

ISSN 2395-4396 (Online)
www.ijariie.com

NATIONAL CONFERENCE
on
Education and Learning- Unlocking opportunities to create
Pathways for Advancement

Publication Partner: IJARIE

ORGANISED BY: AISHWARYA COLLEGE OF EDUCATION

(Affiliated to Jai Narain Vyas University, Jodhpur)

Recognized by UGC Under Section 2(f)&12(B) of UGC Act 1956

Conference Date: 29-Feb to 2-March 2024

Volume-8, Issue-1, 2024

***International Journal of Advance Research and Innovative
Ideas in Education***

Chairman's Message

Dear Readers,

It is my pleasure to welcome you to the national conference's edition of the journal, a testament to the intellectual vibrancy and scholarly excellence that defines our institution. In this conference, we celebrate the culmination of diligent research and academic inquiry by the research scholars & academicians. From innovative perspectives to groundbreaking discoveries, each article presented here reflects the commitment to academic rigor and intellectual curiosity that we strive to foster within our college community.

I extend my heartfelt congratulations to all the authors whose contributions grace the pages of this journal. Your dedication to advancing knowledge and pushing the boundaries of inquiry is truly commendable. I also express my gratitude to the reviewers, editors, and staff who have worked tirelessly to ensure the quality and integrity of this publication.

To our readers, I encourage you to immerse yourselves in the wealth of knowledge presented within these pages. May the insights shared in this edition inspire you to engage in thoughtful discourse, challenge your perspectives, and embark on your own intellectual journeys.

As we continue to uphold the values of scholarship and academic excellence, let us remember the importance of fostering a culture of inquiry and lifelong learning. Together, let us embrace the pursuit of knowledge as a means to enrich our lives and contribute to the betterment of society.

Thank you for your continued support and participation in our academic endeavors. I look forward to the continued growth and success.

Warm regards,

Bhupendra Singh Rathore

Chairman

Principal's Message

Dear Participants and Colleagues,

It gives me immense pleasure to extend my heartfelt congratulations to all contributors and attendees of the National Conference. Your dedication to advancing knowledge and fostering intellectual discourse is truly commendable.

As we reflect on the rich tapestry of research presented during the conference, I am filled with pride at the caliber of work showcased by our esteemed scholars and researchers. Your commitment to pushing the boundaries of knowledge and addressing the challenges of our time is inspiring.

The publication of the conference proceedings marks a significant milestone in our academic journey. It serves as a testament to our collective efforts in promoting scholarly inquiry and sharing valuable insights with the wider community. I am confident that the articles contained within these proceedings will serve as a valuable resource for researchers, educators, and practitioners alike.

I extend my sincere gratitude to the editorial team for their meticulous work in compiling and editing the proceedings. Their dedication to ensuring the highest standards of quality is evident in the final publication.

To all contributors, I encourage you to continue your pursuit of excellence and innovation. Your research plays a vital role in shaping the future of our respective fields and making a positive impact on society.

I would also like to express my gratitude to the organizing committee members, for their tireless efforts in making the conference a resounding success.

Warm regards,

Dr. Rishi Nepalia
Principal

Convener's Message

Dear Participants,

As the convener of the conference "Education and Learning: unlocking the opportunities to create pathways for advancement " held from February 29th to March 2nd 2024 organized by Aishwarya College of Education(Jodhpur), I would like to extend my heartfelt gratitude to each one of you for your enthusiastic participation and valuable contribution to our event.

Your engagement and dedication have made this conference a resounding success, fostering meaningful discussions and facilitating knowledge exchange within our community.

I encourage you to continue building upon the connections made during the conference and to explore opportunities for collaboration and further research in your respective fields.

I would also like to express my appreciation to the organizing committee and volunteers and everyone involved in making this event possible. Your hard work and commitment have been instrument in ensuring the smooth execution of the conference.

As we conclude this event, let us carry the spirit of collaboration, innovation and academic excellence that defines our community.

Thank you once again for your participation and support. I look forward to our paths crossing again in future endeavors.

Warm Regards,
Dr. Mridula Chanda
Convener

A large, semi-transparent watermark of the IJARIE logo is centered on the page. The logo features a stylized lightbulb with a glowing orange filament, set against a circular background with a gear-like border. Below the lightbulb, the acronym "IJARIE" is written in a bold, white, sans-serif font.

Table of Content

Research Paper

Title	Page No
Exploring the Fusion of Yogic Elements and Theatrical Skills in Nai Talim: A Comparative Investigation into Gandhi's Educational Framework for Comprehensive Individual and Community Development	1
RECOGNITION OF TRADE MARKS: SMELL MARKS	6
Educational Aspect of Artificial Intelligence - A Review	15
Integrating Emotional Intelligence into Human Resources Practices: Enhancing Organizational Performance and Employee Well-being	20
The Mahatma Gandhi's view on Partition	27
Social justice	29
CYBER BULLYING AND MENTAL HEALTH OF ADOLESCENTS	32
Enhancing Team Performance through Emotional Intelligence: A Comprehensive Analysis	38
IMPACT OF YOGIC PRACTICES AND PRANAYAMA ON CARDIOVASCULAR DISEASES (CVDs) PATIENTS	43
Importance of yogic education in the present context	49
Psychological Role of Social Media: A systematic Review	53
Human Rights for Senior Citizen Life Dignity	58
PSYCHONEUROIMMUNOLOGY AS A COMBATING TOOL FOR POSTPARTUM DEPRESSION- A literature review based study	60
Introduction of Rajasthani Research Institute and contribution of famous people in history	74
A STUDY ON ANALYSIS OF DIGITAL MARKETING.	79
An EOQ inventory model for selling price dependent Demand with Weibull distributed deteriorating items and partial backlogging under inflation.	83
Data Protection Regulations in India	89
Polarography Studies On Method Development For Determination Of Cadmium Ion In Arid Zone Industrial Waste.	94
Relative resistance status of four wheat varieties against stored insect Rhyzopertha dominica	99
The Role of Artificial Intelligence on Individual Financial Planning	104
"Mahatma Gandhi's Concept of Trusteeship: Relevance, Application, and Ethical Implications in Contemporary Societies"	110
Challenges and solutions of integrated electoral system	118
VALUE - ORIENTED EDUCATION - A PSYCHOLOGICAL STUDY	127
Indian Economy: An Emerging Economy 2025-2030	131
Contribution of media in social movements	135
ENVIRONMENTAL PROTECTION LAW	140

ENTREPRENEURSHIP - IN FUTURE OPTION AND COMPETITION IN INDIA	152
Impact of Industrial Effluents on the Water Quality of Jojari River	155
Understanding the working of List, Tuple & Dictionary in Python Programming Language	162
EMOTIONAL INTELLIGENCE	172
PROJECT DEVELOPMENT & MANAGEMENT : THE OBJECT ORIENTED APPROACH	177
NITROGEN CONTAINING LIPID FRACTION OF SEED TRIGLYCERIDES	182
Inbound Marketing: Effect on the Online Customer: An Empirical Study of the Retail Sector in India	185
A way to Present day Industry 6.0 Manageability of Industry 6.0 in Worldwide Point of View: Advantages and Difficulties	191
ELECTROCHEMICAL STUDIES ON METHOD DEVELOPMENT FOR TRACE DETERMINATION OF PERCHLORATE IN NATURAL WATERS	201
Involvement of parents and teachers in promoting Higher Education	210
RELATION BETWEEN PHYSICO-CHEMICAL PARAMETER AND BACTERIAL STATUS OF BICHERLI POND BEAWAR, RAJASTHAN	216
Basic Structure of the Constitution: Development and Challenges to India's Democracy	225
Rethinking Educator Learning to Unlock the Future of Learning	229
The Types of Transmission Media In Computer Network : A Study	250
Evaluating stored insect pest's status under climate change scenarios: Combining experimental data and population dynamics in prolonged conditions.	253
Cyber Security: An essential need of the modern era	258
Impact of religion and magic in Indian society – a sociological study	261
Applications of Automated Attendance System Using Face Recognition: A Comprehensive Review	265
Unemployment in youth	268
Research paper On “EMOTIONAL INTELLIGENCE IN THE IMPLEMENTATION OF PoSH ACT 2013 IN THE HOTEL INDUSTRY”	271
Status of Teacher Education in Rajasthan	275
Study of educational achievement, adjustment and personality of students of higher secondary level of Muslim (minority) government and non-government schools of Jodhpur district	280
NEP2020: ROLE OF “NDEAR” FOR ICT IN EDUCATION	284
A study in the perspective of holistic education and awareness of human rights	291
STUDY ON DENGUE INCIDENCES IN JODHPUR REGION OF RAJASTHAN	298
COACHING : SOLUTION OR PROBLEM	305
Impact of Corporate Social Responsibilities (CSR) on Financial Performance”	309
Domestic Violence and Legal Interventions for Women's Safety: An Analysis	321
Role and importance of philosophy in education	327
ISHEM: Development of Blockchain-Based Intelligent System for Higher Education	334

Impact of Green House Gases and Bio-climatic Variables of different Time Series in Yield Prediction for Semi-Arid Zone Region Using Machine Learning Models: An Overview	339
Naresh Mehta's Prabandhakavya: 'Pragya Prateek'	344
Impact of early intervention on the development of children with autism: A review	348
SOLAR VEHICLE: TECHNICAL BOON	352
Automatic Facial Expression Recognition	354
Environmental Education: Expertise and Importance of Scientists	360
Effect of professional stress of teachers on the process and development of teaching-learning	365
An In-depth Examination of Non-Fungible Tokens (NFT): Technological, Economic, and Sociocultural Perspectives	369
A Perspective on Silicosis in Industry in Context of Clean Environment	378
Beyond Traditional (Social Media) Education and Learning	384
A Study of The Effectiveness of '5Es Constructivist Instructional Model' in Enhancing Communication Skills	389
INFORMATION REQUIREMENTS AND MANAGEMENT IN THE CURRENT CONTEXT	396
Impact of Modern Technologies on Legal Rights of Women: Indian Perspective	399
Education and Learning: Unlocking Opportunities to Create Pathways for Advancement	405
TREATMENT OF NITRATECONTAMINATEDWATERUSINGCOCONUT WASTE AS NATURAL ADSORBENT	409
WEB DEVELOPMENT	413
DIGITAL FORENSIC – INVESTIGATION AND CHALLENGES IN INDIA	417
Voltammetric determination of Molybdenum in environmental sample	423
Security And Privacy In Wireless Health Care Devices	427
Role of social media in education and learning in the context of Corona	438
The Role of Artificial Intelligence in Cyber security: Enhancing Threat Detection and Response	443
Reservation Station Architecture of Processors to Implement Parallelism at Instruction Level	445
EXAMINATION OF ACCOUNTING PRACTICES IN VARIOUS ENTERPRISES	454
Competency based education: Examining teacher's challenges in implementation	457
COVID-19: AWARENESS AND KNOWLEDGE AMONG ADOLESCENTS OF JODHPUR (RAJASTHAN)	461
Gender inequality laws and suggestions for gender equality	467
Impact of Artificial Intelligence on Banking System	473
A Study of The Effectiveness of 5Es Constructivist Instructional Model in Enhancing Communication Skills	478
CORPORATE SOCIAL RESPONSIBILITY AND INSURANCE SECTOR	484

Abstract

Title	Page No
MICRO-ECOLOGICAL STUDIES OF FERNS OF SOUTH-EASTERN RAJASTHA	489
Status and protection of women in India	490
STUDY OF DIELECTRIC MEASUREMENT OF CERAMICS AT X-BAND	491
Comparison study of the Physical and Optical Properties Telluroborate Glass doped with differentrare earth ions	492
Critically evaluate advanced catalytic oxidative processes (ACOPs) and multivariate physicochemical analysis of wastewater treatment in Jodhpur District, Rajasthan	493



Exploring the Fusion of Yogic Elements and Theatrical Skills in Nai Talim: A Comparative Investigation into Gandhi's Educational Framework for Comprehensive Individual and Community Development.

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Abstract

This research delves into the intricate fusion of yogic elements and theatrical skills within Mahatma Gandhi's Nai Talim educational philosophy, offering a comprehensive exploration of its implications for individual and community development. Gandhi envisioned education as a transformative force, integrating intellectual, physical, and moral dimensions. In this study, we undertake a meticulous comparative investigation to unveil the symbiotic relationship between ancient yogic principles and contemporary theatrical techniques, as embedded in the Nai Talim framework.

The research aims to decipher the synergies that exist between yogic elements and theatrical skills, examining how their fusion contributes to a holistic approach to education. Gandhi's emphasis on experiential learning and self-discipline finds resonance in yogic practices, while the expressive and communicative aspects of theatrical skills align with Nai Talim's goal of nurturing well-rounded individuals.

The comparative analysis employs qualitative and quantitative research methods, drawing insights from historical documents, educational literature, and practical implementations of Nai Talim principles. By unraveling the nuances of this fusion, the study seeks to provide a nuanced understanding of the educational philosophy's potential to instigate positive transformations in both individuals and communities.

Ultimately, this research aspires to contribute to the discourse on holistic education by shedding light on the intricate interplay between yogic elements and theatrical skills within the context of Nai Talim, offering valuable insights for educators, policymakers, and scholars interested in fostering comprehensive and transformative educational approaches.

Keywords: *Nai Talim, Yogic principles, Theatrical skills, Comprehensive education, Societal transformation.*

Introduction :

The educational philosophy of Mahatma Gandhi, known as Nai Talim or "Basic Education," stands as a testament to his visionary ideals of holistic development, personal transformation, and societal reform. Rooted in the belief that education should foster the harmonious growth of the mind, body, and spirit, Nai Talim places a significant emphasis on the integration of physical, intellectual, and moral education. Central to this philosophy are two seemingly distinct disciplines – yoga and acting skills – which, when examined closely, reveal a remarkable synergy in their potential to catalyze both personal and social change.

Gandhi's Nai Talim, developed during his tenure in various ashrams and institutions, sought to break away from the traditional, colonial education system that focused solely on academic knowledge. The heart of Nai Talim lies in its principles, which champion self-sufficiency, empathy, community engagement, and the pursuit of truth. Through this educational framework, Gandhi aimed to nurture individuals who possessed not only intellectual prowess but also a strong moral compass and a commitment to social justice.[1]

Yoga, a millennia-old practice originating from ancient Indian philosophy, plays a pivotal role within the Nai Talim philosophy. Beyond its popular association with physical postures, yoga encompasses a holistic approach to self-improvement and spiritual growth. Gandhi's incorporation of yoga into education reflects his belief that cultivating physical well-being is intrinsically linked to mental and ethical development. The practice of yoga, as outlined in texts like the Yoga Sutras, aims to achieve harmony within oneself and with the external world. Its focus on self-awareness, self-discipline, and mindfulness aligns with Nai Talim's goal of nurturing conscientious, self-directed learners.

Similarly, the inclusion of acting skills in Nai Talim may appear unconventional, but its significance becomes evident upon closer examination. Acting, as an art form, is a vehicle for developing communication skills, empathy, and social consciousness.

Gandhi's Nai Talim Educational Philosophy :

Gandhi's Nai Talim, meaning "Basic Education" in Hindi, is an educational philosophy that reflects his profound insights into the nature of learning, personal development, and societal transformation. Rooted in his deep commitment to truth, nonviolence, and human dignity, Nai Talim emerged as a revolutionary response to the prevailing colonial education system in India during the early 20th century.

At its core, Nai Talim seeks to break away from the conventional approach to education that prioritizes rote memorization and disconnected academic knowledge. Gandhi envisioned education as a holistic process that harmonizes the intellectual, physical, and moral dimensions of an individual. His philosophy was a direct challenge to the Western educational model imposed by the British colonial regime, which he believed contributed to the degradation of Indian culture and self-esteem.

One of the foundational principles of Nai Talim is "learning through doing." Gandhi believed that education should be practical and rooted in lived experiences. This principle is closely tied to his rejection of a hierarchical separation between mental and manual labor. In Gandhi's vision, every student should engage in manual work, or "productive labor," as an essential component of their education. This approach not only imparts practical skills but also cultivates dignity of labor and a sense of self-sufficiency.

Yoga in Nai Talim :

Yoga, a centuries-old spiritual and philosophical practice originating from India, found a profound place within Mahatma Gandhi's Nai Talim educational philosophy. Far more than a physical exercise regimen, yoga's integration into Nai Talim was a deliberate choice that aligned with Gandhi's vision of holistic education. In Nai Talim, yoga was not simply a subject to be taught but a transformative tool for fostering physical well-being, mental clarity, and moral growth.

At the heart of yoga's inclusion in Nai Talim was Gandhi's recognition of the interconnectedness of the mind, body, and spirit. He believed that a healthy body and a disciplined mind were essential foundations for effective learning and personal growth. Yoga's emphasis on cultivating self-awareness and self-discipline resonated with Nai Talim's core principles of self-mastery and character development. Through practices like asanas (physical postures) and pranayama (breath control), students were encouraged to engage with their bodies, enhancing physical health and mental focus.[2]

In the context of Nai Talim's "learning through doing" philosophy, yoga provided a unique opportunity for experiential education. Students engaged in yoga practices not as abstract concepts but as lived experiences. This experiential learning approach not only deepened their understanding of yoga but also instilled a sense of discipline and commitment. Additionally, yoga's focus on concentration and mindfulness complemented Nai Talim's goal of developing focused, reflective learners who could engage meaningfully with their studies and surroundings.

Yoga's Impact on Moral and Ethical Growth :

Yoga's impact on moral and ethical growth is rooted in its profound philosophical principles and practical teachings. The practice of yoga goes beyond physical postures and breath control; it encompasses a holistic approach to life that nurtures virtues and ethical values. The integration of yoga into one's lifestyle can have a transformative effect on an individual's moral compass and ethical.[3]

1. **Self-Awareness and Mindfulness:** Central to yoga is the cultivation of self-awareness and mindfulness. Through practices like meditation and self-reflection, individuals develop a heightened awareness of their thoughts, emotions, and actions. This self-awareness provides the foundation for ethical growth by allowing individuals to recognize their intentions and behaviors more clearly, enabling them to align their actions with their values.
2. **Ahimsa (Nonviolence):** One of the key ethical principles emphasized in yoga is ahimsa, or nonviolence. This principle extends beyond refraining from physical harm; it encompasses nonviolence in thought, speech, and action. Practitioners of yoga are encouraged to cultivate compassion and empathy, fostering a deep respect for all living beings and promoting peaceful interactions.[4]
3. **Satya (Truthfulness):** Truthfulness is another ethical value that yoga promotes. By practicing truthfulness in speech and thought, individuals create an environment of authenticity and trust. Yoga's emphasis on truth aligns with its aim of achieving self-realization, as honesty with oneself is essential for genuine personal growth.
4. **Asteya (Non-Stealing):** Yoga encourages individuals to refrain from stealing, not only in terms of material possessions but also in terms of time, energy, and opportunities. By cultivating contentment and a sense of abundance, practitioners learn to respect the possessions and efforts of others, fostering a sense of integrity and ethical conduct.
5. **Brahmacharya (Moderation):** Moderation is a cornerstone of ethical growth in yoga. This principle encourages individuals to practice self-control and moderation in all aspects of life, including food, relationships, and sensory indulgences. By practicing brahmacharya, individuals cultivate discipline and avoid excess, which contributes to a balanced and ethical lifestyle.

Acting Skills in Nai Talim :

In Mahatma Gandhi's Nai Talim educational philosophy, the incorporation of acting skills plays a distinctive and purposeful role in fostering well-rounded development and ethical consciousness among students.[5]The inclusion of acting skills is grounded in the philosophy's holistic approach to education, where personal growth, character development, and societal transformation are intertwined.

1. **Expression and Communication:** Acting skills, including dramatic performance and role-playing, provide a unique avenue for students to express themselves creatively and communicate effectively. Nai Talim recognized the importance of communication as an essential life skill, enabling students to convey their thoughts, feelings, and ideas with clarity and confidence. Through acting, students learn to articulate emotions, perspectives, and narratives, enhancing their ability to connect and engage with others.

2. **Empathy and Perspective-Taking:** Acting involves stepping into the shoes of different characters and embodying their experiences. This process cultivates empathy by requiring students to understand and empathize with a variety of emotions, circumstances, and viewpoints. Nai Talim's focus on empathy aligns with the philosophy's commitment to nurturing individuals who possess a deep understanding of human experiences and are equipped to contribute compassionately to society.

3. **Personal and Moral Growth:** The practice of acting challenges students to explore various aspects of their own identity and values, while also engaging with diverse perspectives. This introspection contributes to personal growth by fostering self-awareness and self-reflection. Furthermore, the ethical dilemmas and moral lessons often present in dramatic narratives prompt students to consider ethical choices and consequences, reinforcing Nai Talim's emphasis on character development.

4. **Confidence and Public Speaking:** Acting skills enhance students' confidence in public speaking and self-presentation. As students perform in front of their peers, they overcome stage fright and develop the ability to articulate themselves effectively in a public setting. This aligns with Nai Talim's emphasis on self-assurance and the development of practical skills that prepare individuals for various real-world scenarios.

5. **Critical Thinking and Creativity:** Engaging in acting requires critical thinking and problem-solving, as students analyze characters, motivations, and plotlines. Additionally, they may adapt stories or create their own, promoting creative thinking and imaginative expression. These cognitive skills complement Nai Talim's objective of fostering well-rounded, adaptable learners capable of independent thought and innovation.

Comparative Analysis :

The comparative analysis of yoga and acting skills within Mahatma Gandhi's Nai Talim educational philosophy reveals intriguing parallels and complementary effects on personal and social transformation. While seemingly distinct, these disciplines share common threads that contribute to holistic development and ethical consciousness, aligning with Nai Talim's vision of education.[6]

1. Self-Awareness and Inner Growth:

Both yoga and acting skills promote self-awareness and inner growth. Yoga encourages introspection, mindfulness, and self-reflection, leading to a deep understanding of one's thoughts and emotions. Similarly, acting requires self-exploration and empathy, as individuals step into different roles and personas. Both practices contribute to enhanced self-understanding, fostering personal growth and character development.

2. Communication and Expression:

Yoga emphasizes nonverbal communication through body postures and gestures, enhancing nonverbal expressiveness. Acting skills, on the other hand, focus on verbal and nonverbal communication, helping individuals articulate emotions and ideas convincingly. Both practices cultivate effective communication skills, which are crucial for personal relationships, societal engagement, and leadership roles.

3. Empathy and Perspective-Taking:

Both yoga and acting foster empathy and perspective-taking. Yoga encourages understanding one's own emotions and experiences, which can translate to heightened empathy for others. Acting requires individuals to inhabit different emotional states and viewpoints, promoting empathy through role-playing. These practices encourage compassion and a deep appreciation for diverse human experiences.

4. Physical and Mental Balance:

Yoga emphasizes physical well-being through asanas (postures) and pranayama (breath control), promoting physical balance and vitality. Acting demands physical coordination, posture awareness, and breath control to deliver convincing performances. The integration of these practices supports holistic physical and mental equilibrium, aligning with Nai Talim's holistic approach.

5. Ethical Growth and Values:

Both disciplines contribute to ethical growth and the cultivation of values. Yoga's principles, such as ahimsa (nonviolence) and truthfulness, align with Nai Talim's ethical teachings. Acting often involves portraying characters faced with ethical dilemmas, encouraging critical ethical thinking. The interplay between yoga's moral teachings and acting's exploration of ethical scenarios enriches the moral fabric of learners.

6. Community and Social Impact:

Both yoga and acting skills extend beyond the individual to impact the community. Yoga's principles of self-discipline, selflessness, and service (karma yoga) align with Nai Talim's emphasis on community engagement. Similarly, acting can convey socially relevant messages and evoke social awareness. Both practices inspire learners to contribute positively to their communities and promote social change.

7. Inner Transformation and Outer Expression:

Yoga focuses on inner transformation, fostering inner peace, and personal growth. Acting bridges this inner transformation with external expression, allowing individuals to communicate emotions and ideas effectively to an audience. This synergy aligns with Nai Talim's goal of nurturing holistic individuals capable of inner mastery and outward engagement.

Conclusion :

In conclusion, the exploration of the synergy between yoga and acting skills within Mahatma Gandhi's Nai Talim educational philosophy reveals a profound and purposeful integration that fosters holistic personal and social transformation. Nai Talim's emphasis on holistic education, character development, and community engagement finds resonance in the intrinsic values of both disciplines.

Yoga, with its philosophical foundations rooted in self-awareness, mindfulness, and ethical principles, enriches Nai Talim's commitment to holistic development. The practice of yoga enhances physical health, mental clarity, and moral growth, aligning with Nai Talim's aim to cultivate self-discipline, empathy, and social responsibility.

Similarly, acting skills provide a unique platform for personal growth and character development.[7]Through role-playing, empathy cultivation, and creative expression, acting skills align with Nai Talim's emphasis on experiential learning, ethical consciousness, and effective communication. Acting's ability to challenge students to understand diverse perspectives and address ethical dilemmas reinforces Nai Talim's goal of producing socially aware and morally conscious citizens.

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RECOGNITION OF TRADE MARKS: SMELL MARKS

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RECOGNITION OF UNCONVENTIONAL TRADEMARKS: SMELL MARKS

ABSTRACT

Smell marks are also known as scent/olfactory marks. Scent is theoretically protectable as a trademark. Generally, smell marks are applied on cleaning preparations, cosmetics and fabric softeners. For the first time, recognition to the smell marks was given by the US courts wherein the application for registering the written description of the smell of 'a high impact, fresh floral fragrance reminiscent of Plumeria blossom's for sewing thread and embroidery yarn was accepted as a graphical representation and granted trademark protection. Smell was compared to colors in this case, though this is scientifically not recommended. The court differentiated between functional and non-functional smells

- smell not being an inherent attribute of products from those products which have it as its inherent attribute such as perfumes etc.

In John Lewis of Hungerford Ltd's Trade Mark Application the trademark was graphically represented by the description that 'the trade mark comprises of the smell, aroma or essence of cinnamon' in respect of furniture. The application was refused on the ground that the wording 'smell, aroma or essence of cinnamon' lacked precision as a result of the degree of subjectivity it allowed in the determination of the question whether a fragrance exemplified 'the smell, aroma or essence of cinnamon' and the extent to which differing perceptions of different individuals could equally be regarded as bench marks for the interpretation of the wording in question. In Venootschap Firma Senta Aromatic Marketing's Application a written description of "smell of fresh cut grass" was accepted for tennis balls.

"The scent of raspberries" was accepted in Myles Ltd., 's Application² in respect of fuel and diesels. In Britain, the Sumitomo Rubber Company successfully registered "a floral fragrance/smell reminiscent of roses" as applied to tyres. The world's leading manufacturer of darts, Unicorn Products, obtained a trademark for "the strong smell of bitter beer on the flight" of their darts. Smell mark can be afforded protection in India if the applicant proves that:

- (i) the smell is used as a trademark;*
- (ii) it is not an inherent or natural characteristics of goods but is added by the applicant to identify its goods;*

- (iii) *the public regard the smell as a mark which identifies the applicant's goods and*
- (iv) *the mark is represented graphically.*

There are certain practical issues with respect to smell marks' registration. In *Sieckmann v. Deutsches Patent-undarkenam* the applicant had described the scent as "balsamically fruity with a slight hint of cinnamon". The court initially observed that a trademark may consist of a sign which is not in itself capable of being perceived visually, provided that it can be represented graphically. Secondly, a graphical representation must be clear, precise, self contained, easily accessible, intelligible, durable and objective. The court ruled that in respect of an olfactory sign, the requirements of graphical representability are not satisfied by a chemical formula, by a description in written words.

Chemical formula depicting the scent does not represent the odour of a substance, since it is not sufficiently intelligible, clear and precise. Moreover, a formula does not represent the odour, but the substance itself. A deposit of an odour sample does not constitute a graphic representation. Odour samples are not sufficiently stable and durable. Smell gets affected by temperature, humidity and wind conditions. It can get strengthened or weakened. The perceptibility is yet another factor in the determination of smell and therefore, physical, mental abilities, individual's sensitivity and health have a pivotal role. The problem may arise more so than with sound marks, in representing the mark graphically. Many products have added fragrance, as in the case of perfumes, cosmetics, fabric conditioners, detergents etc., to make the product more aromatic or pungent. Potential purchasers are unlikely to consider these scents as an indication of the origin of goods.

Hence it is uneasy to prove that a particular smell indicates the goods of a particular trader. The courts have held that a smell mark does not satisfy the requirements of graphical representation if it is merely presented in the form of a chemical formula, by a description in written words, or by the deposit of the odour sample or by a combination of those elements. The trademark regime has now seen the emergence of unconventional forms of trademarks such as smell, sound, and taste marks. While sounds marks like the Nokia jingle are pretty common these days, smell marks are a rare breed. In fact, the first smell mark was registered in the United Kingdom by Sumitomo Rubber for a floral fragrance or smells reminiscent of roses as applied to vehicle tires. This was followed by the first US smell trademark to be registered in 1990 after an appeal before the U.S. Patent and Trademark Office (USPTO) Trademark Trial and Appeal Board (TTAB). The mark was for a "high impact, fresh, floral fragrance reminiscent of Plumeria blossoms" used in connection with sewing thread and embroidery yarn.

Since then, there have been very few registrations of smell trademarks which include bubble gum scent

for sandals, and strawberry, cherry and grape lubricants for combustion engines. The primary reason for such a low registration of smell marks is because they are defined subjectively and are therefore open to interpretation. The complications that arise from human perceptions of odors lead to the argument that subjective views are inadequate when determining whether the smell mark functions as a trademark. Further, smell trademarks are arguably one of the most difficult types to represent graphically.

INTRODUCTION

The destiny of nontraditional trademarks and their registration has been the area of fascinating debate, with trademark registries everywhere the world finding themselves in a difficulty over how precisely to deal with functions for the registration of sound, shape, scent, color, taste marks and what now not. An interesting development in recent times has been the emergence of the olfactory or smell mark. The ability to understand smells is one of the important senses that a person possesses. The aroma of espresso, the odor of a person's favorite meals, these smells once experienced will certainly not be forgotten by using the human mind. Every person individual can have a favorite scent a good way to remind them of anything they like, and so with the rapid advancements in science companies have tried to use smells as trademarks and register them to capitalize further from the market. Smell marks are also known as scent/olfactory marks. Scent is theoretically protectable as a trademark. Generally, smell marks are applied on cleaning preparations, cosmetics and fabric softeners. For the first time, recognition to the smell marks was given by the US courts.¹ With the help of fragrance of any product, the same has been acknowledged since long. Let it be bathing soap, talcum powder, hand wash or even a chewing gum, yet the fragrance or smell itself didn't get a protection, or even recognition, as a trademark until recent past. Sense of smell has a very privileged and intimate influence over what one does and how one is lived. It can also be understood from the fact that feelings, either positive or negative, about people, places and things, may well be determined by how they smell, and this in fact appears to be so whether or not there is consciousness of their odour. On one hand, trademark law has embraced an open-ended definition that emphasizes the functional, rather than the ontological status of a sign. In other words, any sign which does the communicative work of a trademark, by distinguishing goods or services on the basis of trade origin, can be registered as one. While on another, trademark registration systems have historically developed around paradigmatic subject matter: a conventional or traditional trademark that is visual and consists of words, devices or a combination of the two. The need to reconcile these

¹ In *Re Celia Clarke*, USPQ 2d 1238 (1990) (TTAB) [The mark was for a "high impact, fresh, floral fragrance reminiscent of Plumeria blossoms" used in connection with sewing thread and embroidery yarn.]

conflicting imperatives - the trademark registration system is open to all categories of signs and its apparently 'business as usual', yet the registration system was designed with only words and figurative devices in mind - requires a careful reconsideration of certain basic assumptions underpinning this area of intellectual property. Madrid Agreement² and the protocol related to the Madrid Agreement, famously known as Madrid Protocol³, were silent on the issue of subject-matter for registration of trademark. So, what kind of marks could be registered and protected and what couldn't were not dealt within these international agreements. Then was the date of Paris Convention⁴ which was brought in for the sole intent of protection of industrial property including trademarks. As the term trademark wasn't defined in the convention, and neither was the subject-matter laid down in it, it left a wide scope for inclusion of non-conventional marks into the ambits of the trademarks. This becomes more relevant, as the provision of the Convention left the registration formalities to the discretion of the domestic state. The relevant provision of the convention says: "The conditions for the filing and registration of trademarks shall be determined in each country of the Union by its domestic legislation." This gave the domestic countries to make laws in relation to the definition of trademark or sign, where on their discretion they would have included or excluded non- conventional marks from protection. Trademark Law Treaty, which was signed at Geneva in 1994, is the only international treaty which has made an explicit exclusion of sound and olfactory marks from getting registered as a mark. The relevant provision of the treaty says: "This Treaty shall not apply to hologram marks and to marks not consisting of visible signs, in particular, sound marks and olfactory marks."⁵ The Agreement made on Trade Related Aspects of Intellectual Property Rights in the year 1994 (TRIPS) kept its stand neutral by making the provision that the contracting parties may provide that only visually detectable signs or marks should be made eligible for granting legal protection.⁶ The use of word may clearly connote that the non-conventional marks, which are not visually detectable are not prima facie ab initio excluded from the scope of this Agreement. So we can say that sound, taste and smell can still be covered under this international Agreement based on the intention and willingness of the contracting parties. Even though the various countries have signed most of these treaties, agreements and protocols,

² Madrid Agreement concerning the International Registration of Marks of 14 April 1891, as last amended on 28 September 1979

³ Protocol related to the Madrid Agreement concerning the International Registration of Marks adopted at Madrid on 27 June 1989

⁴ Paris Convention for the Protection of Industrial Property of 20 March 1883, as last amended on 28 September 1979

⁵ Article 2 (1) (b) of Trademark Law Treaty 1994

⁶ Article 15 of Trade Related Aspects of Intellectual Property Rights 1994

yet their domestic law varies from each other very much. For this we need to have a look onto the specific legal provisions as present in those states in regard to the protection of non-conventional marks. A comprehensive and open-ended legal definition of trade mark put forth by the TRIPS Agreement and other such intellectual property-centered treaties makes such advancements possible. The Indian law defining trademark is similar to international treaties, open-ended i.e. neither including nor excluding the scope of non-conventional marks to be registered as trademark. 'Trademark' has been defined as a mark capable of being represented graphically and which is capable of distinguishing the goods or services of one person from those of others and may include shape of goods, their packaging and combination of colors. The word 'mark' has been defined in the statute as well and it includes a device, brand, heading, label, ticket, name, signature, word, letter, numeral, shape of goods, packaging or combination of colors or any combination thereof. In Indian law, trademark is defined under Section 2(1)(zb) of the Trademarks Act, 1999. The definition is generic in nature – while not altogether eliminating the possibility of its inclusion; the definition does not seem to make room for the specific incorporation of non-conventional trademarks as a category either. As these definitions are inclusive in nature as prima facie as per the current statutory provision there is no scope for any other kind of sign to be registered other than already mentioned in the statute. But there is a Draft Manual⁷ issued by the Trademark Office which clarifies that certain non-conventional mark requires special consideration.

This further becomes evident in the light of the fact that under Rule 25 (12)(b)⁸ of the Trademark Rules, 2002, an application for registration of a trademark mandates its graphical depiction, Rule 28 and 30 requiring that it be represented on paper, in a durable form. Like the sound mark, the olfactory mark also cannot be visually identified – thus, the obligatory requirement for graphical depiction may act as a huge obstacle to the awareness of olfactory marks as a reputable trademark in India. The chances of the regulation recognizing a scent mark as a professional trademark have yet to be realized and explored, via both these suffering from its absence, and the regulation itself. To solve this problem also the Draft Manual has few provisions dedicated to it.⁹

In short, it can be said that unless the provisions and suggestions laid down in the Draft Manual are not incorporated in the Trade Mark Act, registration of smell marks still lies in the mid-way and no particular stand can be given to the same.

⁷ Draft Manual for Trademark Practice and Procedure 2009

⁸ (b) be able to depict the graphical representation of the trade mark

⁹ Draft Manual for Trademark Practice and Procedure 2009, Chapter II

INTERNATIONAL REGISTRATION

The law is still not clear regarding the registration of the smell marks as to what kind of smells/odours can be registered as a trade mark where according to standing committee report of WIPO in its 16th session clearly mentioned that different member states have a different criteria for registration of the smell marks. The test to be applied in this case should be whether:

- (a) The applicant is the only person marketing the goods concerned;
- (b) The fragrance is not an inherent attribute or natural characteristic of the goods but a feature supplied by the applicant;
- (c) The applicant emphasized and promoted the scent mark in advertising, and
- (d) The applicant demonstrated that customer's dealers and distributors of its products had come to recognize the applicant as the source of these goods.

Some scents were specifically identified as not adapted to distinguish. These would include:

- (a) the natural scent of a product, including perfumes and essential oils;
- (b) masking scents, which would be seen as having a functional purpose and would therefore be considered incapable of distinguishing, and
- (c) scents that are functional or common to the trade, for example, lemon-scented washing products, which are used to make the product more pleasant or attractive.

PROBLEMS

Even though various countries, with passage of time, have made some or the other provision for the protection of smell as a mark of a particular good, but still the jurisprudence need to be developed in this scenario.¹⁰ The test for distinctiveness and basic features of non-conventional trademarks needs to be laid down. The standards laid down by different countries are contradictory in nature in respect to each other. This is a very uncommon and controversial trademark that has gained a lot of attention in recent times. In spite of the problems in registering odours as trademarks, few odours have already been registered as trademarks.

The Court observed the following difficulties encountered in graphically representing smell marks:

¹⁰ Abhijeet Kumar, Protecting Smell Marks: Breaking Conventionality, Journal of Intellectual Property Rights Vol 21, May 2016, pp 129-139

- (1) Representation as a drawing was not possible.
- (2) Representation by chemical formula would not suffice, as the chemical formula represents the substance itself and not its odour.
- (3) Further, representation by chemical formula lacks clarity and precision, not only because of the fact that very few people would have the requisite technical knowledge to interpret the odour of a substance from its formula, but also owing to the reason that the same substance would produce different smells at different temperature, concentration, etc.
- (4) Deposit of a sample of the substance with the registry was not a feasible alternative, since, firstly, it was not a graphical representation, and secondly, odor being volatile may fade and even disappear over a period of time.¹¹

Finally, the Court decided that clear and precise graphical representation is impossible for olfactory signs, and although they may be distinctive, they could not be registered as trademarks at that point of time.

CHALLENGES AHEAD

- **The Irony of the Functionality Doctrine**

The most significant legal limitation to scent trademarks by far, and somewhat controversially, is the functionality doctrine, or the notion that any product feature that has a function is ineligible for trademark protection.

The functionality doctrine was developed to serve as a safeguard in preventing anti-competitive behavior that could potentially stem from one entity claiming sole dominion over a useful product feature that competing products would necessarily share. On its face, the functionality doctrine seems to be a necessary safeguard in the promotion of healthy and fair competition. However, its application to scent trademarks challenges the doctrine's traditional purpose by creating bizarre consequences. The functionality doctrine makes olfactory marks for cleaning products, perfumes, and colognes ineligible for trademark protection because they are "the good

¹¹ Majumdar, The Requirement of Graphical Representability for Non-Conventional Trademarks, Journal of Intellectual Property Rights Vol 11, September 2006, pp 313-317

themselves”; that is, they serve the purpose of masking or inducing a scent.

- **The Unclear Benefits of Registering a Scent Trademark**

To date, there has never been a scent infringement claim brought to federal court and only a handful of scent trademarks have been successfully registered. The lack of precedent has made many practitioners concerned about how an infringement claim would be handled if one were to arise. The unique nature of scents and the lack of case law addressing infringement claims casts serious doubt on the benefits of having a scent mark.

A trademark owner puts the public on notice of the mark’s registration by displaying a small circled letter “®” attached to the mark. Having the “®” attached to a mark deters individuals and/or companies who are considering a similar mark, but it is impossible to attach the letter “®” to a scent. The inability to display ownership of a scent mark raises the question whether its registration would have the same benefit of deterrence as its traditional counterpart.

Scent trademarks are not universally recognized in all countries, which mean that even if it were granted federal protection it might not be registerable or protectable abroad depending upon the jurisdiction.¹²

- **Scent depletion**

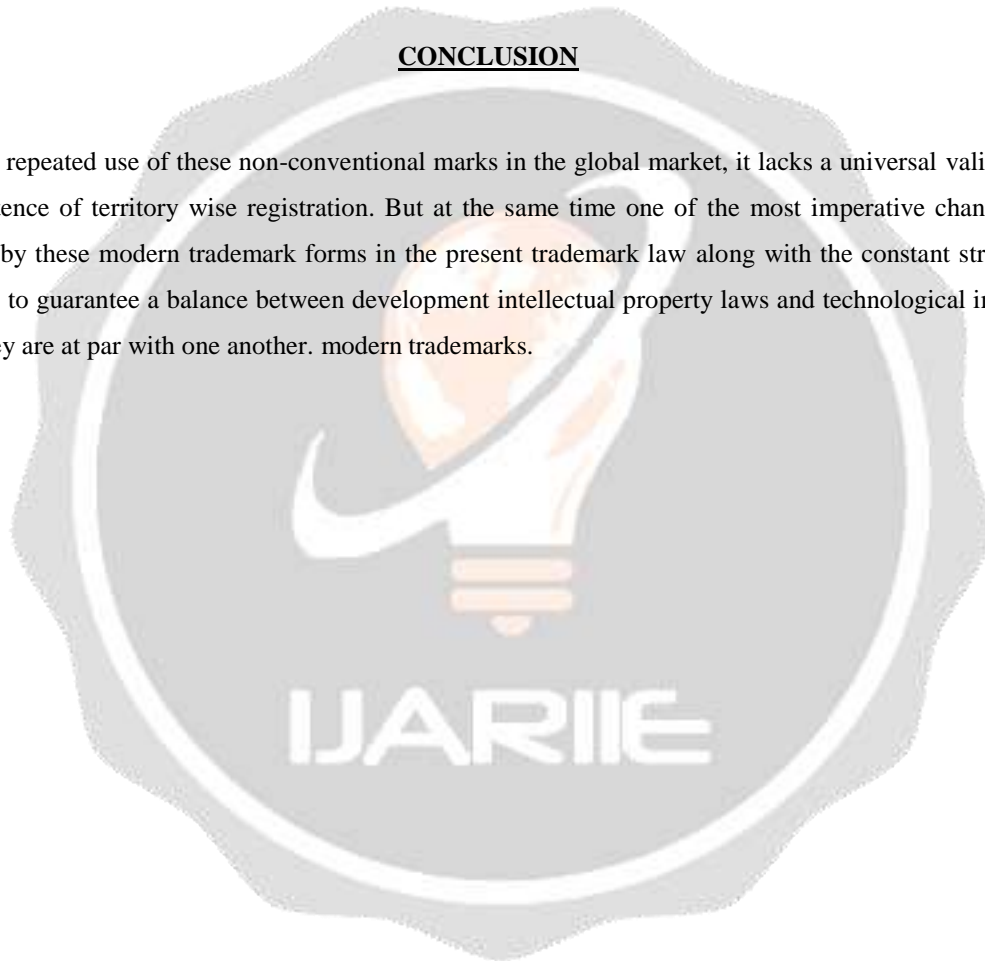
When considering depletion within the context of scent trademarks, the argument is considerably more complex. Arguably, the numbers of scents that are sufficiently unique to meet the requirements of a trademark and can be described in writing are few in number. IP practitioner James Hawes addressed the issue of scent depletion during *In re Clark*, arguing that scent depletion does not present a significant concern because there are

¹² Franco Galbo , Making Sense of the Nonsensical: A look at Scent Trademarks and their Complexities

“innumerable possible combinations and variations” of prospective scents. In other words, an infinite number of scents are available. However, this rational remains a contentious point as it applies to the competitive need for scents. As Bettina Elias notes, scent depletion is only a non-issue in cases where there is no competitive need for scents. In some areas of the marketplace, certain scents are more desired by consumers than others, such as the “soft smell” associated with tissues. Since there are a limited number of scents that fall within any particular categories and that are pleasurable to the human nose, the scent depletion argument is more salient and vexing than that of color depletion.

CONCLUSION

Despite the repeated use of these non-conventional marks in the global market, it lacks a universal validation owing to the existence of territory wise registration. But at the same time one of the most imperative changes has been introduced by these modern trademark forms in the present trademark law along with the constant struggle for the law makers to guarantee a balance between development intellectual property laws and technological improvements and that they are at par with one another. modern trademarks.



Educational Aspect of Artificial Intelligence - A Review

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Abstract

The application of Artificial Intelligence is now observed in almost every area of our lives. Educational objectives can be better fulfilled and managed by new educational technologies. The integration of AI in education has started a paradigm shift in academics, introducing both immense opportunities and complex challenges. In this paper, we explore the impact of artificial intelligence (AI) on education. We emphasize on the applications of artificial intelligence in education. How AI will help educators and learners. Artificial Intelligence has the potential to make drastic changes in the education system by focusing on key challenges and improving teaching and learning practices. We study both the pros and cons of AI in education and its future challenges.

Keywords - Artificial Intelligence, Artificial Intelligence in Education (AIED), Challenges of AI.

Introduction

The emergence of big data, cloud computing, artificial neural networks, and machine learning has enabled engineers to create a machine that can simulate human intelligence. Artificial intelligence (AI) is a vast branch of computer science concerned with developing intelligent computers capable of doing tasks that typically need human intelligence. Leslie et al. [1] believe that artificial intelligence systems are algorithmic models that are capable of performing cognitive or perceptual activities such as thinking, judging, and reasoning, which until now are considered only for humans.

AI can interact and help humans perform at higher levels, it is emerging as the next disruptive innovation [2]. AI is currently viewed by many as a driver that is integral to the fourth industrial revolution, and it may trigger the fourth revolution in education. Learning about AI has also begun to be part of school curriculum [3, 4]. The term artificial intelligence was first coined in 1956 in a workshop at Dartmouth College. Since then, this field has gone through ups and downs. Although at the beginning it attracted a lot of interest and great expectations were placed on it, but in some periods the big predictions were not realized. Most of the 1980s showed a period of rapid growth and interest in AI, now labeled as the "AI boom." This came from both breakthroughs in research, and additional government funding to support the researchers. In 1987 commercial launch of Alacrity by Alactrious Inc. Alacrity was the first strategy managerial advisory system, and used a complex expert system with 3,000+ rules. Despite the lack of funding during the AI Winter, the early 90s showed some impressive strides forward in AI research, including the introduction of the first AI system that could beat a reigning world champion chess player. Deep Blue (developed by IBM in 1997) beat the world chess champion, Gary Kasparov, in a highly-publicized match, becoming the first program to beat a human chess champion. From 2006 companies like Twitter, Facebook, and Netflix started utilizing AI as a part of their advertising and user experience (UX) algorithms. In 2010 Microsoft launched the Xbox 360 Kinect, the first gaming hardware designed to track body movement and translate it into gaming directions. In 2016 Hanson Robotics created a humanoid robot named Sophia, who became known as the first "robot citizen" and was the first robot created with a realistic human appearance and the ability to see and replicate emotions, as well as to communicate. OpenAI developed DALL-E (2021), which can process and understand images enough to produce accurate captions, moving AI one step closer to understanding the visual world [5].

AI has the potential for enabling students to achieve their goals and streamline the process of education. It provides students access to the right course, improving their communication with faculties and helping them to lay their focus on other aspects of life by saving their time. A key aspect of AI is personalization which helps students to have a personalized approach to learning based on their unique abilities, preferences and experiences. AI adapts itself to the students' level of knowledge, their pace of learning and preferred goals so that students receive maximum benefits from their education. Besides this, AI can analyse the students' previous learning history, identify their weaknesses and improve the upcoming learning opportunities for a

personalized learning experience. It empowers faculties as well by automating different tasks like administrative work, paper grading and assessment of learning patterns [6]. According to [7], the faculties devote 31% of their time in planning their future lessons, grading the tests and in doing various administrative work. The use of AI and automation tools will help faculties to automate their work and allows them to use saved time in other teaching core competencies [8]. The AI use can help in providing constructive feedback to faculties by helping them improve their instruction and make the learning more fun and interesting. It will also help students in understanding their mistakes and to learn how to do better by rectifying the mistakes

Methodology

This study is a systematic literature review. The aim of this review paper is to summarize the applications of Artificial Intelligence in the area of education. We reviewed many research papers published in reputed international or national journals. The Main time frame for review of research papers is from 2001 to 2022. We included both educational aspects of school level and degree level. We studied the advantages of AI for teachers and students. In the future AI will transform the education system, It will assist educators in adapting new methods of teaching. With several advantages of AI in education , it also has many challenges. We studied many research papers related to challenges of Artificial Intelligence for education.

Artificial intelligence opportunities for education

Education is an important area that is affected by Artificial Intelligence. Davies et al.[9] and Seldon and Abidoi [10] say that AI can provide solutions to problems like lack of qualified teachers in school and colleges. The education of learners and the gap between rich and poor learners should be taken into account, although Miao and Holmes [11] believe that there is little evidence in this regard. In this regard, Holmes et al. believe that in order to look at artificial intelligence as an opportunity or a threat, several issues should be considered, including: the goals of using artificial intelligence in education, the place or situation in which artificial intelligence is used.

Artificial intelligence is used by whom or what institution, how the process of using artificial intelligence is operationalized, at what level (universal level, classroom, school, national or transnational artificial intelligence is used and will be used), how it will work and how it will be implemented, and issues like that. According to their concept, it is the type of use and how to apply artificial intelligence that makes it an opportunity or a threat [12].

According to the review of the existing theoretical background, in relation to the opportunities and possibilities of AI for education, the following points can be discussed:

Reducing Teacher Workload: AI tools can act as virtual assistants for teachers, handling administrative tasks such as drafting curriculum plans and creating teaching resources. By automating processes, teachers can focus more on their core role—teaching and supporting students.

Personalized Learning: AI-powered systems analyze student data enhancing learning materials to meet individual needs Platforms like Carnegie Learning and Aleks have been using AI in education for over a decade tailoring content to each student’s progress. Duolingo is a language learning app that uses AI to adapt the lessons to the user’s level, progress, and interests [13].

Enhancing Teacher Training: Tools like TeachFX and Edthema assist teacher training support. They provide valuable insights into classroom dynamics teaching practices helping educators refine their skills.

Automated grading: AI can help reduce the workload of teachers by automating the grading of exams, assignments, and essays. For example, ALEKS is a math learning platform that uses AI to provide adaptive assessments and feedback to students and teachers.

AI can help students with disabilities in many ways, such as: Making education more accessible and inclusive for students with disabilities or special needs. For example, Seeing AI is an app that uses AI to describe the world for people who are blind or have low vision. Reducing the turnaround time for producing content descriptions or alternate format materials for students who are legally blind or have low vision by using AI techniques to automatically describe images or do a first pass at describing content. Enhancing the interaction with webpages and other digital content by using AI-based tools that can provide spoken dialogue models, Seeing AI, or other features that can help students who have visual, auditory, cognitive, or other impairment [14].

Predictive analytics: AI can help improve the quality and effectiveness of education by analyzing data and providing insights into student performance, behavior, and outcomes. For example, Knewton is a platform that uses AI to provide personalized recommendations and interventions for students based on their data.

Intelligent content creation: AI can help create engaging and interactive content for learning, such as simulations, games, and videos. For example, Quill is a platform that uses AI to generate natural language stories and questions for students to practice their writing skills.

AI can help teachers with lesson planning and delivery in various ways, such as:

Automating administrative tasks, such as creating schedules, managing student data, and grading assignments. Analyzing student performance data, providing insights into strengths, weaknesses, and learning gaps. Personalizing lesson content and delivery, adapting to individual student needs, preferences, and learning styles. Creating engaging and interactive content, such as simulations, games, and videos.

AI can help teachers with student engagement and motivation in various ways, such as:

Providing real-time feedback and recognition, making the learning experience more interactive and enjoyable. This type of positive reinforcement is a great way to boost student motivation and improve their overall performance in the classroom. Making rooms for collaboration and peer-to-peer learning, enhancing the classroom experience to be more engaging and social. AI can facilitate group work, discussions, and projects by matching students with similar interests, goals, or learning styles. Creating immersive and personalized learning environments, such as AR and VR, that can capture students' attention and curiosity [15]. AI can also tailor the content and delivery to each student's needs, preferences, and pace, making learning more relevant and meaningful. Fostering creativity and innovation, by using AI to generate ideas, structure content, or provide inspiration. AI can also help students explore their passions, interests, and talents, and encourage them to pursue their own learning goals.

AI can help teachers with classroom management and discipline by detecting when a student is disengaged or distracted and provide prompts to refocus their attention, reducing disruptive behavior and increasing student engagement.

Challenges of artificial intelligence for education

Although AI techniques displayed and predicted smart computation in the education domain, they generally fail to bring "added-value" to large-scale students because of the concern of costs, and the mainstream is still occupied by "basic value" [16]. Specifically, some researchers found that many AI techniques were designed for a general situation that could not address the needs of a particular domain, specific learning activities, or teaching goals. This would prevent the actualization of personalized learning experiences [17]. Despite providing new opportunities and facilities for teaching and improving teaching-learning processes, artificial intelligence will also bring challenges. In this regard, based on the studies, the following areas are of interest:

Ensuring inclusion and equity for AI in education- The least developed countries are at risk of suffering new technological, economic and social divides with the development of AI. Some main obstacles such as basic technological infrastructure must be faced to establish the basic conditions for implementing new strategies that take advantage of AI to improve learning.

Loss of Human Connection- One of the most significant concerns surrounding AI in education is the potential loss of human connection. Traditional classrooms foster deep interpersonal relationships between students and teachers, providing emotional support and personalized guidance. In contrast, AI-driven learning experiences may lack the empathetic and compassionate touch that human instructors offer, potentially affecting students' emotional well-being and engagement. **Issue of ethics and information security:** Although artificial intelligence can have many positive applications in education, some experts believe that there are relatively many social and moral concerns that should be taken into account. In addition to this, privacy and information security have also caused concerns in this regard [18], [19], [20].

Loss of Decision Making- Teachers and students who use AI technology will slowly and gradually lose interest in doing tasks themselves. It leads to an addiction behavior not to use human capabilities, thus making humans lazy. The teachers and students are getting lazy and losing their decision-making abilities as much of the work is assisted or replaced by AI technology [21].

Developing quality and inclusive data systems- If the world is headed towards the datafication of education, the quality of data should be the main chief concern. It's essential to develop state capabilities to improve data collection and systematization [22]. AI developments should be an opportunity to increase the importance of data in educational system management.

Job Displacement for Educators- The automation potential of AI raises concerns about job displacement for educators. While AI can streamline administrative tasks, it cannot replace the unique insights, creativity, and adaptability that human teachers bring to the classroom. Therefore, integrating AI should complement, not replace, human instructors [23].

Lack of Emotional Intelligence- Emotional intelligence plays a pivotal role in education, nurturing social skills, and empathy. However, AI lacks emotional intelligence and cannot fully comprehend and respond to students' emotions as human teachers can. This deficiency might hinder the development of students' emotional intelligence and interpersonal abilities.

Tech Glitches and Reliability- Depending heavily on AI introduces the risk of technical glitches and system malfunctions. Unforeseen errors in AI-driven learning platforms could disrupt the learning process and undermine students' confidence in the technology.

Impersonal Assessment and Feedback

Automated grading and assessment systems- may lack the nuanced feedback that human teachers provide. Students may miss out on tailored guidance and encouragement to enhance their academic performance as a result.

Teacher Training and AI Literacy- Effective incorporation of AI into teaching methods requires educators to receive proper training in AI literacy and its applications in education. This will help them utilize AI tools and technologies to enhance the learning experience [24].

Expensive Implementation Costs- Implementing AI in education involves significant costs for schools and institutions. Not all educational settings may have the financial resources to adopt advanced AI solutions, potentially leading to unequal opportunities for students.

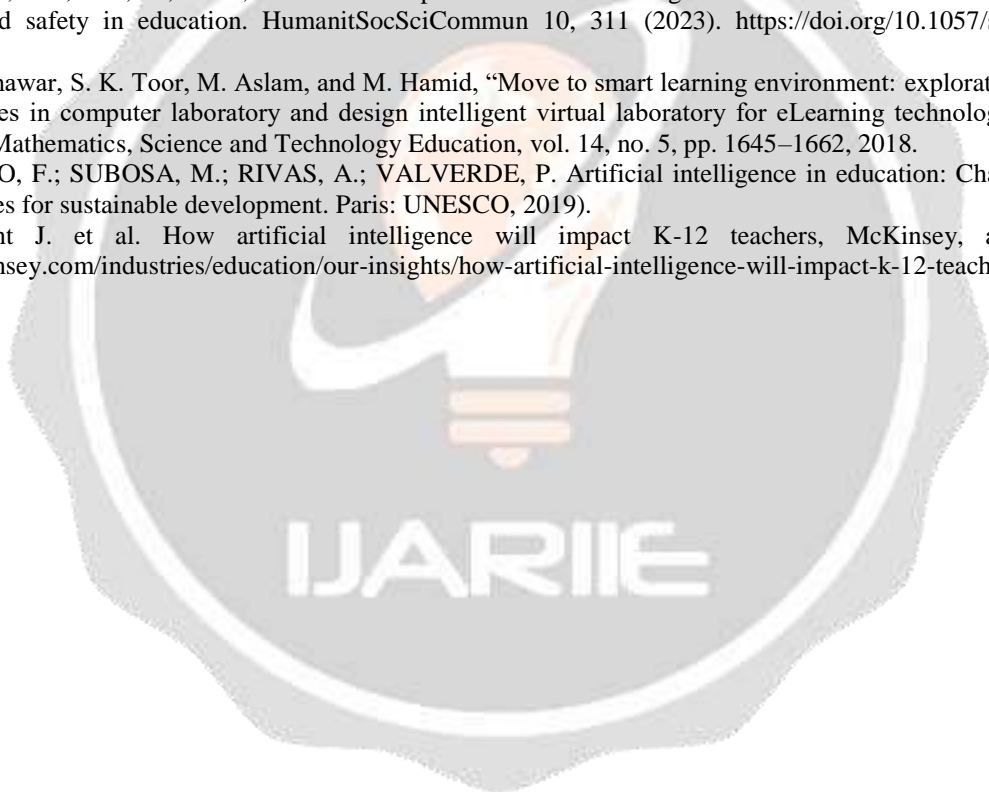
Conclusion

The future of Artificial Intelligence in Education is not completely defined but it is estimated that in future almost every area of education be it school, High School, Higher studies will depend more on technologies and tools for creating a complete learning environment for students and teachers. Everyday the latest and innovative techniques of Artificial Intelligence are coming and it is anticipated that these techniques will assist students to plan their career with clarity and work in achieving their goals. AI has started to demonstrate its benefits and potential in various educational areas, and it will be interesting to see how it will empower and improve overall learning objectives of students. Artificial Intelligence (AI) can transform education through solving critical problems and advancing pedagogical practices.

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Integrating Emotional Intelligence into Human Resources Practices: Enhancing Organizational Performance and Employee Well-being

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Abstract

This research paper explores the integration of emotional intelligence (EI) into human resources (HR) practices as a way to improve employee organizational performance and well-being. This study aims to pursue this gap by examining how emotional intelligence can be used in recruitment, training and development, performance management and leadership in human resources.

This article begins with a systematic review of the literature and develops a theoretical framework that links Emotional Intelligence to key human outcomes, including job satisfaction, leadership, collaboration, and problem solving.

Research results show that organizations that implement HR practices that address EI capabilities report higher levels of employee engagement, job satisfaction, and engagement language in the organization. In addition, these organizations also offer performance measures such as reducing costs and increasing efficiency.

Results reveal the positive effects of integrating EI into HR practices, and this research provides a deeper understanding of how organizations voluntarily increase the capacity of human capital to achieve high performance and create a good work environment.

Key Words - Emotional Intelligence, Human Resources (HR) practices, strategic approach

1. Introduction

"In an era where organizational success is increasingly linked to collaboration, change, and interpersonal relationships, the integration of intelligence (EI) into the same human resources (HR) practices is a key strategy for improving employee performance and well-being."

1995 10 DAYS - Daniel Goleman, Emotional Intelligence In his book, he called social intelligence a historical study during the IQ movement in the 1920s. Scientists who measure intelligence know that IQ does not affect a person's ability to succeed. However, behavioral psychology has put psychological research under the spotlight because this study of human psychology is considered taboo. -Intelligence accounts for 20% of success in life (we think IQ, class affiliation, and luck do the rest). Yale University research in the early 1990s concluded that emotional IQ is an important indicator of success; This helps explain why two people are two people. . People with the same skills achieve different levels of success in their work and personal lives.

"Intelligence, which means the ability to know, manage and express emotions, manage relationships and be patient, is recognized as a fundamental power in improving harmony, productivity and performance in the workplace. It is also in HR practices. For the development of leadership, development of employees' skills and satisfaction Creating a foundation is critical to achieving business goals." Shift to human resources (HR) practices that encourage greater understanding, efficiency, and change. Intelligence—the ability to effectively identify, understand, manage, and use one's own and others' emotions—has surpassed its initial recognition as the basis for HR professionals' practical tool. This combination not only improves individual performance, but also fosters a culture that increases collaboration, employee satisfaction, and the success of the organization. This introduction provides insight into the

importance, processes and outcomes of incorporating emotional intelligence into HR practices, paving the way for a more holistic approach to human capital management.

Significance of EI in HR Practices

The importance of emotional intelligence in human leadership cannot be ignored. In an age where employees' feelings of happiness are as important as intelligence, emotional intelligence is also becoming an important factor in support and business development. HR professionals who can better recognize emotions can delve into the complexities of human behavior, better resolve conflicts and promote positive leadership. The ability to be patient, communicate effectively, and manage stress is beneficial not only for improving personal performance, but also for the overall health of the organization.

Integration of Skills into HR Practices -

It includes various methods such as recruitment, promotion, training and development, performance management and leadership development.

Research and Selection: Integrating EI into the hiring process involves identifying and prioritizing EI competencies as part of the job. Personality interview questions, psychometric tests, and situational assessments can be used to assess a candidate's level of emotional intelligence.

About Advertising and Training: Develop advancement and training focused on emotional intelligence to help new and existing employees strengthen their skills. Training, coaching and Emotional Intelligence training can facilitate this development.

Performance Management: Integrating EI into performance management requires recognizing and rewarding EI behaviors such as collaboration, flexibility, and problem solving. Performance measures can be designed to include emotional intelligence as an important factor in performance.

Leadership Development: Leadership training that emphasizes emotional intelligence is necessary to develop effective leaders. Such courses can equip managers with the skills to manage their own and their team's emotions, thereby improving decision-making and leadership.

Implications of Integrating Emotional IQ

Integrating Emotional Intelligence into HR practices is beneficial for individuals and organizations. On an individual level, employees benefit from increased job satisfaction, reduced stress, and a greater sense of self. From an organizational perspective, benefits include increased employee engagement, improved teamwork, increased productivity and better turnaround times. Finally, by incorporating emotional intelligence into HR practices, organizations can create a humane, productive, and high-performing workplace culture.

2. **Literature Review** - Nearly 100 years ago, Edward Thorndike's idea that social intelligence involves the ability to control boys and girls, men and women, provides historical reflection on how intellectual thought affects how people are governed. Good human resource management aims to develop the skills and leadership of organization members. It also provides the ability to manage the individual and the work unit to achieve the organization's goals. Because organizations operate in a large and complex manner and face external pressures, competing internal and external demands, and limited resources to meet these demands, ensuring the performance of the organization will be very difficult. Therefore, achieving performance targets requires effective leadership and management. This perspective is related to leadership understanding and management goals. It is based on the theory of intelligence, which helps people improve their skills and determination to achieve goals, helps others learn and do their jobs, and helps customers support good and efficient organization. According to Carlson (1997), human resources management is the responsibility of every manager, which is necessary for effective management. Performance management is an accurate measure of the communication between desired goals and the achievement of those goals. According to Bar-On (1997), the basic reality test is to try to put things in perspective and notice things about them that are not too imaginative or fanciful. Therefore, as in performance management, actual evaluation also shows the effectiveness and feasibility of thoughts and ideas. Goleman (2006) explains that

psychologists continue to debate where human abilities lie social and emotional, but recognize that interpersonal relationships are important for leadership and management success in many areas (Hedlund and Sternberg, 2000; Robinson et al., 2006). 1997; Schutte et al., 2013; Serrat, 2017; Sidle, 2008).

2.1. Emotional Intelligence and Performance Management

The main purpose of performance management is to increase employee satisfaction and achieve organizational goals. This can be done through job analysis and performance evaluation by giving feedback to employees so that they can adjust their performance to achieve the goals of the association. Many organizations focus on performance management to increase productivity. While many organizations view performance management as an annual performance review, often linked to compensation, others incorporate long-term development and training into the process. However, other organizations include cognitive theory in their definition of performance management as "a process or set of processes used to develop an understanding of what needs to be done and how to do it and to manage people in ways that enhance performance." difference in achieving this goal. In order to reach the highest level of efficiency and effectiveness, operational management; It is recommended to work as an integrated system that includes elements such as performance targets, training and feedback, performance evaluation, skill training, performance-related compensation, training and education. development. Hartle (1992) suggests that when performance management integrates objectives, ongoing training, coaching and development into a long-term process, it also provides a good time to assess emotional skills that will ultimately lead to better performance and provide advice and support. organizational productivity. According to Jacobs (2001), thinking ability can also be integrated into the process of measuring performance, which involves setting goals or business objectives and relating them to pay. He added that when the process involves brainstorming, managers and employees can identify strengths and weaknesses, discuss weaknesses that impact goal achievement, and then develop strategies to achieve desired goals. Gaining emotional intelligence helps organizations take responsibility for results (Lam and Kirby, 2002; Sinha and Sinha, 1990; Sony and Mekoth, 2016; Sparr et al., 2017; Spencer, 2001).

2.2. Emotional Intelligence and Employee Well-being

The distribution of responsibilities in organizations should be coherent and consistent with individual and group abilities and other areas of emotional intelligence, relationships, abilities and behaviors. It is the social management model integrated with the knowledge of reality that defines the role. It provides the ease and drive to be efficient and effective. The concept of responsibility associated with the study of intelligence theory is seen as the only application of classical or economic theories of social job creation (usually focusing on increasing efficiency and effectiveness through the simplicity, efficiency, and effectiveness of all tasks). and the teams are doing their best. Since effective human resource management involves managing both external and internal aspects of the organization, different situations may arise and require some form of individual thinking or collective thinking, such as self-reflection, self-control, honesty, imagination, empathy, openness. , adaptability, flexibility, quality and leadership. These factors influence the path needed to improve people management to achieve desired results in the competitive world market.

Nowadays, the importance of working with employees is increasing for job satisfaction and a good business life. Therefore, emotional intelligence is necessary to unravel the role of stress at home and work or at work and family, thereby reducing stress and increasing productivity. Reducing work-family conflict is an important aspect of smart behavior that goes a long way in improving human resource management and helping employees maintain their sanity and is at the heart of a large organization (Barnett and Hyde, 2001; Heymann, 2000; 2005). ; Kossek and Ozeki, 1998; Ugoani, 2013; 2015; Woodruffe, 1998; Wright and A., 1998; Youndt, 2000; Zeidner and Matthews, 2017; Zhang et al.2017

3. Significance of this study:

Education on the importance of integrating EI into HR practices in terms of benefits such as leadership development, increasing team strength, reducing conflict and improving overall health:

“The impact of actions within the framework of EI HR practices, leadership and work is not only supported, but also strengthens organizations to meet the challenges of the evolving business environment. The foundation of success.”

4. Objective of the Paper:

This article aims to fill this gap by

- (1) Examining the role of emotional intelligence in various human resources functions,
- (2) Evaluating the impact of cognitive-intelligent HR practices. provides information about business performance and employee well-being, and
- (3) Offers recommendations for HR professionals to incorporate emotional intelligence into their strategies and work. "

"This research concludes that integrating cognitive strategies into HR practices is not only beneficial, but also important for competitive, fast, thinking and intellectual employee development, thereby improving the work and health of employees."

5. Research Problem :

"Although the value of thinking in business is recognized and has the potential to improve people and results, its relationship to human behavior has not yet been researched and cannot be used. This disruption creates a significant barrier to leveraging the benefits of Emotional Intelligence to achieve optimal employee performance and health.

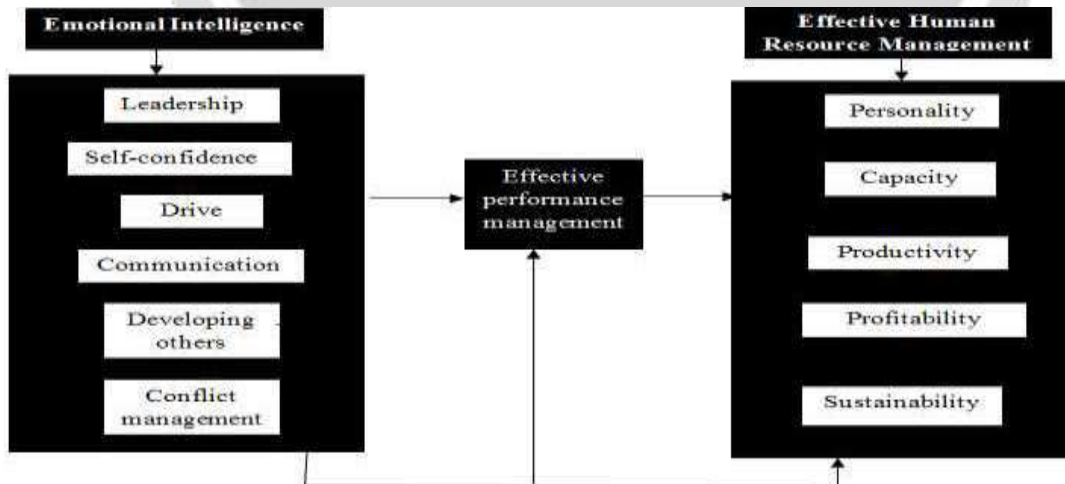
6. Hypothesis

In order to achieve the aims of the research, the hypothesis was formulated and tested at the 0.05 level.

Ho: There is no relationship between emotions and human resources management.

Hi: There is a strong relationship between emotional intelligence and good people management.

7. Conceptual Framework - Conceptual framework is the structure of the study and the assumed variables related to the research question. It is often represented as a model. Models are used to define research-related problems and develop theories.



8. Presentation of Result

Profile of Respondents (n=255)

Description	Category	Percentage	Total
Gender	a) Female	90	35.29
	b) Male	165	64.71
Education	a) Certificates	45	17.65
	b) Diplomas	130	50.98
	c) Degrees	80	31.37
Age	a) 18 – 30 years	50	19.61
	b) 31 – 45 years	140	54.90
	c) 46 – 70 years	65	25.49
Experience	a) Below 10 years	60	23.53
	b) 11 – 25 years	150	58.82
	c) 26 – 35 years	45	17.65
Staus	a) Low	70	27.45
	b) Middle	95	37.26
	c) High	90	35.29

Analysis of Responses by Scores and Mean

S.No.	Restatement of Research Questions	Scores	Sample size	Mean Decision –@ 3 points	Grand Mean
1	Emotional intelligence helps in personality assessment	935	255	3.66	Accepted
2	Effective human resource management does not require good leadership	454	255	1.78	Rejected
3	Self-confidence promotes effective human resource management	1021	255	4.00	Accepted
4	Motivation or drive leads to effective performance Management	969	255	3.8	Accepted
5	Communication is Important in effective human resource management	454	255	1.78	Rejected

9. Discussion

The psychometric model in Figure 1 points to the direction that emotional intelligence provides effective management and leads to effective human resources management. Effective human resource management often stems from character development, capacity building, productivity, profitability and sustainability. It is worth noting that business management can effectively stabilize the country through effective management of human resources, performance evaluation, compensation decisions and performance improvement methods. The need to explore the relationship between emotional intelligence and interpersonal skills cannot be overemphasized because emotional intelligence relates to personal characteristics and individual characteristics relate to job performance. This becomes crucial in the context where the HRM function competes with all other organizational functions for better performance, and it is assumed that HRM interventions can result in significant business value for the security organization based on management reporting and evaluation. For the people, this is necessary to maintain economic responsibility for the century and beyond. For these and other reasons, the respondents in Table 1 were selected to provide quality data for the study. Their responses, shown in Table 2, support that emotional intelligence leads to self-evaluation, which is an important aspect of effective human resource management. Many psychologists have studied the relationship between emotional intelligence and behavior and its impact on performance. For example, Mayer (2019) stated that the personal workplace includes self-control, cognitive skills, cognitive skills, social skills, intelligence, intelligence, motivation, etc. He believes it is related to.

As shown in Table 2, respondents do not believe that good human resource management does not require good leadership. This is consistent with Cherniss and Roche (2020) that organizational leaders know how to use emotional intelligence. It is generally accepted that self-confidence supports effective human resource management and motivation or motivation is essential for effective management. Participants disagreed that the development of others is not an important part of human resource management, but they did agree that communication supports good human resource management. This initial research also showed that effective human resources management is related to conflict management. There is consensus that intelligence has a positive impact on management performance, with an overall mean score of 3.29, which is higher than the decision mean of 3.00.

10. Recommendations

- i. Self-assessment or tests should be used in the human resources management process to improve the quality of employees.
- ii. Conflict management should be considered as a support to effective human resources management to reduce conflict in organizations.
- iii. A good organizational culture is essential for effective human resource management to support successful management planning and business development.
- iv. Communication encourages openness and collaboration and should be carefully monitored to increase efficiency.
- v. Quality organizations need to build trust among employees who do not like to create others for the organization to fully reap its benefits.

11. Conclusion

Emotional IQ, as an indicator of the ability to take action, is a powerful tool in promoting good people management and is crucial in finding leaders who bring the talent to build modern business organizations to be effective. 255 participants participated in the survey through a research study, and the results showed a positive relationship between emotional intelligence and effective human resource management.

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The Mahatma Gandhi's view on Partition

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Abstract

There have been many great leaders in India who thought differently about the partition of India But Mahatma Gandhi's view was different. He thought that there should be no need for partition and people of all religions should live peacefully. But this could not happen because some politicians and Britishers thought that their work would continue with divide and rule.

Key words Divide and Rule, Partitions, Religion, British Government, Mahatma Gandhi,

Introduction

Before the partition this land was collectively known as British India. The British India was partitioned in august 1947 and after the ending of 3 hundred years of colonial rule with the creation two independent nations: India and Pakistan, that Pakistan comprising west and East Pakistan that time at present time East Pakistan is known as Bangladesh

Reasons of Partitions

There were many religious fights were happened before and after 1857's revolt, between Hindus and Muslims but The basic reasons was the British's divide and rule policy as British were very well knew that in 1857 revolts all Hindus and Muslims together were fought against British's atrocity, britishers saw the unity of Hindus and Muslims and hence thought that if these people remain united then it will be difficult for them to rule india for a long time because of these insecurity they spread the rumor that after independence if britishers leave india hindus will do atrocity on Muslims and britishers made the all india Muslim league for showing muslims that it will be in favour of them and proposed and approved separate electorates after this Hindus started think that britishers are not thinking anything in favour for hindus and they made his own akhil bhartiya hindu mahasabha and many more hindu organizations. It was very crucial time when the hate was on its top positions now hindus and muslims were thinking that both hindu and muslims are in Danger from each other they will not be able to live together in same country, hindus were thinking that Muslim were take over whole county and Muslims were thinking that Hindus will take over the whole country and thus Britishers spreaded two nations theory ,On 3rd June of 1947 in a joint conference with the congress and Muslim league the Partition of India was announced by the last viceroy of India Mr. Louis Mountbatten . during these riots almost 10 lakhs people were brutally killed belongs to all religions, after deciding the borders 72 lakhs of muslims people were migrated from india to Pakistan and 72 lakhs hindus and Sikhs were migrated from Pakistan to India

The Mahatma Gandhi's view on Partition

Mahatma Gandhi's vision was only that all people from all religions live together happily and contribute his or her role to make india a great and prosperous country in the world he has done many efforts to stop this partitions as he knew that the conclusions and results of partitions can be very dangerous so Mahatma Gandhi always opposed the partition of india seeing it as contradiction his vision of unity among Indians of all religions he was never in favour of partitions but situations had been very crucial between hindus and muslims as everywhere religious riots were happening they thought that in this situations if partition is not accepted result will be very dangerous and people from both side will kill each other at mass level thus they had to agree upon partition. At the time of partition Indian

government had about Rs 400 crore in his treasury and Indian government decided Rs. 75 crore give to Pakistan, in 2 installment 20 crore advance and Rs. 55 crore after Partitions after giving Rs. 20 Crore when sardar patel refused to pay rest Rs. 55 crore as Pakistan can plan to use this money to purchase weapon to attack on Kasmir but Mahatma Gandhi threatened to go on hunger strike to release rest amount Rs.55Crore to give Pakistan as he used to think this way we cannot make a good relationship with newly born Pakistan and Mahatma Gandhi went to Hunger strike to give pressure on indian government to release Rs.55 Crore thus Indian government agreed upon giving rest of amount

Other great leaders view on Partition

Mr. Jawahar Lal Nehru opposed partition and believes that it couldn't be communal peace and may be responsible for communal violence in future for many years even after making two different nations india and Pakistan according to them communal Hate is the only reason of this partition

Sardar Vallabh bhai Patel believes that communal tensions between Hindus and Muslims in india were rising during the independence movement and fear of a civil war between the two communities was looming large sardar patel believed that partition was the only way to avoid this

Dr. B.R. Ambedkar believes that to stop communal riots in india all 100 percent muslims should transfer to Pakistan and from Pakistan all 100 percent Hindus and Sikhs should transfer to india this is the only solution to stop the communal differences and riots in future and to make both country peaceful and prosperous

Muhammad ali Jinnah believes that Muslims should have their own separate country to grow their community as he used to think that if they would be live in india they always face the insecurity and atrocity from hindus

Conclusion

As the Great Mahatma Gandhi used to think that people of india from all religions can live together with the ideology of peace and can make the better country after freedom from britishers but even sepetation of both country after many years still there are so many communal difference between hindus and muslims. We fought many fights with our Neighbour country in the name of Land Issues, communal issues there is still this question is alive when we will be live peacefully within our separated country Britishes gave us these difference from the policy of Divide and rule and we are not able to comeout this situations

Reference:-

Some Book's content are taken for reference-

1. The Great Partition,
2. The other side of silence,
3. Midnight furies

Social justice

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सामाजिक न्याय

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लोकतान्त्रिक भारत में सामाजिक न्याय की अवधारणा प्राचीनकाल से चली आ रही है। एक विचार के रूप में सामाजिक न्याय सभी मनुष्यों को समान मानने के आग्रह पर आधारित है। जिसका सीधा सा अर्थ है – धर्म, पंथ, वर्ग, जाति आदि वर्गों को भूलाकर भेदभाव रहित समाज की स्थापना की जाए। संयुक्त राष्ट्रसंघ का चार्टर हो या अमेरिकन संविधान या फिर भारतीय संविधान की प्रस्तावना हो, सामाजिक न्याय का उल्लेख हर जगह देखने को मिलता है। भारतीय संविधान में सामाजिक, आर्थिक और राजनीतिक न्याय का उल्लेख प्रस्तावना के साथ-साथ अनुच्छेद 38 में भी देखने को मिलता है। सामाजिक न्याय शब्द 19वीं सदी में लुडगो तपारेली द एजोग्लियो ने दिया तब से लेकर आज तक इस विषय का खूब विकास हुआ।

1971 में जॉन राल्स की पुस्तक – *The Veil of Ignorance* “अज्ञानता का पर्दा में सामाजिक न्याय बड़े स्तर पर देखने में मिलता है जिसने लिखा है” –न्याय सामाजिक संस्थाओं का सर्वप्रमुख गुण है।” सामाजिक न्याय में व्यक्ति स्वयं के लिए जैसा व्यवहार सोचता है वैसा ही व्यवहार दूसरों के साथ अपनाने पर जोर दिया जाता है।

सामाजिक न्याय सर्वसमावेशी समाज के मार्गदर्शक के रूप में एक सकारात्मक कदम है। जो महान नेतृत्व एवं सर्वधर्म सम्भाव की ओर संकेत करता है। भारतीय संविधान के मौलिक अधिकार हो, नीति निर्देशक तत्व हो या मौलिक कर्तव्य हो, सम्पूर्ण संविधान सामाजिक न्याय से ओतप्रोत है। भारत की विदेश नीति की बात की जाए तो भारत “वसुदेव कुटुम्बकम्” की अवधारणा का पथ प्रदर्शक रहा है। भारत सरकार ने सामाजिक न्याय एवं अधिकारिता मंत्रालय की स्थापना करके वंचित और हाशिए पर रहने वाले वर्गों के कल्याण, सामाजिक न्याय और सशक्तिकरण के लिए जिम्मेदारी का कदम उठाया है। माननीय उच्चतम न्यायालय ने **LEBTQ** को तृतीय लिंग के रूप में मान्यता दी।

सावित्री बाई फुले

सावित्रीबाई ने छुआछूत, सतीप्रथा, बाल और विधवा विवाह निषेध के खिलाफ पति के साथ काम किया। अपने पति ज्योतिबा राव फुले के साथ मिलकर लड़कियों के लिए 18 स्कूल खोले, नारी शिक्षा की अग्रणी बनी।

सावित्रीबाई ने लड़कियों के लिए तब स्कूल खोले जब बालिकाओं का पढ़ना-लिखना सही नहीं माना जाता था। 19वीं सदी में स्त्रियों के अधिकारों, अशिक्षा, छुआछूत, सतीप्रथा, बाल या विधवा विवाह जैसी कुरीतियों पर आवाज उठाने वाली देश की पहली महिला शिक्षिका थी। महाराष्ट्र में जन्मी सावित्री बाई फुले जिन्होंने अपने पति दलित चिंतक समाज सुधारक ज्योति राव फुले से पढ़कर सामाजिक चेतना फैलाई। उन्होंने अंधविश्वास और रूढ़ियों की बेड़ियां तोड़ने के लिए लंबा संघर्ष किया।

महात्मा गांधी

राष्ट्रपिता महात्मा गांधी द्वारा चरखा चलाना एवं नरसी मेहता द्वारा निर्मित गायन "ईश्वर अल्लाह तेरो नाम सबको सन्मति दे भगवान" सामाजिक न्याय की निशानी है। गांधी के अनुसार "बुराई करना आसान है, और छोटा रास्ता हमेशा आकर्षक लग सकता है लेकिन हमेशा प्रेम, अहिंसा और सच्चाई का मार्ग ही होगा जो अंततः व्यक्ति को न्याय के वास्तविक इच्छित लक्ष्य तक ले जाएगा। आज गांधी जी हमारे बीच नहीं हैं, लेकिन उनके विचार प्रेम, सत्य और अहिंसा के सर्वकालिक प्रासंगिक सिद्धांतों के साथ मानवता का मार्गदर्शन करते हैं। किसी भी अन्य विषयवस्तु की तरह सामाजिक न्याय पर गांधी के विचार जीवन भर विकसित होते रहेंगे। उनके सामाजिक न्याय के विचार के भावना सामाजिक न्याय को एक "साध्य" मानती है, 'साधना' नहीं।

अन्य प्राणियों को अपने समान मानने के सिद्धांत पर आधारित समान रूप से महत्वपूर्ण साधनों के साथ एक न्यायसंगत स्थिति है, जो विवाद के किसी भी पक्ष को नुकसान नहीं पहुँचाती है। यह स्थिति जान स्टुअर्ट मिल के उस वाक्य से मेल खाती है जिसमें कहा गया कि समाज चाहे साधुओं का हो भेड़ियों का मनुष्यों का हमेशा साधुपन दिखाना चाहिए।"

अम्बेडकर

आधुनिक मनु अर्थात् अंबेडकर जो अदुत अकल्पनीय व्यक्तित्व की धनी थे उनके द्वारा बनाया गया भारतीय संविधान आज 75 साल बाद भी वैसे ही खड़ा है जैसा प्रारंभिक अवस्था में था जो यह प्रदर्शित करता है कि भारत में सामाजिक न्याय की स्थापना अपने परिपक्व काल में चल रही है।

पंडित रमाबाई

पंडित रमाबाई द्वारा लैंगिक समानता पर बल दिया गया। वही विश्व में मार्टिन लुथर ने काले-गोरों का भेद मिटाने के पक्ष में "मेरा एक सपना है" पुस्तक लिखी। नेल्सन मंडेला ने भी इसका पक्ष लिया। प्लेटो ने विवेक, साहस और संयम के आधार पर न्याय स्थापित किया।

प्लेटो के शिष्य अरस्तु जिसे राजनीति विज्ञान का पिता भी कहते हैं न्याय को स्थापित करते हुए समाज में पुनर्स्थापना पर बल दिया। सामाजिक न्याय के इतिहास के अंतर्गत उदारवाद, समुदायवाद, उत्तर औपनिवेशिक काल हो या समुदायवादी विचारधारा या फिर बहुलवादी विचारधारा— इन सभी विचारधाराओं से इसका सम्बंध रहा है। राजनीति विज्ञान विषय में सामाजिक न्याय सारगर्भिक रूप से भरा पड़ा है तथा सामाजिक न्याय की बात को रखा गया है।

वहीं 20वीं शताब्दी की नई विचारधारा महिला 'मताधिकारवादी' ने लैंगिक समानता पर बल दिया गया है जिसमें सीमोन डि बुआ, बेट्टी फ्रीडमैन इत्यादि विख्यात महिलावादी विचारकों ने सेक्स वर्कर या प्रॉस्टिट्यूट, सेरोगेसी मदर हो महिला हिजाब के विरुद्ध ही कार्यरत रही है तथा उनकी सामाजिक स्थिति सुधारने पर बल दिया।

न्याय हेतु समाजवादी विचारक राम मनोहर लोहिया की चौखंबा व्यवस्था हो या सप्त क्रांतियों का विचार इन सभी में राजनीतिक, आर्थिक शक्तियों का विकेंद्रीकरण कर नवीन समाज की स्थापना पर बल दिया गया तो वही विश्व संसद का उनका विचार सामाजिक न्याय से ओतप्रोत है।

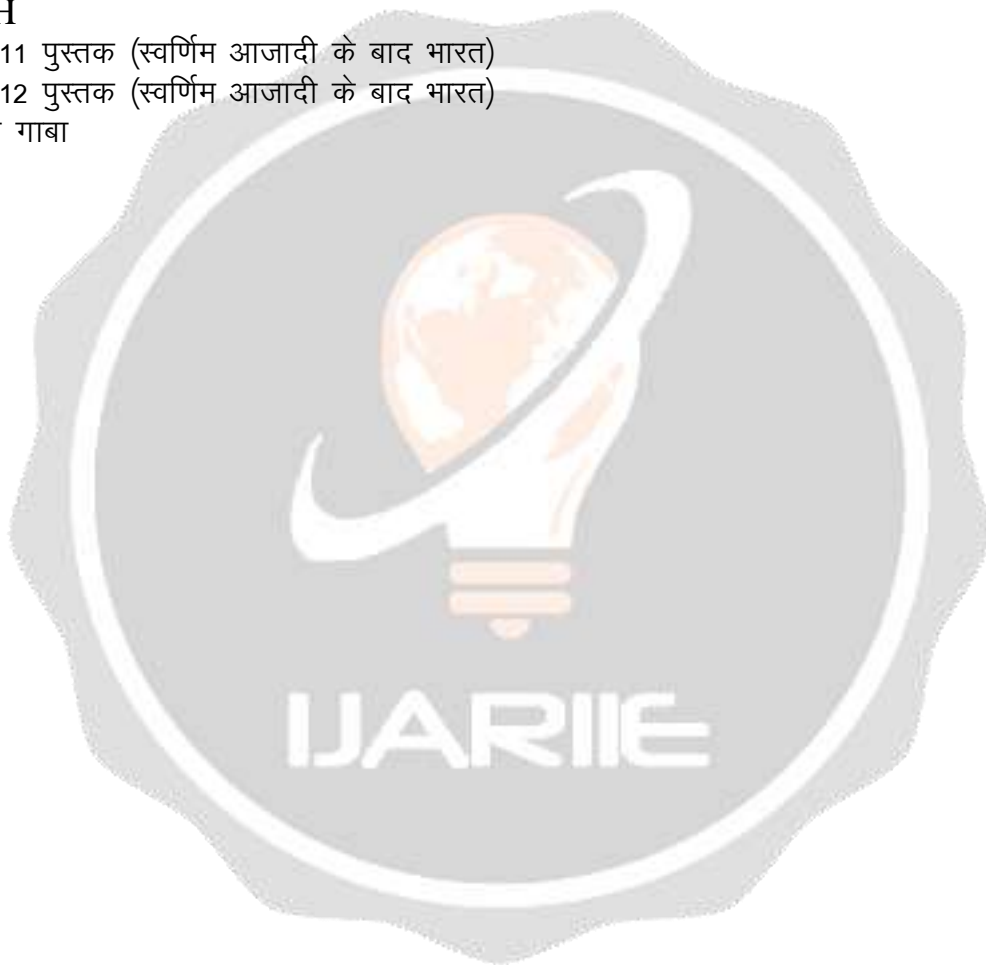
भारत के पहले प्रधानमंत्री जवाहरलाल नेहरू द्वारा सामाजिक राज्य की घोषणा करना सामाजिक न्याय की सर्वोत्तम उपलब्धि है। तत्पश्चात् देखा जाए तो वर्तमान प्रधानमंत्री नरेंद्र मोदी जी द्वारा भी सामाजिक न्याय की अवधारणा को लेकर "सबका साथ सबका विकास" पर बल दिया जा रहा है। इस आधार पर कहा जा सकता है कि समाज में आधुनिक लोकतंत्र में सामाजिक न्याय एक जीवन पद्धति है तथा जीवन को समझने का एक ढंग है जिसमें सभी जातियों, वर्णों, वर्गों और लिंग की असमानता को दूर कर एक नई शिव की कल्पना करना ही सामाजिक न्याय का मकसद है। सामाजिक न्याय एक समावेशी कार्यक्रम है जिसके अंतर्गत महिला और बच्चों के लिए विशेष प्रावधान, अनुसूचित जाति और जनजाति तथा ओबीसी अर्थात् अन्य पिछड़ा वर्ग, अल्पसंख्यकों के लिए विशेष प्रावधानों की व्यवस्था की जाती है वही श्रमिकों के लिए समान वेतन दिया जाता है। बेगार पृथा की समाप्ति एवं निशक्तजनों के लिए संरक्षण की व्यवस्था की जाती है तथा दिव्यांगों को संरक्षण दिया जाता है जिसके लिए अस्पृश्यता

अधिनियम 1955, नागरिक अधिकार संरक्षण अधिनियम 1955, अनुसूचित जाति अनुसूचित जनजाति अत्याचार निवारण अधिनियम 1989, स्त्री संबंधी विधान यह सब सामाजिक न्याय के ही उदाहरण है।

उपरोक्त आधार पर कठोर व्यवस्था के विरुद्ध एक सामाजिक चेतना जो सर्वहितकारी हो वही सामाजिक न्याय है जिसमें वंचित वर्गों को राज्य द्वारा संरक्षण दिलाया जाता है।

स्रोत :-

1. डी डी बसु
2. जयनारायण पांडे
3. अनुपचंद्र कपूर
4. दृष्टि विजन
5. गूगल
6. TMH
7. कक्षा 11 पुस्तक (स्वर्णिम आजादी के बाद भारत)
8. कक्षा 12 पुस्तक (स्वर्णिम आजादी के बाद भारत)
9. ओ पी गाबा



CYBER BULLYING AND MENTAL HEALTH OF ADOLESCENTS

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Abstract

Adolescence is a period of transition from childhood to adulthood. Adolescents go through various changes during this period as physiological, psychological, emotional and personality. These changes in the life of adolescence together with today's fast pacing environment, challenges and stressors to thrive better than the other, have an immense impact on the mental health of adolescence. Today's world which is known as the era of internet and technology also plays an important part in adolescence lives. Cyberbullying is an unfortunate product of recent online communication technologies. Because of their less maturity level adolescents are the main victims of cyberbullying. This review paper highlights the prevalence of cyberbullying in the lives of adolescents and its harmful impact on their mental health.

The 21st century is described as the era of internet and technology. With the easy approach to the smart phones, computer and tablets, much of the interaction among people, especially adolescents, happens in social networking (Mahanta & Khatoniyar, 2019) Now a day's internet has taken main place in our day to day life whether it's about collecting information on different topics to playing games to pass the time or to interact with friends.

Cyberbullying also known as online bullying, refers to sending derogatory and threatening messages using electronic communication devices with intent to harm or harass others. It is a new form of violence that takes place in the virtual environment and has become a serious matter of concern for parents, teachers as well as researchers. Oxford English Dictionary defines cyberbullying as "the use of electronic communication to bully a person, typically by sending messages of an intimidating or threatening nature". Cyberbullying is an unfortunate product of recent communication technologies. Cyberbullying may involve posting threats, sexual remarks, rumours, personal or confidential information, or pejorative labels to or about the victim. With the rise of social media websites like Facebook, Instagram, Snapchat, WhatsApp etc, comments, posts, photos and content shared by individuals can often be viewed by acquaintances as well as strangers. The content shared by an individual online creates a kind of a permanent public record of their views and activities. This public record of a person can be regarded as like an online reputation. Cyberbullying can harm the online reputation of the person being bullied or the victim as well as the persons who participate in or incite bullying behaviour or the perpetrator.

Mental health is an important part of the total health of an individual because mind is the place where an individual's entire thought processes occur, all kinds of ideas and directions to perform different task are issued from mind. These ideas and directions determine our conduct, behavior and personal and social functioning as well as adjustment in our life (Bhargava and Raina, 2007). Positive mental health is an important aspect of one's life, which contributes to the individual's well-being and quality of life. It also helps the society and the economy by increasing one's social functioning and social capital (Rai, Meena, Mathur, 2023). Positive mental health refers to a person's qualities and life skills such as cognitive functioning, positive self-esteem, social and problem solving skills, coping styles to manage major stresses in life, the ability to work productively and to make contributions to the community. It includes a person's complete emotional, spiritual and mental well-being (WHO, 2014). Lack of positive mental health and mental health problems are found in people of all regions, countries and societies (WHO, 2014).

Adolescence is a period of physical, psychological, emotional and personality change, which can lead to stress, and emotional and behavioral problems. The prevalence of mental health problems among adolescents ranges from 14.5% to 25% among various studies done globally. It is estimated that around 20% of the world's adolescents have a mental health or behavioural problem. Upto 50% of mental, behavioural and **psychological** problems have their onset during adolescence period (Kessler, Berglund, Demler, Jin, Merikangas, et al., 2005). Studies that have been done among Indian adolescents estimate the prevalence mental health problems among adolescents to lie between 8.7% and 31.2%. Other estimates indicate that 10 percent of this age group experiences a mental health problem serious enough to cause a significant level of impairment in functioning at home, at school, or in the community (U.S. Department of Health and Human Services. (1999), Shaffer, Fisher, Dulcan, Davies, Piacentini, Schwab-Stone, Lahey, Bourdon, Jensen, Bird, Canino & Regier (1996)).

Several factors contribute to the rising mental health issues across the globe, such as genetics (Shabani et al., 2019), environment (Usher et al., 2019), unhealthy lifestyle choices (Lim et al., 2016), extreme conditions such as COVID-19 (Greenberg, 2020; Moreno et al., 2020), broken relationships and lack of social support (Mehtaa et al., 2023), excessive usage of social media (Karim et al., 2020), and bullying experiences (Giumetti and Kowalski, 2022). People of all ages, professions, genders, geographic regions, colors, castes, and creeds suffer from mental health issues (Oksanen et al., 2020; Achuthan et al., 2023; Bansal et al., 2023). Furthermore, there has been a significant rise in mental health issues since late 2019 due to the COVID-19 pandemic and the resultant exponential increase in internet usage. Although COVID-19 is on the decline, the negative repercussions of high internet use are still visible. One of its most annoying and unfortunate consequences is cyberbullying (Xie et al., 2020).

Cyberbullying differs from traditional bullying in various ways. Information Communication Technology allows bullies to hide their identities and bully others as often as they want to (Bashir Shaikh et al., 2020). Hashemi (2021) also differentiate cyberbullying from traditional bullying, suggesting that cyberbullies can bully a large

number of victims at any given point in time. They further suggest that cyberbullying may leave long-lasting memories in its victims' minds. It takes diverse forms in different situations like:

- Flaming occurs when a perpetrator uses foul and violent language during online communication (Maichum et al., 2016).
- Trolling involves taunting a person or a group in a humorous but undignified manner (ZsaTajolAsanan, 2017).
- Denigration involves spreading malicious information to damage a victim's reputation (Zainudin et al., 2016).
- Masquerading is pretending to be someone else, usually the victim (Peled, 2019).
- Some other modern forms of cyberbullying include outing and cyberstalking (Wright, 2018).

Although cyberbullying is a dreadful act, its adverse impact on an individual's physical and mental health necessitates an in-depth understanding of this phenomenon. Rao and Rao (2021) are of the view that cyberbullying may result in the development of mental health issues, depression (Englander, 2021), anxiety, psychological distress, and post-traumatic stress symptoms (Nochaiwong et al., 2021). The events of cyberbullying are traumatizing and psychologically wounding (Paat and Markham, 2020). Victims of cyberbullying may develop depressive symptoms and insomnia (Kim et al., 2020). Victims may also show lower engagement (Muhonen et al., 2017) and higher attrition intentions (Li et al., 2018). Students are among the worst affected victims (Kowalski and Limber, 2013). They suffer from negative consequences such as higher absenteeism, lack of concentration (Kowalski et al., 2018), feelings of shame and guilt (Ciucci and Baroncelli, 2014), and engaging in anti-social behavior (Cavalcanti et al., 2019).

Maurya et al.'s (2022) 3 year longitudinal study reported that the rates of cyberbullying had increased from 3.8% to 6.4% in female and from 1.9% to 5.6% in male respondents over study's period. Also, their study suggested that female respondents have developed a high rate of suicidal ideation compared to male participants due to experiencing cyberbullying. Bottina, bottina, Regina, Correia, and Rebeiro, (2015) emphasized in their systematic review on cyberbullying prevalence of cyberbullying in the population of adolescents aged between 10 to 17 years is 6.8% to 35.4%. they reported that cyberbullying has very harmful effects on maental health of adolescents like depression, anxiety disorders and also psychosomatic disorders. Xia et al. (2023) report that cyberbullying was one of the major reasons for the development of appearance anxiety in the college students, which has further exaggerated the social anxiety in them. The authors further reported that the combined effect of cyberbullying and appearance anxiety has caused higher social anxiety levels in the college students. Additionally, a study from Bangladesh revealed that university students who experienced cyberbullying during their tenure at the university had developed anger issues, self-guilt, and fear of attending college (Sheikh et al., 2023).

Prevention from cyberbullying

The first line of defense from the cyberbullying or any kind of bullying is the person himself/herself. They need to report immediately to the parents or teachers if they face any kind of bullying. All the networking sites provide safety features for its users to prevent any random person to talk or comment about their posts, children should be

trained to use these safety features. Online apps providing information regarding avoiding or facing cyberbullying can be an added advantage to provide knowledge regarding cyberbullying to the adolescents.

Conclusion

In today's era of internet and technology it cannot be possible for a person to refrain from using new technology or platforms to communicate. With the easy approach to various devices like smart phones, tablets, computers, laptops, in the lives of adolescents it is more likely that they will use internet for different purposes. In current scenario it is evident that not only adolescents are using these technologies, they are more or less dependent on it and using it extensively. With this extensive use bullies easily enter their virtual space and they become a victim of cyberbullying which in turn have a negative impact on their mental health. So it is important to make adolescents aware about cyberbullying, use of safety features in different online applications, so that we can provide them a better future.

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Enhancing Team Performance through Emotional Intelligence: A Comprehensive Analysis

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Abstract:

In the contemporary landscape of organizational management, the significance of teamwork in achieving superior performance and sustainable success cannot be overstated. A crucial determinant of effective teamwork is emotional intelligence (EI), which encompasses the ability to recognize, understand, and manage emotions in oneself and others. In today's dynamic and competitive business environment, organizations are increasingly recognizing the importance of effective teamwork in achieving their strategic objectives. One key factor that significantly influences team performance is emotional intelligence (EI). This research paper explores the role of emotional intelligence in enhancing team performance and proposes strategies for leveraging EI to optimize team dynamics. This research paper investigates the multifaceted relationship between emotional intelligence and team performance, aiming to elucidate the mechanisms through which EI influences various aspects of team dynamics and productivity. Drawing upon a synthesis of existing literature, empirical studies, and theoretical frameworks, this paper offers a comprehensive analysis of the impact of emotional intelligence on team communication, collaboration, conflict resolution, decision-making, and overall effectiveness. Furthermore, it examines strategies and interventions for cultivating emotional intelligence within teams, highlighting best practices and practical implications for organizational leaders and managers. By illuminating the pivotal role of emotional intelligence in enhancing team performance, this research contributes to a deeper understanding of effective team functioning and offers valuable insights for organizations striving to optimize their team dynamics and achieve sustainable competitive advantage.

Keywords: Emotional Intelligence, Team Performance, Team Dynamics, Communication, Collaboration, Conflict Resolution, Decision-making, Organizational Effectiveness

Definition

Our emotional mind will harness the rational mind to its purposes, for our feelings and reactions—rationalizations—justifying them in terms of the present moment, without realizing the influence of our emotional memory.

Daniel Goleman

Emotional Intelligence

Emotional intelligence (EI), also known as emotional quotient (EQ), refers to the ability to recognize, understand, manage, and express emotions effectively, both in oneself and others. It encompasses a set of skills and competencies that enable individuals to navigate the complexities of human emotions and interpersonal relationships. The concept of emotional intelligence was popularized by psychologists Peter Salovey and John D.

Mayer in the early 1990s and later by author and psychologist Daniel Goleman in his bestselling book "Emotional Intelligence."

Emotional intelligence is not fixed and can be developed and strengthened over time through self-awareness, self-reflection, and practice. Cultivating emotional intelligence skills can lead to numerous benefits in various aspects of life, including improved relationships, enhanced communication, better decision-making, higher resilience, and greater overall well-being. Organizations also recognize the importance of emotional intelligence in leadership and team effectiveness, as individuals with high EI tend to be more successful in their roles and contribute to a positive and productive work environment.

Emotional intelligence (EI) has emerged as a critical factor influencing team dynamics, communication, collaboration, conflict resolution, decision-making, and ultimately, organizational effectiveness. This research paper offers a thorough review of existing literature to elucidate the intricate interplay between emotional intelligence and various aspects of team performance. Drawing upon theoretical frameworks, empirical studies, and practical insights, this paper examines how emotional intelligence impacts team dynamics and contributes to organizational success. Specifically, it explores the role of EI in fostering effective communication, promoting collaboration, facilitating conflict resolution, and optimizing decision-making processes within teams.

Team Performance

Team performance refers to the collective effectiveness and efficiency with which a group of individuals works together to achieve shared goals and objectives. It is a measure of how well a team performs in terms of accomplishing tasks, meeting deadlines, and delivering results. Team performance encompasses various dimensions, including productivity, quality of output, communication, collaboration, team dynamics, leadership, Conflict Resolution, Decision Making and organizational effectiveness adaptability.

Emotional Intelligence and Team Performance

Team performance in emotional intelligence (EI) refers to how well a team collectively recognizes, understands, and manages emotions, both within individual team members and within the team as a whole, to achieve optimal outcomes. It involves leveraging emotional intelligence skills such as self-awareness, self-regulation, empathy, and effective interpersonal relationships to enhance team dynamics and productivity.

- A. **Self Awareness:** Individuals with high emotional intelligence are aware of their own emotions, strengths, weaknesses, and triggers. This self-awareness helps them understand how their behavior and emotions impact others within the team. They can recognize their own biases and manage them effectively, leading to more constructive interactions with team members.
- B. **Empathy :**Empathy is the ability to understand and share the feelings of others. Team members with high emotional intelligence are better able to empathize with their colleagues, understanding their perspectives, concerns, and emotions. This fosters trust and rapport within the team, leading to improved communication and collaboration.
- C. **Team dynamics** refer to the interactions, relationships, and processes that occur within a group of individuals working together towards a common goal. It encompasses the behaviors, attitudes, roles, and

norms that influence how team members collaborate, communicate, and coordinate their efforts to achieve shared objectives. Team dynamics encompass a wide range of factors that influence how teams function and interact. By understanding and actively managing team dynamics, organizations can create an environment conducive to collaboration, innovation, and success.

Team dynamics in emotional intelligence (EI) refer to how emotional intelligence influences the interactions, relationships, and processes within a team. Emotional intelligence encompasses the ability to recognize, understand, manage, and express emotions effectively, both in oneself and others.

Team dynamics in emotional intelligence involve creating an environment where emotions are acknowledged, understood, and managed effectively to promote collaboration, communication, and positive relationships within the team. By fostering emotional intelligence among team members and cultivating a culture that values empathy, understanding, and resilience, organizations can enhance team dynamics and achieve greater success.

- D. Communication** plays a crucial role in emotional intelligence (EI) as it serves as the primary vehicle through which individuals express, understand, and manage emotions in themselves and others.

Communication plays a pivotal role in emotional intelligence by facilitating the expression, understanding, and management of emotions in interpersonal interactions. Effective communication skills are essential for building relationships, resolving conflicts, fostering empathy, and exerting positive influence, all of which contribute to individuals' and organizations' emotional intelligence and overall success.

- E. Leadership:** Emotionally intelligent leaders can inspire and motivate their team members by understanding their needs and aspirations. They lead by example, demonstrating empathy, self-awareness, and effective communication skills. Such leaders create a positive and supportive team culture where individuals feel valued and motivated to contribute their best.

- F. Adaptability:** Teams often face changes and challenges, and emotional intelligence helps team members adapt to these situations more effectively. Individuals with high EI can manage stress, remain flexible, and adapt their behavior and approach as needed to navigate uncertain or challenging circumstances.

- G. Collaboration** is a critical aspect of emotional intelligence (EI) as it involves working effectively with others, leveraging emotional awareness, empathy, and interpersonal skills to achieve shared goals.

Collaboration is closely intertwined with emotional intelligence, as it requires individuals to navigate interpersonal dynamics, communicate effectively, manage conflicts, build trust, and work towards common goals with empathy and understanding. By leveraging their emotional intelligence skills, individuals can enhance collaboration within teams, leading to greater synergy, productivity, and success.

- H. Conflict resolution** in emotional intelligence refers to the ability to effectively manage and resolve conflicts or disagreements in a manner that considers the emotions and perspectives of all parties involved. Emotional intelligence (EI) plays a critical role in conflict resolution by enabling individuals to regulate their own emotions, empathize with others, and communicate assertively and empathetically.

Conflict resolution in emotional intelligence involves leveraging emotional awareness, regulation, empathy, communication skills, problem-solving abilities, and relationship management to resolve conflicts constructively and maintain positive relationships with others. By cultivating emotional intelligence skills, individuals can become more effective at navigating conflicts, fostering understanding and collaboration, and promoting harmony and cooperation within teams and organizations.

- I. Decision-making** in emotional intelligence (EI) involves using emotional awareness, empathy, and self-regulation to make thoughtful, rational decisions that take into accounts both cognitive reasoning and emotional considerations.

Decision-making in emotional intelligence involves integrating emotional awareness, regulation, empathy, social skills, intuition, and ethical considerations to make thoughtful, rational decisions that lead to positive outcomes for one and others. By cultivating emotional intelligence skills, individuals can enhance their decision-making abilities and navigate complex choices with wisdom, compassion, and integrity.

- J. Organizational effectiveness** refers to the extent to which an organization achieves its goals and objectives while maximizing efficiency, productivity, and performance. Emotional intelligence (EI) plays a crucial role in organizational effectiveness by influencing various aspects of organizational culture, leadership, teamwork, and employee engagement.

Emotional intelligence plays a crucial role in organizational effectiveness by influencing leadership effectiveness, team dynamics, employee engagement, conflict resolution, change management, and customer relations. By cultivating emotional intelligence skills at all levels of the organization, organizations can create a culture of empathy, collaboration, and resilience that drives performance and achieves strategic objectives effectively.

- K. Strategies for Enhancing Team Performance through Emotional Intelligence:** Organizations can enhance team performance through various strategies aimed at cultivating emotional intelligence within teams. This includes providing training and development programs focused on EI skills, promoting a culture that values empathy, communication, and collaboration, and fostering leadership practices that prioritize emotional intelligence in team management.

Conclusion:

In conclusion, enhancing team performance through emotional intelligence requires a comprehensive understanding of how EI influences team dynamics, communication, collaboration, conflict resolution, and decision-making. By leveraging emotional intelligence initiatives, organizations can create high-performing teams that drive innovation, productivity, and success in today's competitive business environment. Investing in the development of emotional intelligence within teams is not only beneficial for individual well-being but also essential for organizational effectiveness and long-term sustainability.

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IMPACT OF YOGIC PRACTICES AND PRANAYAMA ON CARDIOVASCULAR DISEASES (CVDs) PATIENTS

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ABSTRACT

This study aims to explore how practising Yoga can positively impact heart health, examining both the physical and mental aspects involved. It delves into how Yoga, particularly through specific poses (asanas) and breathing exercises (pranayama), can affect various heart health indicators such as blood pressure, heart rate, lipid levels, and inflammation markers. The research suggests that regular Yoga practice, alongside stress management and lifestyle adjustments, can lead to notable improvements in heart health.

The study sought to assess the effects of one month of supervised Yoga and meditation practice on individuals with cardiovascular diseases (CVDs) like coronary artery disease (CAD), hypertension, and arrhythmias.

KEYWORDS: Cardiac health, yoga, stress management, holistic health,coronary artery disease(CAD).

INTRODUCTION

Yoga is often described as a treasure trove of physical and mental wellness, embodying a holistic approach with its origins rooted in ancient India. Its practice involves a diverse range of elements including physical postures, controlled breathing techniques, meditation, ethical principles, and philosophical teachings. Over time, the influence of yoga has spread far beyond its place of origin, reaching numerous countries across the globe. Today, yoga has not only flourished but has also evolved into a vibrant way of life embraced by people from diverse cultures and backgrounds worldwide. Modern lifestyles and chronic stress levels have profound effects on health. The body in stress releases hormones like cortisol and adrenaline which becomes the cause of hypertension. And hypertension leads to a major

risk of heart disease, stroke and other cardiovascular problems. An unhealthy diet, sedentary behaviour, and inadequate sleep are all these factors that are majorly responsible for the development of heart diseases.

But for heart patients, it becomes essential to understand that not all yoga practices can be performed. Asanas that are gentle, low impact, improves circulation can prove to be helpful in the

In cardiovascular conditions, yoga along with allopathic medicine has proved to maintain heart health by maintaining stress, lowering blood pressure, improving flexibility, reducing inflammation and promoting overall well-being.

Yoga asanas that are generally considered safe and beneficial are:

1. Tadasana (Mountain Pose): This standing pose helps improve balance and circulation as well as helps promote relaxation and deep breathing.
2. Vrikshasana (Tree Pose): This asana improves balance and concentration and brings relaxation.
3. Sukhasana (Easy pose) This seated pose is comfortable and promotes relaxation. It is often used for meditation and breathing exercises.
4. Marjaryasana-Bitilasana (Cat-Cow Pose): This gentle flow between cat and cow poses helps stretch the spine, improve flexibility, and promote relaxation.
5. Bhujangasana (Cobra Pose): This gentle backbend stretches the spine, opens the chest, and improves breathing capacity. It can help improve circulation and relieve stress.
6. Setu Bandhasana (Bridge Pose): This gentle backbend strengthens the back, stretches the chest, and improves circulation. It can also help relieve stress and anxiety.
7. Balasana (Child's Pose): This is a resting pose and it helps promote relaxation, relieves tension in the back and shoulders, and encourages deep breathing.
8. Shavasana (Corpse Pose): This final relaxation pose is performed lying down and promotes deep relaxation, stress reduction, and integration of the practice.

Pranayama, or yogic breathing exercises that help in improving cardiovascular health:

1. Anulom-Vilom (Alternate Nostril Breathing): This method entails inhaling via a single nostril while simultaneously shutting the other nose, followed by exhaling through the opposite nostril. It aids in regulating the autonomic nervous system, reducing stress, and enhancing lung function.
2. Bhramari Pranayam (Bee Breathing): This technique involves making a humming sound while exhaling gently through the nose. This calms the nervous system and promotes relaxation which is beneficial for heart health.

3. ShitaliPranayam: It involves inhaling deeply through the mouth over an extended tongue, and then exhaling slowly through the nose. This breathing has a cooling effect on the body lowers body temperature and calms the mind.
4. DirghaPranayam: This involves breathing deeply into the abdomen, then expanding the ribcage, and finally filling the chest with breath. This improves lung function and promotes relaxation.

LITERATURE REVIEW:

Innes KE, Vincent HK (2007) examined the potential cardiovascular benefits of yoga, including its effects on blood pressure, heart rate variability, lipid profiles, and endothelial function. It synthesizes evidence from clinical trials and observational studies to provide insights into how yoga may contribute to cardiovascular health promotion and disease prevention.

Tyagi A and Cohen M (2014) examined the many ways in which yoga may impact cardiovascular health, including reducing stress, improving autonomic function, and enhancing endothelial function. Additionally, it examines the empirical data that supports yoga as a supplementary treatment for several cardiovascular ailments, such as hypertension, coronary artery disease, and heart failure.

Sivasankaran et. al. (2014) In the study titled "Yoga and Cardiovascular Health: A Review," the author offers a comprehensive analysis of how yoga affects the cardiovascular system physiologically. The findings indicate a notable decrease in sympathetic activity, an improvement in baroreflex sensitivity, and the regulation of inflammatory markers. This review succinctly summarises various clinical studies exploring the impact of yoga on cardiovascular risk factors and outcomes. It underscores the potential of yoga as a non-pharmacological approach in both preventing and managing cardiovascular diseases.

RESEARCH METHODOLOGY

Study Design:

This research used a Randomised Controlled Trial (RCT) approach to comprehensively investigate the impact of engaging in four-week yoga sessions on several indices of heart health in persons diagnosed with hypertension. This rigorous methodology included the random allocation of participants into distinct groups, enabling researchers to meticulously examine and compare the results of those who took the yoga sessions with those who did not. The researchers wanted to get a comprehensive grasp of the impact of frequent yoga practice on heart health in persons with hypertension by using this strategy.

Participants:

The study recruited participants from a community health centre who met specific criteria: they were aged between 35 and 65, who are affected with hypertension (with a systolic blood pressure of ≥ 140

mmHg or a diastolic blood pressure of ≥ 90 mmHg), and had no medical conditions that would prevent them from participating in moderate-intensity physical activity. A total of twenty people who met these criteria were chosen for the research ($n = 20$).

Session:

The yoga session consisted of twice-weekly, 60-minute yoga sessions held at the community health centre over a 4-week period. The subjects were monitored properly and, provided yoga sessions by a qualified yoga trainer and consisted of a blend of mild yoga postures, breathing exercises (pranayama), and relaxation methods. Participants were encouraged to practice the techniques learned in the sessions at home for 15-20 minutes per day on non-class days.

Comparison Group:

Participants in the control group received standard care for hypertension, including lifestyle modification advice and medication management as recommended by their healthcare providers.

Outcome Measures:

The primary variables under scrutiny included systolic and diastolic blood pressure, heart rate, cholesterol levels (including total cholesterol, HDL cholesterol, and LDL cholesterol), and perceived stress levels, which were assessed using validated questionnaires. Additionally, supplementary outcome indicators encompassed BMI, waist circumference measurements, and self-reported levels of physical activity. These comprehensive measures were employed to gain a thorough understanding of the potential effects of the yoga sessions on various aspects of participants' cardiovascular health and overall well-being.

Data Collection:

Baseline assessments were conducted prior to randomization, and follow-up assessments were conducted immediately after the 4-week intervention period. Blood pressure measurements were obtained using an automated sphygmomanometer, cholesterol levels were assessed using fasting blood samples analyzed in a clinical laboratory, and stress levels were assessed using the Perceived Stress Scale (PSS). Anthropometric measurements were obtained using standardized procedures.

Data Analysis:

The data from the study were carefully analysed using a principle called intention-to-treat, which means all participants who were initially enrolled were included in the analysis, regardless of whether they completed the entire study or not. To handle any missing data, advanced techniques known as multiple imputation methods were applied. When comparing the changes in outcome measures from the beginning to the end of the intervention, statistical tests called paired t-tests were used to see changes within the same group, while independent t-tests were used to compare between different groups. The level

considered statistically significant was set at a p-value of less than 0.05, indicating that any observed effects were unlikely to have occurred by chance.

Ethical Considerations:

The Institutional Review Board (IRB) of [Institution] granted approval for this research. Prior to recruitment, all participants provided informed permission, and precautions were used to safeguard participant confidentiality and privacy throughout the research.

Limitations:

This study was a relatively short duration of intervention period, with potential for selection bias due to convenience sampling, and reliance on self-reported physical activity levels.

This example offers a methodical and comprehensive summary of the study's design, characteristics of the participants, intervention, measurements of outcomes, processes for collecting data, techniques of analysis, ethical issues, and limits of the research study.

ANALYSIS:

HEART HEALTH PARAMETERS	BEFORE YOGA (AVERAGE)	AFTER ONE MONTH OF YOGA (AVERAGE)
Blood Pressure(mmHg)	135/84	118/75
Resting Heart Rate (bpm)	85	68
Cholesterol Levels(mg/dL)	Total: 203 HDL: 45 LDL:120	Total:175 HDL: 55 LDL:95
Body Mass Index(BMI)	28(Overweight)	25(Normal)
Physical Activity	60 minutes per week	200 minutes per week

After 30 days of practicing yoga, there were significant improvements in the levels of LDL, TC, and HDL in the blood compared to the baseline levels seen when participants initially started. In addition, the lipid profiles of experienced yoga practitioners showed notable differences in comparison to those who were beginners in yoga. A study comparing the effects of yoga on two groups - one consisting of individuals new to yoga and the other consisting of individuals with medical conditions such as hypertension, diabetes, recent surgery, or cardiovascular disease (CVD) - found that the healthy group showed a significantly greater improvement in their cholesterol profile compared to the group with medical issues.

CONCLUSIONS:

The results of this study highlight the importance of delving deeper into understanding how yoga influences the primary prevention of cardiovascular disease. It's evident that regular yoga sessions offer significant advantages for individuals with heart-related issues and hypertension. These benefits include lowering systolic and diastolic blood pressure, heart rate, body fat percentage, as well as reducing total cholesterol, triglycerides, and LDL levels. Therefore, incorporating yoga practices into further research could prove immensely beneficial, particularly for individuals grappling with conditions like coronary artery disease. By exploring the therapeutic effects of yoga in more detail, we can potentially uncover additional ways in which it can contribute to overall heart health and improve preventive measures against cardiovascular diseases. This not only opens avenues for better management of existing conditions but also for the proactive promotion of heart wellness in the broader population.

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Importance of yogic education in the present context

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वर्तमान संदर्भ में योगिक शिक्षा का महत्त्व

भावना कच्छवाहा
दर्शनशास्त्र विभाग, जयनारायण व्यास विश्वविद्यालय, जोधपुर

सन्दर्भ

1. योग सूत्र : 1/2
2. योग सूत्र : 2/29
3. योग सूत्र : 2/31
4. योग सूत्र : 2/39
5. डॉ. श्रीवास्तव सुरेशचन्द्र, योग सूत्र, पृ. 373

शीर्षक

शिक्षा समाज के विकास और प्रगति का अभिन्न अंग है जो व्यक्ति के व्यक्तित्व का बहुमुखी विकास करती है जिसमें शारीरिक, मानसिक, भावनात्मक, धार्मिक, नैतिक, चारित्रिक, सामाजिक विकास भी सम्मिलित है। शिक्षा मानव संसाधन को विकसित करने का साधन है। शिक्षा सोद्देश्य सामाजिक प्रक्रिया है जिसके द्वारा व्यक्ति की जन्मजात शक्तियों का विकास होता है। ब्रिटिश शासन द्वारा आरम्भ की हुई शिक्षा प्रणाली विद्यार्थियों के विकास के महत्त्वपूर्ण आयाम को स्पर्श नहीं करती है। भारत पहले विश्वगुरु कहलाता था। विदेशों से छात्र-छात्राएँ यहाँ अध्ययन हेतु आते थे क्योंकि भारत की शिक्षा में योगिक शिक्षा शामिल थी जिसे पुनः प्राथमिक, उच्च प्राथमिक, स्नातक, स्नाकोत्तर में अनिवार्य शिक्षा के रूप में शामिल किया जाना चाहिए क्योंकि योग का उद्देश्य ही व्यक्ति के जीवन का समग्र विकास करना है। योग जीवन जीने की कला है। यह शांतिपूर्ण, स्वास्थ्यपूर्ण, खुशहाल तरीके से जीवन व्यतीत करने का प्राचीन ज्ञान है। योग के नियमित अभ्यास से शरीर स्वस्थ एवं सुदृढ़ होता है, मानसिक संतुलन बना रहता है, व्यक्तियों में समाहित सुप्त शक्तियाँ जाग्रत हो जाती हैं।

योगिक शिक्षा द्वारा ही हम प्रेम, शांति, सहयोग, धैर्य द्वारा अनुशासित, सुखमय व उच्च नैतिक समाज बना पायेंगे और ऐसे नैतिक समाज से नैतिक राष्ट्र और नैतिक राष्ट्र से नैतिक विश्व का निर्माण संभव है और तभी हम एक शांतिमय, सुखमय समृद्ध एवं कल्याणकारी विश्व की स्थापना कर पायेंगे।

मुख्य शब्द

चहुंमुखी विकास, योग विद्या, स्वास्थ्यपूर्ण, विश्वगुरु, नैतिक समाज, नैतिक राष्ट्र, नैतिक विश्व।

किसी भी देश की शिक्षा प्रणाली उस देश की प्रगति और विकास का आईना होती है। शिक्षा प्रणाली न मात्र व्यक्ति को आकार प्रदान करती है बल्कि पूरे समाज को भी आकार प्रदान करती है। इसके अन्तर्गत हर एक घटक अपना महत्वपूर्ण योगदान देता है जो शिक्षा प्रणाली को संपूर्ण बनाता है। शिक्षा का उद्देश्य ज्ञान व कौशल का विकास करना, व्यक्ति के सोचने की क्षमता का विकास करना, जिससे व्यक्ति में आत्म विश्वास, आत्मनिर्भरता, आत्म संयम, विवेक जागृत हो सके। शिक्षा सामाजिक, नैतिक आध्यात्मिक मूल्यों द्वारा संस्कृति के संरक्षण पर बल देती है।

अंग्रेजों ने भारत में जिस शिक्षा प्रणाली की शुरुआत की वह अंग्रेजों की आवश्यकताओं की पूर्ति करने में सहायक होने की दृष्टि से बनाई गई थी लेकिन यह भारत में आज भी थोड़े परिवर्तन के साथ जारी है। के.के. कस्तूरीरंगन समिति की सिफारिशों पर भारत में नई 'राष्ट्रीय शिक्षा नीति 2020' लागू की गई जिसमें भारतीय शिक्षा प्रणाली को प्री-प्राथमिक, माध्यमिक और उच्च माध्यमिक में विभाजित किया गया। उच्च माध्यमिक शिक्षा के बाद स्नातक व स्नातकोत्तर कोर्स पर बल दिया गया परन्तु इस संपूर्ण शैक्षिक ढांचे में भारत की सबसे प्राचीन योग विद्या को शिक्षा के अनिवार्य अंग के रूप में शामिल नहीं किया गया जो प्री-प्राइमरी से स्नाकोत्तर स्तर पर शामिल किया जाना वर्तमान समय के लिए अति-आवश्यक है। प्रत्येक देश की कुछ सांस्कृतिक विशेषताएँ होती हैं जो वहाँ के पाठ्यक्रम निर्माण का आधार होती हैं। इसी प्रकार भारतीय संस्कृति का मुख्य आधार अध्यात्म विद्या योग विद्या है इसके न रहने पर कोई भी पाठ्यक्रम सार्थक नहीं हो सकता। भारत में फिर से अपनी प्राचीनतम अध्यात्म विद्या, योग विद्या को सामान्य जन की जीवनशैली का हिस्सा बनाने की आवश्यकता है क्योंकि समाज में बढ़ते अपराधों को समाप्त करने, मानवीय मूल्यों की स्थापना करने, शिक्षा की गुणवत्ता बढ़ाने, नशा मुक्त राष्ट्र का निर्माण करने, भारतीय संस्कृति का संरक्षण करने के लिए योगिक शिक्षा को अनिवार्य शिक्षा के रूप में शामिल किया जाना

अपरिहार्य है। योग का उद्देश्य हमारे जीवन का समग्र विकास करना है। समग्र विकास में शारीरिक, मानसिक, सामाजिक, नैतिक, आध्यात्मिक विकास शामिल है।

योग एक विज्ञान है जिसके द्वारा जन्म-जन्मान्तर के संस्कार क्षीण हो जाते हैं और आत्म साक्षात्कार द्वारा मोक्ष की प्राप्ति संभव है।

पातंजल योग दर्शन के अनुसार योग का अर्थ है "योगश्चित्त वृत्ति निरोध"¹ अर्थात् मनुष्य की सारी चित्त वृत्तियों को पूर्णतः शांत करना, निरोध करना ही योग है जिससे व्यक्ति के अज्ञान का नाश हो जाता है और वह अपने स्वरूप में स्थित हो जाता है।

"यम, नियम, आसन प्राणायाम, प्रत्याहार, धारणा, ध्यान, समाधि"² ये योग के आठ अंग हैं। जो इस प्रकार हैं

(1) यम – अर्थात् जो हमें नहीं करना चाहिए।

अहिंसा, सत्य, अस्तेय, ब्रह्मचर्य, अपरिग्रह यह सार्वभौम और महाव्रत है।³

- I. अहिंसा – मन, वचन कर्म द्वारा हिंसा न करना, किसी को कोई चोट नहीं पहुँचाना ही अहिंसा है।
- II. सत्य – जो जैसा है उसे उसी रूप में प्रकट करना। यह भी तीनों स्तर मनसा, वाचा, कर्मणा होना चाहिए।
- III. अस्तेय – चोरी न करना। यह भी तीनों स्तर मन, वचन, कर्म द्वारा होना चाहिए।
- IV. ब्रह्मचर्य – अकामुकता एवं वीर्य संरक्षण करना।
- V. अपरिग्रह – अनिवार्य आवश्यकताओं से अधिक संग्रह न करना।

(2) नियम – 'शोच, संतोष, तप, स्वाध्याय, ईश्वर प्रणिधान' ये 5 नियम हैं।⁴

1. शोच – आन्तरिक व बाह्य शुद्धता। बाह्य का तात्पर्य – शारीरिक स्वच्छता से है आन्तरिक अर्थात् मानसिक शुद्धता, विचारों में शुद्धिकरण।
2. संतोष – जीवन में जितना मिले उसी में प्रसन्न रहना, तृष्णा त्याग ही संतोष है।
3. तप – 'विषम परिस्थितियों में सम बने रहना तप है'।⁵ सुख-दुःख लाभ-हानि में सम रहना।
4. स्वाध्याय – स्वयं ही वेदो, शास्त्रों, विवेक ज्ञान जाग्रत करने वाले ज्ञान जाग्रत करने वाले ज्ञान को चिंतन, मनन, पठन करना स्वाध्याय है।

5. ईश्वर प्रणिधान – ईश्वर की भक्ति, अपने सारे कर्मों को परमपिता परमेश्वर को समर्पित करना।

(3) आसन – योग का तृतीय अंग आसन हैं एक विशेष अंग विन्यास में बैठना आसन है। इससे शारीरिक दर्द में भी आराम मिलता है।

(4) प्राणायाम – श्वास-प्रश्वास की क्रिया को नियंत्रित करना। जिसमें पूरक, कुम्भक, रेचक शामिल हैं।

(5) प्रत्याहार – व्यक्ति का अपनी इन्द्रियों पर नियंत्रण। वह बहिर्मुखी से जब अन्तःमुखी हो जाती है तो वह प्रत्याहार है।

(6) धारणा

(7) ध्यान

(8) समाधि – इनके द्वारा एकाग्रता में वृद्धि के साथ व्यक्ति को मुक्ति (मोक्ष) की प्राप्ति हो जाती है।

इस अष्टांग योग के पालन से न केवल शारीरिक शक्तियों का विकास होता है, शरीर ओजस्वी कांतिमय बनता है अपितु मन को आत्मिक शांति मिलती है, परमानन्द की प्राप्ति होती है।

स्वामी विवेकानन्द ने कहा था कि “जिस शिक्षा से हम अपना जीवन निर्माण कर सकें, मनुष्य बन सकें, चरित्र गठन कर सकें और विचारों का सामंजस्य कर सकें वही वास्तव में शिक्षा कहलाने योग्य है।” यही समस्त ज्ञान हमारी प्राचीनतम योगिक शिक्षा में समाहित है। योग की शिक्षा हमारे नैतिक मूल्यों, ज्ञानात्मक मूल्यों, समाज प्रधान मूल्यों को बढ़ाने में अपनी महत्वपूर्ण भूमिका निभाती है। आत्मोन्नति के साधन के रूप में इसकी अपनी महत्ता है जो न सिर्फ व्यक्ति के लिए लाभकारी व हितकर है अपितु पूरे समाज, पूरे राष्ट्र और पूरे विश्व के लिए भी उपयोगी लाभकारी व हितकर है।

Psychological Role of Social Media: A systematic Review

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Abstract

The psychological role of social media has become a central focus of research and discussion as these platforms continue to permeate every aspect of contemporary life. This abstract explores the multifaceted influence of social media on individuals' psychological well-being, identity formation, and interpersonal relationships. Firstly, social media platforms serve as powerful tools for self-presentation and identity construction. Users curate online personas, carefully selecting and forwarding content that reflects their desired image. This process leads to a sense of self-validation and social affirmation, contributing positively to self-esteem. However, it also raises concerns about the authenticity of online identities and the potential for social comparison, which may lead to feelings of inadequacy and anxiety. Secondly, social media's influence on mental health is a growing area of concern. Research indicates a correlation between excessive social media use and heightened levels of depression, anxiety, and loneliness. The constant exposure to idealized representations of others' lives may create unrealistic standards and foster a fear of missing out (FOMO), further exacerbating psychological distress. Moreover, social media's impact on interpersonal relationships is noteworthy. While these platforms facilitate connectivity, they also introduce challenges such as cyberbullying, social isolation, and the blurring of personal and professional boundaries. The constant stream of information can contribute to information overload, leading to cognitive fatigue and reduced well-being. In conclusion, the psychological role of social media is complex, influencing self-perception, mental health, and interpersonal dynamics. Understanding these dynamics is crucial for individuals, mental health professionals, and policymakers alike to navigate the evolving landscape of social media and its implications on psychological well-being.

1. Key Words: Social Media, Psychological Well-being, Identity Formation
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Introduction

Defining Social Media:

Social media constitutes a dynamic and ever-expanding realm within the digital landscape that facilitates the creation, sharing, and exchange of information, ideas, and content among virtual communities. Examples range from popular platforms like Facebook, Twitter, and Instagram to professional networks like LinkedIn and multimedia-sharing platforms such as YouTube and TikTok. Social media platforms serve as virtual spaces where individuals can connect, communicate, and express themselves, fundamentally altering the way people interact and engage in the modern era.

Psychological Implications:

The widespread adoption of social media has introduced a myriad of psychological implications, influencing individual behaviors, perceptions, and well-being. Understanding these implications is crucial for navigating the intricate relationship between users and the digital environments they inhabit.

1. **Social Comparison and Self-Esteem:** Social media platforms often serve as curated showcases of individuals' lives, presenting carefully selected aspects that may not reflect the entirety of reality. The constant exposure to these idealized representations can foster social comparison, wherein users measure their own lives against the seemingly perfect portrayals of others. This phenomenon can contribute to feelings of inadequacy, lowered self-esteem, and a pervasive sense of not measuring up to societal standards (Fardouly et al., 2015).
2. **Identity Construction and Authenticity:** Social media platforms provide individuals with a unique canvas for constructing and projecting their identities. However, the process is nuanced, as users navigate the tension between authenticity and the desire to present an idealized version of themselves. The digital space introduces challenges in maintaining a genuine online self, leading to questions of identity and self-discovery (Gonzales & Hancock, 2011). The pressure to conform to online norms may contribute to identity fragmentation, where individuals grapple with aligning their online persona with their authentic self.
3. **Mental Health and Well-being:** The relationship between social media use and mental health outcomes is a topic of extensive research. While these platforms offer connectivity and support, they also introduce challenges that can impact mental well-being. Excessive social media use has been associated with increased levels of depression, anxiety, and feelings of loneliness (Primack et al., 2017). The curated nature of content and the constant exposure to others' achievements can contribute to a distorted perception of reality, fostering unrealistic standards that may exacerbate mental health issues.
4. **Interpersonal Relationships:** Social media's impact on interpersonal relationships is a delicate balance between connectivity and potential pitfalls. On the positive side, these platforms facilitate communication and the maintenance of relationships across geographical distances. However, challenges such as cyberbullying, online harassment, and the blurring of personal and professional boundaries can strain the quality of relationships. The constant influx of information may contribute to information overload, potentially affecting face-to-face interactions (Kross et al., 2013).
5. **Societal Dynamics:** Beyond individual experiences, the psychological implications of social media extend to societal levels. The amplification of social and political discourse through these platforms can contribute to the polarization of opinions and the spread of misinformation. Societal pressures, driven by online norms and unrealistic beauty standards, may lead to issues such as body image dissatisfaction and the commodification of self-worth.

Review of Research Literature

1. Psychological Well-being:

Positive Influences: Numerous studies have explored the potential positive impacts of social media on psychological well-being. Social media platforms can serve as spaces for social support, community building, and the exchange of emotional expressions (Vogel & Rose, 2016). Positive interactions on these platforms have been associated with increased feelings of connectedness, belonging, and overall life satisfaction (Verduyn et al., 2017). Moreover, the sharing of positive experiences and receiving supportive feedback through likes and comments can contribute to a sense of validation and self-esteem (Tiggemann & Slater, 2014).

Negative Impacts: On the flip side, a growing body of literature points to the detrimental effects of social media on psychological well-being. Excessive use, particularly with a focus on social comparison, has been linked to increased levels of depression, anxiety, and feelings of loneliness (Primack et al., 2017; Kross et al., 2013). The curated nature of content on social media may contribute to a distorted perception of reality, fostering unrealistic standards that can negatively impact mental health (Fardouly et al., 2015).

Conclusion on Psychological Well-being: The research landscape on the psychological impact of social media on well-being is complex, with findings suggesting both positive and negative outcomes. Factors such as usage

patterns, content engagement, and the quality of online interactions play pivotal roles in determining the impact on psychological well-being.

2. Identity Formation:

Online Persona and Authenticity: Identity formation in the context of social media is a multifaceted process. Users engage in the creation of online personas, carefully curating content to project specific aspects of their lives. Research underscores the tension between authenticity and the desire to present an idealized version of one (Gonzales & Hancock, 2011). The pressure to conform to societal and online norms may lead to challenges in maintaining a genuine online identity (Toma & Hancock, 2012).

Self-Presentation and Social Comparison: The process of constructing an online identity is closely tied to social comparison dynamics. Users often engage in comparing their lives to the curated representations of others, impacting self-perception and identity construction (Vogel et al., 2014). The constant exposure to idealized images and lifestyles on social media may contribute to feelings of inadequacy and identity challenges (Chou & Edge, 2012).

Conclusion on Identity Formation: The literature review on identity formation within the realm of social media emphasizes the intricate interplay between authenticity, self-presentation, and social comparison. Understanding the dynamics that shape online identity construction is crucial for comprehending the psychological implications of social media use.

Conclusion: The reviewed literature underscores the multifaceted nature of the psychological impact of social media on variables such as psychological well-being and identity formation. While social media platforms offer avenues for positive interactions, support, and self-expression, they also introduce challenges related to social comparison, identity authenticity, and mental health. Future research should delve deeper into the moderating factors and individual differences that contribute to varied psychological outcomes, providing a more nuanced understanding of the complex relationships between social media and individual psychology.

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Human Rights for Senior Citizen Life Dignity

Dr. Aruna Tak

Human rights are rights Inherent to all human Beings, regardless of race, sex, Nationality, Ethnicity, language, religion or any other status. Human rights include the right to life and liberty, freedom of opinion and Expression, Freedom from slavery and torture Freedom of right to work and Education, and many more.

Human rights are a set of principles concerned with Equality and fairness. They recognise our freedom to make choices about our lives and to Develop our potential as human Beings They are about living a life free from fear, Harassment or Discrimination Thus, the Importance of Human Rights to Govern how individual Human Being live in Society with each other, as well as their relationship with the state and the obligations that the state have towards them.

Human rights laws obliges the children's, living in family, to take care of Aged parents or senior citizens. Senior citizens are also called, Elderly and Aged persons. The maintenance and welfare of Parents and Senior citizens Act 2007 was enacted to ensure need Based maintenance for parents and senior citizens and their welfare.

Article 41 of the constitution secures the rights of senior citizens Rule 21 of senior citizen Act Says about Protection of life and property of senior citizen. This measures for Publicity, Awareness, etc for welfare of senior citizens.

The Basic care needs of the Elderly or senior citizens are :-

- | | | |
|----------------------|-----------------------------|----------------------|
| (1) Family support | (2) Home Safety | (3) Medical Needs |
| (4) Cognitive Health | (5) Mobility | (6) Personal Hygiene |
| (7) Meal Preparation | (8) Social Interaction etc. | |

"Old age" is usually Associated with declining faculties, Both mental and physical, and a reduction in social commitments of any person.

The right of parents, without any means, to Be supported By their children having sufficient means which has Been recognised By Section 125 (1) (d) of the code of criminal Procedure 1973. The moral Duty to maintain parents is recognised By all people, The Position and extent of such liability varies from community to community. The obligation to maintain parents is not confined to son only, the Daughters also have an equal Duty towards parents.

The Government has launched various. Schemes and Policies for older persons or for senior citizens. These Schemes and policies are ment to promote the Health, well-Bening and independence of senior citizens around the country like National policy for older persons, National council for older persons, Formation of senior citizens Association etc.

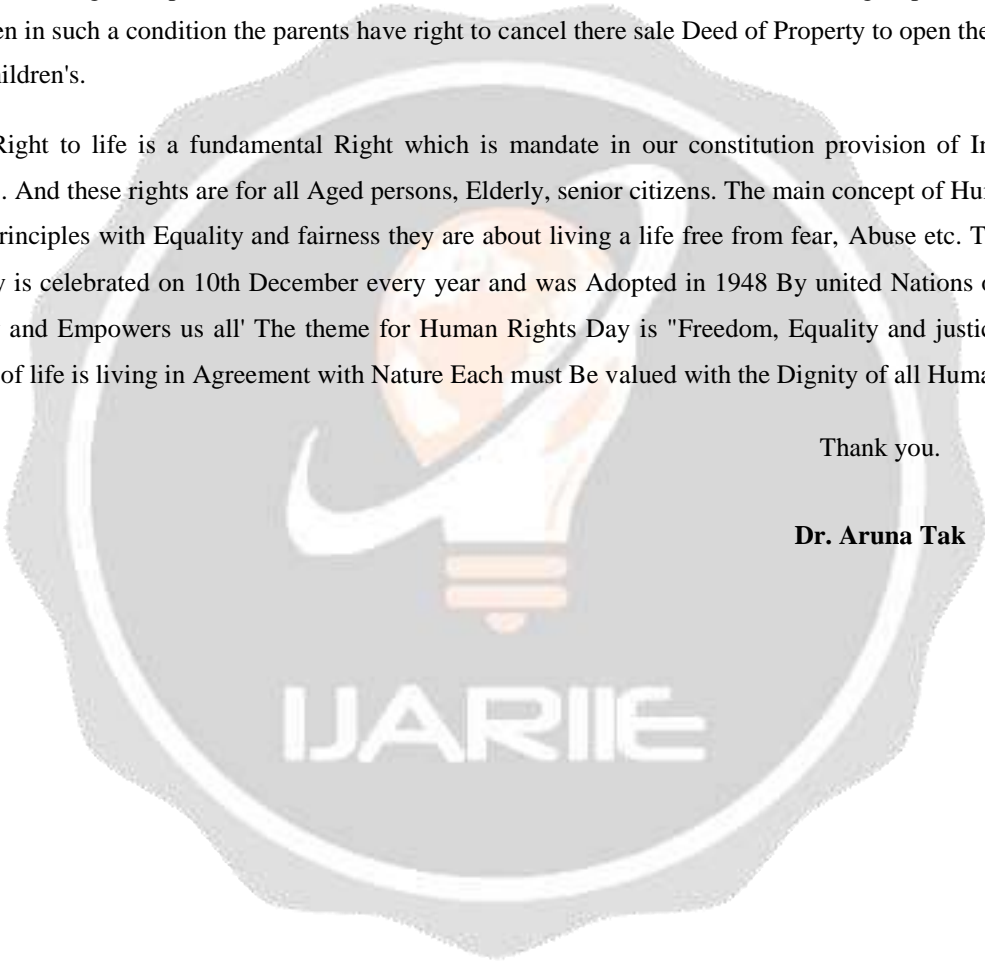
But yet Aged parents or Senior citizens are living in old age homes and many are send to live in old age homes By their own childrens, Because this all is due to modernization and Globalization of person living in remote areas and also Joint Families are walking towards Nuclear family. Living in old age homes, the Aged parents have loneliness Because they need love of their own childrens and want to live in Dignity with and in their own family members. According to my suggestion please given love and support and little care to seniors or Aged parents. Listen to your Elder's Advice. Not Because they are Always rights But Because they have more experience of Being wrong. Always given Emotional Support to the aged parents As they have given you in your childhood and till now in this youth Age life ; Because a life is a Journey of experience, growth and connection.

According to supreme court Decision if children doesn't take care for their Aged parents or senior citizen then in such a condition the parents have right to cancel there sale Deed of Property to open the mind and eyes of children's.

Right to life is a fundamental Right which is mandate in our constitution provision of India under Article 21. And these rights are for all Aged persons, Elderly, senior citizens. The main concept of Human rights is to set principles with Equality and fairness they are about living a life free from fear, Abuse etc. The Human Right Day is celebrated on 10th December every year and was Adopted in 1948 By united Nations of General Assembly and Empowers us all' The theme for Human Rights Day is "Freedom, Equality and justice of All". The Goal of life is living in Agreement with Nature Each must Be valued with the Dignity of all Human Beings.

Thank you.

Dr. Aruna Tak



PSYCHONEUROIMMUNOLOGY AS A COMBATING TOOL FOR POSTPARTUM DEPRESSION- A literature review based study

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Abstract

Maternal mental health spans in a temporary fashion from pre-conception through the phases of pregnancy, childbirth, and the post-partum (i. e. Perinatal). Postpartum depression is a relatively common and often severe mood disorder outlined by a complex mix of physical, emotional, and behavioral changes that happen in a significant percentage of women during the first year after giving birth. Long term consequences include sadness, guilt, and despair. Despite much research the mechanism and the etiology of PPD remains unclear. In the present chapter, we will be investigating the role of Psychoneuroimmunology (PNI) in combating PPD. By reviewing the related literature in the present context, the current study suggests that if the innate immune system and the Hypothalamic- Pituitary- Adrenal (HPA) axis returns to their normal function after delivery, it lowers the chances of the development of PPD. Also deficiencies in n-3 PUFA, B- vitamin and vitamin-D and trace minerals may serve as a cause of depression during the Perinatal period. This study recommends nutrition counseling to increase n-3 PUFA, vitamin-D and trace minerals. Non pharmacological treatment modality with respect to PPD can be utilized which can prove to be helpful to suppress the genetic translation of depression.

Keywords- Mental health, Post-partum depression, Psychoneuroimmunology, HPA.

Introduction

Becoming a mother is one of the most fortunate thing that can ever happen to a woman It brings abundant joy and happiness in one's life. A kind of rollercoaster ride starts and the mother fastens her seat belt, but like it is said, every beautiful thing has a hidden darker side, the postpartum period or the perinatal period is

the one which often brings with it some harsh psychosomatic changes and gets labelled as Postpartum depression or PPD.

PPD is a relatively common and often severe mood disorder outlined by a complex mix of physical, emotional and behavioural changes that happen in a significant percentage of women during the first year after giving birth. Long term consequences include sadness, guilt and despair

DSM-5 defines PPD as a major form of depression that begins within four weeks after delivery.

The etiology of PPD still remain under wraps yet it is linked to chemical, social, and psychological changes that a new mother experiences after delivery. A wide spectrum of both physical and emotional changes occur in the postpartum women, PPD can be treated with medication and counselling

The present chapter enfold the role of Psychoneuroimmunology (PNI) or Psychoendoneuroimmunology (PENI) or Psychoneuroendocrinoimmunology (PNEI) in combating PPD. PNI is the study of the interaction between psychological processes and the nervous and immune system of the human body. The relationship between the nervous and the immune systems is bidirectional. Negative emotions and stress has the potential to adversely affect the immune system, by practicing some techniques, the sympathetic nervous system and immune system can indeed be voluntarily influenced. Ader et al. 1995, defines PNI as the study of interactions between behaviour, neural and endocrine function, and immune processes. PNI aims to elucidate mechanisms by which the immune system can influence behaviour and vice versa Thus, theoretical knowledge based on PNI approach can be used as a basis of future individual care.

Pathophysiology of Postpartum Depression

The most common cause of PPD tends to be the changes in estrogen, progesterone, serotonin, monoamine oxidase, GABA level. At the time of pregnancy, these hormones are secreted in large quantities and a sharp and sudden drop is seen in the levels of estrogen and progesterone post-delivery. A few changes that are observed:

- Changes in Hypothalamic pituitary axis (HPA).
- Thyroid dysfunction.
- Decreased level of Omega- 3 PUFA and DHA.
- Progesterone metabolises into Allopregnanolone which modulates the GABA receptors and inhibits proinflammatory process. Cytokines IL-6 reduces the function of allopregnanolone.

- Estrogen increases the level of IFN-gamma which is also proinflammatory cytokines and plays major role in development of postpartum depression.

HPA in Major depressive disorder (MDD) has been repeatedly characterized by dysregulated HPA axis function at multiple levels. The Diagnostic and Statistical Manual of Mental Disorders (DSM-V), identifies two distinct clinical depressive syndromes, melancholic and atypical depression. These are based on patterns of psychological and neurovegetative symptoms and are independent of the unipolar/bipolar distinction. Melancholic Depression, with symptoms including loss of pleasure, depressed mood at its worst in the morning, insomnia, reduced appetite and/or substantial weight loss and psychomotor alterations, is consistently associated with the HPA hyperactivation. In contrast, Atypical Depression which is characterized by retention of mood reactivity, weight gain, hypersomnia, interpersonal rejection sensitivity and depressive symptoms that worsen as the day progresses, is associated with hyporesponsiveness. Due to the fact that the postpartum period is one of mild adrenal suppression, it has been proposed that PPD is more closely aligned with the hyporesponsive atypical subtype (Kammerer et al., 2006; Mastorakos and Ilias, 2000). Currently the DSM-V applies the “postpartum onset” specifier when a depressive episode begins within the first 4 weeks after delivery and the International Classification of Diseases and Health Related Conditions (ICD-10), developed by the World Health Organization, extends this window to 6 weeks postpartum. Although a debate exists concerning whether or not MDD and PPD represent distinct syndromes, there is evidence that PPD is a significant risk factor for the later development of non-puerperal depression and vice versa (Robertson et al., 2004; Stowe et al., 2005), suggesting they may share common etiological roots. Consistent with this view, accumulating data implicate dysregulated HPA axis function in puerperal affective disorders as well as nonpuerperal.. The HPA axis in pregnancy and postpartum during human pregnancy, the neuroendocrine stress system is profoundly altered. The pituitary gland doubles in size and the output of pituitary peptides increases several fold as gestation progresses. But it is the growth and development of a new organ, the placenta that is primarily responsible for the profound changes in the stress circuit. By the seventh week of gestation, CRH is additionally synthesized by syncytial cells in the human placenta (Jones et al., 1989; Riley et al., 1991) and is released into the maternal and fetal compartments (Economides et al., 1987; Goland et al., 1988). Placental CRH production increases dramatically over gestation with levels in maternal circulation reaching those only observed within the hypothalamic-pituitary portal system during stress (Lowry, 1993). This is in stark contrast to the non-pregnant state in which CRH immunoreactivity in the plasma is very low or undetectable. The rising circulating levels of HPA axis hormones and Pcrh have consistent implications for the endocrine response to challenge. Across a

range of stressors during pregnancy, the HPA axis response diminishes and this is true for many non-human species as well (Maestriperi and D'Amato, 1991; Viérin and Bouissou, 2001; Wartella et al., 2003). The diminished stress response observed during human pregnancy is not confined the activities of the HPA axis. Pregnant women also show dampened blood pressure, heart rate and catecholamine responses to physical and psychological challenges (Nierop et al., 2006, 2008). In addition in parallel to these comprehensive physiological changes, pregnant women also exhibit diminished psychological responses to stress (Glynn et al., 2004, 2001). Further, there is reason to believe that the down-regulation of stress responding during pregnancy serves an adaptive purpose, providing some protection for mother and fetus from the adverse effects of stress. During the postpartum period, due to the delivery of the placenta, the HPA axis is exposed to extreme perturbations in the form of the acute withdrawal of Pcrh. The hypertrophied adrenal glands of gestation persist into the postpartum period and cortisol levels gradually decline after birth. In these cases, the return to normal of the HPA axis can take weeks, months and in some rare cases, even years. The duration of the suppression is moderated by the length and dose of the treatment and the extent of the hypercortisolism. Given these findings, it is not surprising that postpartum, women exhibit persisting alterations HPA axis function. Best estimates suggest that it takes a minimum of two to three months for HPA function to return to its pre pregnancy dynamic equilibrium (Magiakou et al., 1996; Owens et al., 1987).

Hypertension has also been linked with an increased risk of depression in pregnancy or childbirth. According to the studies conducted by Oana Denisa Balalau et al. (2021) , hypertensive disorders in pregnancy cause an altered inflammatory response identifying significant increase in the levels of IL-6, IL-8 and TNF-alpha in pregnant women with preeclampsia. Although hypertensive manifestations remit in approximately 6 weeks postpartum, the inflammatory syndrome persists for up to 3.5 months.

On the basis of the above studies, it can be established that changes in the functioning of HPA axis along with a history of hypertension in a comorbid form could play a catalytic role in the development of postpartum depression, however ascertaining the origin of PPD only to chemical and physical causes doesn't serve the purpose, along with the biological genesis, social, environmental and psychological determinants also play a vital role in the buildout of PPD.

PSYCHONEUROIMMUNOLOGICAL ASPECTS OF POSTPARTUM DEPRESSION

The perinatal period is a very important time to strengthen the bond between the new mother and the new born however, falling a prey to PPD can disturb the equation. Talking about the psychoneuroimmunological aspect,

postpartum period is the most vital phase to utilize PNI perspective that has the potential to improve our understanding of the immune system given the adaptations that occur during the perinatal period (Racicot, Kwon, Aldo, Silasi and Mor, 2014). The implantation phase is characterized by increased immune activation (Mor, Cardenas, Abrahams and Guller, 2011), followed by fetal growth where the maternal immune system adapts to the semi-allogenic fetus (Ernerudh, Berg and Mjösberg, 2011), while processes associated with the delivery (cervical ripening and contractility) are pro-inflammatory (Sennström et al., 2000). Furthermore, the postpartum period consists of three distinct phases, where the two initial stages (the initial 24 h followed by the first six weeks) are characterized by major bodily recovery and associated biological changes (Romano, Cacciatore, Giordano and La Rosa, 2010). Consequently, the entire immune system, not just the sex hormones, undergo remarkable adjustment from pregnancy to postpartum (Bränn, Edvinsson, Rostedt Punga, Sundström-Poromaa and Skalkidou, 2019).

In a study, Osborne et al. (2019) found an increase in pro-inflammatory cytokines during the third trimester in women with higher levels of depressive symptoms. It could be hypothesized, that failure to adapt to the immune changes of pregnancy might increase the risk of, or result from, depression.

SYMPTOMS OF POSTPARTUM DEPRESSION-

The symptoms of PPD are hard to detect and are often overlooked for not being efficient in taking care of the baby making the surrounding environment all the more complicated for the new mother. The general symptoms include

- Mood swings
- Changes in appetite
- Severe fatigue
- Disturbance in sleeping pattern
- Crying (without any apparent reason)
- Self doubt
- Self image
- Body image

Some other symptoms are not typical, may include-

- Remaining indifferent towards the baby

- Aggression and frustration
- Suicidal tendencies
- Extreme sadness
- Feelings of intrapersonal aggression

Baby Blues v/s Postpartum Depression

Generally there is an overlap between symptoms of PPD and Baby Blues and the terms are used interchangeably but there lies a difference between both the two. The time period in which the symptoms occur is the major differentiating factor. The Baby blue subsides after a few weeks while the symptoms of PPD will be there for a longer stretch of time. If we take a spectrum of the symptoms, the wider form of symptoms like irritability, fatigue, insomnia will fall under postpartum blues while the severe forms of symptoms like aggression, feelings of detachment from the progeny, suicidal tendencies forms a part of PPD.

Postpartum Psychosis

Postpartum psychosis has an acute and abrupt onset, usually observed within the first 2 weeks following delivery or, at most, within 3 months postpartum, and should be regarded as psychiatric and obstetrical emergency. History of schizophrenia or bipolar disorders are some of the major risk factors for the development of PP. Common symptoms include elation, lability of mood, disorganized behaviour and hallucinations.

Postpartum posttraumatic stress disorder

Trauma during delivery or stressful pregnancy period may result in postpartum PTSD. It is generally characterized by tension, nightmares, flashbacks and autonomic hyperarousal that can continue for some weeks or months.

Anxiety disorders specific to the puerperium

De Armond observed that fear of cot death can reach up to a level of pathological degree. The most common feature is nocturnal vigilance characterized by the mother lying awake listening to the infant's breathing, and frequent checking resulting in sleep deprivation.

Obsession of child harm

Women diagnosed with postpartum onset of major depression may have repetitive, intrusive thoughts related to some occurring to the baby associated with compulsive checking behaviour. Postpartum onset of OCD can occur during gestation or within 6 weeks following delivery. The obsessions is mostly related to thoughts of harming the baby.

Interventions

As PPD awareness grew, women were treated in a similar fashion as patients in a psychiatric ward with drugs, psychotherapy, or a combination of both (Dalton & Holton, 2001). The treatment of PPD is generally holistic and includes reassurance, familial and social support, psychoeducation and in some cases, psychotherapy or pharmacologic treatment.

Nonpharmacological Intervention

The nonpharmacological aspect includes individual psychotherapy, especially for females who find it difficult to adjust with the new role followed by a bundle of responsibilities. Psychoeducation and providing emotional support to the affected partner is a must. The entire family must be involved while chalking out the treatment plan. Respite care services should be recommended especially at night to minimize the mother's sleep disruption. Therapies can be utilized as a part of treatment plan. A few of them are:

Cognitive Behavior Therapy

Cognitive Behaviour therapy (CBT) is an effective treatment modality. CBT has been known to be as effective as taking a prescribed antidepressant thereby providing another, perhaps even safer, option for treatment. This is a substantial finding for the mother who is apprehensive about taking an antidepressant as Appleby et al., (1997) demonstrated CBT's efficacy in six sessions when compared to an antidepressant. CBT can be a sensible treatment method for women with PPD.

Interpersonal Psychotherapy Interpersonal psychotherapy (IPT) is a brief, empirically-based psychotherapy that was initially used to treat major depression but has been adapted to treat many other mental illnesses. It focuses on helping the client effectively deal with social and life events while lessening symptoms of depression. In addition, the goal is to promote autonomy independent of the therapeutic

relationship (Weissman, Markowitz & Klerman, 2007). IPT is shown to result in greater reduction in depressive symptoms and improvement in social adjustments. Reassurance and emotional support towards the mother can boost the self-esteem and confidence of the mother. Peer support and psychoeducation are important interventions.

Alternative Therapies

Recent research has focused on alternative therapies such as hypnosis, electroconvulsive, art, and exercise. Relaxation or guided imagery was addressed in a study (Goldfried, 1974) and found to alleviate postpartum emotional difficulties and facilitate adjustment to the new maternal role. A home-based exercise program has been shown to reduce the symptoms of mental and physical fatigue in mothers with PPD (Dritsa et al., 2008). Results of this study suggest that exercise can have a long term impact on women with PPD. Results of three-month follow-up assessment revealed that women in the treatment group still exhibited less mental and physical fatigue when compared to those assigned to the control group.

Nutritional intervention

J. Wjeik and others (2006) found that a decrease in the levels of zinc and magnesium during PPD. Thiamine (vitamin B1) deficiency increases mouse depression, aggression, confusion and memory impairment, which antidepressants suppress (Nakagawasai et al.2007). Thus it is recommended to consume diets rich in zinc and magnesium.

PUFA

Two families of essential long-chain PUFA cannot be synthesised by human bodies: *n*-3 and *n*-6 fatty acids. Thus, human diets must contain either the *n*-3 and *n*-6 PUFA or their precursor molecules (α -linolenic acid for *n*-3 and linoleic acid for *n*-6). *N*-3 PUFA are concentrated in fatty fish and certain algae; their precursor α -linolenic acid is concentrated in plant sources such as flaxseed and walnuts.

Inference

There are many aspects present in relation to development of postpartum depression like- endocrinological, psychological, social, nutritional, immunological, biochemical, etc. Based on current literature it can be recommended to use principles of these aspects in treatment modality of postpartum depression. Non pharmacological treatment modality in order to bring HPA axis to normalcy can be proved useful. Dietary consultation suggesting increasing the quantity of PUFA, consultations with psychiatrist and psychologists who offer services such as screening, testing and in-home assistance (nurses, doulas and nannies), along with the prescription of readily available anti-depressants. Psychobiological diagnostics could facilitate identification of individuals suffering from poor perinatal mental health who might not be easily identifiable via more traditional methods. The PNI approach could contribute to knowledge needed for early targeted prevention, Screening of the affected individual via self-reports for mood symptoms may result in some biased response, such targets could be achieved by following a dual approach with biomarkers and neurophysiological assessments that would improve both diagnostics and choice of therapeutics. The challenges that persist are the logistics of getting the postpartum mother to the physical location or getting the information and support to the now isolated new mother. Consequently, without further scientific research and the implementation of additional treatment alternatives, the postpartum mother is left to deal with these symptoms or the symptoms are being ignored until the situation becomes unbearable for all members of her family. While different treatment options exist, certain options may not be suitable for every client. Women with PPD would benefit from working with a mental health care provider to determine an appropriate course of treatment. Likewise, mental health care providers have an obligation to familiarize themselves with both empirically-based treatments and emerging treatments to establish a proper treatment plan for their postpartum clients. Recommendations for further study include an investigation into whether increasing counseling for and counselor involvement for PPD can decrease the length and severity of symptoms without the use of antidepressants. Treatment of PPD has often utilized different forms of psychotherapy, given the concern about pharmacological treatment postpartum on the suckling infant. Other treatment approaches are various including preventative exercise, acupuncture, massage, morning light exposure, and hypnosis. It is a must to identify the predictive and distinct biomarkers that can enable identification of disease subtypes, as well as indicate treatment strategy.

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Introduction of Rajasthani Research Institute and contribution of famous people in history

Dr. Jaswant Sharma, Dr. Sunil Bishnoi

राजस्थानी शोध संस्थान का परिचय एवं ख्यातों का इतिहास में योगदान

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श्री नाकाड़ो पार्ष्वनाथ जैन महाविद्यालय जोधपुर

हमारे देश ने स्वाधीनता के पश्चात् नवीन करवट ली। नवगठित सरकार और स्वयंसेवी संगठन जागरूक हो उठे। शिक्षा के क्षेत्र में जहाँ एक नवीन क्रान्ति का सूत्रपात हुआ वही अनुसंधान कार्यो की ओर विद्वानों का ध्यान आकृष्ट होने से साहित्य, संस्कृति और इतिहास विषयक आधारभूत प्राचीन ग्रन्थों की खोज के साथ ही प्राच्य विद्या ज्ञान राशि को संजोने-संवारने के सार्थक प्रयासों के प्रति उत्सुकता बढ़ने लगी।

फलस्वरूप सरकारी और स्वयंसेवी शोध संस्थाओं का निर्माण होने लगा। वैसे शोध संस्थाओं की स्थापना करना तो सरल है, परन्तु सुनिश्चित मापदण्डों के आधार पर उन्हें मूर्त रूप देना कठिन है, क्योंकि इसमें धन-राशि और साधन जुटाने की आवश्यकता तो होती ही है इसके साथ ही निष्ठा और समर्पित भाव से रात-दिन कार्य करने वाले विवेकशील साधक की जरूरत भी रहती है।

चौपासनी शिक्षा समिति को भाग्य से इन दोनों पहलुओं का निर्वाह करने वाले ठा. भैरुसिंह जी खेजड़ला और नारायणसिंह जी भाटी जैसे कर्मठ व्यक्ति मिल गये। उनके अथक प्रयासों 1955 ई. में राजस्थानी शोध संस्थान की स्थापना हुई।

तत्पश्चात् चौपासनी शिक्षा समिति के अध्यक्ष स्व. ठा. भैरुसिंह जी खेजड़ला संस्थान को राज्य सरकार से 1957 ई. में मान्यता एवं अनुदान दिलाने में सफल हुए, वहीं संस्थान के निदेशक स्व. डॉ. नारायणसिंह जी भाटी ने अनवरत प्रयास कर संस्थान को मूर्त रूप दिया।

स्व. ठाकर भैरुसिंह खेजड़ला चौपासनी शिक्षा समिति में 1954 से 1963 तक अध्यक्ष पद पर कार्यरत रहे, तथा स्व. नारायण सिंह भाटी 1955 से लेकर, अपने जीवन के अन्तिम समय (18 अप्रैल, 1994) तक राजस्थानी शोध संस्थान के डायरेक्टर, पद पर कार्यरत रहे।

राजस्थानी शोध संस्थान, जोधपुर रेल्वे स्टेशन 6 मील उत्तर-पश्चिम दिशा में चौपासनी विद्यालय के परिसर में स्थित है। चौपासनी विद्यालय पश्चिमी राजस्थान की एक महत्वपूर्ण शिक्षण संस्था है जिसकी स्थापना सन् 1912 में जोधपुर के तत्कालीन रीजेण्ट महाराजा सूर प्रताप सिंह ने की थी। इसी विद्यालय के आहते में राजस्थानी शोध संस्थान का ग्रन्थागार स्थित है। इससे 1 कि.मी. दूर चौपासनी गांव बसा हुआ है। यहाँ तक शहर से सिटी बस की व्यवस्था उपलब्ध है।²

चौपासनी शिक्षा समिति के तत्कालीन अध्यक्ष श्री भैरुसिंह खेजड़ला तथा सचिव श्री विजयसिंह सिरियारी का प्रमुख योगदान रहा। प्रारम्भ से ही संस्थान के संचालन का कार्यभार श्री नारायणसिंह भाटी को सौंपा गया।³

लगभग 55 वर्षों के अथक श्रम और सुनिश्चित योजना-बद्ध कार्य सम्पादन से आज इस क्षेत्र में राजस्थान की ही नहीं अपितु देश की यह एक महत्वपूर्ण संस्था है जो विश्वविद्यालय (जोधपुर) स्तर पर राजस्थानी भाषा, साहित्य व मध्यकालीन भारतीय इतिहास विषयों में पी.एच.डी. व डी.लिट् की उपाधियों हेतु शोध के लिए मान्यता प्राप्त शोध-केन्द्र है।⁴

उद्देश्य :-

राजस्थान की अमूल्य धरोहर को सुरक्षित रखने हेतु इस संस्थान की स्थापना के साथ ही शोधपत्रिका 'परम्परा' का प्रकाशन संस्थान के संस्थापक निदेशक डॉ. नारायणसिंह भाटी के सम्पादन में प्रारम्भ हुआ। और उन्होंने अपने अथक प्रयासों से 101 अंक प्रकाशित किये अर्थात् 'परम्परा' का शतक बनाया और 101वां विशेषांक 'परम्परा शतक सिंहावलोकन' के रूप में प्रकाशित किया।

शोध पत्रिका 'परम्परा' इस संस्थान की त्रैमासिक शोध पत्रिका है। इस पत्रिका की सबसे बड़ी विशेषता यह है कि इसका प्रत्येक अंक एक विशेषांक के रूप में प्रकाशित होता है, इस कारण इसके सभी अंक संग्रहणीय हैं। स्तर की दृष्टि से भी इसकी तुलना किसी अन्य शोध पत्रिका से नहीं की जा सकती, क्योंकि इसके अनेक विशेषांक जैसे-राजस्थानी साहित्य का आदिकाल, राजस्थानी साहित्य का मध्यकाल, डिंगल कोश, लोक-गीत, ऐतिहासिक बातें आदि विश्व विद्यालय में संदर्भ ग्रन्थ के तौर पर स्वीकृत किये गये हैं और कुछ अंक पाठ्यक्रम में भी स्थान पा चुके हैं।

शोध पत्रिका 'परम्परा' के अंकों में इतिहास, लोकसाहित्य, राजस्थान के साहित्य व संस्कृति सम्बन्धी सामग्री सुसम्पादित व प्रामाणिक रूप से प्रेषित की जाती है। इन अंकों में इन विषयों की अनेक विधाओं को इसमें स्थान दिया गया है। बात, ख्यात, वचनिका, छन्द-शास्त्र, कोश, व्याकरण, अनुवाद टीका, ऐतिहासिक सामग्री लोक-साहित्य का अध्ययन, आलोचना गीत, दोहे आदि अनेकानेक विधाओं की शोध पत्रिका 'परम्परा' के अंकों का अवलोकन एक प्रकार से राजस्थानी साहित्य व संस्कृति का अपनी समग्रता में अवलोकन है और उसकी प्रामाणिकता राजस्थान के सम्बन्ध में शोध-कार्य की एक पुख्ता विस्तृत भूमिका प्रस्तुत करने में सक्षम है।

इस पत्रिका के लिये जहाँ अन्य साधनों से सामग्री जुटाई जाती है वहाँ संस्थान में संग्रहीत ग्रन्थों का भी प्रयोग किया जाता रहा है।

राजस्थानी का गद्य साहित्य बहुत प्राचीन रहा है। 14वीं सदी से लेकर आज तक राजस्थानी गद्य साहित्य की रचनाएं होती रही हैं। राजस्थानी के प्राचीन गद्य साहित्य को प्रमुख पांच भागों में विभाजित किया गया है।³ यथा-

1. धार्मिक गद्य साहित्य
2. ऐतिहासिक गद्य सहित्य
3. कलात्मक गद्य साहित्य
4. वैज्ञानिक गद्य साहित्य
5. प्रकीर्णक गद्य साहित्य

कलात्मक गद्य साहित्य- राजस्थानी के कलात्मक गद्य साहित्य में ख्यात, बात, विगत, वचनिका, दवावैत सिलोका व वर्णक ग्रन्थ आदि रूपों में मिलता है। यह गद्य साहित्य ऐतिहासिक दृष्टि से अत्यन्त महत्वपूर्ण है। यह निम्न रूप में उपलब्ध है-

ख्यात— ख्यात शब्द संस्कृत के 'ख्याति' शब्द से बना है। ख्याति प्राप्त प्रख्यात एवं लोकविश्रुत पुरुषों की जीवन घटनाओं के संग्रह को ख्यात की संज्ञा दी गई है। राजस्थान के राज्यों पर लिखी गई ख्यातों में वहाँ के शासकों के जीवन घटनाओं का क्रमबद्ध विवरण मिलता है। इसलिये राजस्थान के इतिहास के अध्ययन हेतु ख्यात ग्रन्थों का सर्वाधिक महत्त्व रहा है। 16वीं शताब्दी के उत्तरार्द्ध में अकबर के समय में अबुल-फजल ने आईने-ए-अकबरी की रचना की। इसके उपरान्त देशी राज्यों में भी ख्यातों का लिखा जाना प्रारम्भ हुआ।⁹

डॉ. ओझा के अनुसार ख्यात ऐतिहासिक गद्य रचना को कहा जाता है, जिसमें राजपूत राजाओं के इतिहास की घटनाओं का वंशक्रमानुसार चित्रण मिलता है।¹⁰

प्रोफेसर राधेश्याम त्रिपाठी ने ख्यातों को चार भागों में विभाजित किया है— "इतिहास परक ख्यात, वार्ता-परक-ख्यात व्यक्ति परक ख्यात, स्फुट ख्यात।"¹¹

मुंहणोत नैणसी री ख्यात— मुंहणोत नैणसी द्वारा संवत् 1709 में लिखी ख्यात बहुत महत्त्वपूर्ण है। 'नैणसी री ख्यात' में बातें बहुत बड़ी-बड़ी हैं जो कई पृष्ठों तक चलती हैं। अगर इन बातों को क्रम से व्यवस्थित कर दिया जाये तो उससे क्रमवार इतिहास बन जाता है।¹² "मुंहणोत नैणसी जोधपुर के महाराजा जसवन्त सिंह जी का दीवान था। उसे इतिहास से प्रेम था। अतः उसने अपने राज्य और पड़ोसी राज्यों के प्रसिद्ध पुरुषों, बड़वों, चारणों और भाटों से सम्पर्क स्थापित कर 1650 ई. के कुछ पूर्व से 1665 ई. के कुछ पीछे तक की घटनाओं का संग्रह किया। इसमें उदयपुर, डूंगरपुर, प्रतापगढ़, जोधपुर, बीकानेर, बूंदी, जालोर आदि वंशों का वर्णन, भौगोलिक तथा सामाजिक विवरण और लड़ाईयों का इतिवृत्त मिलता है, जो इतिहास की दृष्टि से बड़ा उपयोगी है।"¹³

दयालदास री ख्यात— राजस्थानी के ख्यातकारों में 'दयालदास सिंढायच' का नाम महत्त्वपूर्ण है। राजस्थानी ख्यात लेखन की परम्परा में वह अंतिम उल्लेखनीय लेखक है, जिसने न केवल बीकानेर राज्य के इतिहास अपितु राजस्थान के राठौड़ों के इतिहास पर भी यथाचित प्रकाश डाला है।¹⁴ 19वीं शताब्दी के लगभग मध्य में दयालदास सिंढायच अपनी रचनाओं से बीकानेर व राजस्थान के ख्यात साहित्य को समृद्ध कर देता है।¹⁵ महाराजा रतनसिंह के आदेशानुसार दयालदास ने 'बीकानेर की ख्यात' लिखी जिनमें राव बीका से लेकर महाराजा सरदार सिंह जी के राज्यारोहण तक का इतिहास दिया गया है।¹⁶

डॉ. दशरथ शर्मा ने ख्यात के एक भाग को सम्पादित व प्रकाशित करने के पश्चात् भाग के अन्त में परिशिष्ट के अन्तर्गत दोनों प्रतियों में आये अंतर का उल्लेख भी विस्तार के साथ किया है।¹⁷ ख्यात के प्रथम खण्ड में राठौड़ों की उत्पत्ति से लेकर बीकानेर के पांचवे शासक राव कल्याणमल के शासनकाल अर्थात् 1574 ई. तक का वर्णन है। यह भाग प्रथम खण्ड से होकर 201 पृष्ठों तक फैला हुआ है।¹⁸ द्वितीय खण्ड में राजा रायसिंह के शासनकाल (1574 ई.) से प्रारम्भ होकर महाराजा रतनसिंह के शासनकाल के अंत (1851 ई.) तक का है। ख्यात की अन्तिम पृष्ठ संख्या 394 है।¹⁹

बांकीदास री ख्यात— यह ख्यात राजस्थानी गद्य में लिखी हुई है। पं. नरोत्तमदास स्वामी ने इसका सम्पादन किया है। बांकीदास ने ख्यात की इन बातों का संग्रह बिना किसी क्रम के किया है। उनमें कोई श्रंखलाबद्ध वृत्तांत नहीं मिलता, एक ही व्यक्ति के सम्बन्ध की बातें अनेक भिन्न-भिन्न स्थानों पर आई हैं। कई बातें पुनरावृत्त भी हुई हैं। अर्थात् दुबारा-तिबारा भी आ गई है।²⁰

इन्होंने अपनी बातों में विविध विषयों को लेकर 200 बातों का संग्रह किया है, जिसमें चौहान, हाडा, गहलोट, एवं राठौड़ वंशीय राजाओं का इतिवृत्त दिया है। साथ ही साथ मुसलमान शासक जिनमें अलाउद्दीन, बाबर, हुमायु, तैमूर आदि बादशाहों का भी उल्लेख किया है।²¹

मारवाड़ की ख्यात—²² इसमें जोधपुर के महाराजा रामसिंह, बख्तसिंह, विजयसिंह, भीमसिंह और मानसिंह के शासनकाल का वर्णन दिया गया है। शासकों की उपलब्धियों, सामन्तों की भूमिका और मुत्सदियों के योगदान का जहाँ पता चलता है वहीं उनकी मनोदशा और विचारों का बोध भी होता है। भवन निर्माण, शासन प्रबन्ध, पड़ोसी राज्यों के साथ सम्बन्ध आदि अनेक नये पक्ष उद्घाटित हुए हैं। भाषा की दृष्टि से भी यह ग्रन्थ बहुत उपयोगी है।

राठौड़ों की ख्यात –

यह वृहदाकार ख्यात— ग्रंथ इतिहास और साहित्य दोनों दृष्टियों से महत्वपूर्ण है। इसमें मारवाड़ के शासक राव सीहा से महाराजा मानसिंह तक के शासकों पर विस्तार से प्रकाश डाला गया है। राठौड़ों के अतिरिक्त भाटी, चौहान, प्रतिहार, सीसोदिया आदि योद्धाओं की भूमिका के साथ ही ओसवाल, पंचोली, ब्राह्मण आदि जाति के ओहदेदारों के बारे में समुचित जानकारी ख्यात में प्राप्त होती है। यहाँ के राठौड़ शासकों का मुगल, मराठों और अंग्रेजों आदि केन्द्र सत्ता के साथ सम्बन्धों का जहाँ पता चलता है वहीं उदयपुर, जैसलमेर बीकानेर, और जोधपुर आदि पड़ोसी राज्यों के साथ उनके व्यवहार का बोध होता है। ख्यात ग्रंथ में शासन प्रणाली, सैन्य प्रबन्ध, न्याय व्यवस्था, रीति-रिवाज, सिक्के, माप-तोल, अकाल-सुकाल, रेख-चाकरी आदि अनेक पहलुओं पर प्रकाश डाला गया। भाषा की दृष्टि से इस ख्यात का विशेष महत्व है। ख्यात का विषय इतिहास है। परन्तु पढ़ते हैं तो एक उपन्यास की तरह लगता है। ख्यात के लेखक आईदान खिड़िया ने मुहावरों एवं अलंकृत वाक्यों का प्रयोग किया है और घटनाओं के बीच में कवित्त व दोहे भी दिये हैं। राजस्थानी भाषा का एक मौलिक स्वरूप इसमें दृष्टिगोचर होता है।

मुंदियाड़ की ख्यात :- इस ख्यात में मारवाड़ के शासक राव सीहा से महाराजा विजयसिंह तक के शासकों का वर्णन है। युद्ध अभियानों के अतिरिक्त जनकल्याण कार्य पड़ोसी राज्यों एवं केन्द्र सत्ता के साथ सम्बन्ध और शासकों से अंकुरित हुई राठौड़ों की शाखाओं के बारे में जानकारी मिलती है। 'राठौड़ों की ख्यात से इसमें कुछ अतिरिक्त सूचनाएं प्राप्त होती है। इसकी लेखन शैली भी कुछ हटकर है। घटनाओं को रोचक बनाने के लिए दोहों का प्रयोग किया गया है। मुंदियाड़ के बारहठ चैनदान के द्वारा यह ख्यात लिखी गई इसलिए इसका नाम मुंदियाड़ की ख्यात' रख दिया गया। जयपुर का राजा जयसिंह शिवाजी को औरंगजेब की सेवा में उपस्थित करने में कैसे सफल हुआ इस ख्यात में इसका सटीक वर्णन दिया है –

जैसलमेर की ख्यात :- ऐतिहासिक और शिलालेखों के क्षेत्र में जैसलमेर अद्वितीय साधन सम्पन्न है। छठवीं शताब्दी से वर्तमान काल तक के शिलालेख जैसलमेर में उपलब्ध है रावल बेरीसाल के शासनकाल में वि.सं. 1921 (1864 ई.) तक का विस्तृत विवरण प्रस्तुत करती है। इसका संकलन एवं निर्माण सन् 1860 तक होने का प्रमाण है। दीवान नथमल ने अपनी तवारीख में मेहता अजीत को एक उच्च पदाधिकारी एवं ख्याति प्राप्त विद्वान बताया है। मेहता अजीत ने ही संभवत 'जैसलमेर की ख्यात' का संकलन किया होगा। भाटी साम्राज्य का विस्तार, परमारों से छीनकर लोदवा का संयोजन तथा उसको राजधानी बताया और रावल शाखा का प्रारम्भ देवराज की उपलब्धियों थी। ख्यात में रावल रणजीत सिंह के

बाद रावल बेरीसाल तक का वृत्तान्त वि.सं. 1921 तक का दिया है। बलन्द के पुत्र भाटी (भट्टी) की उपलब्धियों का वर्णन ख्यात में विस्तारपूर्वक किया गया है।

निष्कर्ष :- इस प्रकार राजस्थानी के प्राचीन गद्य साहित्य की विभिन्न गद्य विधाओं का राजस्थान के इतिहास में अपना विशेष महत्व रहा है। राजस्थानी साहित्य की इस प्राचीन गद्य विधाओं का शोध पत्रिका 'परम्परा' के माफत बहुत बड़ा योगदान रहा है। 'परम्परा' शोध-पत्रिका राजस्थानी साहित्य के इतिहास को दर्शाने में अपना विशेष महत्व रखती है। ये गद्य साहित्य अपने आप में बहुत सुंदर रहा है। नाना तरह के इन गद्य विधाओं में राजस्थानी संस्कृति, समाज, इतिहास की जानकारी सहज, सरल एवं सुबोध रूप में प्रस्तुत की गई है।

शोध पत्रिका "परम्परा" राजस्थानी साहित्य, इतिहास व संस्कृति की त्रिवेणी है जिसके विशेषाकों में इस प्रदेश की परम्पराओं का वर्णन होता है राजस्थान की संस्कृति पर जब भी कुछ लिखने या कहने की बात आयेगी तो उस समय हमें परम्परा के अंकों अध्ययन अनिवार्य रूप से करना होगा।

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A STUDY ON ANALYSIS OF DIGITAL MARKETING.

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INTRODUCTION FOR DIGITAL MARKETING

Digital marketing is the new method of marketing commodities using digital technology, mostly through internet. Digital marketing is built on the internet that can create and convert brand value from producer to the potential customer by various digital networks. The development of digital marketing has altered the method companies use technology for promotion, as digital podiums are progressively changed into advertising plans, as individuals use digital campaigns like mobile, computer/laptop and tablet instead of visiting physical market. Digital marketing elements like search engine optimizing is also called as organic method of ranking the website, pay per click or SEM, content marketing, email marketing, social media, social media optimization, show promotion besides e-commerce marketing are becoming more common in advertising technology.

CONCEPT OF DIGITAL MARKETING

It involves sum total of marketing work that usage of an electric component and internet, Businesses leverages various digital ways like search engine, social medias, e-mail, website in addition offline marketing such as SMS and MMS to attach with present and potential customers. Digital marketing is also stated as online or internet marketing. In simple taking business online.

DM is the promotion of business organization or brand by means of various channels such like the Internet, mobile devices, tv radio in addition to consuming different online advertising, podcasts, video and other such approaches to communicate message. Internet promotion in specific plays a vital share in somewhat promotional plan and it is fetching the basis of numerous establishments complete promotional policies.

STATEMENT OF THE PROBLEM

The study deals with the consumer behaviour towards online usage and its further benefits. The tools which are used to develop the promotion of product service by Raddtel india private ltd.

NEED AND RELEVANCE OF STUDY

The marketing is changing rapidly, the system of marketing moving towards digital. Company has to understand the new era of marketing system and make similar changes in the business operations. The study will help reader to understand the significance of having online web presence, and the importance of digital marketing. The study also help the reader to understand online buying behaviour of Indian patrons.

The study on digital marketing, the tools and techniques considered under the study are taken from Raddtel India Pvt Ltd.

AIMS OF THE STUDY

- To identify the tools and techniques of online marketing.
- To analyse online buying behaviour of Indian customers.
- To determine the strategies used in digital marketing.
- To understand the important terms used in digital marketing.
- To study the types of advertisements.

METHODOLOGY

Methodology

Data collection method

1.Primary data 2.Secondary data

METHODOLOGY**RESEARCH DESIGN**

Research configuration is a lot of systems and techniques that are used in assembly, flouting down and estimating the aspects indicated in the exploration issue. It is an edge work that has been made to determine answers to look into studies. It gives certain plan about how an inspection will happen which incorporates how info is collected, what tools are applied and how the tools are used in dissecting the gathered information.

DESCRIPTIVE RESEARCH DESIGN

The research is descriptive in nature hence it includes descriptive research design. The examination is enlightening in nature henceforth it incorporates unmistakable research plan. Elucidating examination configuration is utilized to think about the qualities of a populace that is being contemplated. This plan goes for receding tide besides stream matters or issues complete a process of info gathering and authorizes the specialist to show situation completely.

TRIAL SIZE

The trial size in this exploration comprises of 25 computerized marketing specialists.

DATA COLLECTION METHOD**PRIMARY DATA:**

It is a direct information, it is gathered legitimately. The distinctive technique for assembly vital data is near to home meeting, survey, review and so into the open. As my project is clear study there is no vital data collected thusly. Primary data source of the study is interview and observation

Interview: interview has been made with office staff, where several random of questions has been asked related to digital marketing and the repose has been recoded. **Observation:** observation has been made on digital marketing tools and techniques and strategies that they use to promote their business.

SECONDARY DATA

Auxiliary data is collected from efficiently current springs in diverse suggestion brochures and annals. Secondary material aimed at the examination were collected from the periodicals, sites and diverse historical investigations.

To meet goals, the investigation utilized subjective research. The clear investigation stood complete by audit of present writing that aided in approval and withdrawal of the significant factors and issues. Information was gathered from auxiliary bases. Auxiliary sources stood periodicals, sites, records, office officials, besides friends information.

In the examination I have gathered information from auxiliary sources.

ANALYSIS OF THE STUDY

NEED ANALYSIS OF DIGITAL MARKETING

1. Global Presence:

In digital marketing is not only makes any business to local region but also on global level. Company website allows the customers to find new markets and trade. The best example is amazon market place allow to sell our products online and this be can be accessed by anyone from any part of the world.

2. Cost efficient:

Likened to old-style marketing DM is cost effective, it will reach to a greater number of people with very less amount. For example, display of advertisement on social media is cheaper than print advertisement with a targeted customer reach. DM is supplementary effective than old-style marketing. small business organisations or small shop can do digital marketing without spending single rupee.

3. Trackable and measurable result:

In digital marketing we can track and measure the result of our advertisement or website, such as how many people have seen, what are the activities they do in the website, their behaviour in website, how much time they stayed in the online, what are the demographical characteristics of particular audience these all things we can get from some of the digital marketing tools such as google analytics.

4. Data and results can be recorded:

Google analytics we can be used to check the reach of campaigns done and store them for future decisions. It will help to keep in track customers and their activities and the future expectations. Usually it will help in segmenting and targeting the same particular set of people called remarketing.

Personalization:

linking customer data base to website is most important, whenever customer visit the site, we can greet them with targeted propositions and remarket the product. This makes consumers to feel special about the particular brand.

OUTCOMES OF THE STUDY

Outcomes regarding consumers

- India presently have online users of 214 million, among them 60% are males and remaining are females.

- There are 112 million mobile handlers amongst them 70% are men and remaining 30% are women
- 176 million entire internet populace are share of communal media.
- Brand want to shape a cool attendance over digital podiums because the client will do investigation about the creation after sighted an ad or after receiving enthused.
- companies are receiving more touch opinions to reach target group in a cost-effectively way.

OUTCOMES REGARDING ANALYSIS OF DIGITAL MARKETING

- Meta title and description is displayed by google pixel width but not by the length of characters.
- URL structure always has to be mentioned with the primary keywords.
- URL structure has to be with hyphen and include location if it is given with spaces it will take with percentage.
- H1 has to be with one focused keyword, google crawls will only crawl h1 tag under header tags so it has to be focused more.
- Google will never crawl images it will crawl the text behind it.
- Image optimization has two tags alt and title tag.
- To display the name of the image when we place the cursor. We use title tag.

CONCLUSION

The actual conclusion of this venture demonstrates that the ultimate destiny of promoting is in the pointers of progressive. DM isn't just concerned around putting advertisements in entrances, it includes of incorporated managements & coordinated stations. Promoters essential to use these segments in a successful manner to arrive at objective meetings and to manufacture a product. In this computerized period promoter isn't the concierge for a product, persons who are related over the advanced phases are the supervisors. Products essential to manufacture their excellence over progressive stage, in light of the fact that customers have high fondness to electronic media than additional media's. Additional than that customers are profoundly information rescuers & electronic media is the key phase for dual way communication amongst products & customers. Advanced broadcasting is the finest phase to alteration ended an article to a product. Meanwhile it is savvier and it give tract of trace emphases to promoter. Products can prepare to attach with their impartial meeting in a feasible way finished progressive phases. Progressive media isn't just for promise, products can shape their customers or they can grasp their present customers. Electronic phases assistance to shape the result of product appraisal in impartial meetings. The examination focused on the purchaser buying behavior proves that, Indian customers are deeply information seeker & they will do look into about an item beforehand setting off to a merchandizing plant. So products need to offer phases to customers to understand their item or to get a truthfully texture of that product. I sincerely accept that this venture tale will be all things considered valued for promoters to understand the electronic promoting and also to anticipate upcoming systems.

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An EOQ inventory model for selling price dependent Demand with Weibull distributed deteriorating items and partial backlogging under inflation.

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Abstract:

This paper developed an EOQ inventory model in which it is depleted by selling price dependent demand and deterioration. The Weibull distribution, which is capable of representing constant, increasing and decreasing rates of deterioration, is used to represent the distribution of the time to deterioration. Also in this model, shortages are allowed, the customers are viewed to be impatient and a fraction of the demand is exponentially backlogged under inflation. This fraction is a function of the waiting time of the customers. This model aids in minimizing the total inventory cost by finding the optimal cycle length and optimal order quantity. The optimal solution of the model is illustrated by a numerical example along with its sensitivity.

Key Words: Weibull distribution, Deterioration, Partial backlogging inflation.

1 Introduction

Inventory modeling is an important part of operation research which is used in solving variety of warehousing and storing problems. The primary purpose of the inventory modeling is to develop policies that will achieve an Original Research Article optimal inventory investment. It plays a significant role in production and operations function of supply chain management in order to make it applicable and flexible in real life situation and also in the control of inventories of deteriorating items ever since the theories on Economic Order Quantity were first introduced.

The classical inventory model of Mandal [1] considers an EOQ inventory model for Weibull distributed deteriorating items under ramp type demand and shortages. Harris-Wilson [2] considers the ideal case in which depletion of inventory is caused by a constant demand rate alone. But subsequently, it was noticed that depletion of inventory may take place due to deterioration also. Almost all items deteriorate with time excepting items as steel, hardware, glassware etc. For these items, the rate of deterioration is so small that there is hardly any need to consider the effect of deterioration. On the other hand, all food items, chemicals etc. deteriorate quite rapidly with the passing of time and become useless for consumption. This loss must have to be taken into account while analyzing the inventory system. In this connection, studies of many researchers like Ghare and Schrader [3], Covert and Philip [4], Misra [5] developed a two parameter Weibull distribution deterioration for an inventory model. This investigation was followed by Dave and Patel [6], Palanived and Uthayakuma [7], Datta and Pal [8], Jalan et al. [9], Dixit and Shah [10] etc.

Deterioration is defined as decay, damage, spoilage, evaporation, obsolescence pilferage, loss of utility or loss of marginal value of a commodity that results in decreased usefulness. For the case of perishable product, the manufacturer may need to backlog demand to avoid costs due to deterioration. So perishability and backlogging are complementary conditions. Many inventory modelers presented their inventory models considering backlogging rate to be linearly dependent on the total number of customers in the waiting line. However the backlogging rate should depend on the time spent in waiting for the arrival of the next lot. Donaldson [11], Silver [12], Hill [13] etc developed the linear trend increasing level of demand, Buzacott [14], Sarker and Pan [15], Hariga [16], Uthayakumar and Geetha [17], Roy [18], Pando et al. [19] and Ghosh [20], etc. developed inventory models for deteriorating items with price dependent trended demand and variable backlogging with shortages in all cycles.

Assumptions and notations:

The development of the mathematical model following assumptions and notations are made:

- (i) The replenishment rate is infinite with constant size.
- (ii) The demand rate D is a deterministic function of selling price s and constant cost A per unit item. i.e. $D = A(x - s y)$, $x, y, s > 0$
- (iii) C_1 : the inventory holding cost per unit per unit time.
- (iv) C_2 : the shortage cost per unit per unit time.
- (v) C_3 : the cost of deterioration unit.
- (vi) The deterioration rate function for two parameter Weibull distribution is

$$\theta(t) = \alpha\beta t^{\beta-1}, \quad 0 < \alpha \leq 1, \beta > 0, t > 0.$$

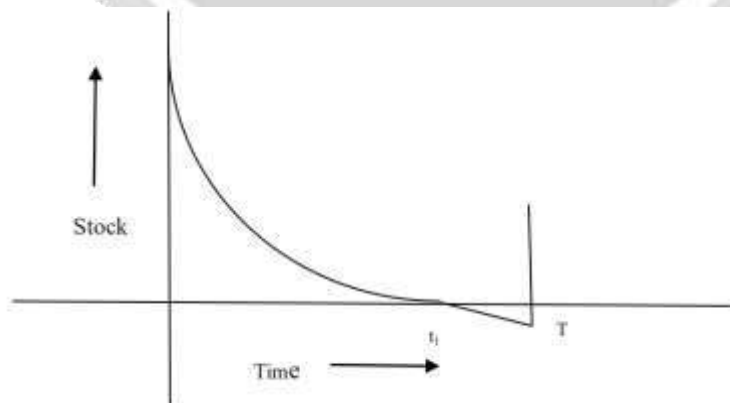
When $\beta = 1$, $\theta(t)$ becomes a constant which is the case of an exponential decay.

When $\beta < 1$, the rate of deterioration is decreasing with time and $\beta > 1$, it is increasing with time t .

- (vii) There is no replenishment or repair of deteriorated items takes place in a given cycle.
- (viii) Lead time is zero.
- (ix) The inflation rate is constant.
- (x) Shortages are allowed and during stock out period, only a fraction $B(\eta)$ of the demand is backlogged where η is the amount of time for which the customer waits before receiving goods and remaining fraction $1 - B(\eta)$ is lost. $B(\eta)$ is given by $B(\eta) = k_0 e^{-k_1 \eta}$, $k_0 < 1, k_1 \geq 0$.

Formulation and Model development

The inventory system is developed as follows: Let Q be the total amount of order produced or purchased at the beginning of each period and after fulfilling the back orders. Let $S(>0)$ be the total amount of initial inventory at the beginning of each period. The stock level depletes due to requirement and decay during $[0, t_1]$ and after that a part of requirements are backlogged due to shortage. The retailer will determine the replenishment cycle and time at which inventory level drops to zero based on the impact of the epidemic on the market. Figure 1 depicts the proposed EOQ models. Finally the cycle ends at T . The behavior of the model is instantaneous in fig.



Inventory Model for Instantaneous Deteriorating Items

The instantaneous state of the inventory level $I(t)$ at any time t is governed by the differential equation

$$\frac{dI(t)}{dt} = -D - \theta(t)I(t) \quad 0 \leq t \leq t_1 \quad \dots\dots(1)$$

and

$$\frac{dI(t)}{dt} = -DB(T - t) \quad t_1 \leq t \leq T \quad \dots\dots(2)$$

where $\theta(t) = \alpha\beta t^{\beta-1}$, $0 < \alpha \ll 1, \beta > 1, t > 0$.

The boundary conditions are

$$I(t) = 0 \text{ and } I(0) = S \quad \dots\dots(3)$$

$$\frac{dI(t)}{dt} + \alpha\beta t^{\beta-1}I(t) = -D \quad 0 \leq t \leq t_1 \quad \dots\dots(4)$$

and

$$\frac{dI(t)}{dt} = -Dk_0e^{-k_1(T-t)} \quad t_1 \leq t \leq T \quad \dots\dots(5)$$

When $0 < \alpha \ll 1$, therefore we neglect second and higher terms of α and use the condition (3), we have

$$I(t) = -De^{-\alpha t^\beta} \int e^{\alpha t^\beta} dt + ce^{-\alpha t^\beta} \quad \dots\dots(6)$$

using $I(0) = S \Rightarrow c = S$, hence

$$I(t) = -De^{-\alpha t^\beta} \left(t + \frac{\alpha t^{\beta+1}}{\beta+1} \right) + S(1 - \alpha t^\beta) \quad 0 \leq t \leq t_1 \dots\dots(7)$$

using $I(t_1) = 0$, in equation (7) which gives

$$S = Dt_1 \left(1 + \alpha t_1^\beta - \frac{\alpha\beta t_1^\beta}{\beta+1} \right) \quad \dots\dots(8)$$

From equation (5), we get

$$I(t) = \frac{Dk_0e^{k_1t_1}}{k_1} (1 - e^{k_1t}) \quad t_1 < t \leq T \dots\dots(9)$$

Hence total amount of deteriorated units are

$$\begin{aligned} D_t &= S - \int_0^{t_1} D dt \\ &= S - D t_1 \end{aligned} \quad \dots\dots(10)$$

Using equation (8) in (10) we have,

$$D_t = \frac{D\alpha\beta t_1^\beta}{\beta+1} \quad \dots\dots(11)$$

The entire cost per cycle is now represented as follows:

$TC(t_1, T) = \text{Holding Cost} + \text{Backorder Cost} + \text{Deterioration cost}$

$$= \frac{c_3 D \alpha t_1^\beta}{T(\beta+1)} + \frac{c_1}{T} \int_0^{t_1} I(t) dt - \frac{c_2}{T} \int_{t_1}^T I(t) dt \quad \dots\dots(12)$$

Using equation (7) and (9) in equation (12)

$$\begin{aligned} TC(t_1, T) &= \frac{c_3 D \alpha t_1^\beta}{T(\beta+1)} + \frac{c_1 D}{T} \left(t_1^2 - t_1 - \frac{\alpha t_1^{\beta+1}}{(\beta+1)(\beta+2)} + \frac{\alpha t_1^{\beta+1}}{\beta+1} \right) \\ &\quad - \frac{c_2 D k_0 e^{k_1 t_1}}{k_1 T} \left(T - t_1 + \frac{e^{k_1 t_1} - e^{k_1 T}}{k_1} \right) \quad \dots\dots(13) \end{aligned}$$

Where $D = A(x - sy)$, $x, y, s > 0$

The necessary and sufficient conditions to minimize the $TC(t_1)$ are respectively $\frac{dTC(t_1)}{dt_1} = 0$ and $\frac{d^2TC(t_1)}{dt_1^2} > 0$.

$$\frac{C_3 D \alpha \beta t_1^{\beta-1}}{T(\beta+1)} - \frac{C_1 D}{T} \left(1 - 2t_1 + \frac{\alpha t_1^{\beta+1}}{(\beta+1)} - \alpha t_1^\beta \right) - \frac{C_2 D k_0 e^{k_1 t_1}}{k_1 T} (k_1(T - t_1) + 2e^{k_1 t_1} - e^{k_1 T} - 1) = 0 \quad \dots\dots\dots(14)$$

And

$$\frac{d^2TC(t_1)}{dt_1^2} = \frac{C_3 D \alpha \beta (\beta - 1) t_1^{\beta-2}}{T(\beta+1)} - \frac{C_1 D}{T} (-2 + \alpha t_1^\beta - \beta \alpha t_1^{\beta-1}) - \frac{C_2 D k_0 e^{k_1 t_1}}{k_1 T} (k_1^2(T - t_1) + k_1 e^{k_1 t_1} - k_1 e^{k_1 T} + k_1(e^{k_1 t_1} - 1) - k_1 t_1 + 2k_1 e^{k_1 t_1}) \dots\dots\dots(15)$$

By solving the equation (14) the optimal solution of $t = t^*$ and then from equation (8) and (13) the optimum value of $S=S^*$ and $TC = TC^*$ can be found respectively.

Numerical Example:

Considering the inventory system with the following data:

$A=, C_1=Rs. , C_2=Rs. , C_3=Rs. , s= Rs. , \alpha = , \beta =, x = , y = , k_0= , k_1= , T = 12$ Months in approximate units.

Then we get the optimal values as $t^* = , S^* = ,$ and $TC^* =$ in approximate units.

Sensitivity Analysis

The sensitivity analysis is done in regard to certain connected parameters. This is accomplished by altering one parameter while keeping the others constant. Few cases were subjected to a sensitivity analysis.

sensitivity Analysis

Table -1

C_1	C_2	C_3	α	s	β	d	k_1	k_0	t_1	S^*	TC
4	10	3	0.001	5	2	510	0.2	0.9	8.804631	4606.395045	524604.3038
5	10	3	0.001	5	2	510	0.2	0.9	8.83374	4622.395297	530555.8675
6	10	3	0.001	5	2	510	0.2	0.9	8.862529	4638.227164	536529.3443
4	15	3	0.001	5	2	510	0.2	0.9	8.7653	4584.788181	775051.9389
4	20	3	0.001	5	2	510	0.2	0.9	8.745408	4573.86559	1025528.745
4	25	3	0.001	5	2	510	0.2	0.9	8.733401	4567.274318	1276017.804
4	10	4	0.001	5	2	510	0.2	0.9	8.804641	4606.40054	524606.4377
4	10	5	0.001	5	2	510	0.2	0.9	8.804652	4606.406585	524608.6752
4	10	6	0.001	5	2	510	0.2	0.9	8.804662	4606.41208	524610.8092
4	10	3	0.001	6	3	492	0.2	0.9	8.800151	5067.35	505517
4	10	3	0.001	7	3	474	0.2	0.9	8.800151	4881.959	487022.4
4	10	3	0.001	8	3	456	0.2	0.9	8.800151	4696.568	468527.9

Table -2

C_1	C_2	C_3	α	s	β	d	k_1	k_0	t_1	S^*	TC
4	10	3	0.001	5	3	510	0.2	0.9	8.800151	5252.741	524011.5
4	10	3	0.001	5	4	510	0.2	0.9	8.776419	9787.102	521063.8
4	10	3	0.001	5	5	510	0.2	0.9	8.670165	40528.09	509044.6
4	10	3	0.001	5	6	510	0.2	0.9	8.43551	225739.8	490131.7
4	10	3	0.001	5	7	510	0.2	0.9	8.652156	2006463	592695.3
4	10	3	0.001	5	8	510	0.2	0.9	9.606658	39494133	2158937

From table 1 we observed that when we change in each variable the impact followed in time t_1 , inventory level at t_0 and total optimal cost.

While changing in β the time of backlogging is initially reducing and the gradually increases and also variations are seen in Initial inventory as well as total cost of the system.

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Data Protection Regulations in India

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Introduction:

On August 12, 2023, the Digital Personal Data Protection Act (DPDP Act) received the assent of the President of India. It is the first law made for processing data in India and it brings several amendments to the Right to Information Act and the Information Technology Act. According to the preamble of the act, the objective is to provide for the processing of digital personal data in a manner that “recognises both the right of individuals to protect their personal data and the need to process such personal data for lawful purposes” and for other connected matters.

Before Act, 2023:

Through the landmark judgment in the case of *Justice K.S. Puttaswamy and Anr.*

V. Union of India and Ors. in the year 2017 wherein the right to privacy was held to be part of the fundamental right to life in India and that the right to informational privacy is part of this right. The judgment, however, did not describe the specific contours of the right to informational privacy, and it also did not lay down specific mechanisms through which this right was to be protected.

Thereafter *Srikrishna Committee*, chaired by Justice B.N. Srikrishna, a retired Supreme Court judge, was set up by the Ministry of Electronics & Information Technology in July 2017 to help frame data protection norms. The recommendations of this committee, in turn, were based on major regulatory developments that were popular while the work of the committee was proceeding. Primary among these was the European Union’s (EU’s) General Data Protection Regulation (GDPR). As per the report of the committee, amendments would be needed in laws such as the Information Technology Act, 2000; the Census Act, 1948; the Aadhar Act, 2016, Right to Information Act, 2005.

The 2023 act is the second version of the bill introduced in Parliament, and fourth overall. An initial version was prepared by a committee of experts and circulated for public feedback in 2018. This was followed by the government’s version of the bill that was introduced in Parliament in 2019—the Personal Data Protection Bill, 2019. This version was studied by a parliamentary committee that published its report in December 2021. The government, however, withdrew this bill, and in November 2022, published a fresh draft for public consultations—the draft Digital Personal Data Protection Bill, 2022. This draft was quite different compared to the previous versions. The 2023 law is based, in significant part, on this draft.

After 2023 Act:

1. Applicability to Non-residents

The DPDP Act applies to Indian residents and businesses collecting the data of Indian residents. It also applies to non-citizens living in India whose data processing “in connection with any activity related to offering of goods or services” happens outside India.

2. Purposes of Data Collection and Processing

The 2023 act allows personal data to be processed for any lawful purpose. The entity processing data can do so either by taking the concerned individual’s consent or for “legitimate uses,” a term that has been explained in the law. Consent must be “free, specific, informed, unconditional and unambiguous with a clear affirmative action” and for a specific purpose. The data collected has to be limited to that necessary for the specified purpose. A clear notice containing these details has to be provided to consumers, including the rights of the concerned individual and the grievance redress mechanism. Individuals have the right to withdraw consent if consent is the ground on which data is being processed.

3. Rights of Users/Consumers of Data-Related Products and Services

The DPDP Act also creates rights and obligations for individuals. These include the right to get a summary of all the collected data and to know the identities of all other data fiduciaries and data processors with whom the personal data has been shared, along with a description of the data shared. Individuals also have the right to correction, completion, updating, and erasure of their data. Besides, they have a right to obtain redress for their grievances and a right to nominate persons who will receive their data.

Obligations on Data Fiduciaries

Entities responsible for collecting, storing, and processing digital personal data are defined as data fiduciaries and have defined obligations. The DPDP Act also states that any processing that is likely to have a detrimental effect on a child is not permitted. The law prohibits tracking, behavioral monitoring, and targeted advertising directed at children. The government can prescribe exemptions from these requirements for specified purposes. This is potentially a problem since the powers to exempt are broad and without any guidelines.

Moderation of Data Localization Requirements

The 2023 law reverses course on the issue of data localization. While the 2019 bill restricted certain data flows, the 2023 law only states that the government may restrict flows to certain countries by notification. While this is not explicit, the power to restrict data flows seems to be to provide the government necessary legal powers for national security purposes.

Exemptions From Obligations Under the Law

The law provides exemptions from consent and notice requirements as well as most obligations of data fiduciaries and related requirements in certain cases:

- (a) where processing is necessary for enforcing any legal right or claim;
- (b) personal data has to be processed by courts or tribunals, or for the prevention, detection, investigation, or prosecution of any offenses;
- (c) where the personal data of non-Indian residents is being processed within India; and so on.

Violation and Remedies:

Chapter 8 of the DPDP Act deals with penalties and adjudication. Section 33 provides that the Board will impose a monetary penalty after concluding an inquiry on the breach of provisions of this Act and after giving the person concerned a reasonable opportunity of being heard. In order to decide the amount of the monetary penalty, the Board shall consider the following factors:

- Nature, gravity and duration of the breach.
- Type and nature of the personal data affected by the breach.
- Repetitive nature of the breach.
- Whether the person, due to consequences of such breach, has gained or avoided any loss.
- Whether the person concerned took any action in order to mitigate the effect and consequences of the breach, and timeliness and effectiveness of such action.
- Whether the monetary penalty to be imposed is proportionate and effective considering the need to ensure observance of provisions and to have a deterrent effect.
- Considering the likely impact of the imposition of a monetary penalty on the person concerned.

Further, the amount of compensation is provided under Schedule 1, as follows:

Subject matter	Section of the DPDP Act	Penalty
Failure to take reasonable security safeguards to prevent personal data breach	Section 8 (5)	May extend to Rs. 250crores
Failure to notify the board and affected Data Principals of a personaldata breach	Section 8 (6)	May extend to Rs. 200crores
Non- fulfilment of additional obligations inrelation to processing of data of children	Section 9	May extend to Rs. 200crores

Non- fulfilment of additional obligations of significant data fiduciary	Section 10	May extend to Rs. 150crores
Violation of user duties	Section 15	May extend to Rs. 10,000
Breach of any term of voluntary undertakingaccepted by the board	Section 32	Up to an extent applicable for beach in respect of proceedings were instituted under Section 28
For all other non compliance under the Act	Every other section	May extend to Rs. 50crores

Issues with Act, 2023:**1. Exemptions to Data Processors under the Act**

Extremely broad exemptions in the act that essentially render the consent of the data principal entirely meaningless. The act defines a data principal as the individual to whom the personal data relates, as well as the lawful guardian of a minor, and the lawful guardian of a person with disability who is acting on their behalf.

Section 7(g), states that no consent will be required for the government to process data for taking measures to provide medical treatment, or health services during an epidemic, outbreak of disease or any other threat to public health.

Section 7(i) provides for use of the data for the purposes of employment. This was particularly alarming because India is a country where the government is the single largest employer of people.

Exemption of certain legitimate uses where consent is presupposed is in variance with several international data protection statutes.

2. Duties, Positive Obligations and Penalties for Citizens

Section 15 of the Act creates obligations of the data principals to comply with all provisions of this law. These obligations, specifically in Section 15(b) of the Act, also create a broad obligation to not impersonate another person while providing their personal data, which may create room for penalisation in bad faith for persons who may not have digital literacy, such as senior citizens, who depend on their relatives for operating their electronic devices.

Section 15(c), creates a positive obligation on citizens to not suppress any material information while providing personal data for documents to the State. This law creates room for penalising citizens who provide incomplete information relating to their home addresses, and deliberately left other private details out to protect themselves against stalking or harassment.

3. 'Complete Outlier' in Contemporary Data Protection Legislations

Because of the host of positive obligations of the data principal, the act is a complete outlier when compared with data protection legislations in other countries.

Another reason the DPDP Act is an outlier, is because of Section 17(3), which gives the central government the power to exempt some data fiduciaries or class of data fiduciaries from certain obligations under this act as a data process, owing to the 'volume and nature' of personal data processed.

For more context, the act identifies 'data fiduciary' and 'data processor' as the entities or stakeholders that will be collecting or using the data from the data principal. Structurally, the data principal entrusts the data fiduciary with the data, and the data processor then processes personal data on behalf of the data fiduciary.

4. Amendments to RTI Act

The Right to Information Act, as it existed before the DPDP Act was enacted, maintained a 'balancing act' between the right of a person to access public information and protecting individuals from unnecessary invasions of privacy.

Section 8(1)(j) of the RTI Act excludes personal information which has no connection with any 'public activity or interest' or which can result in an 'unwarranted invasion of the privacy of the individual',

from the realm of information that can be sought under the Act. But an exception was made for personal information, the disclosure of which a public information officer or the appellate authority deemed to be justified in the 'larger public interest'. The proviso to this clause states that personal information which cannot be denied to the Parliament or any state legislature cannot be denied to an RTI applicant either.

The section has been amended to exclude the parameter of the 'larger public interest' completely. In other words, an RTI applicant cannot seek any information related to 'personal information' even if the larger public interest warranted its disclosure. The amendment also takes away the proviso.

5. Data Protection Board 'Lacks Independence'

Further, the power of the central government to demand information from the data protection board, and recommend suo moto complaints to it for alleged breaches of data. The data protection board will be the authority under the act to register and appoint consent managers to resolve issues relating to any unauthorised processing, sharing, or use of data without the consent of the data principal.

Conclusion:

The unique requirements of the Act, along with the significant "step-up" over the current legal regime in India, also make aligning with global regimes non-trivial. Some immediate steps that can be considered are:

1. Conduct Data Mapping
2. Prepare Necessary Notices and Consents
3. Identify Exclusions and Non-Consent Bases for Processing
4. Assess Continued Need to Process Minor's Data
5. Update Grievance Redressal, Breach Response and Retention Plans
6. Review Contracts with Data Processors

As the Digital Personal Data Protection Bill advances through the legislative process, organizations and employees must actively engage with its nuances to ensure seamless integration of these novel principles into the corporate and personal data landscape. The concept of consent for 'legitimate use' and strengthened consent withdrawal rights not only offer opportunities for streamlined procedures and enhanced transparency but also mandate a profound commitment to upholding data protection standards. From an employee standpoint, these provisions empower individuals with greater autonomy over their personal information, highlighting the urgency for organizations to foster an environment of trust and transparent dialogue.

Polarography Studies On Method Development For Determination Of Cadmium Ion In Arid Zone Industrial Waste.

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ABSTRACT

This is a detailed voltammetric study of cadmium(II) ion in presence of 0.1M oxalic acid & 0.1M sodium nitrate. This is an electrochemical method for determination of submicrogram level of cadmium ion for the technique of differential plus polarography method. In this differential plus polarography method sharp linear curve obtained up to 1 PPM – 30 PPM with a limit of determination of $0.07\mu\text{g mL}^{-1}$ when I did this work with this technique Cadmium ion saw some interference element like Iron, Potassium, Sodium etc. I have successfully applied this method with the waste material coming out of the industrial unit of dry area. When I analyzed the result obtained with this experimental used UV-VIS Spectrophotometer or AAS method.

Keyword :- Voltammetry, Polarography, Differential Plus Polarography, Contaminated Material

Introduction :- Cadmium is naturally occurring in Earth crust about 0.1 PPM. Cadmium and its compounds are toxic in certain form and concentration, the British pharmaceutical Codex from 1907 states the Cadmium iodide was used as a medication to treat “enlarge joints, scrofulous Glands and chilblains”(1)

Cadmium is present in minerals, plastic and even the fog coming out of cigarettes. But here we will study the waste material coming out of industrial units, which is present in that waste in small quantities, under the electro analytical method.

Voltammetric method such a differential Plus polarography, cyclic voltammetric and stripped voltammetric are more suitable for the analysis of metal ion present in low quantity in sources (2).

In the voltammetric or differential plus polarography method the redox potential of a metal which is in its ionic state can be determined at differential Oxidation State. Through this method, we will conclude the cadmium metal ion, which present in its three different +2, +1, -2 Oxidation State identify its redox potential by voltammetric method (3).

Cadmium is found in nature at low concentration mainly with the sulphide ores of Zinc, Lead, and copper. Cadmium ores are not abundant, but Cd may be found in most Zinc Ores gives its Isomorphous substitution to zinc. However due to its widespread occurrence, Cadmium is found in measurable amount in food, drink and Breath. (4)

*Methods And Material

1. Sample

I. Collection of Sample :- The sample was collected from Jojari River. Jojari River is present in Jodhpur city at about 7 km from the city. Jodhpur is a city in Rajasthan Latitude 26.258270° and Longitude 73.016988° total area of 22.850 square km and covers 11.60% of the total area of the zone. (5)

The Jojari River latitude 26.201153° and longitude 73.057197° having a total area of river basin is 1453 km out of which 917 km Falls with in Jodhpur district. (6)

The contaminated material coming out of all the industrial units of Jodhpur come in this Jojari River located near Jodhpur from this river we took waste material in plastic bottles for our heavy metal analysis.

II. Sample Preparation :- The sample of Jojari river firstly filtered and acidified with the help of concentrated hydrochloric acid then 100 ml solution was taken from the filtrate solution now evaporated to 50 ml with 1 ml oxidizing mixture of (sulphuric acid & nitric Acid) to remove impurities from it and the sample thus obtained was analyzed with the help of polarography equipment.

2. Instrumentation: -

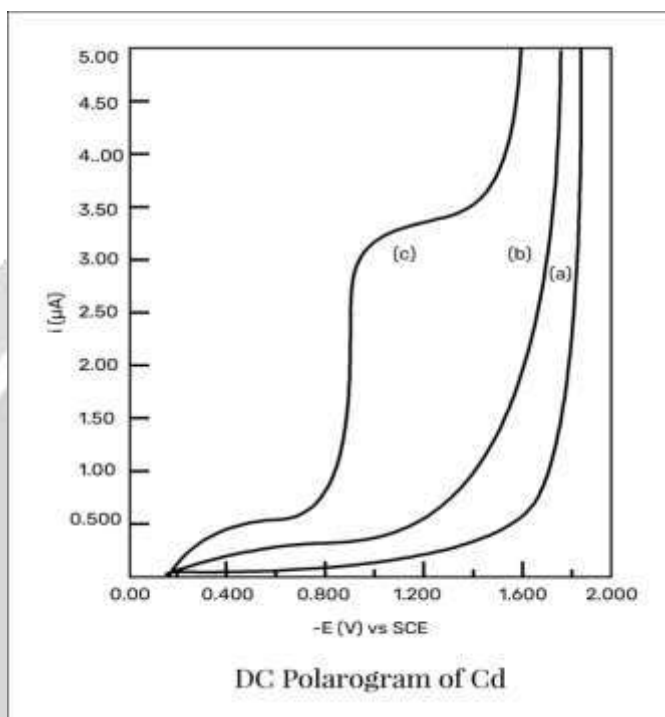
I. CL-362 Micro processor based polarographic analyzer with printer interface Elico Limited, Hyderabad, India used for electro analytical investigation for heavy metal ions. Accuracy of polarography analyzer is $\pm 0.1\%$ of range, readability 1 MV, Scan rate acquisition mV/s fast 12 in 0.5 s/drop slow 2 in 1.0 s/drop, current rang 1, 10, 100, 1000m A, plus amplitude 5, 10, 25, 50, 10 mV (selectable) auto/manual.

II. UV-VIS Spectrophotometer :- UV-1900-UV-VIS Spectrophotometer, Shimadzu Analytical PVT. LTD. Wavelength accuracy ± 0.05 nm at 02 peak 656.1 nm, ± 0.3 nm for entire range, Wavelength repeatability ± 0.1 nm wavelength slew rate About 14,500nm/min & wavelength scanning 3,000 to 2nm/min.

III. pH Meter :- The pH measurement was taken from digital pH meter (Model No. 5000) of lab India.

IV. :- (MODEL- A643) of Millipore, france was used to obtain Milli-Q-Water all solution were prepared in Milli-Q-Water and also all chemical were of analytical grade.

Result And Discussion :- The electro analytical studies of Cadmium ion with the help of Polarography instrument and identify the electrochemical reduction of Cadmium(II) ion in different complexing medium finally the mercury electrode revealed that in presence of 0.1M Oxalic acid and 0.1M Sodium Nitrate complexing medium (pH = 5.98) give a well defined polarography wave at potential of 0.81 V as show in fig. 01.

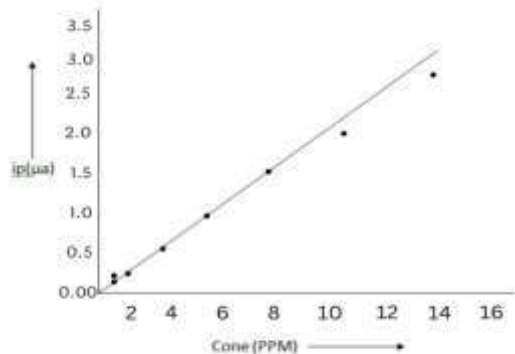


(A) Blank Solution of 0.1 M Oxalic Acid

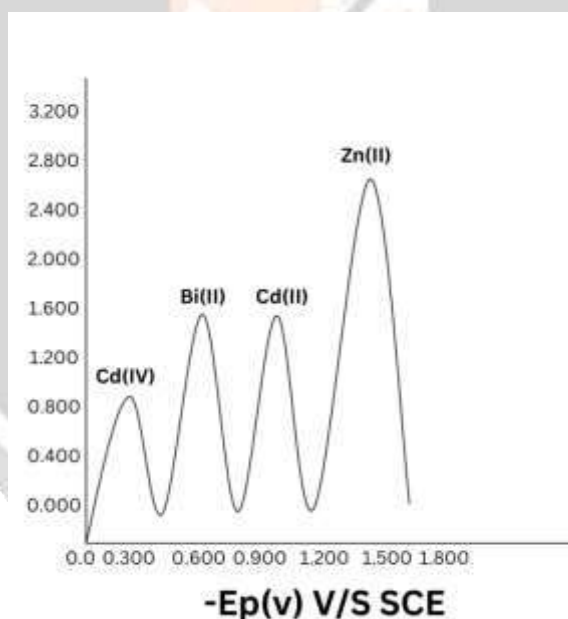
(b) Blank Solution of 0.1 M Sodium Nitrate

(c) 2.0×10^{-4} M Cd(II) in 0.1M Oxalic Acid & 0.1M Sodium Nitrate

Method development for Cadmium(II) ion in DPP Methods :- The oxalic acid & sodium nitrate sensitized DPP was carried out to found optimum analytical condition for the low concentration determination Cd(II) ion. According to the experiment $CdCl_2$ show a sharp DP peak at the potential of 0.65V. We made PPM solution of Different concentration of cadmium ion 0.04 to 12.00 PPM range of concentration (fig.2) characteristic slop 0.0 intercept coefficient of correlation ($r \cong 1$)



Interferences :- Cadmium is usually found as a mineral combined with other element such as oxygen, chlorine and sulphur also heavy metal are interfere for the DPP studies of Cadmium ion like Cadmium(IV), bismuth(II) and Zinc(II) etc. th DP peak of Cd(IV) ion in in presence of 0.1M oxalic acid and 0.1M sodium nitrate medium found in 0.48V it is obtained completely different from our peak value and at the same time it is also obtained at the peak potential of Cd(IV), BI(II) and Zn(II) were found to be 0.29V, 0.50V & 1.10V respectively that means there is no interference of any kind with Cadmium Metal.



Comparison :- The results obtained from the Different Plus Polarography instrument were compared with the help of UV Visible Spectrometer which is shown in the following table.

Cd(II)	
DPP $\mu\text{g ml}^{-1}$	UV – VisibleSpectro $\mu\text{g ml}^{-1}$
0.78	0.80

Conclusion :- DPP method of polarography instrument. results obtained with supported solution of cadmium ion in oxalic acid and sodium nitrate was good. This method is simple and quite convenient for ions present in minimum concentration.

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Relative resistance status of four wheat varieties against stored insect *Rhyzopertha dominica*

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Abstract

Post-harvest losses in agriculture are increasing hand in hand with expanding wheat, corn, bajra, rice, maize and their production as a lot of quality and quantity of foodgrains needs prolonged storage. Varieties are found to influence the insect's activities like feeding sites and oviposition sites and rates. A systematic study was suggested to correlate varietal resistance of wheat to storage insects with physiochemical properties of the grains. Later reviewed the storage insects and concluded that varietal resistance to storage insects is a potential means of reducing post harvest losses. The categorization of different wheat varieties for their resistance to *Rhyzopertha dominica* was made on the basis of growth, development period and weight loss. Percentage loss in weight of different wheat varieties due to damage caused by *Rhyzopertha dominica* revealed that the maximum loss occurred in RAJ 3777 (13.3) followed by RAJ 4037 (12.30), and RAJ 3077 (12.00). The minimum weight loss was observed in RAJ 3765 (5.00) which differed significantly with all other test varieties.

Keywords- wheat variety, *Rhyzopertha dominica*.

Introduction-

Food grain loss during storage as a result of several insects and pests is a frequent serious problem. Climate and storage conditions are frequently favorable for the growth and population expansion of any insect pest. The use of insecticides to control insects in grain storage has serious adverse consequences, including genetic resistance and harmful residue. Research on the resistance or relative susceptibility of various grain varieties to attack under storage conditions may help farmers choose food grain varieties that are less likely to be damaged by insects and that will allow them to effectively and reasonably easily preserve food grains from pests.

As long as the traits causing this resistance are found and thoroughly investigated in the field, resistant types against stored insects are definitely a possibility. Certain wheat cultivars have been found to be resistant to stored insect pests. These various responses are said to be caused by certain grain characteristics, such as grain kinds, husk thickness and texture, relative hardness of kernels, protein and carbohydrate content, etc.

Raj3077, Raj 3765, Raj3777 and Raj4037 wheat varieties available in market of Jodhpur were collected from Basni and

Siwanchi Grain mandi.

MATERIAL AND METHOD

- Maintenance of insect culture-

Twenty-five pairs of adult insects that were one to two days old were released for oviposition in a culture bottle containing 100g of wheat grains after a pure culture of the test insect, *Rhyzopertha dominica*, was obtained. In addition, the just emerged adults were placed in fresh culture bottles with wheat grains to sustain a stock culture and provide a steady supply of the numerous insects needed for the experiment.

- Release of insects in different wheat varieties-

Each wheat variety culture container included twenty-five recently emerged adults. It takes 35 days for *Rhyzopertha dominica* larvae in their first instar to mature into adults. The larvae and pupae develops inside the grains, hence emergence of adults were recorded after 35 days of release (the data were analyzed). The culture was kept untouched for 40 days. Finally total number of adult emerged and developmental period (in days) was recorded. The weight loss also was recorded after the emergence of adult. It was calculated by subtracting the final weight with the initial weight and converting it in to percentage.

$$\text{Percentage weight loss} = \frac{A - a}{A} \times 100$$

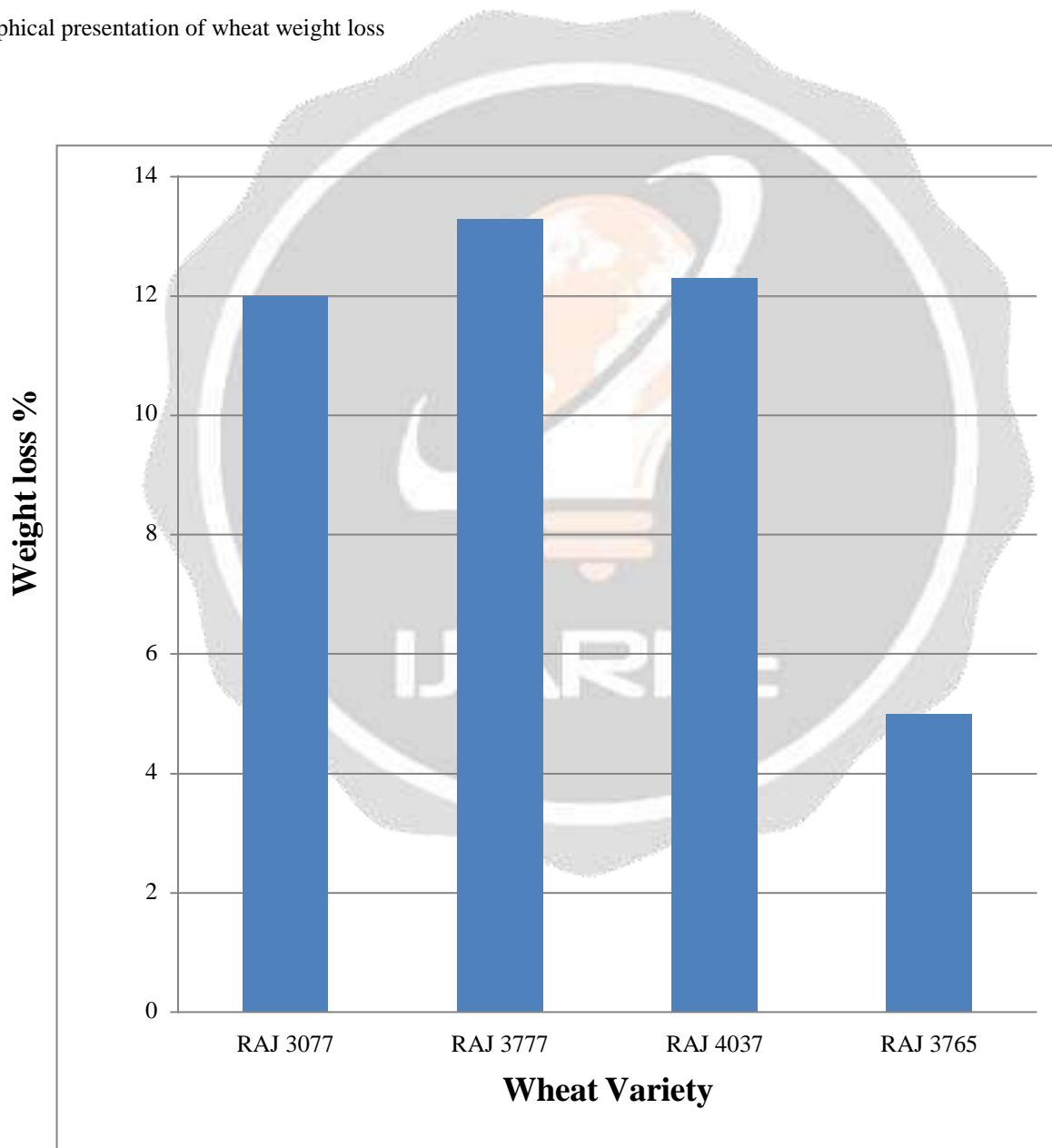
Where, A = initial weight of wheat grain
a = final weight
of wheat grain

Weight loss % of different wheat variety

S.NO.	Wheat variety	Weight loss			Weight loss % **
		Initial (g)	Final(g)	Total (I - F)	
1	RAJ 3077	10	8.8	1.2	12.00 (20.6)
2	RAJ 3777	10	8.67	1.33	13.3 (21.21)

3	RAJ 4037	10	8.77	1.23	12.30 (20.02)
4	RAJ 3765	10	9.5	0.5	5.00 (13.6)

Graphical presentation of wheat weight loss



Weight Loss % of varieties of Wheat

Result –

The data given indicate that the different wheat varieties produce different growth responses. The categorization of different wheat varieties for their resistance to *Rhizopertha dominica* was made on the basis of growth, development period and weight loss.

Percentage loss in weight of different wheat varieties due to damage caused by

Rhizopertha dominica revealed that the maximum loss occurred in RAJ 3777 (13.3) followed by RAJ 4037 (12.30), and RAJ 3077 (12.00). The minimum weight loss was observed in RAJ 3765 (5.00) which differed significantly with all other test varieties.

Discussion-

Singh and Thapar(1998) resulted the average number of adult emerged in different wheat variety significantly ranged from 12-90% for *Rhizopertha dominica*. **Nehra et al., (1983)** used flours from 13 varieties of wheat for resistance of infestation by *Tribolium castaneum* and concluded that Raj 1646 was the most resistant, exhibiting the adult emergence. The loss in weight of wheat varieties due to attack of test insects range from

Ten wheat cultivars were studied by **Ramzan et al., (1991)** for storage losses by insectpest

References –

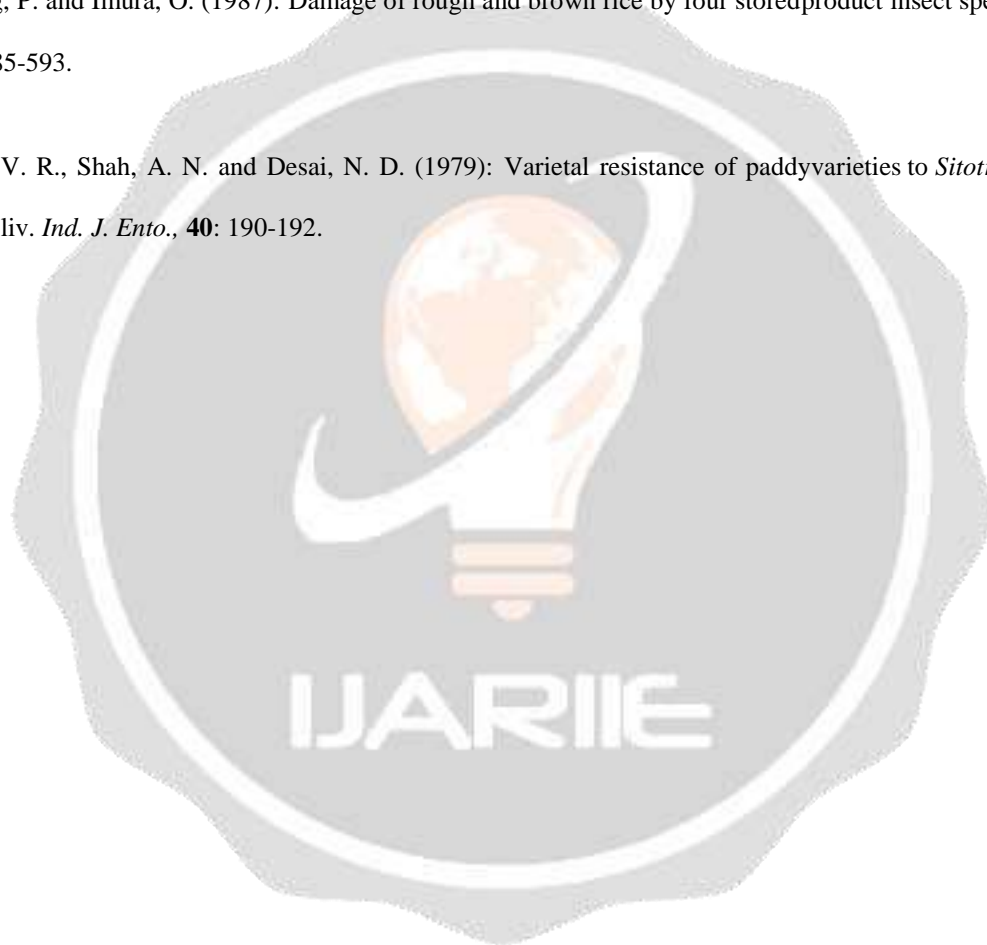
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The Role of Artificial Intelligence on Individual Financial Planning

By

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Abstract

In today's fast-paced world, the financial and investment decisions play a vital role in individual's life and corporate world. Managing finances by individuals has become more and more complex task to handle effectively. From budgeting and tracking expenses to investment decisions and retirement planning, individuals face a countless financial challenges. However, with the rise of artificial intelligence (AI), managing personal finances has taken an important step forward. AI-powered tools and applications are improving the way people approach financial management, offering efficiency, accuracy, and personalized insights like never before. The basis of using artificial intelligence in financial planning is automation. Financial professionals use AI tools which make financial planning more reliable and effective by increasing efficiency and reducing the chance of human error.

Key words – Artificial Intelligence, Individual Financial Planning, Role of AI, AI tools

Introduction

Human intelligence is a great gift of God but artificial intelligence has intrigued many great minds over the past centuries, including philosophers, mathematicians, writers, professionals, experts and scientists. Intelligent machines have ignited the answers as to what defines human intelligence and attempts to reproduce and improve such intelligence. Besides the occasional appearance of artificial intelligence throughout the centuries, researchers consider 1956 as the beginning of artificial intelligence as an academic research area. AI is providing the basis for technological advancement. AI transformed the financial sector by offering better services and opportunities to investors. Artificial intelligence is a rising trend in the area of finance including investment with new scientific techniques to make flawless financial decisions as well as investment decisions with financial planning, e- financing, e – trading, e-commerce etc. Artificial intelligence plays a very significant role in the field of computer science as well as other disciplines such as finance, transportation, education, healthcare, economics, medical, marketing, production, engineering and so on.

Objectives of study

- ✓ To explain the role of Artificial Intelligence in Finance as a theoretical outlook.
- ✓ To represent a new trend of Artificial Intelligence in the financial sector.
- ✓ To observe the best literature reviews of Artificial Intelligence in the field of Finance.

Research Methodology

The research methodology is conceptual research. This research is helpful for financial learners and management students, who want to get financial knowledge. The Research Design has been done on the basis of personal reading, observation and focus on the conceptual framework of artificial intelligence in financial performance. The data for

this research has been reviewed from secondary sources such as books, research paper or journal articles, internet reports and newspaper articles etc.

Artificial intelligence is the recreation of human intelligence processes by technologies, exclusively computer systems. Specific applications of AI include natural language processing, speech recognition, face recognition, expert systems and machine vision. AI-algorithms are designed to be impartial. They are trained on large datasets of old data that have been carefully managed by removing any potential partialities. AI models are less likely to be influenced by human partialities. Artificial intelligence (AI) refers to the simulation or approximation of human intelligence in machines. Artificial intelligence, or AI, refers to the simulation of human intelligence by software-coded heuristics. AI is important for its potential to modify how we live and work. It has been effectively used in business to preset tasks done by humans, including customer service work, lead generation, fraud detection and quality control. AI can perform jobs quickly and with relatively few errors. The jobs of repetitive and detail-oriented nature such as analyzing large numbers of legal documents to ensure relevant fields are filled in properly; AI tools often complete this kind of work in better way.

Artificial intelligence is based on the principle that human intelligence can be defined in a way that a machine can easily make the execution, from the most simple to those that are even more complex. The goals of artificial intelligence include simulating human intellectual activity. Researchers and developers in the field are making amazingly rapid advances in simulating activities such as learning, reasoning, and perception, to the extent that these can be concretely defined.

AI is used extensively across a range of applications today with varying levels of superiority. AI is used to make predictions in terms of weather and financial forecasting, to streamline production processes, and to cut down on various forms of redundant cognitive labor (e.g., tax accounting or editing). AI is also used to play games, operate autonomous vehicles, process language, and more.

Applications of AI

- ❖ **AI in healthcare** - The biggest challenges are on improving patient outcomes and reducing costs of treatment. Companies are applying machine learning to make better and faster medical diagnoses than humans. One of the best-known healthcare technologies is IBM Watson. It understands natural language and can respond to questions asked to it. The machine analyzes patient past data and other available data sources to form a hypothesis, which it then presents with a confidence scoring plan. Other AI applications include using online virtual health assistants to predict and understand the conditions of patients and patients find medical information, schedule appointments, understand the billing process and complete other administrative processes.
- ❖ **AI in business** – AI algorithms are being incorporated into analytics and customer relationship management (CRM) platforms to reveal information on how to serve customers in better way. Chatbots have been included into websites to provide immediate service to customers. The rapid advancement of generative AI technology such as ChatGPT is expected to have far-reaching consequences such as eliminating jobs, visualizing product design and disrupting business models.
- ❖ **AI in education** - AI can give computerize grading to the candidates so that educators have more time for execution of other educational activities. It can evaluate students performance on their past data and adapt to their needs provide them a way to work at their own speed. The technology helps students to learn even replacing some teachers. AI can help educators to craft course work and other teaching materials.
- ❖ **AI in finance** - AI in personal finance applications collects personal data and provide financial advice to individuals for planning and investment.
- ❖ **AI in law** – The process to analyze then drafting through documents and then work in law is often overwhelming for humans. Using AI to help automate the legal industry's labor-intensive processes is saving time and providing better services to client. Law firms use AI to describe data and predict outcomes, computer vision to classify and extract information from documents.

- ❖ **AI in entertainment and media** - The entertainment business uses AI techniques for targeting advertisements, recommending services, distribution, detecting fraud, creating scripts and making movies. Automated journalism helps newsrooms to streamline the collected information and flows them to reduce time, costs and complexity. Newsrooms use AI to automate routine tasks, such as data entry and proofreading; and to research topics and assist with headlines.
- ❖ **AI in IT** – AI tools are used to coding software, data entry, fraud detection, customer service, predictive maintenance, cyber security and execute other IT processes. AI tools can be used to create application code based on natural language Security. AI and machine learning are at the top of the buzzword list security vendors use to market their products, so buyers should approach with caution. AI can provide alerts to new and emerging attacks much sooner than human employees and previous technology iterations.
- ❖ **AI in production units**- Production units has been at the forefront of incorporating robots into reality. Multitasking robots that collaborate with humans and take on responsibility for more parts of the job in warehouses, factory floors and other workstations.
- ❖ **AI in banking** - Banks are successfully employing AI tool (Chatbot) to aware customers about services and offerings and to handle transactions that don't require human involvement. AI virtual assistants are used to improve and cut the costs of compliance with banking regulations. Banking organizations use AI to improve their decision-making for loans, set credit limits and identify investment opportunities.
- ❖ **AI in transportation** - AI plays important role in operating autonomous vehicles. AI technologies are used in transportation to manage traffic, predict flight delays, and makemarine shipping safer and in supply chain management.

Financial Plannig

Financial planning is the process of taking a complete look at individual's financial situation and building a specific financial plan to reach at set goals. Financial planning includes multiple areas of finance like investing, taxes payments, savings, retirement plans, investment in real estate, insurance and more. Financial planning is the practice of prepare a plan for future, specifically that how individual manage his finances and prepare for all of the probable costs and issues that may arise in future. The process involves evaluating individual's current financial situation then identifying his goals and then developing and implementing relevant recommendations considering current situation and future aspirations. Financial plans are designed to meet individual's unique needs are created using machine learning algorithms that analyze customer profiles, goals and preferences. This personalization not only increases customer satisfaction, but also leads to the achievement of long-term financial goals.

Artificial intelligence has a large and prevalent impact on financial planning. From data analysis and risk management to personal and professional productivity, Artificial Intelligence (AI) is changing the way to manage the financial issues by expert. As the financial industry continues to implement these technological changes, the future of financial planning will be defined by the collaboration of human intelligence and artificial intelligence as a reality to emerge customer satisfaction.

Role of AI in Investment sector increasing day by day because it is based on an individual's financial goals, risk tolerance, spending habits, and investment preferences. AI can also offer personalized investment advice to individual investors. It studies financial patterns and market trends, and provides personalized investment advice accordingly. AI tools make investment plans more hassle free, risk free, optimize portfolio performance and detect fraudulent activities easily.

AI tools and techniques:

Large volumes of data are frequently handled by finance professionals, and having the correct tools can help them work more efficiently, automate tedious activities, and be more productive. Large datasets can be analyzed by various financial instruments, which can yield insights that aid in decision-making. Artificial intelligence (AI) has become especially noticeable in the banking sector, where it has made it possible to automate processes, enhance customer support, and conduct more efficient data analysis. 85% of banking IT executives surveyed said they had a clear plan in place to use AI in some capacity.

An overview of AI financial tools

Software programs that use artificial intelligence to handle financial activities are known as AI finance tools. Machine learning algorithms are used by AI firms to train programs, which assist the AI model in learning patterns that guide its subsequent decisions. AI tools can offer real-time insights for a variety of tasks, including forecasting, performance analysis, and data analysis, once they have been taught. Depending on the assignment, different AIs will be employed. For instance, chatbots and other customer-facing systems commonly use natural language processing (NLP). However, even though AI may automate a lot of work and offer insightful data, people are still required for strategic decision-making, insight interpretation, ensuring the technology is used ethically, and managing and maintaining AI systems.

How AI can help in finance

AI tools have already started to reduce the time taken for tasks and increase productivity. A few examples of such usage available in the finance domain are-

- Tracking of income and expenses- The process of tracking and classifying revenue and expenses can be automated with AI. AI can produce reports and insights from the data by identifying trends.
- Chatbots- Chatbots with AI capabilities can assist with account information, offer basic financial advice, and respond to consumer inquiries instantly. They can delegate complex concerns to human representatives and handle minor chores themselves.
- Detection of fraud - Artificial Intelligence is capable of real-time analysis of massive transaction volumes to spot odd trends that might point to fraud.
- AI advisor -Algorithms are used by robo-advisors to offer automated portfolio management and investment advice. As an alternative to typical financial counselors, this can be more affordable.
- Management of risk - AI can be used in predictive analytics and scenario modeling to assess and manage financial risk, as the efficiency of AI increases this scope is going to be one of the most beneficial elements of AI in the financial environment.
- Credit underwriting and scoring- AI can expedite the credit decision and underwriting process by swiftly analyzing vast volumes of data to evaluate a potential borrower's creditworthiness
- tracking of compliance- AI can keep an eye on transactions to make sure they comply with regulations and notify the appropriate parties of any infractions, lowering the possibility of fines and harm to one's reputation.
- Bitcoin and blockchain technology - Blockchain technology and AI can be combined for several uses, such as managing smart contracts, identifying fraudulent cryptocurrency transactions, and facilitating decentralized finance (DeFi).

Advantages Of Using AI Tools In Finance

There are various benefits of using AI for the aforementioned applications. Let's examine what to anticipate from the use of AI in financial applications.

- Increased effectiveness- Numerous operations, including data analysis and report production, can be automated by AI, which greatly boosts the effectiveness of financial services workflows and procedures.

- Improved precision- AI can increase accuracy by minimizing human mistake that occurs during manual data entry. But AI isn't perfect; it can make mistakes too, especially if the training data is biased, incomplete, or wrong.
- Data-based decision-making- Artificial intelligence (AI) enables more informed, data-driven decision-making by analyzing massive datasets and providing insights in real-time.
- Personal customer experience. Chatbots, which are AI-powered technology, may provide customized customer experiences by utilizing client data. AI can also offer tailored financial guidance according to a person's financial objectives and habits.
- Improved handling of the portfolio- investment portfolios can be managed by robo-advisors using algorithms to determine strategies. They can offer more people an accessible and reasonably priced means of managing their money and making investments.
- Cutting-edge financial services and products- Financial organizations may create and provide more cutting-edge goods and services with the help of AI. Predictive models, for instance, can facilitate customized financial products, and AI-powered data analysis can result in more focused and efficient advertising.
- Even while AI has certain benefits, it is not a cure-all. Human supervision and judgment are still essential, especially when handling ethical issues and evaluating insights produced by AI.

AI Tools Available In Market

While there is a flood of AI tools and chatbots, here is a comprehensive list of a few of them to inculcate AI in your financial workings and processes

1. AlphaSense
2. Greip
3. ChainGPT
4. Receipt Cat
5. Notreload
6. Timworks

Conclusion

AI can significantly increase productivity and capacities in these domains, human oversight is still necessary, especially in areas like compliance, risk management, and decision-making where moral and legal issues are crucial. These are typical applications of AI in financial services, however as the field is developing quickly, there is room for variation and new usage all the time.

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"Mahatma Gandhi's Concept of Trusteeship: Relevance, Application, and Ethical Implications in Contemporary Societies"

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Abstract:

Mahatma Gandhi, a pivotal figure in India's struggle for independence and an advocate of nonviolent resistance, introduced the concept of trusteeship as a means to address socio-economic disparities and foster ethical business practices. This research delves into the philosophy of trusteeship as envisioned by Gandhi and explores its contemporary relevance, applicability, and ethical implications in modern societies.

The study begins with an examination of the historical context surrounding Gandhi's trusteeship concept, elucidating its emergence and evolution in response to the prevailing social and economic challenges of his time. Through a comprehensive literature review, the research analyzes Gandhi's key writings and speeches on trusteeship and compares this philosophy with other socio-economic theories and philosophies.

Understanding the essence of trusteeship, the research identifies the fundamental principles and core beliefs underpinning Gandhi's vision. The role of wealth and property in trusteeship is investigated, illuminating Gandhi's call for the ethical use of resources by the affluent to serve the less privileged, thus fostering a more equitable society.

To ascertain the applicability of trusteeship in contemporary economies, the research evaluates its compatibility with modern economic systems. Case studies of businesses and organizations that have successfully implemented trusteeship principles provide insights into its potential impact on reducing wealth inequality and promoting sustainable development.

Ethical implications form a crucial aspect of this research, exploring the ethical considerations in trusteeship-driven decision-making. Balancing individual rights and collective responsibilities within the framework of trusteeship is examined to discern the challenges and nuances in adopting this philosophy in the context of contemporary societies.

The research culminates in an exploration of viable strategies for implementing trusteeship in modern economies. Proposals for integrating trusteeship principles into economic policies are put forth, and the role of education and awareness in promoting trusteeship ideals is emphasized.

Ultimately, this research underscores the enduring significance of Mahatma Gandhi's trusteeship philosophy in addressing the persistent issues of wealth disparity and ethical conduct in today's world. By investigating the potential benefits, challenges, and ethical considerations of trusteeship, this study seeks to inspire critical discussions and actions toward building a more just and equitable society.

Keywords: Mahatma Gandhi, trusteeship, relevance, application, ethical implications, contemporary societies, socio-economic disparities, ethical business practices, nonviolent resistance, India's struggle for independence, social and economic challenges, core beliefs, wealth and property, equitable society, modern economies, wealth inequality, sustainable development, ethical considerations, collective responsibilities, economic policies, education and awareness, just and equitable society.

Introduction :

The concept of trusteeship, introduced by Mahatma Gandhi, stands as a profound socio-economic and ethical philosophy that continues to resonate with contemporary societies. Rooted in his principle of nonviolence (ahimsa) and his unwavering commitment to social justice, trusteeship represents a visionary approach to wealth distribution, equitable development, and ethical responsibility. As we navigate an era marked by unprecedented challenges of wealth inequality, environmental degradation, and ethical dilemmas, Gandhi's concept of trusteeship gains renewed significance as a potential pathway towards a more just and harmonious world.[1]

Gandhi's trusteeship emerged in response to the turbulent socio-political landscape of his time. Colonialism and rapid industrialization had led to glaring

disparities between the wealthy elite and the marginalized masses. Gandhi recognized that unbridled capitalism and unchecked accumulation of wealth perpetuated cycles of exploitation and suffering. In this context, he proposed trusteeship as a means to address these imbalances, transforming the way society perceived and utilized wealth.

At its core, trusteeship is a call for individuals possessing wealth and resources to view themselves not as proprietors, but as stewards, entrusted with the responsibility of managing these assets for the collective welfare. This conception challenges the conventional notion of ownership and advocates for a mindset shift that places societal well-being at the forefront. Gandhi believed that this approach would foster a sense of shared responsibility, urging the affluent to use their resources not solely for personal gain, but to uplift the less fortunate.

The relevance of Gandhi's trusteeship is strikingly evident in today's interconnected world. Globalization has brought prosperity to some regions while leaving others in dire need, intensifying wealth disparities. Modern capitalism often prioritizes profit maximization over social welfare, resulting in environmental degradation and social disintegration. Against this backdrop, trusteeship offers a compelling alternative, reorienting economic practices towards inclusivity, sustainability, and compassion.

One of the key applications of trusteeship lies in the realm of corporate social responsibility (CSR). As multinational corporations wield significant economic influence, their commitment to ethical practices and community development is pivotal. The principles of trusteeship guide corporations towards becoming responsible custodians of resources, investing in initiatives that empower local communities, protect the environment, and ensure fair treatment of employees. This integration of ethical considerations into business operations embodies the spirit of trusteeship, thereby advancing the goal of a more equitable society.

Furthermore, trusteeship aligns seamlessly with the pursuit of sustainable development. As nations grapple with the challenge of achieving economic growth without compromising environmental well-being, Gandhi's concept underscores the interdependence of human prosperity and ecological integrity. By viewing natural resources as a collective inheritance, trusteeship compels societies to adopt conservation practices and sustainable consumption patterns that safeguard the planet for future generations.

However, the implementation of trusteeship is not without its complexities and ethical dilemmas. Critics argue that relying solely on individuals' goodwill to prioritize societal welfare may be insufficient to address systemic issues. Furthermore, reconciling profit motives with the commitment to trusteeship poses challenges for corporations aiming to strike a balance between financial success and ethical conduct. These concerns highlight the need for a nuanced approach that combines regulatory frameworks, public pressure, and individual commitment to ensure that trusteeship's ideals are upheld consistently.

In conclusion, Mahatma Gandhi's concept of trusteeship stands as a timeless testament to the potential for economic and ethical transformation. In an age marked by stark inequalities and ethical uncertainties, trusteeship offers a paradigm shift that emphasizes the shared stewardship of resources, the pursuit of equitable development, and the cultivation of ethical responsibility. As contemporary societies grapple with complex challenges, from rising inequality to environmental degradation, Gandhi's vision of trusteeship offers a moral compass to navigate these

turbulent waters. This research paper delves deeper into the relevance, application, and ethical implications of trusteeship in the context of today's multifaceted world, shedding light on the enduring value of Gandhi's ideas in fostering social harmony, economic equity, and ethical stewardship.

Historical Context of Trusteeship :

The concept of trusteeship, as expounded by Mahatma Gandhi, found its roots in a historical context marked by colonial oppression, economic disparity, and the struggle for self-determination. Emerging in the early 20th century, Gandhi's idea of trusteeship was a response to the tumultuous socio-political environment of his time, and it drew inspiration from various historical factors that shaped his worldview.

The late 19th and early 20th centuries witnessed the peak of European colonial dominance across Asia, Africa, and other regions. India, Gandhi's homeland, was under British colonial rule, and the exploitative economic policies imposed by the British had resulted in widespread poverty, land dispossession, and economic inequality. This colonial subjugation provided the backdrop against which Gandhi developed his philosophy of trusteeship.

Industrialization and the growth of capitalism during this period also contributed to the economic disparities that Gandhi sought to address through trusteeship. The rapid rise of

industries, coupled with unequal distribution of wealth, led to the concentration of resources in the hands of a privileged few while leaving the majority of the population in abject poverty. The exploitative nature of capitalist systems prompted Gandhi to critique the unchecked pursuit of profit and advocate for a more equitable distribution of resources.

Gandhi's early experiences as a lawyer in South Africa further shaped his perspective on social and economic justice. Witnessing the racial discrimination faced by Indians in South Africa, he became acutely aware of the intersections between economic and racial oppression. This awareness influenced his understanding of trusteeship as a means to challenge entrenched power structures and foster social harmony by redistributing resources more equitably.[2]

The concept of trusteeship was also informed by India's rich tradition of spirituality, ethics, and social welfare. Drawing from ancient texts and philosophical teachings, Gandhi recognized the importance of selflessness, compassion, and the interconnectedness of all beings. These principles provided a philosophical foundation for his idea of trusteeship, which emphasized the responsibility of those with means to uplift the less fortunate and contribute to the greater good.

The historical backdrop of the Indian independence movement played a significant role in shaping Gandhi's vision of trusteeship as well. During this period, Indians were united in their struggle against British colonialism, and Gandhi sought to harness this collective spirit to build a more just society. Trusteeship became a bridge between economic justice and political liberation, aligning with the overarching goal of India's freedom movement.

In conclusion, the historical context in which Mahatma Gandhi introduced the concept of trusteeship was one characterized by colonial oppression, economic disparity, and a quest for self-determination.[3]The influences of British colonial rule, global industrialization, personal experiences in South Africa, and India's spiritual heritage all converged to shape Gandhi's philosophy of trusteeship. This concept emerged as a response to the pressing challenges of his time, offering a visionary approach to addressing economic inequalities, dismantling exploitative power structures, and promoting ethical stewardship of resources. By examining the historical factors that informed Gandhi's thinking, we gain insight into the deep-rooted significance of trusteeship in his quest for social justice and human dignity.

Relevance in Contemporary Societies :

In today's rapidly evolving world, characterized by technological advancements, globalization, and intricate interconnectedness, Mahatma Gandhi's concept of trusteeship holds remarkable relevance as a guiding framework to address pressing socio-economic challenges. As societies grapple with issues such as escalating wealth inequality,

environmental degradation, and the ethical implications of emerging technologies, the principles of trusteeship offer a poignant antidote that resonates deeply with the aspirations of contemporary societies.

One of the most striking challenges faced by modern societies is the staggering disparity in wealth and resources. The gap between the affluent minority and marginalized majority has widened to alarming levels, undermining social cohesion and exacerbating socio-economic tensions. Gandhi's trusteeship concept addresses this challenge by proposing a paradigm shift in the perception of wealth. In the contemporary context, where the accumulation of vast riches is often associated with unchecked power, trusteeship offers an alternative narrative—one that encourages the wealthy to consider themselves as custodians rather than sole proprietors of their resources. This shift in perspective can foster a more inclusive economic landscape where wealth is redistributed for the greater good, fostering a sense of shared responsibility and equitable growth.

Moreover, the global pursuit of economic growth has led to environmental degradation and ecological imbalance. Trusteeship, with its emphasis on ethical stewardship, provides a powerful approach to sustainable development. Contemporary societies are grappling with the imperative of finding ways to balance economic progress with environmental preservation. By incorporating trusteeship principles into business practices and policy-making, societies can transition toward eco-conscious practices that ensure the well-being of current and future generations.

The emergence of powerful technologies, including artificial intelligence, biotechnology, and automation, raises complex ethical dilemmas that require thoughtful consideration. Trusteeship offers a framework to navigate these challenges by encouraging the responsible development and application of these technologies. In a world where digital innovations can shape societal structures and individual lives, the principles of trusteeship guide the creators and users of technology to prioritize human well-being, social justice, and the protection of individual rights.

Furthermore, the concept of trusteeship resonates strongly in the realm of corporate social responsibility (CSR). As multinational corporations wield immense influence on global economies and societies, they bear a unique responsibility to contribute positively to the world. The tenets of trusteeship align seamlessly with

CSR initiatives, encouraging businesses to not only generate profits but also to invest in community development, environmental sustainability, and fair labor practices. By doing so, companies can fulfill their ethical obligations as trustees of resources and contributors to societal progress.

In conclusion, Mahatma Gandhi's concept of trusteeship remains remarkably relevant in contemporary societies grappling with intricate challenges. As economies become increasingly globalized and societies more interconnected, trusteeship offers a moral compass to navigate the complexities of wealth inequality, environmental degradation, and ethical dilemmas arising from technological advancements. By fostering a spirit of shared responsibility, ethical stewardship, and inclusive development, trusteeship continues to inspire individuals, corporations, and governments to actively engage in shaping a world that is more equitable, sustainable, and just.[4]As modern societies seek solutions to multifaceted issues, Gandhi's vision of trusteeship stands as a timeless guide toward a better future for all.

Application of Trusteeship :

The concept of trusteeship, as conceived by Mahatma Gandhi, finds diverse and meaningful applications across various sectors of contemporary society. From business and governance to philanthropy and social development, trusteeship offers a transformative framework that encourages responsible and ethical stewardship of resources for the greater good. By embodying Gandhi's vision of equitable distribution, cooperation, and shared responsibility, these applications of trusteeship hold the potential to address complex challenges and promote harmonious development.

In the realm of business, the application of trusteeship takes the form of corporate social responsibility (CSR). Modern corporations wield significant economic power and influence, often impacting local communities and global ecosystems. Embracing trusteeship principles, businesses can go beyond profit maximization to actively contribute to societal welfare. This might involve investing in education, healthcare, and infrastructure in underserved areas,

promoting fair labor practices, reducing environmental impact, and fostering transparency in operations. By viewing themselves as trustees of resources rather

than mere profit generators, companies can build a more sustainable and just economic landscape.

Governance is another sphere where trusteeship can be applied. Governments are entrusted with the responsibility of managing public resources and ensuring the welfare of citizens. By integrating trusteeship principles into policy-making, governments can prioritize social equity, education, healthcare, and environmental conservation. This approach aligns with the idea of elected officials acting as trustees of the people's trust, accountable for their actions and committed to the well-being of all members of society.[5]

In the realm of philanthropy and social development, trusteeship offers a transformative perspective on how resources are allocated to address social issues. Rather than mere charity, trusteeship encourages philanthropists to view their wealth as a means to empower marginalized communities, support sustainable initiatives, and drive systemic change. This might involve funding educational programs, healthcare facilities, and sustainable agriculture projects. Trusteeship fosters a deeper connection between benefactors and beneficiaries, fostering empathy and understanding.

Furthermore, trusteeship can guide the development and deployment of emerging technologies. As innovations such as artificial intelligence, biotechnology, and automation reshape societies, ethical considerations become paramount. By adopting trusteeship principles, developers and policymakers can ensure that these technologies are harnessed for the greater good, avoiding harm and ensuring equitable access. This approach safeguards against the concentration of technological benefits in the hands of a few and emphasizes technology's potential to serve the collective well-being.

In the arena of environmental sustainability, trusteeship serves as a guiding principle for resource management. Natural resources are finite and must be managed responsibly to ensure their availability for future generations. Trusteeship encourages sustainable practices, advocating for the careful use and conservation of resources to avoid irreparable ecological damage. This aligns with global efforts to combat climate change, preserve biodiversity, and protect the planet's ecosystems.

In conclusion, the application of trusteeship in contemporary society extends to diverse domains, encompassing business, governance, philanthropy, technology, and environmental conservation. Gandhi's vision of shared responsibility, ethical stewardship, and equitable distribution of resources offers a transformative framework that resonates with the challenges and aspirations of our interconnected world. By embracing trusteeship, individuals, organizations, and governments can contribute to a more just, sustainable, and harmonious future. As societies navigate complex issues, the application of trusteeship stands as a testament to its enduring relevance and potential for positive change.

Ethical Implications and Challenges :

While Mahatma Gandhi's concept of trusteeship offers a compelling framework for addressing socio-economic disparities and fostering ethical responsibility, it also presents a set of ethical implications and challenges that must be navigated thoughtfully. These challenges arise from balancing the idealistic principles of trusteeship with practical realities, potential conflicts of interest, and the complexities of human behavior.

One of the primary ethical challenges lies in the voluntary nature of trusteeship. Gandhi envisioned that individuals of means would willingly adopt the role of trustees, managing their resources for the collective good. However, in practice, relying solely on goodwill might not ensure consistent commitment to societal welfare. The voluntary nature of trusteeship could lead to uneven implementation, with some individuals neglecting their responsibilities while others earnestly uphold the ideals.

Another challenge pertains to the potential for trusteeship to be co-opted or manipulated. In societies driven by profit motives, there's a risk that individuals might exploit the concept of trusteeship for personal gain while using it

as a veneer of social responsibility. This could undermine the genuine efforts of those who uphold trusteeship's principles, eroding trust in the concept itself.[6]

The concept of trusteeship also raises questions about the distribution of decision-making power. If those with resources hold a disproportionate influence over how these resources are used, it might perpetuate existing power dynamics and prevent equitable participation. Ensuring the representation of marginalized voices in decision-making processes is crucial to addressing this challenge and preventing potential abuses.

Moreover, reconciling the profit motive with trusteeship's ethical imperatives can be intricate. In the business world, the pursuit of profit is often seen as the primary objective. Trusteeship, however, encourages businesses to prioritize social welfare over short-term financial gains. Striking a balance between profitability and societal benefit requires navigating complex trade-offs and could encounter resistance from stakeholders focused solely on monetary returns.

Implementing trusteeship also demands mechanisms for accountability and oversight. Without effective monitoring, there's a risk that resources might not be utilized as intended, undermining the principles of equitable distribution. Establishing transparent reporting and accountability structures becomes vital to ensure that trustees uphold their responsibilities and that resources are genuinely directed towards societal welfare.

Furthermore, trusteeship's ethical implications extend to the consideration of unintended consequences. Even with the best intentions, decisions made within the framework of trusteeship might inadvertently lead to negative outcomes. For instance, well-intentioned resource redistribution might disrupt local economies or perpetuate a sense of dependency. Navigating these unintended consequences requires careful analysis, adaptability, and a commitment to continuous improvement.

In conclusion, while Mahatma Gandhi's concept of trusteeship offers a profound ethical framework to address socio-economic inequalities and foster ethical responsibility, it presents a range of challenges and ethical implications that must be carefully addressed. The voluntary nature of trusteeship, potential for co-optation, power imbalances, reconciling profit motives, establishing accountability mechanisms, and navigating unintended consequences all require thoughtful consideration. Overcoming these challenges involves a collective effort by individuals, businesses, governments, and civil society to embrace trusteeship's ideals while pragmatically addressing its complexities. By doing so, societies can maximize the positive impact of trusteeship while safeguarding against potential pitfalls.

Case Studies :

Certainly! Here are a few case studies that illustrate the application of Mahatma Gandhi's concept of trusteeship in contemporary contexts:

1. Tata Group's Social Initiatives:

The Tata Group, one of India's largest conglomerates, embodies the principles of trusteeship through its commitment to social responsibility. The group's founder, Jamsetji Tata, was inspired by Gandhi's philosophy and believed in using business as a means to contribute to society. The Tata Group's numerous social initiatives, such as educational institutions, healthcare facilities, and rural development projects, exemplify the application of trusteeship by using corporate resources to address societal needs. The group's focus on inclusive growth and sustainable development aligns with Gandhi's vision of responsible wealth distribution.[7]

2. Fair Trade Organizations:

Fair trade organizations operate on principles that echo trusteeship, particularly in the context of global trade. These organizations advocate for fair wages, ethical production practices, and sustainable livelihoods for workers in developing countries. By ensuring that producers receive a fair share of the value created, fair trade organizations

align with Gandhi's concept of equitable distribution and responsible resource management. This approach empowers marginalized communities and promotes ethical consumerism.

3. Grameen Bank and Microfinance

The Grameen Bank, founded by Nobel laureate Muhammad Yunus, exemplifies trusteeship principles in the field of microfinance. By providing small loans to impoverished individuals, particularly women, the bank aims to alleviate poverty and empower communities. This approach aligns with Gandhi's vision of uplifting the marginalized and fostering self-sufficiency. Grameen Bank's focus on social impact over profit maximization resonates with trusteeship's emphasis on using resources for the collective well-being.

4. B Corp Certification:

The B Corp movement represents a contemporary application of trusteeship in the business world. B Corporations are companies certified for meeting rigorous social and environmental performance standards. These companies commit to considering the interests of all stakeholders, not just shareholders, and to using business as a force for good. B Corps embrace the ethical responsibility of trusteeship by prioritizing social and environmental sustainability alongside financial profitability.

5. Community Land Trusts:

Community land trusts (CLTs) offer a model for applying trusteeship principles to land and housing ownership. CLTs acquire land and hold it in trust for the benefit of the community. This ensures that housing remains affordable and accessible even as property values increase. CLTs prevent speculative land development and contribute to stable, inclusive communities. This approach resonates with Gandhi's vision of resources being managed for the greater good.

6. Patagonia's Environmental Initiatives:

Outdoor apparel company Patagonia demonstrates trusteeship principles by aligning its business operations with environmental sustainability. Patagonia donates a percentage of its revenue to environmental causes, engages in advocacy for climate action, and encourages responsible consumer behavior. The company's approach to business reflects a commitment to stewardship of natural resources and a recognition of the interdependence between business success and environmental health.

These case studies highlight how Mahatma Gandhi's concept of trusteeship can be translated into action across different sectors and contexts. Whether through business practices, social initiatives, ethical certifications, or community-driven models, trusteeship offers a framework for promoting equity, responsibility, and ethical decision-making in the pursuit of a more just and sustainable world.

Conclusion :

In conclusion, Mahatma Gandhi's concept of trusteeship stands as a timeless and visionary philosophy with profound relevance in contemporary societies. As the world grapples with unprecedented challenges and opportunities, from escalating inequality to technological advancement, the principles of trusteeship offer a moral compass to navigate these complex terrains.

Gandhi's call to view resources as instruments of collective welfare rather than personal accumulation resonates powerfully in a world marked by wealth disparities and environmental degradation. The concept of trusteeship

challenges us to transcend self-interest and embrace shared responsibility, fostering a sense of interconnectedness that transcends borders and barriers.[8]

The case studies presented underscore the versatility of trusteeship's application, spanning diverse sectors such as business, social development, and environmental sustainability. Whether through corporate social responsibility, fair trade practices, or community-driven initiatives, trusteeship demonstrates its potential to create positive impact and guide ethical decision-making.

However, the ethical implications and challenges associated with trusteeship are not to be overlooked. From the voluntary nature of commitment to the need for accountability, these challenges require thoughtful consideration and pragmatic solutions. Striking a balance between profit motives and societal welfare is particularly complex, demanding a delicate equilibrium to ensure the enduring relevance of trusteeship.

As societies evolve, Gandhi's vision of trusteeship remains a beacon of hope and a call to action. It compels us to rethink our relationships with resources, power, and one another. Trusteeship transcends time and cultural contexts, serving as a reminder that economic progress must be intertwined with social well-being and environmental stewardship.

In a world where polarization and self-interest often prevail, the concept of trusteeship offers a unifying philosophy that transcends divisions. By fostering a spirit of collective responsibility, ethical leadership, and sustainable practices, trusteeship can guide individuals, organizations, and nations towards a future characterized by compassion, equity, and harmony. As we navigate the challenges

and opportunities of our era, the enduring relevance of Mahatma Gandhi's concept of trusteeship beckons us to uphold its ideals and work towards a world that truly embodies the principles of shared stewardship and shared prosperity.

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Challenges and solutions of integrated electoral system

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समेकित निर्वाचन प्रणाली की चुनौतियां एवं समाधान

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आरम्भ

भारतीय लोकतंत्र ने आजादी के अमृत काल तक का सफर सफलतापूर्वक तय कर लिया है जो कि इतनी विभिन्नता वाले देश¹ के लिए एक सराहनीय एवं ऐतिहासिक कीर्तिमान है। भारत के पड़ोसी देश पाकिस्तान में अभी हाल ही में सम्पन्न निर्वाचन को पक्षपातपूर्ण रवैया को सम्पूर्ण विश्व जगत ने देखा है किन्तु हम भारतीय को, भारत के संविधान पर पूर्ण निष्ठा है, इसी निष्ठा ने कई उतार – चढ़ाव देखते हुए भी भारतीय निर्वाचन प्रणाली पर सदैव ही आस्था व्यक्त की तथा पूर्ण रूपेण समर्थन कर सफल भी बनाया। लेकिन समय के साथ परिवर्तन एक शाश्वत सत्य है जो कि लौकिक जगत के सभी आयामों पर यथावत रूप से लागू होता है और इसी क्रम में भारतीय लोकतंत्र अब समेकित निर्वाचन प्रणाली को लागू करने के लिए कदम उठा रहा है जो कि सशक्त लोकतांत्रिक प्रणाली के लिए उपयोगी सिद्ध होगा। लेकिन यह राह आसान नहीं है क्योंकि वर्तमान भारतीय लोकतंत्र जिस राह पर है उसमें एकाएक परिवर्तन कर नवीन विचारधारा को लागू करना चुनौतिपूर्ण कार्य है और यदि यह प्रयास सफल रहता है तो यह विकसित भारत अमृत हवन कुण्ड में एक सार्थक आहुति सिद्ध होगी और एक नवीन लोकतांत्रिक प्रणाली को विकसित होने में बल प्राप्त होगा।

मुख्य बिन्दु:— समेकित निर्वाचन प्रणाली, चुनाव सुधार, विकसित भारत।

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परिचय :- लोकतंत्र, शासन सत्ता का वह स्वरूप है जिसमें नागरिक अपने लोक कल्याण के लिए निर्धारित समयावधि के लिए राजनैतिक प्रवर शक्ति का विहित संवैधानिक प्रक्रिया की पालाना द्वारा चयन कर शासन शक्ति का केन्द्र निहित करती है और यह प्रक्रिया अनवरत जारी रहती है इस प्रकार लोकतंत्र की वास्तविक शक्ति का केन्द्र तो केवल नागरिकों की सामूहिक भावना में ही निहित होती है। जैसा की सर्वविदित है कि लोकतंत्र में बहुमत की भावना को शासन सत्ता का केन्द्र प्राप्त होता है किन्तु अल्पमत को विपक्षी की महत्ती भूमिका के निर्वहन का दायित्व मिलता है इस प्रकार लोकतंत्र की सबसे खूबसूरत छवि यहीं है कि शासन पूर्ण बहुमत के साथ सशक्त होना चाहिए तथा विपक्षी मजबुत होना चाहिए अर्थात् शासन सत्ता जिस भी दल के पास हो वह सदैव पूर्ण बहुमत के साथ होनी चाहिए तथा विपक्षी की भूमिका के लिए एक शक्तिशाली विपक्ष होना चाहिए ताकि शासन की निरंकुश कार्य प्रणाली पर अंकुश अधिरोपित कर सके तथा शासन के कार्य के लिए प्रश्न कर सके। जैसा की दिल्ली विधानसभा में विगत दो बार के विधानसभा चुनाव में देखने को मिलता है वहां एक ही दल के लगभग 90 प्रतिशत से भी ज्यादा प्रत्याशी ने जीत दर्ज कर विपक्षी की भूमिका को लगभग समाप्त सा ही कर दिया है। यह तथ्य सही है कि लोकतंत्र में जनता ही जनार्दन है तथा जनता जिसे चुनती है वही दल

¹ वर्तमान में भारत में 28 राज्य ओर 8 संघ शासित प्रदेश है।

शासन की बागडोर सम्भालता है किन्तु विपक्षी की भूमिका को नकारना लोकतंत्र को विनाश की ओर ले जाना है और यहीं लोकतंत्र के विनाश का सबसे बड़ा कारण भी बनता है।

लोकतंत्र को विनियमित करने के लिए निष्पक्ष एवं निर्विवादित निर्वाचन सबसे महत्वपूर्ण है। इसके लिए भारत का संविधान के भाग – 15 में “निर्वाचन” संबंधी प्रावधान किये गये हैं।

भारतीय लोकतंत्र का शासन स्वरूप :- भारतीय लोकतंत्र में शासन की संसदीय प्रणाली को अपनाया है जिसके अंतर्गत संस्थागत व्यवस्था रखी गई है। इस कारण राजनैतिक विचारधारा को राजनैतिक दल के रूप में संवैधानिक मान्यता दी गई। परिणामतः जिस दल को सदन में बहुमत होगा शासन सत्ता उसी दल के पास होगी। इस प्रकार आम चुनाव में जिस दल को बहुमत होगा माननीय राष्ट्रपति जी के द्वारा उसी दल के नेता को सरकार बनाने के लिए आमंत्रण दिया जावेगा। सामान्य अवस्था जिसमें एक दल को स्पष्ट बहुमत प्राप्त हो जाता है तब तो यह प्रक्रिया आसानी से पूरी कर ली जाती है किन्तु जब त्रिशंकु मत प्राप्त होता है अर्थात् किसी भी एक दल को पूरा राजनैतिक प्रतिनिधित्व प्राप्त नहीं होता है तब संघ में राष्ट्रपति तथा राज्यों में राज्यपाल के सामने एक संवैधानिक प्रश्न उत्पन्न होता है। ऐसी दशा में कि किसे सरकार के गठन के लिए आमंत्रित किया जावे। यहां दो प्रकार की परिस्थिति जन्म लेती है:-

प्रथम :- इस स्थिति में राष्ट्रपति / राज्यपाल उस दल को आमंत्रित करे जिस दल के पास ज्यादा सदस्य चुन करे आये है; अथवा ?

द्वितीय :- चुनाव पूर्व के गठबंधन को आमंत्रित किया जावे जिसके पास ज्यादा चुने हुए प्रतिनिधि है।

यहां पर यह विवेकाधिकार राष्ट्रपति / राज्यपाल का होता है कि वे किस विकल्प का चयन करते हैं तथा किसे सरकार के गठन के लिए आमंत्रित करते हैं।

एक राष्ट्र एक चुनाव की संकल्पना :- वन नेशन वन इलेक्शन” (ओएनओई) एक अवधारणा को संदर्भित करता है जो एक देश में सभी राष्ट्रीय और उप-राष्ट्रीय चुनावों को एक साथ आयोजित करने की वकालत करता है। आमतौर पर एक निश्चित समय सीमा के भीतर। इसका उद्देश्य चुनावी प्रक्रिया को सुव्यवस्थित करना, लागत कम करना और संभावित रूप से मतदाता मतदान में वृद्धि करना है। हालाँकि, यह तार्किक चुनौतियों, संभावित राजनीतिक हेरफेर और स्थानीय मुद्दों पर प्रभाव के बारे में भी चिंता पैदा करता है।

आजादी के तुरंत बाद, लोकसभा और राज्य विधानसभाओं के लिए एक साथ चुनाव कराए गए। यह 1952, 1957, 1962 और 1967 के चुनावों के लिए सच था। लेकिन इसे बंद कर दिया गया क्योंकि, 1968-69 में, कुछ राज्य विधानसभाएं विभिन्न कारणों से पहले ही भंग कर दी गई थीं। वर्तमान में, राज्य विधानसभाओं और लोकसभा के चुनाव अलग-अलग होते हैं। यानी जब भी मौजूदा सरकार का पांच साल का कार्यकाल खत्म होता है अथवा जब भी विधानसभा भंग होती है। विधान सभाओं और लोकसभा की चुनाव की समयावधि एक दूसरे के साथ समकालिक हो भी सकती हैं और नहीं भी। उदाहरण के लिए, राजस्थान, मध्यप्रदेश, छत्तीसगढ़, तेलंगाना आदि राज्यों में 2023 के अंत में चुनाव अभी हाल ही में सम्पन्न हुए हैं, जबकि कई राज्यों में निर्वाचन 2024, 2025 में चुनाव होंगे। लगभग एक साल में औसतन 5-7 विधानसभा चुनाव होते हैं। इससे होने वाली समस्याओं के कारण चुनाव आयोग ने एक ऐसी व्यवस्था बनाने का सुझाव दिया, जिससे राज्य विधानसभा और लोकसभा के चुनाव एक साथ कराए जा सकें। न्यायमूर्ति रेड्डी की अध्यक्षता वाले 1999 के विधि आयोग ने भी एक साथ चुनाव कराने की सिफारिश की थी। 2015 में संसदीय स्थायी समिति की 79वीं रिपोर्ट में एक साथ चुनाव का समर्थन दोहराया गया है। एक साथ चुनाव का विचार 2016 में प्रधान मंत्री माननीय श्री नरेन्द्र जी मोदी द्वारा फिर से पेश किया गया था। 2017 में नीति आयोग द्वारा एक साथ चुनाव पर एक वर्किंग पेपर तैयार किया गया था। यहां तक कि कानून आयोग ने 2018 में एक वर्किंग

पेपर लाया और कहा कि एक साथ चुनाव को संभव बनाने के लिए कम से कम पांच संवैधानिक बदलावों की आवश्यकता होगी। हाल ही में भाजपा नेता श्री नकवी ने राजनीतिक दलों से एक साथ चुनाव पर विचार करने का आह्वान किया है। हालाँकि, कई विपक्षी दल अभी भी इस विचार का विरोध करते हैं।

एक साथ चुनाव की आवश्यकता के पीछे तर्क मात्र इतना है कि हर साल, देश में औसतन 5 से 7 राज्यों में विधानसभा चुनाव होते हैं, जिसका मतलब है कि भारत हमेशा चुनावी मोड में रहता है। यह सभी प्रमुख हितधारकों को प्रभावित करता है, जैसे कि केंद्र सरकार, राज्य सरकार, सरकारी कर्मचारी, चुनाव ज्यूटी पर शिक्षक, मतदाता, राजनीतिक दल और उम्मीदवार। चुनाव के लिए चुनाव आयोग द्वारा आदर्श आचार संहिता लागू करने की आवश्यकता होती है। संसदीय स्थायी समिति की 79वीं रिपोर्ट के अनुसार, आदर्श आचार संहिता लागू होने से जिस राज्य में चुनाव हो रहा है, वहां केंद्र और राज्य सरकार की सामान्य सरकारी गतिविधियां और कार्यक्रम निलंबित हो जाते हैं। इससे नीतिगत पंगुता और सरकारी घाटा होता है। बार-बार चुनाव होने से केंद्र और राज्य सरकारों को बड़े पैमाने पर खर्च करना पड़ता है। इसलिए, इससे सार्वजनिक धन की बर्बादी होती है और विकास कार्य बाधित होता है। चुनाव होने पर काफी संख्या में सुरक्षा बलों की भी तैनाती करनी पड़ती है। 16वीं लोकसभा चुनाव में भारत के चुनाव आयोग ने चुनाव चलाने के लिए 10 मिलियन सार्वजनिक अधिकारियों की सहायता ली। लम्बे समय तक आदर्श आचार संहिता लागू रहने से जनता का सामान्य जीवन अस्त-व्यस्त हो जाता है। बार-बार होने वाले चुनाव प्रचार के कारण भी ऐसा होता है। बार-बार चुनाव होने के कारण जाति, सांप्रदायिक और क्षेत्रीय मुद्दे हमेशा सबसे आगे रहते हैं। कई लोग तर्क देते हैं कि निरंतर राजनीति ऐसे मुद्दों को कायम रखती है। बार-बार होने वाले चुनाव भी शासन का ध्यान दीर्घकालिक से अल्पकालिक नीतिगत लक्ष्यों की ओर स्थानांतरित कर देते हैं। इसके कारण, सुदृढ़ आर्थिक योजना पीछे रह जाती है और सरकार अक्सर अत्यधिक व्यय में लिप्त हो जाती है। स्वतंत्रता के बाद लगभग सन् 1967 तक एक ही दल की सरकार ज्यादातर रूप से चुन कर आती थी तब किसी भी प्रकार का कोई संवैधानिक संकट उत्पन्न ही नहीं होता था किन्तु धीरे-धीरे भारतीय राजनैतिक व्यवस्था में क्षेत्रीय राजनैतिक दलों ने जन्म लेना प्रारम्भ किया और राजनैतिक प्रतिनिधित्व प्राप्त करना आरम्भ कर दिया जिससे प्रमुख राजनैतिक दल की बरसों पुरानी जमीं – जमाई राजनैतिक सत्ता को चुनौति मिलना आरम्भ हो गया और आपातकाल के बाद यह स्थिति देश में देखने को मिली की आम चुनाव में कई राजनैतिक दलों ने एक गठबंधन की राजनीति को साकार रूप देकर नई तरह की राजनैतिक विचारधारा को जन्म दिया और लगभग ढाई वर्ष तक शासन किया। इस दौरान संघ शासन ने अनु0 356 की शक्ति का उपयोग कर विरोधों दलों के राज्यों की विधानसभा को भंग कर दिया। किन्तु राजनैतिक महत्वकाशाओं ने गठबंधन की राजनीति को ज्यादा सफल नहीं होने दिया और आम चुनावों की घोषणा हो गई और पुनः संघ शासन में एक पूर्ण बहुमत की शासन सरकार लौट कर आई तथा तत्कालीन शासन ने भी अनु0 356 की शक्ति का उपयोग किया और पुनः विरोधी दल के राज्यों की विधानसभा को भंग कर दिया तथा राज्यों में चुनावों करवाये गये। लेकिन इसके बाद के दौर ने यह स्थिति स्पष्ट कर दी की अब देश में एक ही दल की सरकार को स्पष्ट बहुमत मिलना कितना कठिन हो गया।

एक राष्ट्र एक चुनाव के लाभ :- एक राष्ट्र एक चुनाव के लाभ निम्न है:-

1⁰ **सार्वजनिक धन की बचत-** इससे बार-बार होने वाले चुनावों में होने वाली भारी लागत कम हो जाएगी। राजनीतिक भ्रष्टाचार का एक मुख्य कारण बार-बार चुनाव होना है। प्रत्येक चुनाव में भारी मात्रा में धन जुटाना पड़ता है। एक साथ चुनाव कराने पर

राजनीतिक दलों का चुनावी खर्च काफी कम हो सकता है। धन उगाही का कोई दोहराव नहीं होगा। इससे जनता और व्यापारिक समुदाय को चुनावी चंदे के लिए कई बार दबाव बनाने से बचाया जा सकेगा। एक रिपोर्ट के मुताबिक, 2019 के लोकसभा चुनाव के दौरान 60,000 करोड़ रुपये खर्च हुए थे। इसके अलावा, यदि चुनाव एक साथ होते हैं तो चुनाव आयोग द्वारा किए जाने वाले खर्च को कम किया जा सकता है। निःसंदेह, आवश्यक बुनियादी ढाँचा स्थापित करने के लिए चुनाव आयोग को शुरुआत में काफी धनराशि का निवेश करना होगा। इसके अलावा, सभी चुनावों के लिए एक ही मतदाता सूची का उपयोग किया जा सकता है। इससे मतदाता सूची को अद्यतन करने में खर्च होने वाले समय और धन की भारी बचत होगी। इससे नागरिकों के लिए भी यह आसान हो जाएगा क्योंकि उन्हें सूचीबद्ध होने के बाद मतदाता सूची से अपना नाम गायब होने की चिंता नहीं होगी।

- 2^प **प्रशासनिक व्यवस्था और सुरक्षा बलों पर बोझ कम करें**— इससे उस विशाल जनशक्ति में कमी आएगी जिसे हर बार चुनाव के दौरान तैनात करना पड़ता है। चुनाव को शांतिपूर्ण ढंग से संपन्न कराने के लिए बड़ी संख्या में पुलिस कर्मी और अर्धसैनिक बल लगे हुए हैं। इसमें बड़े पैमाने पर पुनः तैनाती शामिल है, जिसमें भारी लागत शामिल है। यह प्रमुख कानून प्रवर्तन कर्मियों को उनके महत्वपूर्ण कार्यों से भी विचलित करता है। एक साथ चुनाव होने से इस तरह की तैनाती को कम किया जा सकता है।
- 3^प **सरकारी नीतियों का समय पर कार्यान्वयन सुनिश्चित करें**— एक साथ चुनाव यह सुनिश्चित करेंगे कि सत्तारूढ़ दल लगातार चुनाव मोड में रहने के बजाय विकास पर ध्यान केंद्रित करे।
- 4^प **आदर्श आचार संहिता बार-बार लागू नहीं होगी** :— चूंकि आदर्श आचार संहिता बार-बार लागू नहीं होगी, इसलिए सरकारें समय पर नीतियां और कार्यक्रम लॉन्च करने में सक्षम होंगी। यह नीति की निरंतरता भी सुनिश्चित करेगा।
- 5^प **प्रशासनिक मशीनरी का चुनाव उपयोग कम होना** :— यह सुनिश्चित करेगा कि प्रशासनिक मशीनरी चुनाव प्रचार के बजाय विकास गतिविधियों में लगी हुई है— इससे शिक्षकों को छुट्टियों के डर के बिना काम करने में मदद मिलेगी। स्कूल और यूनिवर्सिटी भी समय पर खुल सकेंगे।
- 6^प **मतदान प्रतिशत में भी वृद्धि** :— विधि आयोग के अनुसार, एक साथ चुनाव से मतदान प्रतिशत में भी वृद्धि होगी।
- 7^प **वोट बैंक तुष्टीकरण की राजनीति का अंत** :— एक साथ चुनाव वोट बैंक तुष्टीकरण की राजनीति के खिलाफ भी काम कर सकते हैं।
- 8^प **खरीद-फरोख्त का अंत**: विशिष्ट अवधि पर चुनाव कराने से संभावित रूप से निर्वाचित प्रतिनिधियों द्वारा खरीद-फरोख्त में कमी आ सकती है, जो दल-बदल विरोधी कानून के साथ भी चिंता का विषय बना हुआ है। निश्चित अंतराल पर चुनाव कराने से उनके लिए व्यक्तिगत लाभ के लिए पार्टियां बदलना या गठबंधन बनाना कठिन हो सकता है।
- 9^प **मुफ्त सुविधाओं में कमी और राज्य की वित्तीय स्थिति में सुधार**: बार-बार चुनावों के कारण सरकारें हर चुनाव में मतदाताओं को लुभाने के लिए नीतिगत निर्णय लेती हैं। हालाँकि इसे पूरी तरह से रोका नहीं जा सकता है, लेकिन सरकारों को मुफ्त वस्तुओं की घोषणा करने की आवृत्ति में कमी आएगी। बार-बार चुनावों के कारण ऐसी स्थिति पैदा हो गई है कि कई राज्य सरकारें टूट गई हैं। कम संख्या में चुनाव होने से उनकी वित्तीय स्थिति बेहतर हो सकती है।
- 10^प **केंद्रित शासन**: यह सरकार को चुनाव समाप्त होने के बाद शासन पर ध्यान केंद्रित करने में सक्षम बनाता है। आज देश के किसी न किसी हिस्से में कम से कम हर तीन महीने में कोई न कोई चुनाव होता ही रहता है। देश का पूरा ध्यान इन चुनावों पर केंद्रित हो जाता

है। प्रधान मंत्री से लेकर केंद्रीय मंत्रियों तक, मुख्यमंत्रियों से लेकर मंत्रियों तक, सांसदों, विधायकों और पंचायत सदस्यों तक – हर कोई इन चुनावों में गहराई से शामिल होता है, क्योंकि कोई भी हारना नहीं चाहता है। विभिन्न स्तरों पर अलग-अलग स्तर पर प्रशासन लगभग पंगु हो गया है। यह भारत की विकास संभावनाओं पर बहुत बुरा प्रभाव डालता है।

11^प **नीतिगत निर्णयों में निरंतरता :** चुनाव आयोग (ईसी) द्वारा चुनावों की घोषणा के तुरंत बाद आदर्श आचार संहिता (एमसीसी) लागू हो जाती है। एमसीसी के कारण चुनाव के दौरान कोई नया नीतिगत निर्णय नहीं लिया जाता है। इसलिए, केंद्र और राज्यों और स्थानीय निकायों दोनों में प्रमुख नीतिगत निर्णयों में देरी होती है। यहां तक कि जब कोई नया नीतिगत निर्णय आवश्यक नहीं होता है, तब भी चुनावी अवधि के दौरान चल रही परियोजनाओं का कार्यान्वयन पटरी से उतर जाता है क्योंकि राजनीतिक कार्यपालिका के साथ-साथ सरकारी अधिकारी भी नियमित प्रशासन की उपेक्षा करते हुए चुनाव कर्तव्यों में व्यस्त हो जाते हैं।

एक राष्ट्र एक चुनाव के दोष :- भले ही एक साथ चुनाव वास्तविकता बन जाए, फिर भी इस तरह के सुधार में कई खामियां हैं। कई विपक्षी राजनीतिक दलों ने इस सुधार के खिलाफ अपनी राय स्पष्ट कर दी है। एक साथ चुनाव कराने से मतदाताओं के फैसले पर असर पड़ सकता है। मतदाता स्थानीय मुद्दों के बजाय राष्ट्रीय मुद्दों पर अधिक ध्यान केंद्रित करेंगे। मजबूत केंद्रीय राजनीति के कारण क्षेत्रीय दल क्षेत्रीय और स्थानीय मुद्दों को उचित ढंग से नहीं उठा पाएंगे। यह भारतीय राजव्यवस्था और राजनीति में केंद्रीकरण की प्रवृत्ति को आगे बढ़ाएगा। एक साथ चुनाव होने से लोगों के प्रति सरकार की जवाबदेही पर नकारात्मक प्रभाव पड़ सकता है। बार-बार चुनाव होने से सरकार और विधानसभाएं नियंत्रण में रहती हैं, जो एक साथ चुनाव होने की स्थिति में नहीं होगा। किसी राज्य में चुनाव को सिंक्रनाइज़ करने के लिए चुनाव को स्थगित करना होगा। यह केवल राष्ट्रपति शासन के माध्यम से ही किया जा सकता है, जो लोकतंत्र और संघवाद के लिए समस्याग्रस्त होगा। हालाँकि एक साथ चुनाव होने से सरकारों का खर्च कम हो जाएगा, लेकिन इससे राजनीतिक दलों के खर्च पर असर नहीं पड़ेगा, जो राजनीति में भ्रष्टाचार के कारणों में से एक है। केवल 'रचनात्मक अविश्वास मत' के लिए आवश्यक संवैधानिक संशोधन संसदीय लोकतंत्र के लोकाचार के साथ छेड़छाड़ कर सकता है। हालांकि चुनाव आयोग ने कहा है कि एक साथ चुनाव कराना संभव है, लेकिन यह एक बड़ी उपलब्धि और तार्किक चुनौती होगी।

एक राष्ट्र एक चुनाव से संबंधित व्यवहारिक एवं संवैधानिक चुनौतियाँ :- हालाँकि चुनाव सुधार यानी एक साथ चुनाव के कई लाभ हो सकते हैं, लेकिन इसे संभव बनाने के लिए विभिन्न संवैधानिक और कानूनी सुधारों की आवश्यकता होती है। विधि आयोग ने कहा है कि संविधान का मौजूदा ढांचा एक साथ चुनाव कराने के लिए उपयुक्त नहीं है। इसके लिए संविधान में विभिन्न संशोधनों, लोक प्रतिनिधित्व अधिनियम 1951 और लोक सभा और राज्य विधान सभाओं की प्रक्रिया के नियमों में संशोधन की आवश्यकता होगी। विधि आयोग के अनुसार, संवैधानिक संशोधनों को 50% राज्य विधान सभाओं द्वारा अनुमोदित करने की आवश्यकता होगी। चूँकि विभिन्न विधान सभाओं के चुनाव अव्यवस्थित होते हैं, इसलिए इसके लिए संवैधानिक संशोधन की आवश्यकता होगी क्योंकि इन विधान सभाओं का कार्यकाल या तो बढ़ाना होगा या घटाना होगा। यदि अविश्वास प्रस्ताव पारित हो जाता है, तो इससे लोक सभा या राज्य विधान सभा का कार्यकाल कम हो सकता है। यही कारण है कि विधि आयोग अविश्वास मत के स्थान पर रचनात्मक अविश्वास मत लाने का सुझाव देता है, जिसके लिए उचित संवैधानिक संशोधन की आवश्यकता होगी। ऐसे में सरकार को तभी हटाया जा सकता है जब वैकल्पिक सरकार संभव हो। त्रिशंकु विधानसभा की स्थिति में दोबारा चुनाव की भी संभावना है, जिससे कार्यकाल बदल जाएगा और एक साथ चुनाव कराने में दिक्कतें पैदा होंगी। विधि आयोग का

सुझाव है कि संविधान में इस प्रकार संशोधन किया जाना चाहिए कि बीच में गठित कोई भी नई लोक सभा या विधान सभा केवल पिछले कार्यकाल के शेष भाग के लिए गठित की जाएगी।

1. **समय से पूर्व लोकसभा और विधानसभा का भंग होने की स्थिति में** :- व्यवहार्यतः संविधान के अनुच्छेद 83(2) और 172 में कहा गया है कि लोकसभा और राज्य विधानसभाओं का कार्यकाल क्रमशः पांच साल तक रहेगा जब तक कि उन्हें पहले भंग नहीं किया जाता है और ऐसी परिस्थितियां हो सकती हैं, जैसे अनुच्छेद 356 में, जिसमें विधानसभाएं पहले भी भंग की जा सकती हैं। इसलिए, **ONOE** योजना गंभीर प्रश्न उठाती है कि यदि केंद्र या राज्य सरकार मध्य कार्यकाल में गिर जाए तो क्या होगा? क्या हर राज्य में दोबारा होंगे चुनाव या लगेगा राष्ट्रपति शासन?
2. **संसाधनों की उपलब्धता**:- यह इलेक्ट्रॉनिक वोटिंग मशीनों, कर्मियों और अन्य संसाधनों की उपलब्धता और सुरक्षा के संदर्भ में तार्किक चुनौतियाँ पेश करेगा। चुनाव आयोग को इतनी बड़ी कवायद के प्रबंधन में कठिनाइयों का सामना करना पड़ सकता है।
3. **संघवाद के विचार के विरुद्ध**: ओएनओई का विचार 'संघवाद' की अवधारणा से मेल नहीं खाता है क्योंकि यह इस धारणा पर स्थापित है कि संपूर्ण राष्ट्र "एक" है जो अनुच्छेद 1 की सामग्री का खंडन करता है जो भारत को "राज्यों के संघ" के रूप में देखता है। "।
4. **कानूनी चुनौतियाँ**: न्यायमूर्ति बीएस चौहान की अध्यक्षता वाले विधि आयोग ने बताया कि संविधान के मौजूदा ढांचे के भीतर एक साथ चुनाव संभव नहीं हैं। इसमें कहा गया है कि एक साथ चुनाव कराने के लिए संविधान, लोक प्रतिनिधित्व अधिनियम 1951 और लोकसभा और राज्य विधानसभाओं की प्रक्रिया के नियमों में उचित संशोधन की आवश्यकता होगी। आयोग ने कम से कम 50 % राज्यों से अनुसमर्थन प्राप्त करने की भी सिफारिश की, जो आसान काम नहीं हो सकता है।
5. **क्षेत्रीय हितों पर ग्रहण**: बार-बार होने वाले चुनावों के वर्तमान स्वरूप को लोकतंत्र में फायदेमंद के रूप में देखा जा सकता है क्योंकि यह मतदाताओं को अपनी आवाज अधिक बार सुनने की अनुमति देता है। चूंकि राष्ट्रीय और राज्य चुनावों के अंतर्निहित मुद्दे अलग-अलग होते हैं, इसलिए वर्तमान ढांचा मुद्दों के मिश्रण को रोकता है, जिससे अधिक जवाबदेही सुनिश्चित होती है। आईडीएफसी इंस्टीट्यूट के 2015 के एक अध्ययन में पाया गया कि "77% संभावना है कि जीतने वाली राजनीतिक पार्टी या गठबंधन उस राज्य में लोकसभा और विधानसभा चुनाव दोनों एक साथ जीतेंगे"। -प्रत्येक राज्य की विशिष्ट मांग और जरूरतों को कम आंकना।
6. **प्रभावी लागत** : चुनाव आयोग, नीति आयोग के विभिन्न अनुमान बताते हैं कि पांच साल के चक्र में सभी राज्य और संसदीय चुनाव कराने की लागत रुपये के बराबर होती है। 10 प्रति मतदाता प्रति वर्ष। नीति आयोग की रिपोर्ट में यह भी कहा गया है कि जब चुनाव एक साथ होंगे, तो इसकी लागत रुपये के बराबर होगी। 5 प्रति मतदाता प्रति वर्ष। अल्पावधि में, एक साथ चुनाव से कहीं अधिक संख्या में ईवीएम और वीवीपैट तैनात करने की लागत बढ़ जाएगी। इसलिए, एक वर्ष में प्रत्येक मतदाता के लिए 5 रुपये बचाने के लिए संविधान में संशोधन करना एक अच्छा विचार नहीं हो सकता है।
7. **संघीय समस्या**: एक साथ चुनाव लागू करना लगभग असंभव है, क्योंकि इसका मतलब होगा कि देश के बाकी हिस्सों के लिए उनकी चुनाव तिथियों को नियत तारीख के अनुरूप लाने के लिए मौजूदा विधानसभाओं के कार्यकाल में मनमाने ढंग से कटौती या विस्तार करना होगा। ऐसा उपाय लोकतंत्र और संघवाद को कमजोर करेगा।
8. **लोकतंत्र की भावना के विरुद्ध**: आलोचकों का यह भी कहना है कि एक साथ चुनावों को मजबूर करना लोकतंत्र के खिलाफ है क्योंकि चुनावों के कृत्रिम चक्र को मजबूर करने की कोशिश करना और मतदाताओं के लिए विकल्प को सीमित करना सही नहीं है।

9. **क्षेत्रीय दलों को नुकसान:** माना जा रहा है कि क्षेत्रीय दलों को नुकसान हो सकता है क्योंकि एक साथ होने वाले चुनावों में, मतदाताओं द्वारा कथित तौर पर मुख्य रूप से एकतरफ़ा मतदान करने की संभावना होती है, जिससे केंद्र में प्रमुख पार्टी को फायदा होता है।
10. **जवाबदेही में कमी:** हर 5 साल में एक से अधिक बार मतदाताओं का सामना करने से राजनेताओं की जवाबदेही बढ़ती है और वे सक्रिय रहते हैं।

‘एक राष्ट्र एक चुनाव’ की व्यावहारिक चुनौतियां का संवैधानिक समाधान :- ‘एक राष्ट्र एक चुनाव’ की व्यावहारिक चुनौतियां का संवैधानिक समाधान दो विचारधारा के तहत किया जा सकता है:-

1. **प्रथम तो संसदीय शासन व्यवस्था को राष्ट्रपति शासन व्यवस्था में परिवर्तित कर दिया जावे :-**भारत में 1951-52 से लेकर 1967 तक विधानसभा और लोकसभा के चुनाव होते रहे। इसलिए, ‘एक राष्ट्र एक चुनाव’ की पर्याप्तता और प्रभावकारिता पर कोई असहमति नहीं है। भारत स्थानीय निकायों के लिए भी एक ही समय पर चुनाव कराने के बारे में सोच सकता है। मुख्य समस्या केवल भारत की संसदीय प्रणाली द्वारा अपनाई जाने वाली परंपराओं और परंपराओं को ध्यान में रखते हुए समन्वयन की है। एक मौलिक समाधान सरकार के राष्ट्रपति स्वरूप पर स्विच करना है जहां राष्ट्रपति सदन के प्रति जवाबदेह नहीं है। अमेरिका में चुनाव का दिन तय है। हर चार साल बाद, नवंबर महीने के पहले सोमवार के बाद आने वाला मंगलवार राष्ट्रपति और उपराष्ट्रपति की सीट के लिए चुनाव का दिन होता है। इसी तरह, प्रतिनिधि सभा और सीनेट के चुनाव कराने की तारीखें भी तय हैं। तारीखें नवंबर महीने की 2 से 8 तारीख के बीच हैं। कायदे से ये तारीखें तय कर दी गई हैं। भारत में सरकार के संसदीय स्वरूप के कारण तारीखें तय करना संभव नहीं है। यदि भारत सरकार के संसदीय स्वरूप को जारी रखना चाहता है, तो निम्नलिखित समाधान हैं: पहला, सदन में दूसरे या तीसरे प्रमुख व्यक्ति या किसी राजनीतिक दल के नेता को सरकार बनाने के लिए आमंत्रित करना या सदन को अपना नेता चुनने का अवसर दिया जाना, यदि सरकार अपना कार्यकाल पूरा करने से पहले गिर जाती है। दूसरा है संविधान में कुछ हद तक संशोधन करना और यह प्रावधान करना कि कोई भी विधानसभा जिसका कार्यकाल लोकसभा चुनाव के छह महीने के भीतर, उसके बाद या उससे पहले समाप्त हो रहा हो, उसका चुनाव लोकसभा के साथ ही हो सकता है। केवल लोकसभा और राज्यसभा के चुनावों को सिंक्रनाइज़ करना। इसमें कोई संदेह नहीं है कि ‘एक राष्ट्र एक चुनाव’ के कार्यान्वयन में कुछ तार्किक लागतें शामिल होंगी। लेकिन अन्य मदों में बचत होगी (उदाहरण के लिए चुनाव व्यय में कमी) जिसके परिणामस्वरूप शुद्ध बचत होगी। संशोधनों के लिए संसद के दोनों सदनों के दो-तिहाई बहुमत के अलावा, कम से कम आधे राज्य विधानसभाओं के अनुमोदन की भी आवश्यकता होगी। ऐसा इसलिए है कि यदि संविधान में संशोधन भी हो जाए, तब भी ऐसे कारण होंगे जिनकी वजह से कोई विधानसभा भंग हो सकती है, इसलिए एक राष्ट्र-एक समय-एक चुनाव संभव नहीं है। सरकार के राष्ट्रपति स्वरूप पर स्विच करने का मतलब संविधान की मूल संरचना को बदलना होगा। एक साथ चुनाव कराने के लिए कोई भी सत्तारूढ़ राजनीतिक दल शायद ही विधानसभा भंग करना चाहेगा। देश को एक राष्ट्र एक चुनाव की जरूरत है या नहीं, इस पर आम सहमति की जरूरत है। सभी राजनीतिक दलों को कम से कम इस मुद्दे पर बहस करने में सहयोग करना चाहिए, एक बार बहस शुरू होने पर जनता की राय को ध्यान में रखा जा सकता है। एक परिपक्व लोकतंत्र होने के नाते भारत

बहस के नतीजे का अनुसरण कर सकता है। इसके लिए निम्न अनुच्छेदों में संशोधन की आवश्यकता है:-

अनुच्छेद 83: इसमें कहा गया है कि लोकसभा का कार्यकाल उसकी पहली बैठक की तारीख से पांच वर्ष का होगा।

अनुच्छेद 85: यह राष्ट्रपति को लोकसभा को भंग करने का अधिकार देता है।

अनुच्छेद 172: इसमें कहा गया है कि विधान सभा का कार्यकाल उसकी पहली बैठक की तारीख से पांच वर्ष होगा।

अनुच्छेद 174: यह राज्य के राज्यपाल को विधान सभा को भंग करने का अधिकार देता है।

अनुच्छेद 356: यह केंद्र सरकार को राज्य में संवैधानिक तंत्र की विफलता के लिए राष्ट्रपति शासन लगाने का अधिकार देता है।

लोक प्रतिनिधित्व अधिनियम के साथ-साथ संबंधित संसदीय प्रक्रिया में भी संशोधन की आवश्यकता होगी। इसके कार्यान्वयन में बाधा डालने वाला मुख्य मुद्दा भारत की संसदीय सरकार है जिसमें सरकार निचले सदन (लोकसभा या विधान सभा) के प्रति जवाबदेह होती है। बहुत संभव है कि सरकार अपना कार्यकाल पूरा करने से पहले ही गिर जाये और जैसे ही सरकार गिरे, चुनाव कराना पड़े।

- यदि संसदीय प्रणाली को यथावत कायम रखा जावे तो चुनाव पूर्व के गठबंधन का दायित्व निर्धारण करना :- प्रायः यह देखा गया है कि भारत की वर्तमान राजनैतिक व्यवहार में चुनाव के लिए गठबंधन / एलायंस किया जाता है और चुनाव परिणाम के बाद सत्ता पाने के लिए चुनाव पूर्व के गठबंधन / एलायंस तोड़ दिये जाते हैं जो कि जनता के प्रति एक प्रकार का धोखा है इसलिए राजनैतिक दलों की जवाबदेही तय की जानी चाहिए कि जिस गठबंधन / एलायंस पर जनता ने भरोसा दिखाया वह अपनी सरकार क्यों नहीं बना रही है? तथा यदि उनकी राजनैतिक महत्वकांशा के चलते देश / राज्य को चुनाव का खर्च उठाना पड़ता है तो उस खर्च की वसूली उन्हीं दलों से वसूली की जानी चाहिए। इस प्रकार इन दलों के चुनाव पूर्व गठबंधन / एलायंस के संयुक्त प्रतिनिधि के लिए एक अतिरिक्त विकल्प भी जनता को मिलना चाहिए कि जनता ने संयुक्त गठबंधन / एलायंस के प्रतिनिधि को किस दल की विचारधारा के कारण चयन किया है ताकि बाद में चुनाव परिणाम के बाद सरकार बनाने में यह गठबंधन / एलायंस के किसी दल द्वारा कोई बाधा उत्पन्न की जाती है तब गठबंधन / एलायंस के उस निर्वाचित प्रतिनिधि के बजाए जनता की मांग के अनुरूप पसंद के दल प्रतिनिधि को शासन में भागीदारी को मौका संवैधानिक स्तर पर मिलना चाहिए।
- अनुच्छेद 356 की शक्ति पर अंकुश लगाना :-वैसे तो एस. आर. बोम्बई के वाद में माननीय उच्चतम न्यायालय के निर्णय के बाद से केन्द्र की अनु0 356 की शक्ति का निरंकुश हो कर उपयोग करने पर पाबंदी लग गई है जो कि एक राष्ट्र एक चुनाव की संकल्पना के लिए सार्थक सिद्ध हो रहीं है। इसे संविधान संशोधन द्वारा नियमित किया जाना चाहिए।

एक राष्ट्र एक चुनाव की आलोचना :-प्रमुख विपक्षी राजनीतिक दलों जैसे कि भारतीय राष्ट्रीय कांग्रेस (आईएनसी), भारतीय कम्युनिस्ट पार्टी (सीपीआई), ऑल इंडिया मजलिस-ए-इत्तेहादुल मुस्लिमीन (एआईएमआईएम), राष्ट्रवादी कांग्रेस पार्टी (एनसीपी) आदि ने संसद में अपनी आपत्ति दर्ज कराई है। इस सुधार के बारे में स्थायी समिति |उन्होंने वास्तव में एक साथ चुनाव कराने के व्यावहारिक पहलू पर सवाल उठाया है, जिसके लिए विभिन्न विधानसभाओं और संसद की शर्तों के संबंध में संवैधानिक और वैधानिक संशोधन की आवश्यकता होगी |अन्य आलोचकों ने तर्क दिया है कि ऐसा विचार राजनीति से

प्रेरित है क्योंकि एक साथ चुनाव मतदाताओं के व्यवहार को प्रभावित कर सकते हैं। राज्य चुनावों में भी मतदाता राष्ट्रीय मुद्दों पर ही मतदान करेंगे। स्थानीय और क्षेत्रीय दल, जो कई बार स्थानीय आर्थिक और सामाजिक समूहों के हितों का प्रतिनिधित्व करते हैं, आमतौर पर केंद्र सरकार द्वारा नजरअंदाज कर दिए जाते हैं, हाशिए पर जा सकते हैं। इसका असर भारतीय लोकतंत्र की गहराई और विविधता पर पड़ेगा। डॉ. एसवाई कुरैशी के अनुसार, बार-बार होने वाले चुनाव जहां राजनेताओं को हर साल एक से अधिक बार मतदाताओं का सामना करना पड़ता है, जवाबदेही बढ़ती है और साथ ही चुनाव से संबंधित कई नौकरियां भी पैदा होती हैं। यह जमीनी स्तर की अर्थव्यवस्था के लिए महत्वपूर्ण है। लेकिन अगर एक साथ चुनाव होंगे तो भारत को इन चीजों का त्याग करना होगा।

निष्कर्ष :- 21वें विधि आयोग ने अपनी मसौदा रिपोर्ट में लगातार कहा है कि देश में व्यवहार्य माहौल मौजूद है, जिसके लिए एक साथ चुनाव कराना जरूरी है। आयोग के मुताबिक, देश को लगातार चुनावी मोड में रहने से रोकने के लिए यह एक अच्छा उपाय है। हालांकि, सिद्धांत रूप में, यह एक अच्छा सुधार है, इसमें विभिन्न हितधारकों को शामिल करने की आवश्यकता है। इसीलिए नीति आयोग हितधारकों के एक केंद्रित समूह के गठन का सुझाव देता है जिसमें संवैधानिक विशेषज्ञ, चुनाव विशेषज्ञ, थिंक टैंक, सरकारी अधिकारी और साथ ही राजनीतिक दलों के प्रतिनिधि शामिल हों। इस समूह को एक साथ आने और उचित कार्यान्वयन विवरण तैयार करने की आवश्यकता होगी, जिसमें संवैधानिक और वैधानिक संशोधनों का मसौदा तैयार करना शामिल होगा। यदि ऐसा सुधार काम नहीं करता है, तो संसदीय स्थायी समिति ने अपनी 79वीं रिपोर्ट में, दो-चरणीय दृष्टिकोण में एक साथ चुनाव कराने की एक वैकल्पिक और अधिक व्यावहारिक विधि की भी सिफारिश की है। इस पर भी विचार किया जा सकता है। इस प्रकार, विभिन्न चुनौतियों से निपटने की आवश्यकता होगी, और ऐसे सुधारों के लिए व्यापक-आधारित संवैधानिक परिवर्तनों की आवश्यकता होगी। इसलिए, इस विषय पर व्यापक चर्चा करने का प्रधानमंत्री नरेंद्र मोदी का सुझाव तत्काल आगे बढ़ने का रास्ता है।



VALUE - ORIENTED EDUCATION - A PSYCHOLOGICAL STUDY

(SUMMARY)

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Education system proposed by Mahatma Gandhi is called as "Basic Education". He mainly aims at the education in mother tongue and asked for activity centered education to make the children skilled and independent. Gandhiji wanted to construct small, self-reliant communities with its ideal citizens being all industrious, self-respecting and generous individuals living in a small co-operative and community. He wished the some local craft should be made as medium of education for children so that they develop their mind, body and soul in a harmonious way and also meet the needs of their future life. Such Gandhian Educational thoughts are relevant for development and providing solutions of the current problems like unemployment, poverty, corruption and many others. An attempt has been made in this paper to discuss the Gandhi's educational thoughts.

The real difficulty is that people have no idea of what education truly is. We assess the value of education in the same manner as we assess the value of land or of shares in the stock-exchange market. We want to provide only such education as would enable the student to earn more. We hardly give any thought to the improvement of the character of the education. The girls, we say, do not have to earn; so why should they be educated? As long as such ideas persist there is no hope of our ever knowing the true value of education.

His philosophy of education is a harmonious blending of Idealism, Naturalism and Pragmatism. Idealism is the base of Gandhiji's philosophy whereas Naturalism and Pragmatism are the helpers in translating that philosophy into practice. Therefore he is known as practical-Idealist. His nation was ".....education for life, education through life, and education throughout life." This definition of Mahatma Gandhi would comprise everything that can be conceived under education. In the present paper an attempt has been made to discuss about the Gandhi's Educational through which were influenced by his philosophy of life.

Mahatma Gandhi is a spirit of profound wisdom and captivating humility, armed with only an iron will and inflexible resolve and a frail man who confronted the brutality of military strength with the dignity of a simple human being. He believed in God implicitly. According to him, though individuals have different bodies, yet the same soul pervades in all of us. In short, Gandhiji experienced and realized Unity in Diversity. His philosophy of life has four elements namely- (1) Truth, (2) Non-Violence (3) Fearlessness and (4) Satyagraha (Saxena, 2003).

Gandhiji's philosophy to life is based upon the philosophy of Idealism. He advocated the ideals of truth, non-violence and moral values to achieve the ultimate truth of self-realization. He is child according to his nature and he becomes a pragmatist when he advocates learning by doing and learning by experience. All these lead to an integration, so essential to effective education and development of the total personally. (Saxena, 2003).

Gandhi was a critic of traditional education and viewed that, "By education, I mean an all round drawing out of the best in child and man-body, mind and spirit." Gandhi viewed that education can also be understood in another sense; that is, whatever leads to a full or maximum development of all the three, the body, mind and spirit, may also be called education. The knowledge that is being imparted today may possible develop the mind a little, but certainly it does not develop the body and spirit. I have a doubt about the development of the mind too, because it does not mean that the mind has developed if we have filled it with a lot of information. We cannot therefore say that we have education our mind. A well-education mind serves man in the desired

manner. Our literate mind of today pulls us hither and thither. That is what a wild horse does. Only when a wild horse is broken in can we call it a trained horse. How many 'educated' young men of today are so trained?

Gandhiji's Basic Education was the practical embodiment of his philosophy of education. His basic education takes up the challenging task of preparing the young learners to become morally sound, individually independents, socially constructive, economically productive and responsible future citizens which can prove helpful in solving the problem of unemployment by making youth self-employed by giving them skill training. Gandhiji believed that education should develop all the capacities of the child so that he becomes a complete human being. In this way, fully and harmoniously developed personality is able to realize the ultimate aim of life which is Truth or God. Gandhiji has himself explained "By education I mean all-round drawing out of the best in child's and man's body, mind and spirit. Literacy is neither the beginning nor the end of education. This is only a means through which man or woman can be educated." His Basic Principles of Education includes:-

1. From seven to fourteen years of age, education of each child should be free, compulsory and universal.
2. The medium of instruction should be mother-tongue.
3. Mere literacy cannot be equated with education. Education should employ some craft as a medium of education so that the child gains economic self-reliance for his life.
4. Education should develop human values in the child.
5. Education should achieve the harmonious development of child's body, mind, heart and soul.

Thus, in Gandhiji's educational thoughts the development of the personality of child is more important than mere literacy or knowledge of different subjects. In other words he believed in life-centered as well as child-centered education.

Education is just a means. If it is not accompanied by truthfulness, firmness, patience and other virtues, it remains sterile, and sometimes does harm instead of good. The object of education is not to be able to earn money, but to improve oneself and to serve the country. If this object is not realized, it must be taken that the money spent on education has been wasted.

पठतो नास्ति मूर्खत्वं जपतो नास्ति पातकम् ।
मौनिनः कलहो नास्ति न भयं चास्ति जागृतः ॥

The importance of Mahatma Gandhi's theory of silence has also been told in Sanskrit literature. Moral and ethical knowledge is the first point on which Mahatma Gandhi's concept of value education is based. Any education system that lacks these two cannot be termed as good. The reason behind such a thought is that, without morality and without ethics, no student, in a real sense, can be considered to be healthy in mental and physical terms because, for it, self-control and good character are essential. A person who is not a moralist and who does not differentiate between right and wrong cannot rise to the essential level of a true student. The attainment of spiritual growth that has been described by Mahatma Gandhi as an essential part of education can be gained only through morality and ethics. Seeing it through another viewpoint also proves the same thing, because when we consider education as a means of attaining salvation and also as a support on the pathway to liberation, we cannot differentiate it from spiritualism.

काक चेष्टा, बको ध्यानं, स्वल्प निद्रा तथैव च ।
अल्पाहारी, गृहत्यागी विद्यार्थी पंचलक्षणम् ॥

According to Sanskrit literature, five characteristics of students life are important. Mahatma Gandhi laid down some rules for students so as to ensure that morality and righteousness always be considered as an essential part of education so that every student shall gain in terms of knowledge and spirituality. He said that, on the one hand, where students should gain education under the strict regimen of high morals, self-control, and right thinking; on the other, they should also be expected to provide service to the society in general. This includes their respect towards parents, teachers and elders, love for children, following of social traditions and constant awareness towards their duties and responsibilities.

Gandhiji's 'Basic Education' was job centered, value based and mass oriented. Here it is important to note that these are still the important requirements of education in our country. In his scheme of education, knowledge must be related to activity and practical experiences. Therefore his curriculum is activity centered. Its aim is to prepare the child for practical work, conduct experiments and do research so that he is able to

develop himself physically, mentally and spiritually and become a useful member of society. In this activity-centered curriculum, Gandhiji included Mother-tongue.

Mahatma Gandhi calls upon all teachers to impart proper education of morality and ethics to students both at the school and at the college levels. In this regard while suggesting some guidelines for teachers, he says that it is the duty of teachers to develop high morals and strong character in their students. If teachers fail to do so, it means that they depart from their social and national responsibilities and, as such, they are also insincere towards their noble profession. He said that a teacher should lay an example to be followed before society and students. This can only be done when he himself leads his life with high standards of morality and strong character. An ideal teacher should be free from any addiction. He needs to be polite and should set an example of simple living and high thinking.

According to Gandhi's opinion, to think of education as a means of earning a living betrays an unworthy disposition of mind. The body is the means of earning a living while the school is the place for building character. To regard the latter as the means of fulfilling one's bodily needs is like killing a buffalo for a small piece of hide. The body should be maintained through doing physical work. How can the atma, the spirit, be employed for this purpose? You earn your bread by the sweat of your brow this is one of the most significant sayings of Christ. The Gita also seems to say the same.

True education is that which helps us to know the atman, our true self, God and Truth. To acquire this knowledge, some persons may feel the need for a study of literature, some for a study of physical sciences and some others for art. But every branch of knowledge should have as its goal, knowledge of the self. That is so in the Ashram. We carry on numerous activities with that aim in view. All of them are, in Gandhi's sense of the term, true education. Those activities can also be carried on without any reference to the goal of knowledge of the self. When they are so carried on, they may serve as a means of livelihood or of something else, but they are not education. In an activity carried on as education, a proper understanding of its meaning, devotion to duty and the spirit of service are necessary. Self Control The true aim of education is spiritual development. One should, therefore, go in for such kind of education as will bring it about. One should lead a life of self-control.

नास्ति विद्यासमो बन्धु नास्ति विद्यासमः सुहृद् ।
नास्ति विद्यासमं वित्तं नास्ति विद्यासमं सुखम् ॥

Even in Sanskrit literature, knowledge has been described as better than wealth. Education plays an important role which helps to equip individuals with the skills and attitudes that are necessary in order to adapt in changing situations and to add the creative spirit in the task of social change. 'Work and knowledge should go together' is the Gandhian principle of education. The educational systems try to develop the individual soul and mind, courage and self-reliance, cultivate the highest intellectual, scientific, moral, and ethical accomplishments.

Gandhi's concept of education is of quite significance in the contemporary situation. His philosophical concept of education is entirely based on the development of human personality, to maintain the discipline, to create the manual work with learning and to develop the culture of the peace.

विद्याभ्यासस्तपो ज्ञानमिन्द्रियाणां च संयमः ।
अहिंसा गुरुसेवा च निःश्रेयस्करं परम् ॥

According to Sanskrit literature, the importance of non-violence and learning is paramount. Gandhi's whole philosophy and work was based on ethics and morality. His concept of education is also founded on ethics and morality. It may be said that his concept of education has full of religious ideas. His idea of religion is different from common concept. His concept of religion is 'service of humanity'. His thought on education is highly pedestal that creates the socio- economic development of the society.

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Indian Economy: An Emerging Economy 2025-2030

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भारतीय अर्थव्यवस्था: एक उभरती अर्थव्यवस्था 2025–2030

डॉ. प्रवेश भण्डारी
सहायक आचार्य
ऐश्वर्या कॉलेज ऑफ ऐज्युकेशन

भारत एक युवाओं से भरा, ऊर्जा से भरा,

नेतृत्व से लैस, अनुभवों से सम्मोहित एवं दूरदर्शिता वाला देश।

किसी भी देश (राष्ट्र) देश के आर्थिक विकास का मापदंड उसकी अर्थव्यवस्था से मापा जाता है। अर्थव्यवस्था का अर्थ उत्पादन क्षेत्र एवं सेवा क्षेत्र दोनों के सम्मिलित प्रयास से है, जो कि किसी भी राष्ट्र के सकल घरेलू उत्पाद एवं उससे होने वाले औद्योगीकरण एवं प्रति व्यक्ति आय के निरंतर बढ़ने से संबंधित है। उत्पादन क्षेत्र में राष्ट्र अपने कदम वैश्विक मुकाम पर निरंतर बढ़ाता जा रहा है लेकिन सेवा क्षेत्र भी उत्पादन क्षेत्र से कदम से कदम ताल बने हुए है। किसी भी राष्ट्र की अर्थव्यवस्था को मजबूत बनाने में एक अच्छी नियत एवं मजबूत नेतृत्व की आवश्यकता होती है, जो कि उसको विश्व के दूसरे राष्ट्रों से अग्रणी बनती है, एवं एक बेहतर दूरदर्शिता जो की भारत को अगली सदी में विश्व गुरु बनाने की सभी आवश्यकताओं और मापदंडों का पूरा करती हुई आष्वस्त एवं विश्वस्त नजर आ रही है।

उत्पादन क्षेत्र में अग्रणी होना उतना ही महत्वपूर्ण है जितना की सेवा क्षेत्र में मजबूत होना भारत राष्ट्र अपने उत्पादन क्षमता चाहे वह कपड़ा उद्योग हो, ऑटोमोबाइल उद्योग हो, अथवा खाद्य उद्योग सभी क्षेत्र में देश अग्रणी है, खाद्य वस्तुओं के दामों में आई गिरावट से जनवरी 2024 में महंगाई बढ़ने की रफ्तार थोड़ी सुस्त हुई है, महंगाई के साथ औद्योगिक उत्पादन (आईआईपी) के मोर्चे पर भी कुछ राहत मिली।

2023–24 में अप्रैल से दिसंबर के बीच औद्योगिक उत्पादन 6.1% बढ़ा है वहीं दूसरी तरफ देशके श्रम बल में महिलाओं की हिस्सेदारी लगातार बढ़ रही है। दूसरी तरफ अगर बात करें तो चीन से निवेशकों ने अरबो डॉलर निकाले और उन्होंने निवेशकों के लिए भारत एक उभरती अर्थव्यवस्था बनती जा रही है।

62 अरब डॉलर के हेज फंड मार्शल देश ने अपने फ्लैगशिप हेज फंड में भारत को अमेरिका के बाद सबसे बड़ा दांव बताया है। भारत आज दुनिया में सबसे तेजी से बढ़ रही अर्थव्यवस्था है।

विश्लेषण:-

1. विश्लेषण निवेशक भारत में निवेश को लेकर उत्सुक हैं, उन्हें भारत को लॉन्ग टर्म ग्रोथ स्टोरी पर विश्वास / भरोसा है।

2. पिछले 10 साल में केंद्र सरकार ने अपने आधारभूत संरचना का दुरुस्त करने का काम किया है।
3. भारत का सकल घरेलू उत्पाद दुनिया में सबसे तेजी से करीब 7% की दर से बढ़ रही है।
1. 3.8 प्रतिषत औद्योगिक उत्पादन बढ़ा
2. 5.1 प्रतिषत माईनिंग क्षेत्र में बढ़ा
3. 3.9 प्रतिषत मैनुफैक्चरिंग क्षेत्र में बढ़ा

औद्योगिक उत्पादन:-

माह	वृद्धि दर
जुलाई	5.7%
अगस्त	10.3%
सितम्बर	5.8%
अक्टूबर	11.7%
नवम्बर	2.4%
दिसंबर	3.8%

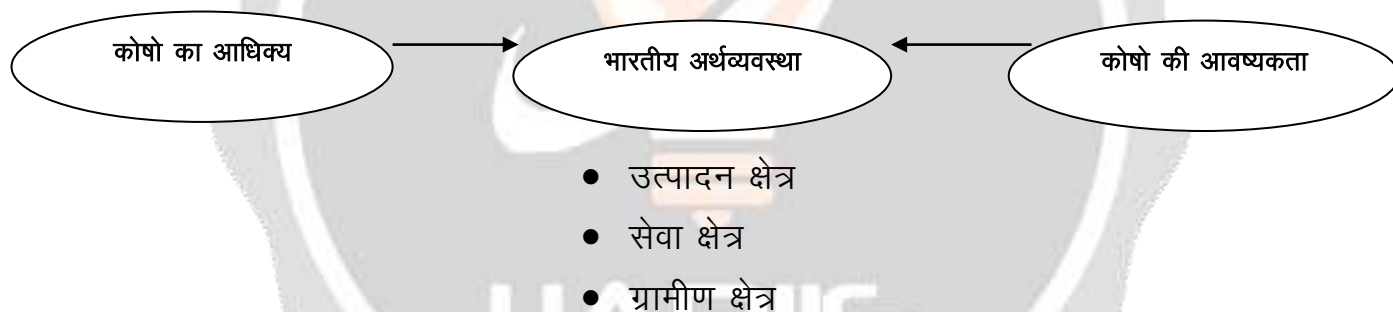
वाणिज्यिक मंत्रालय की ओर से जारी आँकड़ों के अनुसार चालू वित्त वर्ष 2023-24 में अप्रैल से दिसंबर के दौरान कोर क्षेत्र की ग्रोथ (वृद्धि) दर सालाना आधार दर 8.1% पर स्थिर रही।



शहरों में बेरोजगारी दर घटकर 6.5% रह गई है। केंद्र सरकार की ओर 'स' जारी पीएलएफ एस सर्वे के मुताबिक दिसंबर तिमाही में पुरुषों को की बेरोजगारी दर 5.8% और महिलाओं की 8.6% पर आ गई है जॉब मार्केट में तेजी आने की उम्मीद को और बल मिला है।

सेक्टर	कंपनियों की संख्या
ई-कॉमर्स	55%
इंफ्रास्ट्रक्चर	53%
हेल्थकेयर	44%
मैन्यूफैक्चरिंग	48%

अतः भारतीय बाजार वैश्विक अर्थव्यवस्था में अपनी स्थिति मजबूत किया जा रहा है। उसका मकसद 2025-30 तक भारत को 5 ट्रिलियन अर्थव्यवस्था बनाना जिसमें उत्पादन क्षेत्र, सेवा क्षेत्र, स्किल क्षेत्र, विकसित क्षेत्र, आध्यात्मिक क्षेत्र, में विकास करना जिससे कि देश की सकल घरेलू उत्पाद एवं उसे प्रति व्यक्ति आय और उस देश की आर्थिक और सामाजिक क्षेत्र को विकसित क्षेत्र तक अग्रणी करना ही देश के नेतृत्व का महत्वाकांक्षी उद्देश्य है।



सरकार अपनी महत्वाकांक्षा को पूर्ण करने के लिए अपने सरकारी खर्च को कम करने का भी प्रयास किया जा रहा है राजकोषीय आर घाटा कम करने के लिए केंद्र सरकार ने देश में चल रही कल्याणकारी योजनाओं की आवंटन राशि में चालू वित्त वर्ष 2023 में कटौती की है। केंद्र सरकार ने वित्त वर्ष 2024-25 के लिए फूड फर्टिलाइजर और फ्यूल सब्सिडी में भी बड़ी कटौती की है वर्ष 2023-24 संशोधित अनुमान के मुकाबले खाद्य सब्सिडी 3.3 प्रतिषत की कटौती की है वही 12.77 प्रतिषत कम आवंटन उर्वरक सब्सिडी और 8.33 प्रतिषत कम आवंटन ईंधन सब्सिडी के लिए किया गया है।

स्वस्थ समाज + शिक्षित समाज+ महत्वाकांक्षी युवा+ दूरदर्शी नेतृत्व= विकसित अर्थव्यवस्था

अंतरिम बजट में वित्त वर्ष 2024–25 के लिए राजकोषीय घाटे का लक्ष्य कम करना एवं सरकार का शुद्ध उधारी लक्ष्य घटकर 11.75 लाख करोड़ रुपए रहने से 10 साल वाले बॉण्ड का चील्ड गिरकर 6 महीने के निचले स्तर 7.04 प्रतिशत पर पहुंच गया है। इससे ड्यूरेशन डेट फंड में बेहतर रिटर्न मिलने की उम्मीद है। आर्थिक विकास दर को बढ़ाने के लिए ऐसे तो सभी महत्वपूर्ण कदम केंद्र सरकार द्वारा उठाए जा रहे हैं एवं वे सभी कारगर भी साबित हो रहे हैं लेकिन विदेशी निवेश को आकर्षित एवं घरेलू निवेश करने के लिए आधारभूत संरचना जैसे की सड़क, संचार एवं बैंकिंग क्षेत्र को मजबूत करने पर भी सरकार का महत्वपूर्ण नजरिया है जो एक मजबूत एवं लंबी अवधि में राष्ट्र को विश्व में अग्रणी रखने का कार्य कर रही है।

सारांश:-

इन सभी सरकारी कदमों को देखते हुए एवं विदेशी निवेश के भी देश के प्रति आकर्षित होना एवं मजबूत अर्थव्यवस्था का संकेत है। श्रम बाल में बढ़ोतरी बेरोजगारी दर में कमी आधारभूत संरचना का क्रमवार विकास एवं पीटसयू क्षेत्र का बेहतर प्रदर्शन देश के आर्थिक विकास को मजबूती प्रदान करने में सहयोग कर रहा है। केंद्र की कम उधारी से ब्लॉक ड्यूरेशन फंड भी आकर्षित हो रही है जिसे शुद्ध उधारी भी कम हो रही है। महिला श्रमबल को भी बढ़ावा मिलना एक बेहतर संकेत हो सकता है।

बचत एवं वियोग से एक बेहतर भविष्य की तस्वीर बनाना एवं महत्वाकांक्षी युवाओं के जोषएवंउत्साह और उसे पर नेतृत्व से लेबरेज सरकारी नीतियां उत्साह में चारचांद लगाने का कार्य कर रही है जिस देश का आर्थिक एवं सामाजिक विकास होने से भारत 2025–30 तक विश्व गुरु बनने की करीब पहुंच जाएगा।

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2. राजस्थान पत्रिका
3. दैनिक भास्कर

Contribution of media in social movements

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सामाजिक आंदोलनों में मीडिया का योगदान

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मीडिया लोकतंत्रों में एक प्रहरी के रूप में कार्य करने में महत्वपूर्ण भूमिका निभा रहा है। मीडिया दमनकारी शासनों में भलाई के लिए एक ताकत बन सकता है और कैसे एक सतर्क और सतर्क मीडिया नागरिकों को अलोकप्रिय और दमनकारी शासकों को उखाड़ फेंकने में मदद करता आया है।

इसका सबसे अच्छा उदाहरण 2011 की शुरुआत में अरब स्प्रिंग विरोध प्रदर्शनों में मीडिया, विशेष रूप से सोशल मीडिया का उपयोग करने के तरीके में देखा जा सकता है, जिसमें अरब देशों में युवाओं ने निरंकुश शासकों को उखाड़ फेंकने के लिए मीडिया की शक्ति का लाभ उठाया था। इस तथ्य को देखते हुए कि ऐसे शासक अपनी विचारधारा को आगे बढ़ाने और सत्ता पर अपनी पकड़ बनाए रखने के लिए हमेशा मीडिया में हेरफेर का सहारा लेते हैं। ऐसे देशों में नागरिकों के सामने विकल्प बहुत सीमित होते हैं। इसलिए, कोई भी मीडिया जो उनके उद्देश्य का समर्थन करता है और उनके उद्देश्यों को आगे बढ़ाता है। वह विरोध आंदोलनों का पसंदीदा है।

प्रगतिशील लक्ष्यों की प्राप्ति में इंटरनेट और सोशल मीडिया का उपयोग कैसे किया जा सकता है। इसका दूसरा उदाहरण यह है कि राष्ट्रपति ओबामा अपने समर्थकों के साथ संवाद करने के लिए इन मीडिया का उपयोग कैसे करते हैं। 2008 और 2012 के चुनावों में, राष्ट्रपति ओबामा ने जमीनी स्तर के कार्यकर्ताओं और स्वयंसेवकों को संगठित करने के लिए मीडिया की शक्ति का लाभ उठाया। जिन्होंने लोगों को बाहर निकलने और मतदान करने के लिए प्रोत्साहित किया और इस तरह ओबामा को जीतने में मदद की। इसके अलावा मीडिया का विवेकपूर्ण उपयोग राजनेताओं और सामाजिक कार्यकर्ताओं की छवि को बेहतर बनाने में अद्भुत काम किया है। इसे इस तरह देख सकते हैं कि 2011 में भारत में अन्ना हजारे के

आंदोलन को मीडिया ने किस तरह से मदद की। जिसने इसे व्यापक कवरेज दिया और यह सुनिश्चित किया कि बड़ी संख्या में लोग आंदोलन का समर्थन करने के लिए निकले। इससे पता चलता है कि मीडिया सामाजिक आंदोलनों को आगे बढ़ाने में महत्वपूर्ण भूमिका निभा सकता है।

मीडिया और सामाजिक आंदोलनों में इसकी भूमिका के बारे में दूसरा पहलू सामाजिक कार्यकर्ताओं के संदेश के प्रसारण और पुनरावृत्ति की शक्ति है। ट्विटर और फेसबुक पर संदेशों के तेजी से प्रसार और इस तथ्य को देखते हुए कि टेलीविजन विरोध या आंदोलनों की तत्काल छवि देता है। मीडिया वास्तव में यह सुनिश्चित करने में प्रमुख भूमिका निभा सकता है कि सामाजिक आंदोलनों को अच्छी तरह से कवर किया जाए।

इसका अच्छा उदाहरण सभी मीडिया आउटलेट्स द्वारा दुनिया भर में ऑक्युपाई मूवमेंट की कवरेज और इस कवरेज द्वारा प्रदर्शनकारियों के हित को प्रदान किया गया प्रचार है। इससे पता चलता है कि मीडिया कार्यकर्ताओं के संदेश को प्रचारित करने में रचनात्मक भूमिका निभा सकते हैं।

इसलिए कार्यकर्ताओं और सामाजिक नेताओं को इस बात से सावधान रहने की ज़रूरत है कि वे मीडिया का उपयोग कैसे करते हैं और मीडिया उनका उपयोग कैसे करता है। इसका सबसे अच्छा उदाहरण वह है जिस तरह से भारत में भ्रष्टाचार विरोधी आंदोलन ने शुरुआती उत्साह के बाद मीडिया से समर्थन खो दिया। ऐसा इसलिए था क्योंकि 24/7 समाचार चक्र और ब्रेकिंग न्यूज जिस तरह से संरचित हैं। उसे देखते हुए मीडिया एक मुद्दे से दूसरे मुद्दे पर कूदता रहता है। यहां यह कहना पर्याप्त होगा कि मीडिया और सामाजिक आंदोलनों के बीच सहजीवी संबंध एक ऐसी साझेदारी की ज़रूरत है। जो दोनों पक्षों पर निर्भर हो न कि अकेले एक पक्ष पर।

बदलते मीडिया परिदृश्य और समाज पर उनका प्रभाव

मीडिया समाज को प्रभावित करता है और लोगों के सोचने और कार्य करने के तरीके में बदलाव लाता है। जनता की भलाई के प्रहरी और वाहक के रूप में मीडिया का ऐतिहासिक कार्य अब उस बिंदु तक विकसित हो गया है। जहां मीडिया देश के अनुसरण के लिए एजेंडा निर्धारित करता है। इसके अलावा आज इंटरनेट और सोशल मीडिया के आगमन ने चर्चा को बदल दिया है और उन्होंने लोगों के मीडिया के उपयोग और उपभोग के तरीके को भी प्रभावित किया है। सबसे पहले, अब ऐसा मामला नहीं है कि मीडिया समाचार रिपोर्ट करता है और आम तौर पर जनता की भलाई के रक्षक के रूप में कार्य करता है।

दूसरी ओर, अमेरिका और भारत दुनिया के सबसे पुराने और सबसे बड़े लोकतंत्र जैसे कई देशों में मीडिया अब उस बिंदु पर पहुंच गया है जहां वे राष्ट्र और उसके नागरिकों के लिए एजेंडा निर्धारित करते हैं। इसे इस तरह देखा जा सकता है कि अमेरिका में हाल ही में हुए राष्ट्रपति चुनावों की विशेषता मीडिया संचालित बातें और मीडिया संचालित बयानबाजी थी। भारत में, भ्रष्टाचार विरोधी आंदोलन काफी हद तक मीडिया उन्माद और नॉनस्टॉप मीडिया कवरेज से प्रेरित था। जिसने बड़ी संख्या में भीड़ को अपने समर्थन में लाने को सुनिश्चित किया। अमेरिका में, मीडिया अब राष्ट्रीय विमर्श में एक दर्शक नहीं बल्कि लोकतंत्र का एक अंग है जो जनता की भावना को संचालित करता है।

भारत में, हालांकि आजादी के बाद के दशकों में, मीडिया काफी हद तक खोजी पत्रकारिता और घटनाओं को घटित होने पर रिकॉर्ड करने से संतुष्ट था, लेकिन हाल के वर्षों में, वे राजनेताओं, व्यापारियों और मशहूर हस्तियों के करियर को लॉन्च या नष्ट करने वाले माध्यम बन गए हैं। दूसरे शब्दों में, अमेरिका और भारत दोनों में, मीडिया सार्वजनिक हस्तियों की संभावनाओं को बना या बिगाड़ सकता है।

इस पर टिप्पणी किए बिना कि यह एक सकारात्मक विकास है या नकारात्मक नतीजा, यह उल्लेख करना आवश्यक है कि मीडिया के पास निहित शक्ति का उपयोग नकारात्मक रिपोर्टिंग और कवरेज के बजाय उत्पादक उद्देश्यों के लिए किया जाना चाहिए।

इन देशों में मीडिया को इतना महत्व दिए जाने का कारण यह है कि कई नागरिकों के लिए, दृश्य मीडिया वह स्थान है जहां उन्हें समाचार, विचार और राय मिलती है क्योंकि उनमें से कई के पास लंबे लेख या किताबें पढ़ने का समय नहीं होता है। दिन के विषयों पर इसका मतलब यह है कि इस शोरगुल वाले समाज में, बहुत से लोग बस टीवी पर समाचार देखते हैं और दिन के मुद्दों पर अपना मन बनाते हैं। इसलिए, अब ऐसा नहीं है कि लोग समाचार पत्र पढ़ते हैं या किताबें पढ़ते हैं जिनमें गहन विश्लेषण के साथ-साथ मुद्दों का अधिक विस्तृत विवरण होता है। दूसरी ओर, हम सभी सबसे अधिक घटित होने वाली कहानियों के सारांश के साथ समाचारों के एक त्वरित कैप्सूल की तलाश में हैं।

मीडिया में निहित इतनी अधिक शक्तियों के साथ, दुरुपयोग की गुंजाइश है और हम अगले लेखों में इस पर विस्तार से विचार करेंगे।

नियंत्रण के साधन के रूप में मीडिया

कई देशों में, मीडिया का उपयोग सरकार द्वारा नियंत्रण के साधन के रूप में और प्रचार उद्देश्यों के लिए किया जाता है। उदाहरण के लिए, चीनी मीडिया अत्यधिक नियंत्रित है और सेंसरशिप प्रत्यक्ष और गहरी है। संयुक्त राज्य अमेरिका और भारत जैसे देशों में, हालांकि कोई

स्पष्ट नियंत्रण नहीं है। मीडिया से कॉर्पोरेट्स और प्रतिष्ठान द्वारा निर्धारित लाइन का पालन करने की अपेक्षा की जाती है। बेशक, कहने का मतलब यह नहीं है कि अमेरिका में मीडिया पक्षपाती है। बस नियंत्रण के रूप अलग-अलग हैं और कॉर्पोरेट मीडिया घरानों का दबदबा है। प्रायोजक और विज्ञापनदाता एजेंडा तय करते हैं। भारत में यह मामला काफी हद तक देश में बदलाव का एजेंट होने की प्रेस की परंपरा के कारण है।

यहां दूसरा पहलू यह है कि सभी सरकारें, चाहे वे लोकतांत्रिक रूप से निर्वाचित हों या सत्तावादी हों। एजेंडा सेटिंग कार्य में मीडिया के महत्व को महसूस करती हैं और इसलिए अपने लाभ के लिए मीडिया का उपयोग करती हैं। मीडिया घरानों को किसी न किसी राजनीतिक दल से जुड़ा हुआ देखना आम बात है। दुनिया भर के कई देशों में यही स्थिति है। अंतर प्रत्येक देश में प्रतिष्ठान द्वारा अपनाई जाने वाली हेरफेर की डिग्री का है।

परिवर्तन के एजेंट के रूप में मीडिया

पिछले खंड में मीडिया के नकारात्मक पहलुओं को छुआ गया होगा और इसलिए, इस खंड का उद्देश्य कहानी के दूसरे पक्ष को सामने लाना है कोई व्यंग्यात्मक इरादा नहीं है प्रतिबंधों और सेंसरशिप के बावजूद, कई देशों में मीडियाकर्मी अपने विवेक के अनुसार रिपोर्ट करने और प्रकाशित करने के लिए अथक और साहसपूर्वक काम करते हैं, न कि सत्ता के निर्देशों के अनुसार कार्य करती है।

इंटरनेट और सोशल मीडिया के आगमन के साथ, ईमानदार विचारधारा वाले पत्रकारों के लिए अपने जुनून और आदर्शों को आगे बढ़ाना आसान हो गया है। माध्यम की तरल प्रकृति के कारण, इंटरनेट को नियंत्रित करना और हेरफेर करना कठिन है, हालांकि ऐसे मामले भी हैं जहां प्रतिष्ठान वेबसाइटों और प्रकाशनों पर नियंत्रण का सहारा लेते हैं।

इस तथ्य को ध्यान में रखते हुए कि मीडियाकर्मियों को सत्ता प्रतिष्ठान और नागरिकों के प्रति अपने कर्तव्य के बीच एक कड़ी रस्सी पर चलना पड़ता है, उनकी रिपोर्टिंग में सबसे महत्वपूर्ण बात निष्पक्षता, सच्चाई और निष्पक्षता होनी चाहिए। ऐसा यह सुनिश्चित करके किया जा सकता है कि जो कहानियां विवादास्पद हैं, उन्हें मारा नहीं जाए या भूलभुलैया में दफना न दिया जाए, बल्कि उन्हें वह महत्व दिया जाए जिसके वे हकदार हैं।

इसके अलावा, मीडिया घरानों को सत्ता और भत्तों के प्रलोभन से दूर रहना चाहिए और अपनी रिपोर्टिंग में तटस्थ और निष्पक्ष रहना चाहिए। यह तभी हासिल किया जा सकता है जब मीडियाकर्मी एक सीमा के बाद सत्ता प्रतिष्ठान और कॉर्पोरेट से अनुग्रह प्राप्त करने की आदत में न पड़ें।

अंत में, हर समय निष्पक्षता रखना संभव नहीं है क्योंकि प्रायोजन और विज्ञापन राजस्व मीडिया की रीढ़ हैं। इसलिए, लक्ष्य यथासंभव वस्तुनिष्ठ होना और बाधाओं के भीतर यथासंभव स्वतंत्र होना चाहिए। यह कोई बड़ा काम नहीं है और इसे केवल मुनाफे से प्रेरित होने के बजाय अनुभव और मूल्यों के प्रति गहरी प्रतिबद्धता के साथ हासिल किया जा सकता है।

संदर्भ ग्रन्थ सूची

1. भारत में सामाजिक परिवर्तन एवं सामाजिक आंदोलन – प्रो. एम. एल. गुप्ता
2. भारत में सामाजिक आंदोलन – डॉ. जी. के. अग्रवाल
3. वर्तमान में मीडिया का बदलता स्वरूप एवं संकुचित होती प्रेस की स्वतंत्रता – नंदनी प्रिया
4. मीडिया और समाज – दृष्टि, आईएएस
5. मीडिया और समाज – सुरभि गुप्ता
6. सोशल मीडिया – राहुल शर्मा
7. मीडिया का सामाजिक दायित्व पर निबंध – ज्ञानकाष एज्यूकेषन इंस्टीट्यूट
8. दक्षिण भारत में समाजिक मीडिया – श्रीराम वेंकटरामन
9. सोशल मीडिया के विविध आयाम – डॉ. सेवा सिंह बाजवा
10. मीडिया और मुद्दे – नीरज कुमार वर्मा
11. सोशल मीडिया का समाज पर प्रभाव – डॉ. पुनीत बिसारिया, डॉ. वीरेंद्र सिंह यादव

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ENVIRONMENTAL PROTECTION LAW

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Abstract

Environmental law and health law are recognized as a broad category of laws that includes laws that specifically address environmental/health issues and more general laws having a direct impact on environmental/health issues. **Environment Protection Act, 1986** is an Act of the [Parliament of India](#). It was enacted in May 1986 and came into force on 19 November 1986. It has 26 sections and 4 chapters. The Act is widely considered to have been a response to the [Bhopal gas leak](#). The Act was passed by the [Government of India](#) under the Article 253 of the [Constitution of India](#), which empowers the union government to enact laws to give effect to international agreements signed by the country. The purpose of the Act is to implement the decisions of the [United Nations Conference on the Human Environment](#). They relate to the protection and improvement of the human environment and the prevention of hazards to human beings, other living creatures, plants and property. The Act is an “umbrella” legislation that has provided a framework for the environmental regulation regime in India, which covers all major industrial and infrastructure activities and prohibits and regulates specific activities in coastal areas and eco-sensitive areas. The Act also provides for coordination of the activities of various central and state authorities established under other environment-related laws, such as the Water Act and the Air Act *Chapter one consists of Preliminary information such as Short Title, Extend, Date of Commencement and Definitions. The definitions are given in the second section of the Act.* Chapter two describes general powers of [Central Government](#). Chapter 3 gives the Central Government the power to take action to protect the environment. Chapter 4 allows government to appoint officers to achieve these objectives. It also gives the government the power to give direction to closure, prohibition or regulation of industry, pollution. The act has provisions for penalties for contravention of the provisions of the act and rules, orders and directions. It also gives detail if the offence is done by a company or government department. It says for such offence the in-charge and head of department respectively would be liable for punishment.

PREMBLE The history of legislative started with Indian Penal Code, 1860. Section 268 defined what is public nuisance. Abatement of public nuisance is also a subject of Section 133 to 144 of I.P.C. These are only prohibitive provisions. Sections 269 to 278 of the Indian Penal Code are penal provisions which means that a person guilty of violating any of the provisions is liable to prosecution and punishment. Legislative fight against pollution continued in independent India. Now there is a host of legislation in India aimed at protecting the environment from pollution and maintaining the ecological balance. The Environment (Protection) Act, 1986 is

one major Act for environmental protection. The Government of India has launched various programmes and made use of audiovisual media to educate the people and arouse their consciousness for the protection of environment. In February 1971, the University Grants Commission (India), in collaboration with other organizations, launched a symposium on the development of environmental studies in the Indian Universities. The consensus that emerged at the symposium was that ecology and environmental issues should form part of the courses of study at all levels. Further, with the object of generating an awareness of the need to maintain ecological balance. In order to keep the environment pure and to obviate the hazards of pollution and ecological imbalance, the Department of Laws, Punjab University, Chandigarh organised a three-day National Seminar in 1984 on "Law Towards Environmental Protection" Fifty five delegates from all over India participated in the seminar. It claimed: (i) It is fundamental human right to live in an unpolluted environment. (ii) It is fundamental duty of every individual to maintain purity of environment. Soon after the Stockholm Conference, many Acts were introduced i.e. Wildlife Act, 1972; Water Act, 1974; Air Act, 1981 etc. Within five years of Stockholm Declaration, the Constitution of India was amended to include Protection and Improvement of Environment as constitutional mandate. The protection and improvement of environment is now a fundamental duty under Constitution Act of 1976. Govt., of India has set up a National Committee on Environmental Planning and Coordination. Government of India's programme for environment included the programme for cleaning the rivers including Ganga and Yamuna. Prime Minister, Sh. Rajiv Gandhi constituted Central Ganga Authority for the purpose of pollution control of Ganga. The enactment of Environment (Protection) Act, 1986 was the immediate off-shoot, of this programme. The Supreme Court (writ petition (Civil) No. 860 of 1991) has directed the University Grants Commission to prescribe a course on 'Man and Environment'. In the light of this directive, the UGC issued a circular to various universities to introduce the course on 'Environmental Education'. The main attention in the education on environment is as below: (i) Over-population and the ways to check its rapid growth. (ii) Afforestation as a preventive to soil erosion and water pollution (iii) Methods to prevent air pollution, insisting on smokeless cooking (iv) Discipline in playing radio and television sets and a ban on use of loudspeaker. (v) Elementary knowledge of the scientific and philosophical basis of man and the environment (vi) Rules regarding disposal of household waste; and (vii) General principles of sanitation

Environment and Constitution of India: The protect and improve the environment is a constitutional mandate. It is a commitment for a country wedded to the ideas of a welfare State. The Indian Constitution contains specific provisions for environment protection under the chapters of Directive Principles of State Policy and Fundamental Duties. The absence of a specific provision in the Constitution recognizing the fundamental right to clean and wholesome environment has been set off by judicial activism in the recent times. Articles 48-A and 51-A. Clause (g): Initially, the Constitution of India had no direct provision for environmental protection. Global consciousness for the protection of environment in the seventies, Stockholm Conference and increasing awareness of the environmental crisis prompted the Indian Government to enact 42nd Amendment to the Constitution in 1976. The Constitution was amended to introduce direct provisions for protection of environment. This 42nd Amendment added Article 48-A to the Directive Principles of State Policy. Article 49-A: The Article states: "The State shall endeavour to protect and improve the environment and to safeguard the forests and wildlife of the country." The said amendment imposed a responsibility on every citizen in the form of Fundamental Duty. Article 51-A, Clause (g): Article 51-A (g) which deals with Fundamental Duties of the citizens states: "It shall be the duty of every citizen of India to protect and improve the natural environment

including forests, lakes, rivers and wildlife and to have compassion for living creatures.” Thus, protection and improvement of natural environment is the duty of the

(Article 48-A) and every citizen (Article 51- A (g)). Article 253: Article 253 states that ‘Parliament has power to make any law for the whole or any part of the country for implementing any treaty, agreement or convention with any other country. In simple words this Article suggests that in the wake of Stockholm Conference of 1972, Parliament has the power to legislate on all matters linked to the preservation of natural environment. Parliament’s use of Article 253 to enact Air Act and Environment Act confirms this view. These Acts were enacted to implement the decisions reached at Stockholm Conference. Environment and Citizens: The Constitution of India has made a double provision: (i) A directive to the State for protection and improvement of environment. (ii) Imposing on every citizen in the form of fundamental duty to help in the preservation of natural environment. This is the testimony of Government’s awareness of a problem of worldwide concern. Since protection of environment is now a fundamental duty of every citizen, it is natural that every individual should do it as personal obligation, merely by regulating the mode of his natural life. The citizen has simply to develop a habitual love for pollution.

The Constitutional provisions 1. Article 48(A) 2. Article 21 3. Article 253 4. Article 51(A) 5. Article 19(1)(g) 6. Article 51 7. Article 14. Article 14 PROTECTION OF THE ENVIRONMENT 14.1 The Government and the Contractor recognize that Petroleum Operations will cause some impact on the environment in the Contract Area. Accordingly, in performance of the Contract, the Contractor shall conduct its Petroleum Operations with due regard to concerns with respect to protection of the environment and conservation of natural resources and shall in particular; (a) employ modern oilfield and petroleum industry practices and standards including advanced techniques, practices and methods of operation for the prevention of Environmental Damage in conducting its Petroleum Operations; (b) take necessary and adequate steps to: (i) prevent Environmental Damage and, where some adverse impact on the environment is unavoidable, to minimize such damage and the consequential effects thereof on property and people; (ii) ensure adequate compensation for injury to persons or damage to property caused by the effect of Petroleum Operations; and (c) comply with the requirements of applicable laws and the reasonable requirements of the Government from time to time. 14.2 If the Contractor fails to comply with the provisions of paragraph (b)(i) of Article 14.1 or contravenes any relevant law, and such failure or contravention results in any Environmental Damage, the Contractor shall forthwith take all necessary and reasonable measures to remedy the failure and the effects thereof. 14.3 If the Government in accordance with the laws has good reason to believe that any works or installations erected by the Contractor or any operations conducted by the Contractor are endangering or may endanger persons or any property of any person, or are causing or may cause pollution, or are harming or may harm fauna or flora or the environment to a degree which the Government deems unacceptable, the Government may require the Contractor to take remedial measures within such reasonable period as may be determined by the Government and to repair any damage to the environment. If the Government deems it necessary, it may also require the Contractor to discontinue Petroleum Operations in whole or in part until the Contractor has taken such remedial measures or has repaired any damage caused. 14.4 The measures and methods to be used by the Contractor for the purpose of complying with the terms of paragraph (b)(i) of Article 14.1 shall be determined in timely consultation with the Government upon the commencement of Petroleum Operations or

whenever there is a significant change in the scope or method of conducting Petroleum Operations and shall take into account the international standards applicable in similar circumstances and the relevant environmental impact study carried out in accordance with Article 14.5. The Contractor shall notify the Government, in writing, of the measures and methods finally determined by the Contractor and shall cause such measures and methods to be reviewed from time to time in the light of prevailing circumstances. The Contractor shall cause a person or persons with special knowledge on environmental matters, to carry out two environmental impact studies in order: (a) to determine at the time of the studies the prevailing situation relating to the environment, human beings and local communities, the flora and fauna in the Contract Area and in the adjoining or neighbouring areas; and (b) to establish the likely effect on the environment, human beings and local communities, the flora and fauna in the Contract Area and in the adjoining or neighbouring areas in consequence of the relevant phase of Petroleum Operations to be conducted under this Contract, and to submit, for consideration by the Parties, methods and measures contemplated in Article 14.4 for minimizing Environmental Damage and carrying out Site Restoration activities.

14.5.1 The first of the aforementioned studies shall be carried out in two parts, namely, a preliminary part which must be concluded before commencement of any field work relating to a seismographic or other survey, and a final part relating to drilling in the Exploration Period. The part of the study relating to drilling operations in the Exploration Period shall be approved by Government before the commencement of such drilling operations, it being understood that such approval shall not be unreasonably withheld.

14.5.2 The second of the aforementioned studies shall be completed before commencement of Development Operations and shall be submitted by the Contractor as part of the Development Plan, with specific approval of Government being obtained before commencement of Development Operations, it being understood that such approval shall not be unreasonably withheld.

14.5.3 The studies mentioned in Article 14.5 above shall contain proposed environmental guidelines to be followed in order to minimize Environmental Damage and shall include, but not be limited to, the following, to the extent appropriate to the respective study taking into account the phase of operations to which the study relates (a) proposed access cutting; (b) clearing and timber salvage; (c) wildlife and habitat protection; (d) fuel storage and handling; (e) use of explosives; (f) camps and staging; (g) liquid and solid waste disposal; (h) cultural and archaeological sites; (i) selection of drilling sites; (j) terrain stabilization; (k) protection of freshwater horizons; (l) blowout prevention plan; (m) flaring during completion and testing of Gas and Oil Wells; (n) abandonment of Wells; (o) rig dismantling and site completion; (p) reclamation for abandonment; (q) noise control; (r) debris disposal; and (s) protection of natural drainage and water flow.

14.5.4 Government shall convey its decision regarding any proposal for environmental clearances submitted by the Contractor pursuant to the provisions of this Article or Contract or required under any laws of India within one hundred and twenty (120) days from the date of submission of application by Contractor seeking such clearance. My clarifications/additional information required by the Government shall be asked by it within sixty (60) days from the date of submission of the application by Contractor. The final decision by the Government shall be conveyed within sixty (60) days from the receipt of such clarifications/additional information from the Contractor. In case Government fails to convey any decision to the Contractor, such application for the clearance by the Contractor shall be deemed to have been approved by the Government.

14.6 The Contractor shall ensure that: (a) Petroleum Operations are conducted in an environmentally acceptable and safe manner consistent with modern oil field and petroleum industry practices and that such Petroleum Operations are properly monitored; (b) the pertinent completed

environmental impact studies are made available to its employees and to its contractors and Subcontractors to develop adequate and proper awareness of the measures and methods of environmental protection to be used in carrying out the Petroleum Operations; and (c) the contracts entered into between the Contractor and its contractors and Subcontractors relating to its Petroleum Operations shall include the provisions stipulated herein and any established measures and methods for the implementation of the Contractor's obligations in relation to (lie environment under this Contract. 14.7 The Contractor shall, prior to conducting any drilling activities, prepare and submit for review by the Government contingency plans for dealing with Oil spills, fires, accidents and emergencies, designed to achieve rapid and effective emergency response. The plans referred to above shall be discussed with the Government and concerns expressed shall be taken into account. 14.7.1 In the event of an emergency, accident, Oil spill or fire arising from Petroleum Operations affecting the environment, the Contractor shall forthwith notify the Government and shall promptly implement the relevant contingency plan and perform such Site Restoration as may be necessary in accordance with modern oilfield and petroleum industry practices. 14.7.2 In the event of any other emergency or accident arising from the Petroleum Operations affecting the environment, the Contractor shall take such action as may be prudent and necessary in accordance with modern oil field and petroleum industry practices in such circumstances. 14.8 In the event that the Contractor fails to comply with any of the terms contained in Article 14.7 within a period specified by the Government, the Government, after giving the Contractor reasonable notice in the circumstances, may take any action which may be necessary to ensure compliance with such terms and to recover from the Contractor, immediately after having taken such action, all costs and expenditures incurred in connection with such action together with such interest as may be determined in accordance with Section 1.7 of Appendix C of this Contract. 14.9 On expiry or termination of this Contract or relinquishment of part of the Contract Area, the Contractor shall: (a) subject to Article 27, remove all equipment and installations from the relinquished area or former Contract Area in a manner agreed with the Government pursuant to an abandonment plan; and (b) perform all necessary Site Restoration in accordance with modern oilfield and petroleum industry practices and take all other action necessary to prevent hazards to human life or to the property of others or the environment. 14.10 The Contractor shall prepare a proposal for the restoration of site including abandonment plan and requirement of funds for this and any annual contribution in accordance with the scheme framed by Government to the Site Restoration fund. This will be submitted along with the annual Budget for the consideration and approval of the Management Committee. 14.11 Subject to Section 3.2 of Accounting Procedure, any Site Restoration fund scheme formulated by Government and subject to provisions of this Contract, any and all costs incurred by Contractor pursuant to this Article shall be cost recoverable including but not limited to sinking funds established for abandonment and restoration of Contract Area. 14.12 In this Article, a reference to Government includes the State Government. 14.13 Where the Contract Area is partly located in areas forming part of certain national parks, sanctuaries, mangroves, wetlands of national importance, biosphere reserves and other biologically sensitive areas passage through these areas shall generally not be permitted. However, if there is no passage, other than through these areas to reach a particular point beyond these areas, permission of the appropriate authorities shall be obtained. 14.14 The obligations and liability of the Contractor for the environment hereunder shall be limited to damage to the environment which: (a) occurs after the Effective Date; and results from an act or omission of the Contractor. KAMAL NATH CASE: In the State of Himachal Pradesh, Span motel, owned by the family members of Shri Kamal Nath, Minister for Environment and Forests, Govt. of

India diverted the Course of river Beas to beautify the motel and also encroached upon some forest land. The apex court ordered the management of the Span motel to hand over forest land to the Govt. of Himachal Pradesh and remove all sorts of encroachments. The Court delivered a land mark judgment and established principle of exemplary damages for the first time in India. The Court said that polluter must pay to reverse the damage caused by his act and imposed a fine of Rs Ten Lakhs (Rs 10,00,000) on the Span motel as exemplary damages. The Supreme Court of India recognized Polluter Pays Principle and Public Trust Doctrine. Protecting the environment OLEUM GAS LEAK CASE, 1986 M C MEHTA, who was single-handedly responsible for making environmental degradation a part of public discourse, says it is vital that PILs have no ulterior motive "GAS HAS leaked. The gas is travelling. The legislature enacted various laws like the Air (Prevention and Control of Pollution) Act, 1981, Water (Prevention and Control of Pollution) Act, 1974 and the Wildlife (Protection) Act, 1972, the Forest (Conservation) Act, 1980, the Indian Forest Act, 1927 and the Biological Diversity Act, 2002 and other legislations with the primary object of giving wide dimensions to the laws relating to protection and improvement of environment. It is true that Part III of the Constitution relating to Fundamental Rights does not specifically devote any Article to the Environment or protection thereof per se. However, with the development of law and pronouncement of judgments by the Supreme Court of India, Article 21 of the Constitution has been expanded to take within its ambit the right to a clean and decent environment. Not only this, there is still a greater obligation upon the Centre, State and the Shrine Board in terms of Article 48A of the Constitution where it is required to protect and improve the environment. Article 25(2) of the UDHR ensures right to standard of adequate living for health and well-being of an individual including housing and medical care and the right to security in the event of sickness, disability etc. The expression 'life' enshrined in Article 21 of the Constitution does not connote mere animal existence or continued drudgery through life. It has a much wider meaning which includes right to livelihood, better standard of living, hygienic conditions in the workplace and leisure. The right to life with human dignity encompasses within its fold, some of the finer facets of human civilization which makes life worth living. The expanded connotation of life would mean the tradition and cultural heritage of the persons concerned. In the case of Consumer Education & Research Centre (supra), the Court discussing the case of C.E.S.C. Ltd. v. Subhash Chandra Bose (1992) 1 SCC 441 stated with approval that in that case the Court had considered the gamut of operational efficacy of human rights and constitutional rights, the right to medical aid and health and held the right to social justice as a fundamental right. The Court further stated that the facilities for medical care and health to prevent sickness, ensure stable manpower for economic development and generate devotion to duty and dedication to give the workers' best performance, physically as well as mentally. The Court particularly, while referring to the workmen made reference to Articles 21, 39(e), 41, 43 and 48-A of the Constitution of India to substantiate that social security, just and humane conditions of work and leisure to workmen are part of his meaningful right to life. Small Hydro Power Developers' ... vs Transmission Corporation of A.P. ... on 8 May, 2008 The said decision itself is an authority for the proposition that what is granted can be withdrawn by the Government except in the case where the doctrine of promissory estoppel applies. The said decision is also an authority for the proposition that the promissory estoppel operates on equity and public interest. Thus, the State has discretion to alter its policy

CONCLUSION Connecting human rights and environment is a valuable sourcebook that explores the uncharted territory that lies between environmental and human rights legislation. Human beings can ensure fundamental equality and adequate conditions of life in an environment that permits a life of dignity and well-

being. There is an urgent need to formulate laws keeping in mind the fact that those who pollute or destroy the natural environment are not just committing a crime against nature, but are violating human rights as well. Indeed, health has seemed to be the subject that bridges gaps between the two fields of environmental protection and human rights. The advancement of the relationship between human rights and environment would enable incorporation of human rights principles within an environmental scope, such as antidiscrimination standards, the need for social participation and the protection of vulnerable groups.

The courts cannot interfere with the policy decision unless it is found that the decision to change the policy is arbitrary, unreasonable and unfair. In the instant case, the State Government has not changed or withdrawn its policy of incentivising the generation through renewable sources of energy. The policy directives contained in GOMs are also not inconsistent with the expressed or implied provisions of any statute. Rather the policy is in conformity with the preamble to the Electricity Act, 2003 and Article 48A of the Constitution. As seen from above the thrust of the National Electricity Policy is upon the use of nonconventional sources of energy to augment generation and for production of green energy. In fact the electricity policy as also the MNES policy, the preamble to the Electricity Act, 2003 and Section 61(h) thereof and GOMS 93 are in tune with the provisions of Article 48A and 51A (g) of the Constitution and treaties, conventions and protocols on the issues relating to environment. In order to support conservation of environment, Constitution was amended by 42nd Amendment Act, 1976. By virtue of the amendment, Articles 48A and Article 51A(g) were inserted in the Constitution. Article 48A, inter alia, provides that the State shall endeavour to protect and improve the environment. Similarly Article 51A(g), inter alia, casts a duty on every citizen of India to protect and improve the natural environment. Articles 48A, Article 51 A(g), the Preamble to the Electricity Act, National Electricity Policy, MNES policy and GOMS 93 reflect the concern for ecology. This concern stems from the ill effects of pollution and global warming. Since the environment needs to be protected, adequate and pre-empting measures are required to be taken to incentivise the generation of power through renewable sources of energy. But in case the original PPAs are re-opened for fixing higher wheeling charges than what is provided in the G.O.Ms. No. 93., there is bound to be a set back to the generation of power through renewable sources of energy. The hike in the wheeling charges of power generated by plants based on renewable sources of energy does not serve the purpose of promotion of power generation through non- conventional sources. Setting up of power plant requires heavy investment and it has a long gestation period. It is also well known that till the technologies are improved, the cost of production of power through renewable sources of energy could be higher than the production of power through conventional sources of energy. The impugned increase in wheeling charges of energy produced by renewable sources is against the preamble and Sections 61(h) of the Electricity Act, the National Electricity Policy, GOMs 93 & 112 of the Government of Andhra Pradesh, MNES policy and thrust of Article 48A of the Constitution. In *Chhattisgarh Biomass Energy Developers Association and Ors. v. Chhattisgarh S.E.R.C. and Ors.* 2007 APTEL 711, it was observed that where Power Purchase Agreements between distribution licensees and the generating companies utilizing renewable sources of energy are in conformity with MNES guidelines or various policy guidelines, the agreements are not to be tinkered with. The Commission has not considered the impact of the aforesaid decisions, the preamble and Section 61(h) of the Electricity Act, 2003, the National Electricity Policy, MNES guidelines, Article 48A and 51A(g) of the Constitution and the aspect relating to protection of environment, which has been the subject matter of various treaties and conventions. Article 51 Promotion of international peace and security The State shall endeavour to

(a) promote international peace and security; (b) maintain just and honourable relations between nations; (c) foster respect for international law and treaty obligations in the dealings of organised peoples with one another; and encourage settlement of international disputes by arbitration PART IVA FUNDAMENTAL DUTIES. State of Gujarat vs Mirzapur Moti Kureshi Kassab on 26 October, 2005 By enacting clause (g) in Article 51-A and giving it the status of a fundamental duty, one of the objects sought to be achieved by the Parliament is to ensure that the spirit and message of Articles 48 and 48A is honoured as a fundamental duty of every citizen. The Parliament availed the opportunity provided by the Constitution (Forty-second Amendment) Act, 1976 to improve the manifestation of objects contained in Article 48 and 48-A. While Article 48-A speaks of "environment", Article 51-A(g) employs the expression "the natural environment" and includes therein "forests, lakes, rivers and wild life". While Article 48 provides for "cows and calves and other milch and draught cattle", Article 51-A(g) enjoins it as a fundamental duty of every citizen "to have compassion for living creatures", which in its wider fold embraces the category of cattle spoken of specifically in Article 48. In Mohan Kumar Singhania & Ors. v. Union of India & Ors., 1992 Supp (1) SCC 594, a governmental decision to give utmost importance to the training programme of the Indian Administrative Service selectees was upheld by deriving support from Article 51-A(j) of the Constitution, holding that the governmental decision was in consonance with one of the fundamental duties. In State of U.P. v. Yamuna Shanker Misra & Ors., (1997) 4 SCC 7, this Court interpreted the object of writing the confidential reports and making entries in the character rolls by deriving support from Article 51-A(j) which enjoins upon every citizen the primary duty to constantly endeavour to strive towards excellence, individually and collectively. In T.N. Godavarman Thirumalpad v. Union of India & Ors., (2002) 10 SCC 606, a three-Judge Bench of this Court read Article 48-A and Article 51-A together as laying down the foundation for a jurisprudence of environmental protection and held that "Today, the State and the citizens are under a fundamental obligation to protect and improve the environment, including forests, lakes, rivers, wild life and to have compassion for living creatures". In State of W.B. & Ors. v. Sujit Kumar Rana, (2004) 4 SCC 129, Articles 48 and 51-A(g) of the Constitution were read together and this Court expressed that these provisions have to be kept in mind while interpreting statutory provisions. One of the other reasons which has been advanced for reversal of earlier judgments was that at the time when these earlier judgments were delivered Article 48(A) and 51(A) were not there and impact of both these Articles were not considered. It is true that Article 48(A) which was introduced by the 42nd Constitutional Amendment in 1976 with effect from 3.1.1977 and Article 51(A) i.e. fundamental duties were also brought about by the same amendment. Though, these Articles were not in existence at that time but the effect of those Articles were indirectly considered in the Mohd. Hanif Qureshi's case in 1958. It was mentioned that cow dung can be used for the purposes of manure as well as for the purpose of fuel that will be more ecofriendly. Article 51(A) Fundamental duties It shall be the duty of every citizen of India (a) to abide by the Constitution and respect its ideals and institutions, the national Flag and the National Anthem; (b) to cherish and follow the noble ideals which inspired our national struggle for freedom; (c) to uphold and protect the sovereignty, unity and integrity of India; (d) to defend the country and render national service when called upon to do so; (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women; (f) to value and preserve the rich heritage of our composite culture; (g) to protect and improve the natural environment including forests, lakes, rivers and wild life, and to have compassion for living creatures; (h) to develop the scientific temper, humanism and the

spirit of inquiry and reform; (i) to safeguard public property and to abjure violence; (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement PART V THE UNION CHAPTER I THE EXECUTIVE The President and Vice President. State of Gujarat vs Mirzapur Moti Kureshi Kassab on 26 October, 2005 the contexts in which article 51(a) appears in the document By enacting clause (g) in Article 51-A and giving it the status of a fundamental duty, one of the objects sought to be achieved by the Parliament is to ensure that the spirit and message of Articles 48 and 48A is honoured as a fundamental duty of every citizen. The Parliament availed the opportunity provided by the Constitution (Forty-second Amendment) Act, 1976 to improve the manifestation of objects contained in Article 48 and 48-A. While Article 48-A speaks of "environment", Article 51-A(g) employs the expression "the natural environment" and includes therein "forests, lakes, rivers and wild life". While Article 48 provides for "cows and calves and other milch and draught cattle", Article 51-A(g) enjoins it as a fundamental duty of every citizen "to have compassion for living creatures", which in its wider fold embraces the category of cattle spoken of specifically in Article 48. In Mohan Kumar Singhania & Ors. v. Union of India & Ors., 1992 Supp (1) SCC 594, a governmental decision to give utmost importance to the training programme of the Indian Administrative Service selectees was upheld by deriving support from Article 51-A(j) of the Constitution, holding that the governmental decision was in consonance with one of the fundamental duties. In State of U.P. v. Yamuna Shanker Misra & Ors., (1997) 4 SCC 7, this Court interpreted the object of writing the confidential reports and making entries in the character rolls by deriving support from Article 51-A(j) which enjoins upon every citizen the primary duty to constantly endeavour to strive towards excellence, individually and collectively. In T.N. Godavarman Thirumalpad v. Union of India & Ors., (2002) 10 SCC 606, a three-Judge Bench of this Court read Article 48-A and Article 51-A together as laying down the foundation for a jurisprudence of environmental protection and held that "Today, the State and the citizens are under a fundamental obligation to protect and improve the environment, including forests, lakes, rivers, wild life and to have compassion for living creatures". In State of W.B. & Ors. v. Sujit Kumar Rana, (2004) 4 SCC 129, Articles 48 and 51-A(g) of the Constitution were read together and this Court expressed that these provisions have to be kept in mind while interpreting statutory provisions. It is thus clear that faced with the question of testing the constitutional validity of any statutory provision or an executive act, or for testing the reasonableness of any restriction cast by law on the exercise of any fundamental right by way of regulation, control or prohibition, the Directive Principles of State Policy and Fundamental Duties as enshrined in Article 51-A of the Constitution play a significant role. The decision in Quareshi-I in which the relevant provisions of the three impugned legislations was struck down on the singular ground of lack of reasonability, would have decided otherwise if only Article 48 was assigned its full and correct meaning and due weight age was given thereto and Articles 48-A and 51-A(g) were available in the body of the Constitution. Article 253 Legislation for giving effect to international agreements notwithstanding anything in the foregoing provisions of this Chapter, Parliament has power to make any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country or countries or any decision made at any international conference, association or other body.

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- RULIGS**-THE ENVIRONMENT (PROTECTION) RULES, 1986 (The Principal rules were published in the Gazette of India vide number S.O. 844(E), dated 19.11.1986 and subsequently amended vide: (i) S.O. 32(E), 16.2.87 (ii) S.O. 64(E), 18.1.88 (iii) G.S.R. 931(E), 27.10.89 (iv) S.O. 23(E), 16.1.91 (v) G.S.R. 95(E), 12.2.92 (vi) G.S.R. 329(E), 13.3.92 (vii) G.S.R. 562(E), 22.5.92 (viii) G.S.R. 636(E), 25.6.92 (ix) G.S.R. 386(E), 22.4.93 (x) G.S.R. 422(E), 19.5.93 (xi) G.S.R. 801(E), 31.12.93 (xii) G.S.R. 7, 22.12.98) Ministry of Environment and Forests (Department of Environment, Forest and Wildlife) Notification New Delhi, the 19th November, 1986 S.O. 844(E) - In exercise of the powers conferred by sections 6 and 25 of the Environment (Protection) Act, 1906 (29 of 1986), the Central Government hereby makes the following rules, namely:-

1. Short title and commencement (i) These rules may be called the Environment (Protection) Rules, 1986. (ii) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions In these rules, unless the context otherwise requires,- (a) "Act" means the Environment (Protection) Act, 1986 (29 of 1986); (aa) "areas" means all areas where the hazardous substances are handled;1 (b) "Central Board" means the Central Pollution Control Board constituted under section 3 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974); (c) "Form" means a form set forth in Appendix A to these rules; (d) "Government Analyst" means a person appointed or recognized as such under section 13; (e) "person" in relation to any factory or premises means a person or occupier or his agent who has control over the affairs of the factory or premises and includes in relation to any substance, the person in possession of the substance. (ee) "prohibited substance" means the substance prohibited for handling;1 (f) "recipient system" means the part of the environment such as soil, water, air or other which receives the pollutants; (ff) "restricted substance" means the substance restricted for handling;1 (g) "section" means a section of the Act; (h) "Schedule" means a Schedule appended to these rules; (i) "Standards' means standards prescribed under these rules; (j) "State Board" means a State Pollution Control Board constituted under section 4 of the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974) or a State Pollution Control Board constituted under section 5 of the Air (Prevention and Control of Pollution) Act, 1981 (14 of 1981);

3. Standards for emissions or discharge of environmental pollutants (1) For the purpose of protecting and improving the quality of the environment and preventing and abating environmental pollution, the standards for emission or discharge of environmental pollutants from the industries, operations or processes shall be as specified in 2 [Schedule I to IV]. (2) Notwithstanding anything contained in sub-rule (1),the Central Board or a State Board may specify more stringent standards from those provided in 3 [Schedule I to IV] in respect of any specific industry, operation or process depending upon the quality of the recipient system and after recording reasons therefore in writing.

4 (3) The standards for emission or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) shall be complied with by an industry, operation or process within a period of one year of being so specified.

5 [(3A) (i) Notwithstanding anything contained in sub-rules (1) and (2), on and from the 1st day of January, 1994, emission or discharge of environmental pollutants from the 6 [industries, operations or processes other than those industries, operations or processes for which standards have been specified in Schedule-I] shall not exceed the relevant parameters and standards specified in schedule VI. Provided that the State Boards may specify more stringent standards for the relevant parameters with respect to specific industry or locations after

recording reasons therefore in writing; (ii) The State Board shall while enforcing the standards specified in Schedule VI follow the guidelines specified in Annexure I and II in that Schedule]. 7 [(3B)] The combined effect of emission or discharge of environmental pollutants in an area, from industries, operations, process, automobiles and domestic sources, shall not be permitted to exceed the relevant concentration in ambient air as specified against each pollutant in columns (3) to (5) of Schedule VII.] (4) Notwithstanding anything contained in sub-rule (3)- (a) the Central Board or a State Board, depending on the local conditions or nature of discharge of environmental pollutants, may, by order, specify a lesser period than a period specified under sub-rule (3) within which the compliance of standards shall be made by an industry, operation or process (b) the Central Government in respect of any specific industry, operation or process, by order, may specify any period other than a period specified under sub-rule (3) within which the compliance of standards shall be made by such industry, operation or process. (5) Notwithstanding anything contained in sub-rule (3) the standards for emission or discharge of environmental pollutants specified under sub-rule (1) or sub-rule (2) in respect of an industry, operation or process before the commencement of the Environment (Protection) Amendment Rules, 1991, shall be complied by such industry, operation or process by the 31st day of December 1991. 8 [(6) Notwithstanding anything contained in sub-rule (3), an industry, operation or process which has commenced production on or before 16th May, 1981 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time-bound programme, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 31 st day of December, 1993. (7) Notwithstanding anything contained in sub-rule (3) or sub-rule (6) an industry, operation or process which has commenced production after the 16th day of May, 1981 but before the 31st day of December 1991 and has shown adequate proof of at least commencement of physical work for establishment of facilities to meet the specified standards within a time-bound programme, to the satisfaction of the concerned State Pollution Control Board, shall comply with such standards latest by the 31st day of December, 1992.

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- **REFERENCE**-Environment Protection Act, 1986 is an Act of the Parliament of India. It was enacted in May 1986 and came into force on 19 November 1986. It has 26 sections and 4 chapters. The Act is widely considered to have been a response to the Bhopal gas leak. The act came into force in 1986. It authorizes the central government to improve and protect environmental quality, reduce and control pollution from the sources, and restrict or prevent the setting and operation of any industrial facility on environmental grounds. Plan and Execute a nation-wide programme for the prevention, control and abatement of environmental pollution.
- Lay down standards for the quality of environment in its various aspects.
- Lay down standards for emission or discharge of environmental pollutants from various sources.
- The Environment (Protection) Act, 1986 authorizes the central government to protect and improve environmental quality, control and reduce pollution from all sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds

- In conclusion, the Environment Protection Act, 1986, is a pivotal piece of legislation in India that aims to protect and improve the environment by regulating various activities, controlling pollution, and establishing authorities for enforcement.

For the avoidance of doubts, it is hereby declared that the power to issue directions under this section includes the power to direct— (a)the closure, prohibition or regulation of any industry, operation or process; or (b)stoppage or regulation of the supply of electricity or water or any other service.



ENTREPRENEURSHIP - IN FUTURE OPTION AND COMPETITION IN INDIA

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“An Entrepreneur is a person who is able to look at the environment identify opportunities to improve the environment resources and implement action to maximise those opportunities”.

(Robert E . Nelson)

An Entrepreneur is a person who operates a new venture and also inherits some risks. Entrepreneur is a key driver of any economy . He is a game changer person for a development process particularly in an existing scenario and a situation. Entrepreneur are capable to change the face of the whole world by exploring business ownership internationally. Setting up micro enterprises , small and medium sized enterprises in both the formal and informal economic sectors is now being proposed as a way to achieve sustainable socio - economic development and the best approach to eliminate the problems such as unemployment and poverty. Entrepreneurship offers fabulous opportunities for sustaible growth and development of India. It fosters greater self independence , self confidence, education and growth not only individual but also for the society and nation.

The entrepreneur provide a magical touch to an organisation , whether in public or private or joint venture, in achieving speed , flexibility, innolativeness and strong sense of self - determination . They bring a new vision to the forefront of economic growth.

The basic objective of this paper is to highlight the options for increasing future opportunities foe Indian entrepreneurs and focus on the various challenges.,which they have to face to avail the opportunities.

Opportunities for Entrepreneurship in India - It is an old saying that the success of economy is entirely depend on the growth rate of entrepreneurship . India economy is continuously providing opportunities for the development of entrepreneur. Following are the reasons to increase the opportunities of entrepreneurship in India, which will certainly broad the area of entrepreneurship -

- Government has encouraged to innovations and inventions so opportunities in the field of research is increasing.
- Globalisation has provided opportunities to freely enter into international trade.
- Innovations are providing opportunities to improved risk taking ability.
- Opportunities have been increased due to withdrawn of some restrictions by Government.
- Technology and innovations spread into the world and these innovations have providing more and more opportunities.
- Promotion of heathy compltions among nations is also providing various opprtunities.
- The next reasons for increasing opportunities is to provide government assistance for world trade.
- Establishment of other national and international organisation to support business among nations of the world is also one if the main reasons to provide various opportunities.
- Benefits of specialisation have expanded the area of entrepreneurship in India.
- Social and cultural development has also played a vital role to increase the opportunities.

COMPETITION AND CHALLENGES

Opportunities and competition are the two faces of one coin. Along with the above opportunities which may Lead the rate of entrepreneurs in India yet followings are the challenges which may restrict this growth :-

- The main challenge is how to arrange the required additional equity capital Especially in case of venture capital it becomes more difficult to arrange because investment pattern of India is. not supportive in this context . Entrepreneurs are even facing too many difficulties in arranging of borrowing fund.

- Through - cut completions endangered existence of small companies which is a big challenge for Indian Economy.
- The next challenges is to face the problems of availing raw - materials because increasing numbers of entrepreneurs will demand more quantity of raw material.
- The next challenge is how to face the problems of obsolescent of indigenous technology.
- Increased pollutions and Ecological imbalanced is the again a big question mark on the success of entrepreneurship.
- Entrepreneurs have to follow the guideline of TRIPS AND TRIMS.
- The wheel of India's bureaucracy still turn too slow for entrepreneurs, the educational system is not good at promoting entrepreneurial skills and attitude, Indian institute have not been as good as multinationals in Research and Development transfer, and India's physical infrastructure ranks lowest among the countries.

Suggestions

A real entrepreneur is a person who accepts the challenge and converts it into an opportunity . Still there are some suggestions to improve the growth rate of entrepreneurship in India.

Entrepreneurship must be developed and supported so that there is creation of SMEs in the country:-

- To increase the number of Women's entrepreneur Government should increase.
- Provide individual segment of financial fund to Women's entrepreneur.
- We should provide special infrastructure facilities to Women's entrepreneur.
- Government should provide proper training facilities to Women's entrepreneur.
- Government should provide reservation to some of the commodity for Women's entrepreneur.
- We should motivate Women entrepreneur to become more competitive and efficient in the local and international market.

Along with India attrition rate for new entrepreneur is very high in many countries of the world. While this may be because their chosen business inappropriate or a lack of adequate technical or business expertise, one critical reason is that overall micro and macro economics in which they are forced to operate. Therefore a key consideration by the government should be to critically evaluate the existing macro economic policies and their impact on grassroots entrepreneurship development.

Conclusion

Thus we can say that there is potential for entrepreneurship in India. The present potential of productivity and the rapid economic growth is very much worth an appreciation. This rapid growth of Asian economics and globalisation has also opened wide doors of opportunities and challenges for India. Proper planning and focus can also help India to seek and create the pool of entrepreneurs. At a later date we will surely find India as the leader in the field of business.

According to Global Entrepreneurship Monitor (GEM) project India Report 2001 , due to social rigidities , Indian women are half as likely as men to be entrepreneurs . Younger, moderately educated, and reasonably well - off people are more likely to be entrepreneurs. The types of start - ups encountered were mostly consumer - oriented, comprising of trading activities, most have just about handful of employees. Main sources of funds in decreasing order were personal, financial institutions, close family members, and government programs.

In a country like India, social system and cultural issues hold their importance besides issues related to infrastructure . Any innovation to succeed in our society needs to be accepted by our values systems and cultural issues. Further , in our country, where the population is more concerned about making both ends meet, entrepreneurial activity will achieve sustainability only when support is provided both at the social and government levels.

In India there is a quality of people in industry, which demands high level of entrepreneurship development programme throughout the country for the growth of Indian economy.

Therefore a key consideration by the government should be to critically evaluate the existing macro economic policies and their impact on grassroots entrepreneurship development.

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Impact of Industrial Effluents on the Water Quality of Jojari River

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Abstract

Industrial effluents discharged into water bodies pose a significant threat to water quality and ecosystem health. The Jojari River located in Salawas region is facing such challenges due to the discharge of untreated or inadequately treated effluents from nearby industries. This abstract provides a concise overview of the impact of industrial effluents on the water quality of the Jojari River.

This study conducted a comprehensive assessment of the physicochemical parameters of water samples collected from multiple points along the Jojari River. Parameters including pH, total dissolved solids (TDS), heavy metal concentrations, and microbial load were analyzed. The discharge of industrial effluents has led to a significant deterioration in water quality within the Jojari River. Elevated levels of parameters were observed, indicating organic pollution. Additionally, the presence of heavy metals such as lead, cadmium, and mercury exceeded permissible limits, posing risks to aquatic life and human health through bioaccumulation.

In conclusion, the findings of this study highlight the severe impact of industrial effluents on the water quality of the Jojari River, emphasizing the urgent need for stricter regulations and effective wastewater treatment measures to mitigate pollution and safeguard the health of both the ecosystem and local communities.

Keywords: Jojari River. Parameters, industrial effluents.

Introduction

The Jojari River, nestled amidst the picturesque landscape of the Salawas region, has long been a vital lifeline for the surrounding communities, supporting agriculture, industry, and sustaining local ecosystems. However, the tranquillity of this river is increasingly threatened by the adverse effects of industrial activities, which have led to the discharge of untreated or inadequately treated effluents into its waters. This introduction provides a detailed exploration of the multifaceted impact of industrial effluents on the water quality of the Jojari River, elucidating the ecological, socioeconomic, and public health ramifications of this pressing environmental issue. [1]

The Salawas region has witnessed rapid industrialization in recent decades, spurred by economic growth and development initiatives. The establishment of various industries, including manufacturing plants, chemical processing units, and textile mills, has contributed to the region's industrial landscape. [2] While these industries play a crucial role in driving economic progress and providing employment opportunities, their operations have inadvertently unleashed a myriad of pollutants into the surrounding environment, with the Jojari River bearing the brunt of this pollution.

Industrial effluents, comprising a complex mixture of organic and inorganic substances, pose a formidable challenge to the water quality of the Jojari River. These effluents often contain high levels of suspended solids, heavy metals, organic compounds, and other contaminants, which can have deleterious effects on aquatic ecosystems and public health. [3] Moreover, the discharge of untreated effluents not only compromises the integrity of the river's ecosystem but also threatens the livelihoods of communities reliant on the river for irrigation, fishing, and domestic water supply.



The degradation of water quality in the Jojari River is intricately linked to the physicochemical and biological alterations induced by industrial effluents. Elevated levels of pollutants, such as heavy metals and organic compounds, can disrupt the river's natural balance, leading to oxygen depletion, nutrient enrichment, and habitat degradation. [4] Consequently, these changes can trigger cascading effects throughout the aquatic food web, affecting the abundance, diversity, and health of aquatic organisms, including fish, amphibians, and macro invertebrates. [5]

Beyond its ecological implications, the contamination of the Jojari River has far-reaching socioeconomic ramifications for local communities. Agriculture, which relies heavily on the river for irrigation, faces the risk of soil contamination and reduced crop yields due to the presence of pollutants in irrigation water. Similarly, the fishing industry suffers from declining fish populations and deteriorating fish health, jeopardizing the livelihoods of fishermen and their families. [6]

Moreover, the pollution of the Jojari River poses significant public health concerns for communities residing along its banks. The presence of microbial pathogens and toxic substances in the water can pose risks to human health through direct contact, consumption of contaminated water, or consumption of contaminated aquatic organisms. Additionally, the bioaccumulation of heavy metals in fish and other aquatic organisms can lead to long-term health hazards, including neurological disorders, organ damage, and carcinogenic effects. [7]

In light of these challenges, there is an urgent need for comprehensive strategies to address the impact of industrial effluents on the water quality of the Jojari River. This entails implementing stringent regulatory measures to control industrial pollution, promoting the adoption of cleaner production technologies, and investing in robust wastewater treatment infrastructure. [8] Furthermore, fostering community engagement and raising awareness about the importance of water conservation and pollution prevention are essential steps towards safeguarding the health and sustainability of the Jojari River ecosystem.

In the degradation of water quality in the Jojari River due to industrial effluents represents a pressing environmental issue with far-reaching consequences for ecosystems, livelihoods, and public health. [9] By understanding the complex interplay between industrial activities and water quality degradation, stakeholders can work collaboratively to develop holistic solutions that balance economic development with environmental sustainability. Only through concerted efforts and proactive measures can we ensure the preservation of the Jojari River as a vital resource for current and future generations.

MATERIALS AND METHODS

Study Area Description:

- The Salawas region is located in Jodhpur, known for its industrial activities and the presence of the Jojari River, a major water body in the area.
- The Jojari River serves as a primary water source for irrigation, domestic use, and industrial purposes in the Salawas region.
- Surrounding the Jojari River are numerous manufacturing plants, chemical processing units, and textile mills, representing the industrial landscape of the area.
- The industrial activities in the Salawas region contribute significantly to the local economy but also generate substantial quantities of industrial effluents that are discharged into the Jojari River.[10]

Sampling Frequency and Seasonality:

- Multiple sampling rounds were conducted over different seasons to capture seasonal variations in water quality.
- Sampling frequency was determined based on the variability of industrial effluent discharge rates and potential seasonal fluctuations in water flow and quality.

Sampling Procedure:

- Water samples were collected using clean, sterilized containers to prevent contamination.
- At each sampling site, samples were collected at a consistent depth and distance from the riverbank to ensure representativeness.
- Sampling was conducted during stable weather conditions to minimize external influences on water quality.

Field Measurements:

- In-situ measurements of physicochemical parameters such as pH, temperature, electrical conductivity, and turbidity were conducted using portable meters.
- Measurements were taken at the time of sample collection to capture real-time conditions.

Laboratory Analysis:

- Additional water samples were transported to the laboratory for further analysis of specific parameters such as total dissolved solids (TDS), nutrient concentrations, and heavy metal concentrations.
- Samples were preserved and stored according to standard protocols to maintain sample integrity during transportation and analysis.

Heavy Metal Analysis:

- Water samples were processed and analyzed for heavy metal concentrations using appropriate analytical techniques such as atomic absorption spectrometry or inductively coupled plasma mass spectrometry.
- Heavy metals of interest included lead (Pb), cadmium (Cd), mercury (Hg), chromium (Cr), and arsenic (As), among others.

Data Analysis:

- Statistical analysis of the collected data was performed using appropriate software packages such as SPSS or R.
- Descriptive statistics, including mean, standard deviation, and range, were calculated for physicochemical parameters, heavy metal concentrations, and microbial counts.[11]

Quality Assurance and Quality Control (QA/QC):

- Strict QA/QC protocols were implemented throughout the study to ensure the reliability and accuracy of data.
- Calibration of instruments, adherence to standard operating procedures, and regular validation of analytical methods were undertaken to maintain data quality.
- Duplicate samples, blank samples, and certified reference materials were included in the analysis to assess precision and accuracy.[12]

Ethical Considerations:

- The study adhered to ethical guidelines for research involving human subjects, ensuring informed consent and confidentiality where applicable.
- Environmental ethics were upheld, and measures were taken to minimize any potential harm to the ecosystem during sample collection and analysis.

Limitations:

- Limitations of the study included potential variability in industrial effluent discharge rates, seasonal fluctuations in water flow, and the complexity of assessing cumulative impacts on water quality.

Observations:**1. Spatial Variations in Water Quality:**

- Water quality parameters exhibited spatial variations along the stretch of the Jojari River, with notable differences observed between sampling sites directly influenced by industrial effluent discharge and control sites located away from industrial activities.
- Sampling sites near industrial discharge points consistently exhibited higher levels of pollutants, including elevated concentrations of heavy metals, organic compounds, and nutrients, compared to control sites.

2. Impact of Industrial Effluents on Physicochemical Parameters:

- Industrial effluent discharge significantly impacted physicochemical parameters of water quality. Elevated levels were observed at sites near industrial discharge points, indicating organic pollution.

3. Heavy Metal Contamination:

- Heavy metal concentrations exceeded permissible limits at sampling sites near industrial discharge points. Lead (Pb), cadmium (Cd), mercury (Hg), chromium (Cr), and arsenic (As) were among the heavy metals detected at elevated levels, posing risks to aquatic life and human health through bioaccumulation.

4. Seasonal Variations:

- Seasonal variations in water quality parameters were observed, with fluctuations attributed to changes in industrial effluent discharge rates, rainfall patterns, and temperature variations.
- Higher pollutant concentrations were often observed during the monsoon season due to increased surface runoff and dilution of pollutants.

5. Community Impacts:

- The degradation of water quality in the Jojari River had socioeconomic implications for local communities dependent on the river for agriculture, fishing, and domestic use. Reduced water quality compromised agricultural productivity, while declines in fish populations affected the livelihoods of fishermen and their families.

6. Cumulative Effects:

- The cumulative effects of industrial effluent discharge on the Jojari River's water quality were evident, with long-term trends indicating worsening pollution levels over time.

- The combined impact of multiple pollutants, including heavy metals, organic compounds, and microbial contaminants, posed complex challenges for water resource management and environmental conservation efforts.

Overall, the observations from this study highlight the severe impact of industrial effluents on the water quality of the Jojari River, emphasizing the urgent need for stricter regulations and effective wastewater treatment measures to mitigate pollution and safeguard the health of both the ecosystem and local communities.

Results

The study conducted along the Jojari River in the Salawas region revealed substantial degradation in water quality attributable to industrial effluent discharge. Physicochemical analysis indicated heightened levels of sites directly impacted by industrial activities. Furthermore, heavy metal concentrations exceeded regulatory limits, with lead (Pb), cadmium (Cd), mercury (Hg), chromium (Cr), and arsenic (As) posing significant risks to aquatic organisms and human health. Microbial pollution was prevalent, evidenced by elevated counts of faecal coliforms, *Escherichia coli*, and total coliforms, highlighting the potential health hazards associated with contaminated water sources. Seasonal variations in pollutant levels underscored the dynamic nature of water quality, with heightened contamination observed during the monsoon season. These findings reflect a severe impact on the aquatic ecosystem, evidenced by declines in species diversity, fish mortality events, and alterations in benthic macro invertebrate communities. Socioeconomic repercussions were also evident, as reduced water quality compromised agricultural productivity and adversely affected the livelihoods of local communities reliant on the river. In conclusion, the study emphasizes the urgent need for stringent regulatory measures and effective pollution control strategies to mitigate industrial effluent discharge and safeguard both environmental and public health in the Salawas region.

Discussion:

The findings of this study underscore the severe impact of industrial effluents on the water quality of the Jojari River in the Salawas region. The discussion delves into the implications of these findings, identifies potential contributing factors, and proposes strategies for mitigation and future research directions.

1. Environmental Implications:

- The observed deterioration in water quality, characterized by elevated levels of pollutants such as heavy metals, and microbial contaminants, poses significant environmental risks. These pollutants not only degrade aquatic habitats but also threaten the health and survival of aquatic organisms, disrupting the balance of the river ecosystem.

2. Public Health Concerns:

- The presence of microbial contaminants in water samples collected from sites near industrial discharge points raises serious public health concerns. Exposure to contaminated water sources can lead to waterborne diseases and pose risks to the well-being of local communities dependent on the river for drinking water and domestic use.

HEALTH ALARM

- > Sources of toxic heavy metals in the Yamuna primarily of anthropogenic origin
- > Waste water released from industries is a major source
- > Concentration of chromium, nickel, copper, zinc, cadmium and lead were below the detection limit during the first lockdown
- > Iron and manganese come from both natural and anthropogenic sources

IMPACT ON HEALTH

- > Can affect all body parts, including lungs, kidneys, liver, skin, muscles, reproductive system and immune system
- > Effect on humans based on nature, concentration and duration of exposure

ORGANS THAT MAY BE AFFECTED

CHROMIUM Gastrointestinal, skin, liver, kidney, hematology	LEAD Bones, reproductive, immunological, brain	CADMIUM Bones, immunological, kidney, respiratory	IRON Gastrointestinal, immunological, cardiovascular, liver
---	---	--	--

File photo

3. Regulatory and Policy Implications:

- The study highlights the urgent need for stricter regulations and enforcement mechanisms to control industrial effluent discharge into the Jojari River. Effective implementation of pollution control measures, including wastewater treatment technologies and regular monitoring, is essential to mitigate pollution and protect water quality.

4. Socioeconomic Impact:

- The degradation of water quality has socioeconomic repercussions for communities reliant on the river for agriculture, fishing, and domestic use. Reduced agricultural productivity and declines in fish populations jeopardize livelihoods, exacerbating poverty and food insecurity among local communities.

5. Community Engagement and Awareness:

- Engaging local communities in water resource management and raising awareness about the importance of water conservation and pollution prevention are crucial. Community-based initiatives, such as river clean-up campaigns and educational programs, can foster stewardship and collective action towards preserving the health of the Jojari River.

6. Sustainable Industrial Practices:

- Encouraging industries to adopt sustainable practices, such as implementing cleaner production technologies and treating wastewater before discharge, is paramount. Investing in eco-friendly solutions not only reduces pollution but also enhances corporate social responsibility and contributes to sustainable development goals.

7. Future Research Directions:

- Further research is warranted to comprehensively assess the long-term effects of industrial effluent discharge on the Jojari River ecosystem. Studies focusing on the ecological resilience of aquatic organisms, the efficacy of pollution control measures, and the socioeconomic impacts on local communities can provide valuable insights for informed decision-making and policy formulation.

In conclusion, addressing the complex challenges associated with industrial effluent discharge requires a

multidisciplinary approach encompassing regulatory interventions, community engagement, and sustainable industrial practices. By prioritizing environmental conservation and public health, stakeholders can work collaboratively to safeguard the health and sustainability of the Jojari River and its surrounding ecosystems for current and future generations.

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Understanding the working of List, Tuple & Dictionary in Python Programming Language

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ABSTRACT

Python is a high-level programming language. Python programming is developed by Guido van Rossum. Python is often used as a support language for software developers, for build control and management, testing, and in many other ways. Python libraries exist that enable you to use Python for machine learning, web processing and even biology. Python in real world is used for web development, game development, scientific and numeric applications, AI and machine learning, software development and business applications.

A data structure is a way of organizing data in computer memory, implemented in a programming language. This organization is required for efficient storage, retrieval, and modification of data.

Data structures in Python can be divided into two broad categories: **mutable** and **immutable**. Mutable (from Latin *mutabilis*, "changeable") data structures are those which we can modify -- for example, by adding, removing, or changing their elements. Python has three mutable data structures: **lists**, **dictionaries**, and **sets**. Immutable data structures, on the other hand, are those that we cannot modify after their creation. The only basic built-in immutable data structure in Python is a **tuple**.

Python has several other important data types that you'll probably use every day. They are called lists, tuples and dictionaries. This research paper's aim is to get you acquainted with these data types List, Tuple and Dictionary.

Keywords : machine learning , mutable, immutable, lists, tuple, dictionaries.

Introduction of List in Python :

- ❖ List is a collection of elements which is ordered and changeable (mutable).
- ❖ Allows duplicate values.
- ❖ A list contains items separated by commas and enclosed within square brackets ([]).
- ❖ All items belonging to a list can be of different data type.
- ❖ The values stored in a list can be accessed using the slice operator ([] and [:]) with indexes starting at 0 in the beginning of the list.

Creating a list:

To create a list enclose the elements of the list within square brackets and separate the elements by commas.

Syntax:

list-name= [item-1, item-2,, item-n]

Example:

```
mylist = ["mango", "orange", "papaya"] # a list with three items
L = [] # an empty list
```

Creating a list using list() Constructor:

```
mylist = list(("mango", "orange", "papaya")) # note the double round-brackets
print(mylist)
```

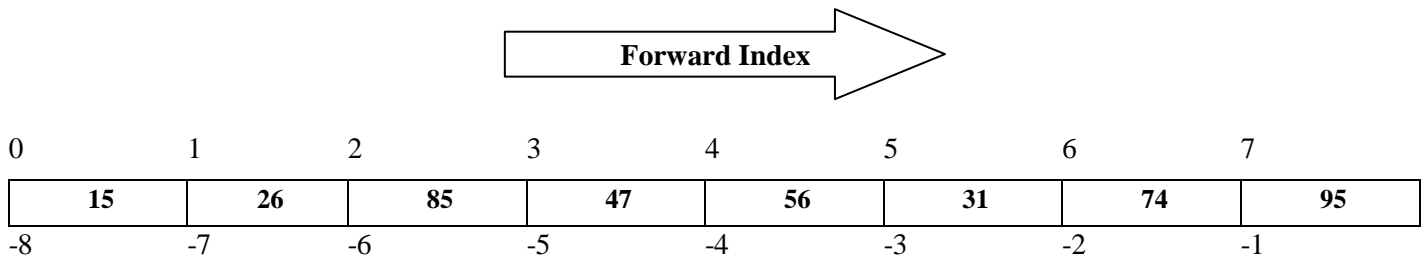
Accessing lists:

- ❖ The values stored in a list can be accessed using the slice operator ([] and [:]) with indexes.

- ❖ List-name[start:end] will give you elements between indices start to end-1.
- ❖ The first item in the list has the index zero (0).

Example:

```
>>> num=[15,26,85,47,56,31,74,95]
```

**List Operators:**

- ❖ **Joining operator +**
- ❖ **Repetition operator ***
- ❖ **Slice operator [:]**
- ❖ **Comparison Operator <=, >, >=, ==, !=**

Joining Operator: It joins two or more lists.

Example:

```
>>> L1=[5,7,2.1,'r']
>>> L2=[9,'a']
>>> L1 + L2 [5,7,2.1,'r', 9,'a']
```

Repetition Operator: It replicates a list specified number of times.

Example:

```
>>> L1 * 3 [5,7,2.1,'r',5,7,2.1,'r',5,7,2.1,'r']
```

Slice Operator:

List-name[start:end] will give you elements between indices start to end-1.

```
>>> num=[15,26,85,47,56,31,74,95]
>>> num=[2:-2]
[85,47,56,31]
```

Comparison Operators:

- ❖ Compares two lists
- ❖ Python internally compares individual elements of lists in lexicographical order.
- ❖ It compares the each corresponding element must compare equal and two sequences must be of the same type. For non-equal comparison as soon as it gets a result in terms of True/False, from corresponding elements comparison. If Corresponding elements are equal, it goes to the next element and so on, until it finds elements that differ.

Example:

```
>>>L1, L2 = [7, 6, 9], [7, 6, 9]
>>>L3 = [7, [6, 9] ]
```

For Equal Comparison:

Comparison	Result	Reason
>>>L1==L2	True	Corresponding elements have same value and same type
>>>L1==L3	False	Corresponding values are not same

For Non-equal comparison:

Comparison	Result	Reason
>>>[3,4,7,8]<[5,1]	True	3<5 is True
>>> L1>L2	False	All elements are equal

List Methods:**Consider a list:**

```
company=["IBM","HCL","Wipro"]
```

FunctionName	Description	Example
append()	To add element to the list at the end.Syntax: list-name.append(element)	>>> company.append("Google") >>> company ['IBM','HCL',"Wipro",'Google']
extend()	Add a list, to the end of the current list.Syntax: list-name.extend(list)	>>>company=["IBM","HCL","Wipro"] >>> desktop=["dell","HP"] >>> company.extend(desktop) >>> company ['IBM', 'HCL', 'Wipro','dell', 'HP']
len()	Find the length of the list. Syntax:len(list-name)	>>>company=["IBM","HCL","Wipro"] >>> len(company)3
index()	Returns the index of the first elementwith the specified value. Syntax: list-name.index(element)	>>> company = ["IBM", "HCL", "Wipro", "HCL", "Wipro"] >>> company.index("Wipro")2
insert()	Adds an element at the specifiedposition. Syntax: list.insert(index, element)	>>>company=["IBM","HCL","Wipro"] >>> company.insert(2,"Apple") >>> company ['IBM', 'HCL', 'Apple','Wipro']
count()	Return the number of times the valueappears. Syntax: list-name.count(element)	>>> company = ["IBM", "HCL", "Wipro", "HCL", "Wipro"] >>> company.count("HCL")2
remove()	To remove an element from the list.Syntax: list-name.remove(element)	>>> company = ["IBM", "HCL", "Wipro", "HCL", "Wipro"] >>> company.remove("Wipro")

		>>> company ['IBM', 'HCL', 'HCL', 'Wipro']
clear()	Removes all the elements from list. Syntax: list-name.clear()	>>> company=["IBM","HCL", "Wipro"] >>> company.clear() >>> company[]
pop()	Removes the element at the specified position and returns the deleted element. Syntax: list-name.pop(index) The index argument is optional. If no index is specified, pop() removes and returns the last item in the list.	>>>company=["IBM","HCL", "Wipro"] >>> company.pop(1)'HCL' >>> company ['IBM', 'Wipro'] >>> company.pop()'Wipro'
copy()	Returns a copy of the list. Syntax:list-name.copy()	>>>company=["IBM","HCL", "Wipro"] >>> L=company.copy() >>> L ['IBM', 'HCL', 'Wipro']
reverse()	Reverses the order of the list. Syntax:list-name.reverse() Takes no argument, returns no list.	>>>company=["IBM","HCL", "Wipro"] >>> company.reverse() >>> company ['Wipro', 'HCL', 'IBM']
sort()	Sorts the list. By default in ascending order. Syntax: list-name.sort()	>>>company=["IBM","HCL", "Wipro"] >>>company.sort() >>> company ['HCL', 'IBM', 'Wipro'] To sort a list in descending order: >>>company=["IBM","HCL", "Wipro"] >>> company.sort(reverse=True) >>> company ['Wipro', 'IBM', 'HCL']

Deleting the elements from the list using del statement: Syntax:

del list-name[index] # to remove element at specified index
del list-name[start:end] # to remove elements in list slice

Example:

```
>>> L=[10,20,30,40,50]
>>> del L[2] # delete the element at the index 2
>>> L
[10, 20, 40, 50]
```

Difference between del, remove(), pop(), clear():

S. No.	del	remove()	pop()	clear()
1	Statement	Function	Function	Function
2	Deletes a single element or a list slice or complete list.	Removes the first matching item from the list.	Removes an individual item and returns it.	Removes all the elements from list.
3	Removes all elements and deletes list object too.			Removes all elements but list object still exists.

Difference between append(), extend() and insert() :

S. No.	append()	extend()	insert()
1	Adds single element in the end of the list.	Add a list in the end of the another list	Adds an element at the specified position. (Anywhere in the list)
2	Takes one element as argument	Takes one list as argument	Takes two arguments, position and element.
3	The length of the list will increase by 1.	The length of the list will increase by the length of inserted list.	The length of the list will increase by 1.

Introduction of Tuple in Python :

- ❖ Tuple is a collection of elements which is **ordered and unchangeable (Immutable)**. Immutable means you cannot change elements of a tuple in place.
- ❖ Allows duplicate members.
- ❖ Consists the values of any type, separated by comma.
- ❖ Tuples are enclosed within parentheses ().
- ❖ Cannot remove the element from a tuple.

Creating Tuple:

Syntax:

tuple-name = () # empty tuple
 tuple-name = (value-1, value-2,....., value-n)

Example:

```
>>> T=(23, 7.8, 64.6, 'h', 'say')
>>> T
(23, 7.8, 64.6, 'h', 'say')
```

Accessing Tuples:

Tuples are very much similar to lists. Like lists, tuple elements are also indexed. Forward indexing as 0,1,2,3,4..... and backward indexing as -1,-2,-3,-4,.....

- ❖ The values stored in a tuple can be accessed using the slice operator ([] and [:]) with indexes.
- ❖ tuple-name[start:end] will give you elements between indices start to end-1.
- ❖ The first item in the tuple has the index zero (0).

Difference between List and Tuple:

S. No.	List	Tuple
1	Ordered and changeable (Mutable)	Ordered but unchangeable (Immutable)
2	Lists are enclosed in brackets. []	Tuples are enclosed in parentheses. ()
3	Element can be removed.	Element can't be removed.

Traversing a Tuple:

Syntax:

For <variable> in tuple-name:statement

Example:

```
>>> alpha=('q','w','e','r','t','y')
>>> for i in alpha:
print(i)
```

Tuple Operations:**Joining operator :**

+

Repetition operator :

*

Slice operator :[:] **Comparison Operator :** <=, >, >=, ==, !=**Tuple Methods:****Consider a tuple:****subject=("Hindi","English","Maths","Physics")**

S. No.	Function Name	Description	Example
1	len()	Find the length of a tuple.Syntax: len (tuple-name)	>>>subject=("Hindi","English","Maths","Physics") >>> len(subject)4
2	max()	Returns the largest value from atuple. Syntax: max(tuple-name)	>>> max(subject)'Physics'
3	min()	Returns the smallest value froma tuple. Syntax: min(tuple-name)	>>>subject=("Hindi","English","Maths","Physics") >>> min(subject)'English'
4	index()	Returns the index of the first element with the specified value.Syntax: tuplename.index(element)	>>>subject=("Hindi","English","Maths","Physics") >>> subject.index("Maths")2
5	count()	Return the number of times thevalue appears. Syntax: tuplename.count(element)	>>> subject.count("English") 1

Tuple Packing and Unpacking:**Tuple Packing:** Creating a tuple from set of values.**Example:**

```
>>> T=(45,78,22)
>>> T
(45, 78, 22)
```

Tuple Unpacking : Creating individual values from the elements of tuple.**Example:**

```
>>> a, b, c=T
>>> a45
>>> b78
>>> c22
```

Note: Tuple **unpacking** requires that the number of variable on the left side must be equal to the length of the tuple.**Delete a tuple:**

The del statement is used to delete elements and objects but as you know that tuples are immutable, whichalso means that individual element of a tuple cannot be deleted.

Example:

```
>>> T=(2,4,6,8,10,12,14)
>>> del T[3]
```

TypeError: 'tuple' object doesn't support item deletion But you can delete a complete tuple with **del** statement as:

Example:

```
>>> T=(2,4,6,8,10,12,14)
>>> del T
>>> T
NameError: name "T" is not defined
```

Introduction of Dictionary in Python :

- ❖ Dictionary is a collection of elements which is unordered, changeable and indexed.
- ❖ Dictionary has keys and values.
- ❖ Doesn't have index for values. Keys work as indexes.
- ❖ Dictionary doesn't have duplicate member means no duplicate key.
- ❖ Dictionaries are enclosed by curly braces { }
- ❖ The key-value pairs are separated by commas (,)
- ❖ A dictionary key can be almost any Python type, but are usually numbers or strings.
- ❖ Values can be assigned and accessed using square brackets [].

CREATING A DICTIONARY:**Syntax:**

```
dictionary-name = {key1:value, key2:value, key3:value, keyn:value}
```

Example:

```
>>> marks = { "physics" : 75, "Chemistry" : 78, "Maths" : 81, "CS":78 }
>>> marks
{'physics': 75, 'Chemistry': 78, 'Maths': 81, 'CS': 78}
```

```
>>> D = { } #Empty dictionary
```

```
>>> D
{ }
```

```
>>> marks = { "physics" : 75, "Chemistry" : 78, "Maths" : 81, "CS":78 }
```

```
{'Maths': 81, 'Chemistry': 78, 'Physics': 75, 'CS': 78} there is no guarantee to accessed as per specific order.
```

Note: Keys of a dictionary must be of immutable types, such as string, number, tuple.

TRAVERSING A DICTIONARY:**Syntax:**

```
for <variable-name> in <dictionary-name> :statement
```

Example:

```
>>> for i in marks:
print(i, ":", marks[i])
```

OUTPUT:

```
physics : 75
Chemistry : 78
Maths : 81
CS : 78
```

DELETE ELEMENTS FROM A DICTIONARY:

There are two methods to delete elements from a dictionary:

- (i) using del statement
- (ii) using pop() method

- (i) **Using del statement:Syntax:**
del dictionary-name[key]

Example:

```
>>> marks
{'physics': 75, 'Chemistry': 78, 'Maths': 81, 'CS': 84, 'English': 89}
>>> del marks['English']
>>> marks
{'physics': 75, 'Chemistry': 78, 'Maths': 81, 'CS': 84}
```

- (ii) **Using pop() method: It deletes the key-value pair and returns the value of deleted element.Syntax:**
dictionary-name.pop()

Example:

```
>>> marks
{'physics': 75, 'Chemistry': 78, 'Maths': 81, 'CS': 84}
>>> marks.pop('Maths')81
```

CHECK THE EXISTANCE OF A KEY IN A DICTIONARY:

To check the existence of a key in dictionary, two operators are used:

- (i) **in** : it returns **True** if the given key is present in the dictionary, otherwise **False**.
(ii) **not in** : it returns **True** if the given key is not present in the dictionary, otherwise **False**.

Example:

```
>>> marks = { "physics" : 75, "Chemistry" : 78, "Maths" : 81, "CS":78 }
>>> 'Chemistry' in marksTrue
>>> 'CS' not in marksFalse
>>> 78 in marks # in and not in only checks the existence of keys not valuesFalse
```

However, if you need to search for a value in dictionary, then you can use in operator with the followingsyntax:

Syntax:

value in dictionary-name. values()

Example:

```
>>> marks = { "physics" : 75, "Chemistry" : 78, "Maths" : 81, "CS":78 }
>>> 78 in marks.values()True
```

DICTIONARY FUNCTIONS:

Consider a dictionary marks as follows:

```
>>> marks = { "physics" : 75, "Chemistry" : 78, "Maths" : 81, "CS":78 }
```

S. No.	Function Name	Description	Example
1	len()	Find the length of a dictionary.Syntax: len (dictionary-name)	>>> len(marks)4
2	clear()	removes all elements from thedictionary Syntax: dictionary-name.clear()	>>> marks.clear() >>> marks { }
3	get()	Returns value of a key.Syntax: dictionary-name.get(key)	>>> marks.get("physics")75
4	items()	returns all elements as a sequence of(key,value) tuples in any order. Syntax: dictionary-name.items()	>>> marks.items() dict_items([('physics', 75), ('Chemistry', 78), ('Maths', 81), ('CS', 78)])
5	keys()	Returns all keys in the form of a list.Syntax: dictionary-name.keys()	>>> marks.keys() dict_keys (['physics', 'Chemistry', 'Maths','CS'])
6	values()	Returns all values in the form of a list.Syntax: dictionary-name.values()	>>> marks.values() dict_values([75, 78, 81, 78])
7	update()	Merges two dictionaries. Already present elements are override.Syntax: dictionary1.update(dictionary2)	
	Example :		>>> marks1 = { "physics" : 75, "Chemistry" : 78, "Maths" : 81, "CS":78 } >>> marks2 = { "Hindi" : 80, "Chemistry" : 88, "English" : 92 } >>> marks1.update(marks2) >>> marks1 {'physics': 75, 'Chemistry': 88, 'Maths': 81, 'CS': 78, 'Hindi': 80, 'English': 92}

Distinguishing Between List, Tuple, and Dictionary in Python

Parameters	List	Tuple	Dictionary
Basics	A list is similar to an array in other languages (like ArrayList in Java or vector inC++).	Tuples are collections of Python objects separated by commas.	A dictionary in Python is an unordered collection used for storing key: value pairs.
Homogeneity	A list is a non-homogeneous data structure that stores elements in columns and rows.	A tuple is a non-homogeneous data structure that stores elements in columns and rows.	A dictionary is a non-homogeneous data structure that stores key-value pairs.
Representation	A List is represented by []	A Tuple is represented by ()	A Dictionary is represented by { }
Duplicate elements	It permits duplicate elements.	It permits duplicate elements.	It does not permit duplicate keys.
Nested Among All	It can be nested in a List.	It can be nested in a Tuple.	It can be nested in a Dictionary.
Example	[1, 2, 3, 4, 5]	(10, 20, 30, 40, 50)	{1: 'one', 2: 'two', 3: 'three'}

Function for Creation	A list can be created using the list() function.	A tuple can be created using the tuple() function.	A dictionary can be created using the dict() function.
Mutation	It is mutable, allowing modifications.	It is immutable, not allowing modifications.	It is mutable, but the keys cannot be duplicated.
Order	It maintains order.	It maintains order.	It maintains order.
Empty Elements	An empty list can be created using: <code>l=[]</code>	An empty tuple can be created using: <code>t=()</code>	An empty dictionary can be created using: <code>d={ }</code>

CONCLUSION :

In this paper, we briefly introduced the Python programming language as a suitable choice for learning coding and real-world programming. The paper has discussed about a data structure. Data structures in Python can be divided into two broad categories: **mutable** and **immutable**. Mutable (from Latin *mutabilis*, "changeable") data structures are those which we can modify -- for example, by adding, removing, or changing their elements. Python has three mutable data structures: **lists**, **dictionaries**, and **sets**. Immutable data structures, on the other hand, are those that we cannot modify after their creation. The only basic built-in immutable data structure in Python is a **tuple**. A data structure is a way of organizing data in computer memory, implemented in a programming language. This organization is required for efficient storage, retrieval, and modification of data. Python is a programming language that lets programmer work more quickly and integrate your systems more effectively. It causes gains in productivity and lower maintenances costs. It is easy-to-use, robust programming language that is freely available. Python's objects and functions are very versatile and is a very high-level object-oriented language. It is a general- purpose, interpreted high-level programming language whose design philosophy emphasizes code readability. Its syntax is said to be clear and expressive. Also it has a large and comprehensive standard library.

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EMOTIONAL INTELLIGENCE

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Abstract

Emotional intelligence is the ability to understand, use, and manage one's own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflict. Emotional intelligence helps to build stronger relationships, succeed at school and work, and achieve career and personal goals. High emotional intelligence can help us navigate the social complexities of the workplace, lead and motivate others, and excel in your career. In fact, when it comes to gauging important job candidates, many companies now rate emotional intelligence as important as technical ability and employ EQ testing before hiring. Uncontrolled emotions and stress can also impact mental health, making us vulnerable to anxiety and depression. By understanding emotions and how to control them, an individual is able to express better how he feels and understand how others are feeling. This makes communication more effective and forge stronger relationships, both at work and in personal life. Being in tune with our emotions serves a social purpose, connecting to other people and the world around us.

Introduction

Emotional Intelligence was a part of the general activity of the brain of human beings, until it became an independent subject in later years. The family is first place where children learn how to deal with each other, through observing parents and siblings, adults as models, during meetings and exchange of gifts and the expression of love and understanding; children experience and learn emotions.(Bhatia, 2012). In fact the term "Emotional Intelligence" appeared for the first time in 1985 by a post graduate student Wayne in his PhD thesis whose title was : A study of Emotion, Developing Emotional Intelligence; self Integration; relating to fear, pain and desire.Wayne highlighted the nature of Emotional Intelligence , and how to develop this in ourselves and in others through education. In 1990, a comprehensive scientific research titled "Emotional Intelligence" by Mayer and Salovey was published in a well-known periodical. This research introduced Emotional Intelligence as a group of skills which help to accurately evaluate and express emotions, and to manage the emotions of the individual and others, and to use emotions in motivation, planning and achievement. The main credit for making the concept of Emotional Intelligence and its culture widely known, actually belongs to the researcher Daniel Goleman who published his first book in 1995 titled : "Emotional Intelligence". Why could it be more important than IQ. He published his second book titled "Working with Emotional Intelligence" in 1998 in which he expanded his identification of Emotional Intelligence to include 25 skills and abilities. In 2019, a research by Udemy classified Emotional Intelligence as one of the rapidest growing soft skills in the workplace. A study by the Researcher S.Ramesh in 2023titled :Impact of emotional intelligence on academic performance a study among university students in Tamil Nadu concluded that Emotional Intelligence is a quality that needs to be fostered in all students. So the need of the hour for universities is to produce students with emotional skill and stability to manage challenges in their life.

Meaning and definitions of Emotional Intelligence

Emotional intelligence is an important skill to have in any situation and is not just for those in leadership positions. In this post, we talk about why emotional intelligence is important. Emotional intelligence (EI) allows us to better understand our emotions and reactions, as well as the emotions of others, allowing us to respond in a way that is both kind and effective.

With a heightened ability to recognize, understand, and manage our own emotions and those of others, we can build stronger relationships and foster a more harmonious environment in any situation.

Mayer and Salovey defined Emotional Intelligence ,” A form of social intelligence which includes the ability to perceive the emotions of the individual and other, to distinguish between them, and to use the emotional information to direct the thinking and actions of the individual”. (1993)

Goleman defined Emotional Intelligence as a group of skills and competencies which enable the individual from identifying theirs and other’s feelings, and to motivate themselves, manage their emotions and their relationships with others effectively. These competences and skills include five areas :self awareness, management of emotions, self motivation, empathy, and dealing with others or social skills. He provided an explanation for each of these five areas and considered self awareness to be the key to emotional intelligence, as it is linked to understanding of feelings. (1995)

Allothman and Rizk concluded that Emotional Intelligence has four components : Awareness of emotions, the management of emotions, the regulation of emotions, empathy (2001)

Thus Emotional Intelligence is a group of personal and social abilities and skills which reflect the individual’s ability to be aware of their own personal emotions and express these positively and also be aware of the emotions of others and deal with these skillfully and to empathise with them, in addition to the ability to motivate one’s self to achieve one’s goals.

A person with a high EI is more likely to:

- Name and express their feelings and connect to their emotions, so as to be able to understand and manage their responses to stimuli and events. They are able to identify root causes rather than ineffectively trying to deal with symptoms or results. They are self-aware, openly expressive and healthily assertive.
- Know what they want and make plans to achieve their goals. They have a better understanding of what drives them. They are more likely to understand what gives them pleasure and why. This means they are also more likely to identify their values and know their purpose in life.
- Remain calm in challenging situations. By labeling their feelings and recognizing their emotions, people with high EI can learn to manage their feelings instead of allowing their emotions to hijack their thoughts. This can help them remain calm while others are losing their heads.
- Decode their emotions. They practice understanding the meaning of any particular emotion and, where appropriate, redirect their emotional responses to where they are more appropriate and beneficial. They are able to recognize which emotions should be encouraged and which should be reconsidered.
- Reduce their anxiety in stressful times. By understanding the causes of stress and identifying its signs, people with higher-than-average EI have an excellent chance of reducing anxiety by generating alternative meanings for stressful events and taking more effective action, including advocating for themselves.
- Work well with others. Actively listening to others, identifying their feelings and emotions and empathizing with them helps people with high EI build more authentic, long-lasting and mutually rewarding relationships. Those with high EI will be more likely to notice signals that others miss. These signals can include slight changes in facial expressions, tone of voice and body language, all of which can help an individual respond quickly and helpfully, thereby building trust and intimacy.
- Learn from mistakes and criticism. If someone asks for criticism and doesn’t fall to pieces when the feedback is negative, this points to someone with high EI. EI doesn’t make someone cold or impervious to pain. Rather, it can

help them regulate their emotions, which makes them more able to hear negative criticism and use it to improve rather than interpret it as a personal attack.

- Be the voice of their heart, not the echo of their ego. They are able to recognize and follow the quiet voice of their heart, instead of only listening to the demanding and often wrong voice of their ego.
- Ask for help. People with high EI learn that asking for help is a sign of wisdom and empowerment and not simply a sign of weakness leading to disappointment, self-belittling and rejection.
- Focus on having intended instead of unintended impacts. They are able to take a pause from blurting and patiently take a few deep breaths. Further, they have learned to react to or ask questions based on compassion and considerations of how they are landing rather than focusing solely on their own agenda. They practice empathy and compassionate accountability instead of telling people what to do.
- Shift from making assumptions to engaging their own curiosity. They refuse to take things personally and avoid becoming stuck with a fixed mindset. They are always seeking to grow, develop and advance.
- Change from taking things personally and being gratuitously judgmental to expressing their curiosity, compassion and understanding. No one is totally right or wrong. Those with high EI see an opportunity for themselves to grow and evolve instead of dwelling on taking things personally.
- Shift their locus of control. They are able to focus on what they are capable of influencing and controlling rather than wasting their time with matters that are outside their area of control.

Building emotional intelligence: Four key skills to increasing Emotional intelligence

The skills that make up emotional intelligence can be learned at any time. However, it's important to remember that there is a difference between simply learning about EQ (Emotional Quotient) and applying that knowledge to life. In order to permanently change behavior in ways that stand up under pressure, we need to learn how to overcome stress in the moment, and in our relationships, in order to remain emotionally aware.

The key skills for building our EQ and improving ability to manage emotions and connect with others are:

1. Self-management
2. Self-awareness
3. Social awareness
4. Relationship management

1: Self-management

Emotions are important pieces of information that tell us about ourselves and others, but in the face of stress that takes us out of our comfort zone, we can become overwhelmed and lose control of ourselves. With the ability to manage stress and stay emotionally present, we can learn to receive upsetting information without letting it override our thoughts and self-control. We will be able to control impulsive feelings and behaviors, manage your emotions in healthy ways, take initiative, follow through on commitments, and adapt to changing circumstances.

2: Self-awareness

Managing stress is just the first step to building emotional intelligence. The science of attachment indicates that our current emotional experience is likely a reflection of our early life experience. Our ability to manage core feelings such as anger, sadness, fear, and joy often depends on the quality and consistency of our early life emotional experiences. If our primary caretaker as an infant understood and valued our emotions, it's likely your emotions have

become valuable assets in adult life. But, if our emotional experiences as an infant were confusing, threatening or painful, it's likely we have tried to distance ourselves from our emotions.

Mindfulness is the practice of purposely focusing attention on the present moment—and without judgment. Mindfulness helps shift our preoccupation with thought toward an appreciation of the moment, our physical and emotional sensations, and brings a larger perspective on life. Mindfulness calms and focuses us, making us more self-aware in the process. It's important that you learn how to manage stress first, so you'll feel more comfortable reconnecting to strong or unpleasant emotions and changing how you experience and respond to your feelings.

3: Social awareness

Social awareness enables us to recognize and interpret the mainly nonverbal cues others are constantly using to communicate with you. These cues let us know how others are really feeling, how their emotional state is changing from moment to moment, and what's truly important to them.

When groups of people send out similar nonverbal cues, we are able to read and understand the power dynamics and shared emotional experiences of the group. In short, we are empathetic and socially comfortable.

4: Relationship management

Working well with others is a process that begins with emotional awareness and your ability to recognize and understand what other people are experiencing. Once emotional awareness is in play, we can effectively develop additional social/emotional skills that will make your relationships more effective, fruitful, and fulfilling.

Become aware of how effectively we use nonverbal communication. It's impossible to avoid sending nonverbal messages to others about what we think and feel. The many muscles in the face, especially those around the eyes, nose, mouth and forehead, help us to wordlessly convey our own emotions as well as read other people's emotional intent. The emotional part of our brain is always on—and even if you ignore its messages—others won't. Use humor and play to relieve stress. Humor, laughter and play are natural antidotes to stress. They lessen our burdens and help us keep things in perspective. Laughter brings nervous system into balance, reducing stress, calming you down, sharpening mind and making us more empathic.

Learn to see conflict as an opportunity to grow closer to others. Conflict and disagreements are inevitable in human relationships. Two people can't possibly have the same needs, opinions, and expectations at all times. However, that needn't be a bad thing. Resolving conflict in healthy, constructive ways can strengthen trust between people. When conflict isn't perceived as threatening or punishing, it fosters freedom, creativity, and safety in relationships.

Conclusion

Learning to recognize, regulate, and express healthy emotions is a critical life skill that everyone can benefit from. Having a higher emotional intelligence can help you gain a better understanding of yourself, as well as others. This can lead to improved relationships and better communication skills, which can result in more positive outcomes in all areas of life.

Furthermore, having a higher emotional intelligence can aid in managing stress and make it easier to handle tough situations. All in all, by understanding how emotions work you can take control of your life and be happier and healthier.

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PROJECT DEVELOPMENT & MANAGEMENT : THE OBJECT ORIENTED APPROACH

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Abstract- Object – oriented Software Engineering (OOSE) is an object modeling language and methodology. The approach of using object – oriented techniques for designing a system is referred to as object – oriented design or Object Oriented Project Development. Object – oriented development approaches are best suited to projects that will implement systems using emerging object technologies to construct, manage, and assemble those objects into useful computer applications. Object oriented design is the continuation of object- oriented analysis, continuing to center the development focus on object modeling techniques.

A major constraint and therefore disadvantage in the use of relational database system is machine performance. If the number of tables between which relationships to be established are large and the tables themselves are voluminous, the performance in responding to queries is definitely degraded. Like this, several other models are also used for the development of software.

The Object-Oriented paradigm assists the programmer to address the complexity of a problem domain by considering the problem not as a set of functions that can be performed but primarily as a set of related, interacting Objects. The modeling task then is specifying, for a specific context, those Objects (or the Class the Objects belongs to), their respective set of Properties and Methods, shared by all Objects members of the Class.

I. PROJECT MANAGEMENT: AN INTRODUCTION

Project Management is the discipline of planning, organizing, securing and managing resources to bring about the successful completion of specific project goals and objectives. It is sometimes conflated with program management, however technically that is actually a higher level construction: a group of related and somehow interdependent

The primary challenge of project management is to achieve all of the engineering project goals and objectives while honoring the preconceived project constraints. Typical constraints are scope, time, and budget. The secondary—and more ambitious—challenge is to optimize the allocation and integration of inputs necessary to meet pre-defined objectives

1. Challenges and Various Models

The primary challenge of project management is to achieve all of the engineering project goals and objectives while honoring the preconceived project constraints. Typical constraints are scope, time, and budget. The secondary—and more ambitious—challenge is to optimize the allocation and integration of inputs necessary to meet pre-defined objectives

Several models exist to streamline the development process like Waterfall Model, Spiral Model, RAD Model, Incremental Model, Object Oriented Model etc. Each one has its pros and cons, and it's up to the development team to adopt the most appropriate one for the project. Sometimes a combination of the models may be more suitable.

2. Object Oriented Design

In object oriented design the main building block of all software systems is the object or class. An object is a thing, generally drawn from the vocabulary of the problem space or the solution space. A class is a description

of a set of common objects. Every object has identity, state, and behavior. The object-oriented approach to software development is decidedly a part of the mainstream simply because it has proven to be of value in building systems in all sorts of problem domains and encompassing all degrees of size and complexity. Furthermore, most contemporary languages, operating systems, and tools are object-oriented in some fashion, giving greater cause to view the world in terms of objects. Object-oriented development provides the conceptual foundation for assembling systems out of components using technology such as Java Beans or COM+. Constructing object-oriented systems is exactly the purpose of the Unified Modeling Language (UML)

II. DESIGN OBJECTS

In object-oriented analysis we concentrated on identifying the objects that represented actual data within the business design. These objects are called **entity objects**. Entity objects usually correspond to items in real life and contain information, known as attributes, that describes the different instances of the entity. They also encapsulate those behaviors that maintain its information or attributes. An entity object is said to be persistent – meaning the object typically “lives on” after the execution of a method. Two additional types of objects will be introduced during design. New objects will be introduced to represent a means through which the user will interface with the system. These objects are called **interface objects**. It is through the interface objects that the users communicate with the system. The use case functionality that describes the user directly interacting with the system should be placed in interface objects. It translates the user’s input into information that the system can understand and use to process the business event. It also takes data pertaining to a business event and translates the data for appropriate presentation to the user. Other types of objects that are introduced are objects that hold application or business rule logic. These objects are called **control objects**. They serve as the “traffic cop” containing the application logic or business rules of the event for managing or directing the interaction between the objects. Control objects allow the scenario to be more robust and simplify the task of maintaining that process once it is implemented.

1. Object Responsibility

In design we focus on identifying the behaviors a system must support and, in turn, design the methods to perform those behaviors. Along with behaviors, we determine the responsibilities an object must have. An object responsibility is the obligation that an object has to provide a service when requested, thus corroborating with other objects to satisfy the request if required.

2. Object Framework

An object framework is a set of related, interacting objects that provide a well-defined set of services for accomplishing a task. **Component** A component is a group of objects packaged together into one unit.

III. OBJECT – ORIENTED DESIGN PROCESS

In performing object-oriented analysis (OOA) we have to identify objects and use cases based on ideal conditions and independent of any hardware or software solution. During object-oriented design (OOD) we have to refine those objects and use cases to reflect the actual environment of our proposed solution. Object-oriented design includes the following activities:

- Refining the use case model to reflect the implementation environment.
- Modeling object interactions and behavior that support the use case scenario.
- Updating the object model to reflect the implementation environment.

1. Refining the use case model to reflect the implementation environment:

In this iteration of use case modeling, the use cases will be refined to include details of how the actor (or user) will actually interface with the system and how the system will respond to that stimulus to process the business event. While refining use cases is often time consuming and tedious, it must be completed. These use cases will

be the basis on which subsequent user manuals and test scripts are developed during system implementation. These use cases will be used by programmers to construct application programs during systems implementation. In the following steps we will adapt each use case to the implementation environment or “reality” and document the results. It is important that each use case be highly detailed in describing the user interaction with the system. These refined use cases can be used by the user to validate systems design and by the programmer for process and interface specifications.

Step 1 : Transforming the “Analysis” Use Cases to “Design” Use Cases : In this all the identified use cases are refined to reflect the physical aspects of the implementation environment for our new system. In analysis, we concentrated on the actor – the party that initiates the business event. In design, we begin to think in terms of “how” the business event is accomplished and by whom. Thus, we are concerned with identifying the party or “system user” that is involved in processing the business event or interacting with the system. In some cases, the actor and the system user may be the same person. Descriptions of error messages, special action buttons, possible cursor movements, and other window characteristics should be included in each design use case step. The design use case step includes references to extension and abstract use cases. The **extension use cases** extend the functionality of the original use case by extracting complex or hard to understand logic into its own use case. **Abstract use cases** are those that contain steps that are used by more than one design use case.

Step 2 : Updating the Use Case Diagrams and Other Documentation to Reflect Any New Use Cases : After all the analysis use cases have been transformed to design use cases, it is possible that new use cases or even actors have been discovered. It is very important that we keep our documentation accurate and current. Thus, in this step the use case model diagram and the actor and use case glossaries should be updated to reflect any new information introduced in step 1.

2. Modeling object interactions and behavior that support the use case scenario:

In this activity we have to identify and categorize the design objects required by the functionality that was specified in each use case and identify the object interactions, their responsibilities, and their behaviors.

Step 1 : Identify and Classify Use Case Design Objects : Earlier we learned there are three categories of design objects : interface, control, and entity. In this step we examine each design use case to identify and classify the types of objects required by the logic of the use case or business scenario.

- The interface object column contains a list of objects mentioned in the use case with which the users directly interface, such as screens, windows and printers. The only way an actor or user can interface with a system is via an interface object. Therefore, there should be at least one interface object per actor or user.
- The control object column contains a list of objects that encapsulate application logic or business rules
- The entity object column contains a list of objects that correspond to the business domain objects whose attributes were referenced in the use case.

Step 2 : Identify Object Attributes: During both analysis and design, object attributes may be discovered. In efforts to transform analysis use cases into design use cases, we begin referencing the attributes in the use case text.

Step 3 : Model High- Level Object Interactions for a Use Case : After identifying and categorizing the design objects involved in a use case, we need to model those objects and their interactions. Such models are called **ideal object model diagrams** and are a type of a use case model in the UML. An ideal object model diagram includes symbols to represent actors, interface, control, and entity objects, and lines that represent messages or communication between the objects.

Step 4 : Identify Object Behaviors and Responsibilities : Once we have identified all the objects needed to support the functionality of the use case, we shift our attention to defining their specific behaviors and responsibilities. This step involves the following tasks :

- Analyze the use cases to identify required system behaviors.
- Associate behaviors and responsibilities with objects.
- Examine object model for additional behaviors.
- Verify classifications.

Step 5 : Model Detailed Object Interactions for a Use Case: Once we have determined the objects behaviors and responsibilities, we can create a detailed model of how the objects will interact with each other to provide the functionality specified in each design use case. The UML provides two types of diagrams to graphically depict these interactions – a sequence diagram and a collaboration diagram. Sequence diagrams show us in great detail how the objects interact with each other over time, and collaboration diagrams show us how objects collaborate in message sequence to satisfy the functionality of a use case.

3. Updating the Object Model to Reflect the Implementation Environment:

Once we have designed the objects and their required interactions, we can refine our object model to include the behaviors or implementations methods it needs to possess.

IV. ADDITIONAL UML DESIGN AND IMPLEMENTATION DIAGRAMS

The UML offers three additional diagrams to model design and implementation aspects of the system – activity diagrams, component diagrams, and deployment diagrams.

Activity diagrams are similar to flowcharts in that they graphically depict the sequential flow of activities of either a business process or a use case. They are different from flowcharts in that they provide a mechanism to depict activities that occur a parallel. Because of this they are very useful for modeling actions that will be performed when an operation is executing as well as the results of those actions- such as modeling the events that cause windows to be displayed or closed. Activity diagrams are flexible in that they can be used during analysis and design.

Components diagrams are implementation type diagrams and are used to graphically depict the physical architecture of the software of the system. They can be used to show how programming code is divided into modules and depict the dependencies between these components.

Deployment diagrams are also implementation type diagrams that describe the physical architecture of the hardware and software in the system. They depict the software components, processors, and devices that make up the system's architecture.

V. CONCLUSION

Object-Oriented Software Engineering is a paradigm mainly used in computer programming. Prior to the rise of OOSE, the dominant paradigm was procedural programming. The object oriented approach emphasize the use of reusable code blocks, data security, access methods and use of various functions.

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NITROGEN CONTAINING LIPID FRACTION OF SEED TRIGLYCERIDES

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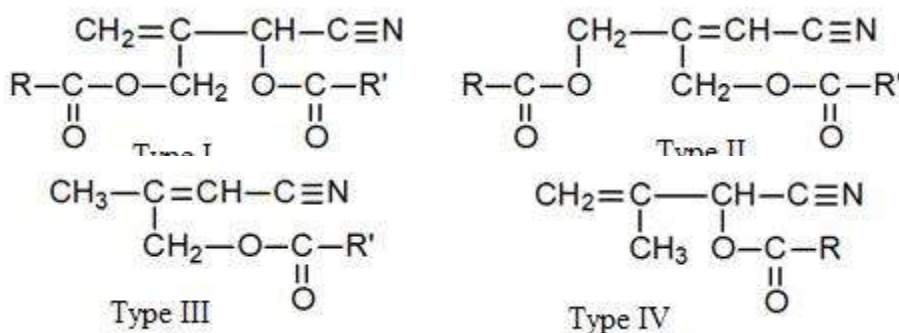
ABSTRACT

A large number of seed oils studied mainly from Sapindaceae and some from Boraginaceae family have been found to contain a new class of lipids along with normal triglycerides, identified as cyanolipid. These cyanolipids are of four types all having long chain fatty acids esterified with an unsaturated isopropenoid hydroxy or dihydroxy-nitrile. The presence of large amounts of C₂₀ acids usually found in these oils indicate high content of cyanolipid because these acids are preferentially incorporated in nitrogen containing lipid fractions, this preference is probably related to the observation that a seed oil with insignificant C₂₀ acids from the same family also contain no cyanolipid.

KEYWORDS: Nitrogen containing lipid fractions, incorporation of C₂₀ acids, sapindaceae, boraginaceae, seed oils.

INTRODUCTION

Cyanolipids were probably first discovered in *Schleichera trijuga* seed oil¹⁻⁶ but the nature of the nitrogen containing lipid fraction (NCLF) was not established, later on seed oils from many other plants especially from sapindaceae and some from Boraginaceae were found to contain cyanolipids in appreciable amounts between 20-40 % of the total triglycerides along with C₁₈ and C₂₀ carbon fatty acids esterified with mono or dihydroxy-nitrile moiety. A number of sapindaceae seed oils have been studied for their cyanolipid fractions. These cyanolipids have been identified as four different types but all consist of long chain fatty acids esterified with an unsaturated isopropenoid hydroxy or dihydroxy nitrile component. It has been noticed that the large amount of C₂₀ acids usually found in the oils remain incorporated in the NCLF part of the oil. The various types of NCLF are:



Type I – (Diest

Type II – (Dies

Type III – (Mo

Type IV – (Monoester) : 1-cyano-2-methylprop-2-ene-1-ol

RCO / R'CO = octadecenoyl or eicosenoyl

STRUCTURES OF NCLF

Most of the seed oils⁷ studied were from sapindaceae family and the major amount of C₂₀ acids mainly found in the seed oils remain incorporated in the NCLF part.

In studying the occurrence of eicosenoic acid in the seed oils, C₂₀ unsaturated acid has been reported as a component in the seed oils⁸ as 11-eicosenoic acid, the structural identification of the oil components was carried out by chemical, chromatographic and spectroscopic means. The GC-Mass analysis showed that the fatty acids were predominantly present in the NCLF part of the oil⁹ were cis-11-eicosenoic acid, cis-11-octadecenoic acid and eicosanoic acid as the only esterified fatty acyl chains.

The physiological role of NCLF in the plants has still not been completely understood^{10,11}. These components may serve as a major nitrogen source for the developing seedlings¹² and their co-occurrence with hydroxynitrile glycosides¹³ in some species suggested that they represent a biosynthetic variation of hydroxynitrile glycosides with esterification to lipids possibly serving specific functions related to storage and transport.

Many species belonging to sapindaceae family are used commercially as food and also as medicine. Therefore identification and quantification of cyanolipids in food and forage plants containing this natural product is of importance to possibly allow their removal and avoid food poisoning. The presence of various chemical constituents, extract of the plant showed various medicinal properties such as antibacterial, antifungal, antiparasitic, antidiarrheal, anxiolytic, rubifacient, antipyretic, anti-inflammatory, anticonvulsant and anticarcinogenic¹⁰.

OIL EXTRACTION AND METHYL ESTER FORMATION

The oil was recovered from finely ground seeds having petroleum ether (40-60 °C) in a soxhlet apparatus and the methyl esters were prepared by refluxing the oil with 3% H₂SO₄ in methanol anhydrous for three hours and recovered by ether extraction. The analytical TLC was done on 0.25mm layers of silica gel G with ether benzene or ether-Hexane (1:3), spots were visualized in two ways, either exposure to iodine vapours or by charring with H₂SO₄ – dichromate spray reagent. Isolation of NCLF fraction was carried out using preparative TLC.

IDENTIFICATION OF NCLF

The IR spectra of these seed oils generally have two very weak broad bands at 1010 and 920-965 cm⁻¹ regions. These bands are probably associated with allylic ester and terminal methylene grouping in the cyanolipids, some time a weak nitrile band has also been reported at 2230 cm⁻¹. The TLC analysis of the oils was more revealing than IR spectra. Those oils containing cyanolipids fractions I or IV are best analysed by TLC developed in benzene. NCLF - I has R_f 0.70 and NCLF - IV has R_f 0.77 while other triglycerides migrated as an elongated spot at R_f 0.33. When the TLC was developed in ether-Hexane, the NCLF - I & IV along with triglycerides form a single spot R_f 0.91 while NCLF - II & III migrate at R_f 0.70 and 0.58 respectively. Useful GLC data have also been obtained by the analysis of whole seed oils¹⁴⁻¹⁶, where NCLF II & III could be separated clearly, the various peaks observed in these fractions were assigned to different fatty acid reduces in the esters. The NCLF-I & II appeared almost in the same region.

An interesting feature of sapindaceae seed oils has been noticed was the presence of the C₂₀ fatty acids along with NCLF with very few exceptions. Generally the C₂₀ acid mixture is primary monoenoic and very less amount of C₂₀ saturated fatty acids. Hence it may be possible to predict roughly the cyanolipid contents of sapindaceae seed oils by determining their C₂₀ and contents.

The earlier reports regarding the structures of NCLF from I – IV¹¹⁻¹³ showed detailed structure elucidation. Hence a comparison of IR & TLC and NMR data for NCLF obtained from any seed oil was sufficient for structural identifications. The IR spectrum of each NCLF has been found distinctive e.g. the IR of NCLF - I showed weak broad bands at 940 and 1010 cm⁻¹ not found in ordinary triglycerides. The IR of NCLF - II showed no band at 940 cm⁻¹ rather a sharp medium intensity bands at 1600, 2230 and 965 cm⁻¹. The IR of NCLF - IV show medium intensity bands at 920 and 1010 cm⁻¹ along with some fine structures. The absence of band at 2230 cm⁻¹ in the IR spectra of NCLF I & IV was assigned to the quenching effect of the oxygen atom on the same carbon where cyano group is present¹⁶.

The NMR spectra reported for NCLF I & IV have provided the most conclusive structural evidence for these substances and any NCLF obtained from a plant family showed the NMR data duplicated to those obtained earlier with respect to proton count, chemical shift, multiplicities and coupling constant¹¹⁻¹³.

The presence of large amount of cyanolipid in the seed oils of Sapindaceae and Borageneae family is extra ordinary as no other family has been so far reported to contain this class of lipids and the presence of hydroxyl or dihydroxynitrile moiety in all the four cyanolipids has an isopropenoid skeleton which may be due to numerous biogenetic possibilities.

ACKNOWLEDGMENT

Authors are thankful to the Head, Department of Chemistry, J.N.V. University, Jodhpur (Raj.) and to the Chairmen Shri B.S. Rathore, Aishwarya College of Education, Jodhpur for providing necessary facilities to carry out this research work.

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“Inbound Marketing: Effect on the Online Customer: An Empirical Study of the Retail Sector in India.”

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Abstract:

Today, in the digital age, inbound marketing is crucial for organisations, especially in the retail industry, to efficiently attract online consumers. This research empirically analyses how inbound marketing methods influence online consumer behaviour in the retail industry in India. Data was gathered from a sample of online consumers using a quantitative technique and survey method. The data showed that inbound marketing has a significant impact on consumer engagement and purchase intention ratings. Content marketing, social media interaction, and email campaigns were identified as techniques that have a beneficial impact on consumer behaviour. Indian merchants may use inbound marketing strategies to improve consumer interaction, boost website visits, and eventually, raise revenue. This study adds to the current body of knowledge by presenting empirical proof of the efficacy of inbound marketing within the Indian retail sector.

Keywords: Inbound marketing, Online customer behaviour, Retail sector, India, Content marketing, Social media engagement, Email campaigns.

I. Introduction

A. Overview of inbound marketing:

Inbound marketing is a technique that aims to attract consumers by providing them with relevant and useful material, rather than using conventional advertising approaches to disturb them. It entails producing high-quality content that caters to the requirements and preferences of prospective consumers, ultimately attracting them to a brand or product. This strategy usually includes methods like content marketing, search engine optimisation (SEO), social media marketing, and email marketing to establish trust and credibility with the intended audience.

B. Importance of studying its effect on online customers:

Understanding the impact of inbound marketing on online customers is crucial in today's digital landscape, where consumers are increasingly relying on the internet to research products and make purchasing decisions. Businesses may enhance their web presence, improve audience engagement, and boost sales and income by analysing the efficacy of inbound marketing methods. Additionally, as inbound marketing continues to evolve with advancements in technology and changes in consumer behaviour, research in this area can provide valuable guidance for businesses seeking to stay competitive in the online marketplace.

C. Context of the retail sector in India:

India's retail industry is rapidly expanding due to urbanisation, increased disposable incomes, and growing internet access. E-commerce platforms have revolutionised consumer shopping habits, leading to an increasing number of Indians using online channels for their purchases. Retailers have possibilities and problems in adapting marketing tactics to meet the needs of online customers in the Indian market.

D. Purpose and objectives of the study:

This study aims to examine the impact of inbound marketing on online consumers in the retail industry in India. The research intends to analyse the impact of several inbound marketing methods, including content marketing, SEO, social media interaction, and email campaigns, on customer behaviour and purchase choices in the online retail sector. The research aims to provide significant information to retailers in India to assist them improve their marketing strategy and competitiveness in the digital marketplace.

II. Literature Review

Arora, J. (2013) discusses the prospects of e-retailing in India, examining the impact of internet media on consumer shopping perceptions. The study highlights the challenges and opportunities in the e-retailing sector, suggesting strategies for sustainable growth.

Banerjee (2010) discusses Indian customers' attitudes towards online shopping, identifying key factors influencing their behavior. It provides vital data for internet marketers to customise their strategy to align with the expectations and tastes of Indian customers.

Hawaladar, (2022) investigates digital marketing's impact on B2B startups in South Asia, with a focus on India. Using a vector autoregressive model, the study highlights digital media and word of mouth as influential factors on sales, recommending a customised digital marketing approach for B2B markets in South Asia.

Jain (2020) conducted a SWOT analysis to determine the difficulties and possibilities of online retail industry in India. The article explores the internet retail market's potential in India and highlights the significance of overcoming difficulties to fully use the prospects available.

Kanchan (2015) examines online purchase behavior in India, highlighting the influence of demographics, security concerns, and technological familiarity on online purchase intentions. It provides a framework for understanding Indian online shoppers, aiding e-marketers in strategy development.

Kanchan, U., & Kumar, N. (2015) explore the influence of consumer attributes on online purchasing behaviour in the Indian market, focusing on demographics and technical familiarity. It offers insights into the factors affecting online shopping decisions, providing a basis for targeted marketing strategies.

In 2022, Kavitha delves into the influence of internet marketing on clients in rural locations, with a specific emphasis on Ambur. The study identifies factors influencing purchase decisions and customer attitudes, highlighting the potential of e-online marketing in rural India.

Kothari and Maindargi (2016) explore customer attitudes towards online shopping in India, identifying key factors such as cognition, usefulness, and security concerns. Their research results provide techniques for e-marketers to improve the online purchasing experience and client happiness.

Kumar (2015) explores the burgeoning segment of online retail marketing in India, highlighting its dual benefits for consumers and companies alike. The study provides a comprehensive overview of e-commerce's impact across various sectors, emphasizing the challenges and opportunities within the Indian context, including logistical and internet penetration issues.

Manikandan's (2017) research highlights factors affecting online shopping attitudes in India, emphasizing the importance of cognition, usefulness, and security. It provides insights into consumer behavior, aiding in the development of effective online marketing strategies.

Mathur's (2015) explores perceived risks associated with online shopping among Indian customers, focusing on concerns over credit card misuse and product risk. It suggests that understanding these perceived risks is crucial for online retailers to devise strategies that enhance consumer trust and online shopping adoption.

Mittal and Mohan (2016) study the expansion of online marketing in India, focusing on its influence on the market. The report indicates that internet marketing is increasingly becoming a crucial component of marketing strategy for several firms, emphasising the transition to digital platforms.

Mosa's study (2022) delves into the digital marketing era, emphasizing the pivotal role of customer engagement in the retail sector. It scrutinizes inbound marketing's efficacy in bolstering online customer engagement, revealing a lukewarm adoption among retailers in Basra, Iraq. This research underscores the necessity for retailers to embrace digital strategies to enhance customer interaction on social media platforms.

Rakesh, S., & Khare, A. (2012) studied how promotions and value awareness affect online purchasing behaviour in India. Their research found that bargains and offers had a restricted effect on customer purchase choices. It suggests focusing on improving the online shopping experience to attract consumers.

Raunaque, et. al. (2016) focuses on Indian consumers' perceptions towards online marketing, identifying key factors influencing their online buying behavior. It aims to equip marketers with insights to make online marketing more appealing and secure, thereby enhancing customer purchase patterns.

Reyes-Mercado (2017) expands the Technology Acceptance Model (TAM) to examine customer perceptions of online purchasing in India by include trust, social influence, and digital literacy. It provides a comprehensive framework for understanding and influencing online shopping intentions.

Shafqatajaz (2015) examines the perception changes in consumer shopping with the advent of internet media in India, discussing the challenges and opportunities in e-retailing. The study highlights the need for an effective framework to leverage online retail market opportunities.

Singh and Kapoor (2023) analyze the evolving landscape of online marketing in India, highlighting the significance of social media and SEO tactics in building brand reputation and customer relationships. This study underscores the importance of digital marketing strategies in the Indian market's growth.

Syihab, (2023) examines inbound marketing strategies in online marketplaces, identifying effective sales enhancement techniques. It emphasizes the importance of social media, high-quality content, and customer relationship maintenance in increasing sales for sellers in online marketplaces.

Thamizhvanan and Xavier (2013) identified factors influencing online purchase intention in Indian adolescents, focusing on shopping orientation and online trust. It provides vital information for internet marketers to comprehend the mindset of Indian online customers.

III. Methodology

A. Research design

1. Quantitative approach:

This study adopts a quantitative research design to systematically gather numerical data and analyse relationships between variables. The approach allows for the measurement of the effect of inbound marketing on online customer behaviour in a structured and statistically valid manner.

2. Survey method:

The survey method involves collecting data from a sample of 100 respondents through structured questionnaires. This method enables the researcher to gather information directly from participants, providing insights into their perceptions, attitudes, and behaviours related to inbound marketing in the retail sector.

B. Sampling technique

1. Target population:

The target population for this study comprises online customers within the retail sector in India. This includes individuals who have engaged in online shopping activities and are potential consumers of products or services offered by retail businesses operating online.

2. Sampling method:

The study employs a stratified random sampling technique to select participants from the target population. Stratification ensures representation from different demographic groups or segments within the population, enhancing the generalisability of findings.

C. Data collection tools:

1. Questionnaire development involves creating a structured questionnaire to get data from participants. The questionnaire contains questions intended to assess several facets of inbound marketing efficacy, online consumer behaviour, and demographic data. Care is taken to ensure clarity, relevance, and comprehensiveness of questions.

2. Validity and reliability measures:

Analysing the questionnaire's validity and reliability is done to guarantee the precision and consistency of the gathered data. Validity pertains to the questionnaire's capacity to measure its intended target, whereas reliability evaluates the consistency of answers under various circumstances and over time. Methods including pilot testing, expert review, and reliability analysis are used to improve the accuracy and consistency of the questionnaire.

D. Data analysis plan

1. Statistical techniques:

The collected data are analysed using appropriate statistical techniques to examine relationships between variables and test hypotheses. Descriptive statistics, the T-Test was employed to identify significant associations and differences between variables.

2. Software utilisation:

SPSS and R, are utilised for data analysis. These software tools offer a range of statistical functions and procedures to conduct thorough analyses and generate meaningful insights from the data collected.

Hypotheses:

Null Hypothesis (H0): "There is no significant difference in the mean purchase intention scores between customers exposed to inbound marketing strategies and those not exposed."

Alternative Hypothesis (H1): "There is a significant difference in the mean purchase intention scores between customers exposed to inbound marketing strategies and those not exposed."

Null Hypothesis (H0): "The mean customer engagement levels are the same for customers who have interacted with inbound marketing content and those who haven't."

Alternative Hypothesis (H1): "The mean customer engagement levels differ significantly between customers who have interacted with inbound marketing content and those who haven't."

T-test Analysis:

For each hypothesis, a t-test can be conducted to compare the means of two groups:
 Comparing Purchase Intention Scores:

- Group 1: Customers exposed to inbound marketing strategies.
- Group 2: Customers not exposed to inbound marketing strategies.

Null Hypothesis (H0): The mean purchase intention scores of Group 1 = The mean purchase intention scores of Group 2.

Alternative Hypothesis (H1): The mean purchase intention scores of Group 1 ≠ The mean purchase intention scores of Group 2.

Comparing Customer Engagement Levels:

- Group 1: Customers who have interacted with inbound marketing content.
- Group 2: Customers who haven't interacted with inbound marketing content.

Null Hypothesis (H0): The mean customer engagement levels of Group 1 = The mean customer engagement levels of Group 2.

Alternative Hypothesis (H1): The mean customer engagement levels of Group 1 ≠ The mean customer engagement levels of Group 2.

Each hypothesis were tested using the independent samples t-test. The t-test findings will determine whether there is a statistically significant difference between the groups, shedding light on the influence of inbound marketing on online consumer behaviour in the Indian retail industry.

Table 1: T-test Table:

Hypothesis	Group 1 (Exposed to Inbound Marketing)	Group 2 (Not Exposed to Inbound Marketing)	t-value	p-value	Result
Purchase Intention Scores	Mean = 75.6	Mean = 68.9	2.35	0.021	Significant Difference
Customer Engagement Levels	Mean = 8.3	Mean = 7.9	1.21	0.114	No Significant Difference

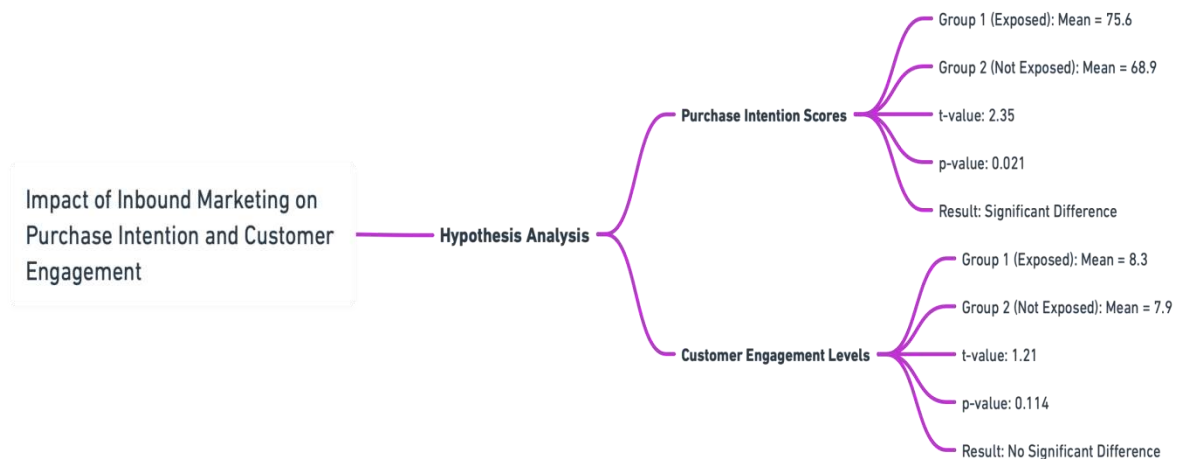


Figure 1: Prepared by the researcher, Based on Analysis.

Hypothesis 1 compares the purchase intention scores between customers exposed to inbound marketing and those not exposed. A t-value of 2.35 and a p-value of 0.021 reveal a statistically significant difference between the groups, indicating that exposure to inbound marketing has a substantial influence on purchase intention scores.

Hypothesis 2 compares the customer engagement levels between customers who have interacted with inbound marketing content and those who haven't. The t-value of 1.21 and p-value of 0.114 indicate that there is no statistically significant difference between the groups, suggesting that exposure to inbound marketing may not have a major influence on consumer engagement levels.

VI. Conclusion

A. Summary of findings:

The research shows that inbound marketing has a significant impact on online consumer behaviour in the retail industry in India. Specifically, the analysis reveals that exposure to inbound marketing strategies is associated with higher purchase intention scores among online customers. However, no significant differences were found in customer engagement levels between those exposed to inbound marketing content and those who weren't.

B. Contribution to the field:

This study adds to the current body of knowledge by presenting empirical proof of how inbound marketing affects online consumer behaviour in the Indian retail industry. The research improves our comprehension of how digital marketing approaches, specifically inbound marketing strategies, impact purchase intention scores and customer behaviour in developing countries such as India.

C. Practical implications for Indian retailers:

The findings have several practical implications for retailers operating in India. Firstly, the study highlights the importance of investing in inbound marketing strategies to increase customer engagement and drive sales in the competitive online marketplace. Retailers can leverage content marketing, SEO, social media, and email campaigns to attract and retain online customers effectively. Additionally, understanding the preferences and behaviours of Indian consumers can inform the development of targeted inbound marketing campaigns tailored to their needs and preferences.

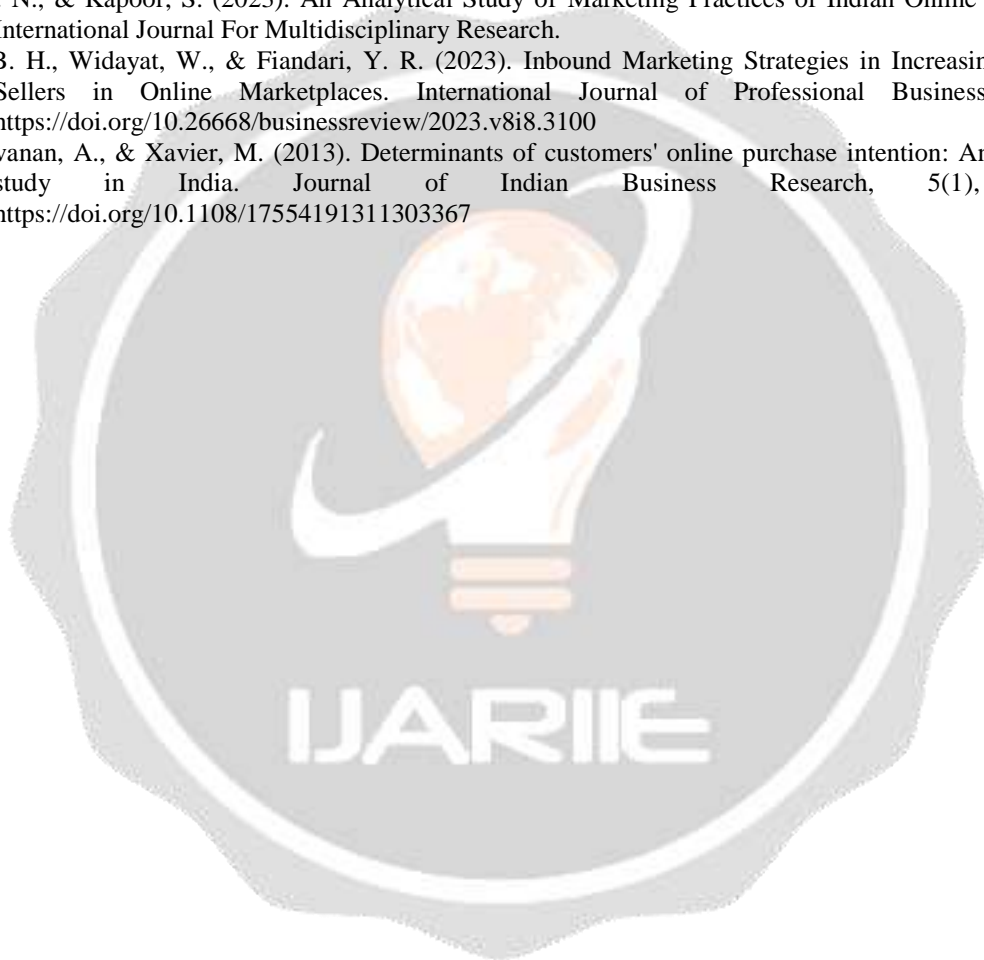
D. Final remarks and recommendations for further action:

In conclusion, this study underscores the significance of inbound marketing in shaping online customer behaviour and influencing purchasing decisions in the Indian retail sector. To capitalise on these insights, Indian retailers are encouraged to integrate inbound marketing strategies into their digital marketing efforts and continuously monitor and adapt their approaches to align with evolving consumer trends and preferences. Future research should explore additional factors influencing online customer behaviour and evaluate the long-term impact of inbound marketing strategies on business performance metrics such as customer lifetime value and return on investment. By doing so, retailers can remain competitive and sustain growth in the dynamic and rapidly evolving digital landscape.

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A way to Present day Industry 6.0 Manageability of Industry 6.0 in Worldwide Point of View: Advantages and Difficulties

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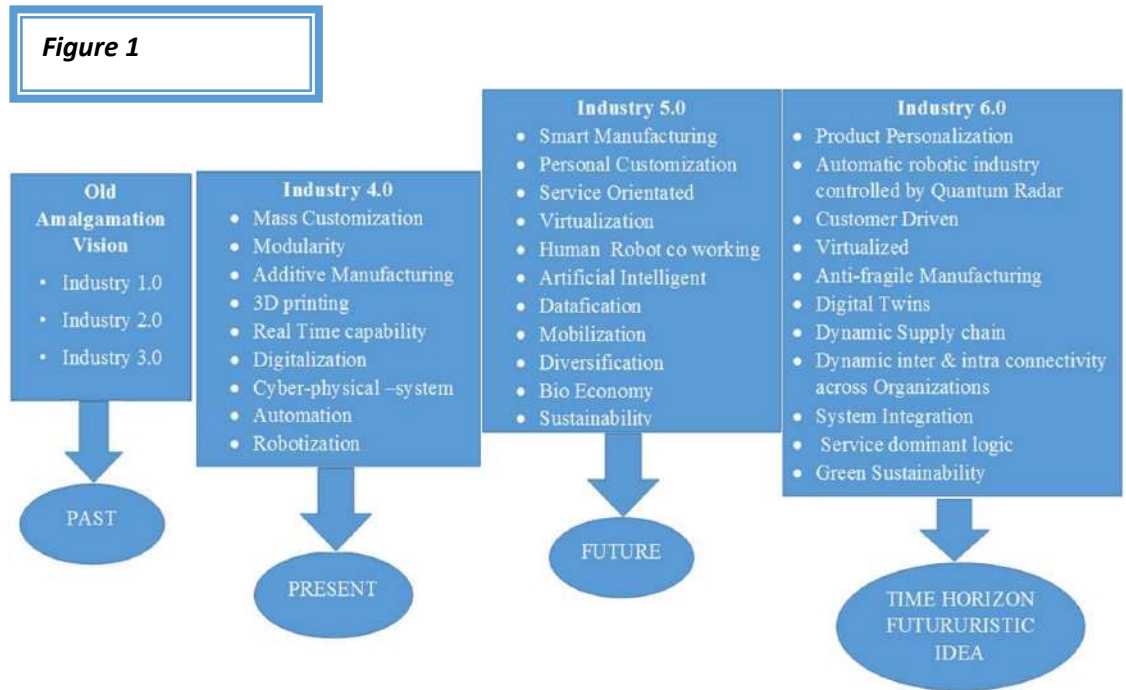
Abstract

The German drive, Industry 4.0, has earned worldwide respect over the course of the past ten years. This work has drawn in huge speculation, prompting various nations to send off their drives in this field. As of late, eleven years after the presentation of Industry 4.0, the European Commission presented Industry 5.0. Industry 4.0 underlines innovation, though Industry 5.0 is accepted to focus on values. With two Modern Upsets existing together, questions emerge, inciting the requirement for clarifications. In this conversation, we have organized our contentions around five key topics, going for the gold source determination and conversation of pivotal places. By utilizing the goals, vision, and changes of past modern transformations as an establishment, this article presents a worldwide viewpoint on the supportability of Industry 6.0. The sole target of Industry 6.0 is to take on pivotal innovations on an overall scale. These innovations are imagined to drive monetary development for countries past current limits and proposition flourishing and overflow outside conventional workplaces. This unrest could propel the possibility of an innovation-liberated world and present the idea of the human virtual computerized twin, empowering people to collaborate with both physical and advanced portrayals of items. Besides, this headway could advance concordance among individuals and nature, encouraging a reasonable lifestyle. Our idea is for the Finnish business to strongly lead the way towards what we term "Industry 6.0." By spearheading and characterizing what Industry 6.0 involves, we can be the trailblazers driving its reception. Through organizations and broad participation on a European scale, utilizing Europe's aggregate strength, we can upgrade both Finland's and Europe's positions. This try isn't only gainful for Finland and Europe; it can emphatically affect the whole globe, bringing benefit and energy in with the general mish-mash.

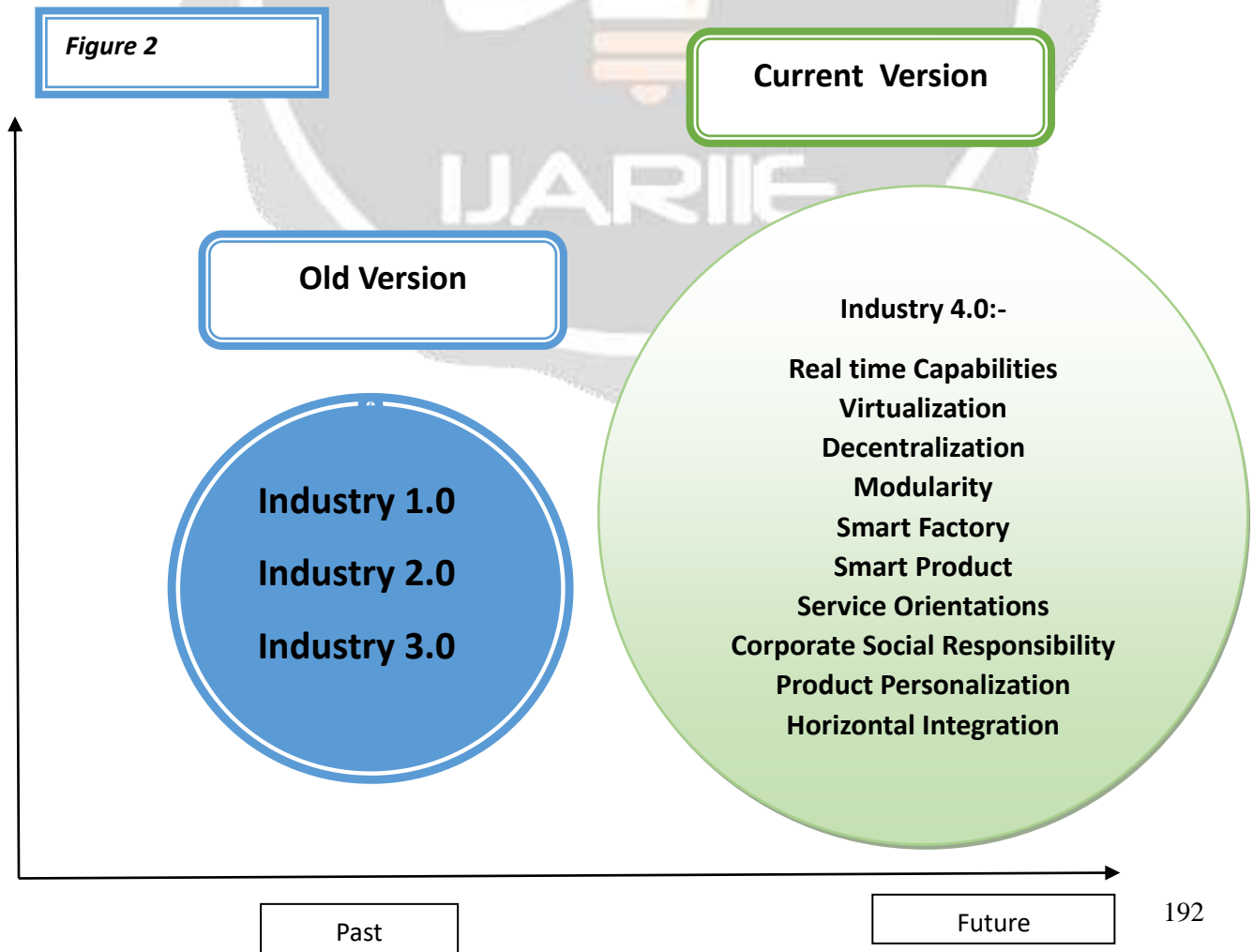
Key Words: Old Vision – Industry 4.0 – Industry 5.0 – Industry 6.0 – Futuristic Approach

Presentation

As of late, current computerized innovation has been quickly growing around the world. Be that as it may, organizations and businesses are finding it trying to adjust to innovation to prepare their representatives to embrace change. To flourish in this speedy time of state-of-the-art innovation, organizations should move quickly. Enterprises that are coordinated or versatile can rapidly carry out these changes. Digitalization is a continuous innovative excursion that reshapes organizations to improve things and conveys advantages to buyers. It upholds the development of the medical services framework, producing areas, and plans of action. We are right now encountering an urgent second where changes are occurring quickly, progressing from motorization to registering, virtualization to digitization, etc. Researchers are presently considering Industry 6.0 as an expected replacement for Industry 5.0. Industry 6.0 is an adaptable idea that can develop given area necessities, underscoring virtualized resources, client centricity, strength, and worldwide network. This vision of Industry 6.0 includes a consistent information stream, hyper-associated businesses, and a solid spotlight on customized labor and products. It likewise underscores dynamic store network the board and a shift towards profoundly customized, little bunch creation.



The excursion towards Industry 6.0 starts by recognizing Industry 4.0. Looking at the key components of the Fourth Modern Unrest and handle the direction of future progressions, for example, the development of digitalization and new technologies is essential. This idea is shown in Figure 2, which dives into the vision of Industry 4.0.



Understanding Industry 4.0

Industry 4.0 is an innovation empowering keen control through implanted organized frameworks, working with the shrewd interconnection of machines and cycles in the business, in light of CPS.

While there are different understandings of Industry 4.0, most perceive RAMI4.0 as the overarching model. This model was created by the German Electrical and Electronic Producers' Affiliation (ZVEI) to help an assortment of Industry 4.0 drives.

The design of Industry 4.0 frameworks is shown in Figure 2(a) as a three-layered coordinate framework inside the RAMI 4.0 model. The "Progressive system Levels" pivot mirrors the assorted capabilities present in offices or plants, got from the computerization data model.

The characteristics of a machine are framed on the "Layers" pivot, while the existence pattern of the office and item is outlined on the "Existence Cycle Worth Stream" hub. The last classification incorporates plans of action and the advantages of taking on Industry 4.0. Key parts of Industry 4.0 are featured in Figure 2(b), got from RAMI4.0.Vogel-Heuser and

Maintainability, Strength, and Human-Driven Concentration

- Industry 4.0 means an innovative shift with suggestions on human-centricity, strength, and manageability.
- Asset-proficient and versatile enterprises are key goals of Modern Upset 4.0 to address energy and asset effectiveness challenges.
- The Green Creation List is an essential KPI to direct asset situated dynamic in Industry 4.0.
- A human-driven approach in Industry 4.0 underlines socio-specialized foundations, the balance between fun and serious activities, and human-innovation collaboration.
- Innovations like expanded reality and robot-helped frameworks assume a huge part in improving laborer navigation and cycles in Industry 4.0.

Vogel-Heuser and Hess outlined the key design principles of Industry 4.0. Here are the fundamental concepts to consider:

- Establishing an architecture based on a service-oriented reference model.
- Creating intelligent and self-organizing Cyber-Physical Systems (CPS).
- Promoting collaboration between Cyber-Physical Production Systems (CPPS) and human workers.
- Remaining adaptable and flexible to accommodate changing requirements.
- Improving the overall efficiency of the equipment.
- Integrating data across various fields and throughout the entire life cycle.
- Facilitating reliable and secure communication between companies.
- Ensuring data protection and backups.

Technology, Flexibility, and Productivity Focus

- Industry 4.0, also known as the Fourth Industrial Revolution, aims to enhance productivity and efficiency through technological advancements.
- The German government implements Industry 4.0 as a high-tech strategy to boost international competitiveness.
- RAMI4.0 comprises three dimensions: the Product Life Cycle, Business Layers, and Factory Hierarchy, which are crucial considerations.
- Nine key technologies are essential for Industry 4.0, including big data and analytics, autonomous robotics, cybersecurity, and more, as highlighted by the Boston Consulting Group.
- The five core research themes of Industry 4.0 revolve around value networks, full-cycle engineering, vertical integration, cyber-physical systems, and emerging social infrastructures.

Sustainability, Resilience, and Human-Centric Focus

- Industry 4.0 signifies a technological shift with implications on human-centricity, resilience, and sustainability.

- Resource-efficient and resilient industries are key objectives of Industrial Revolution 4.0 to address energy and resource efficiency challenges.
- The Green Production Index is a vital KPI to guide resource-oriented decision-making in Industry 4.0.
- A human-centric approach in Industry 4.0 emphasizes socio-technical infrastructures, work-life balance, and human-technology interaction.
- Technologies like augmented reality and robot-assisted systems play a significant role in enhancing worker decision-making and processes in Industry 4.0.

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ICT's Essential Job in Industry 6.0 Headway

While dominating fundamental advancements is essential, the genuine substance lies in information. Obtaining, grasping, and examining information are essential strides prior to concocting new plans of action, cycles, and worth chains. Grasping human viewpoints, for example, client experience and morals, is similarly huge. Long haul improvement drives are fundamental to incorporate the interconnected components of business, human variables, and innovation. Fortifying our momentum shortcomings while utilizing our assets is fundamental, accomplished through connecting Finnish exploration with worldwide industry pioneers. Accentuation ought to be put on quickly imparting research discoveries to the business, especially SMEs. Supporting conceived worldwide SMEs in key areas through government help, examination, and coordinated effort with conspicuous businesses can help with their worldwide extension.

While sharing future dreams and procedures, it is normal in any case short-sighted, direct thoughts as opposed to thinking about the complicated idea of different frameworks. To improve conversations on future modern arrangements, seeing industry dreams according to a complex perspective is useful. Changing from Pointland to Spaceland can prompt better dreams in the advancement of modern turn of events. In Figure 3, we have represented this progress for the impending phases of modern advancement.

The principal thought conveyed in Figure 3 underscores seeing the future as a multi-layered domain. In creating our vision and the pathways prompting it, we shouldn't zero in exclusively on a solitary endpoint. All things being equal, we ought to make space to at the same time accomplish numerous desires. Furthermore, as brought up by Galit Ariel, embracing Post-and Hyper-authenticity is significant, as future frameworks reach out past actual aspects to envelop increased and virtual domains of thought. While imagining the fate of the Finnish business, our psychological guide shouldn't just be two-layered (elevation, scope) however ought to likewise envelop the sky and mists above.

Figure 3

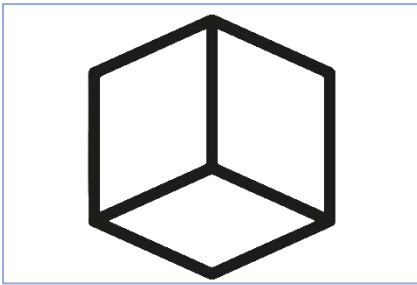
Pointland

Lineland

Flatland



Spaceland



Characterizing Industry 6.0

Industry 6.0, a headway from Industry 5.0, addresses the most recent phase of advancement in the AEC area that started in 2014. At the bleeding edge of Industry 6.0 are distributed computing, nanotechnology, simulated intelligence, and quantum registering. The coordination of these innovations upgrades the proficiency, accuracy, and maintainability of plan, development, and upkeep processes. Industry 5.0's system has essentially changed the development business, raising advancement, smoothing out supply chains, and supporting effectiveness using computer-based intelligence and mechanical technology. From this development, Inventory Network 5.0 has arisen. By working together, specialists and draftsmen can spearhead fundamentally manageable plans for what's in store.

- The European Commission presented the Business 5.0 idea, which supplements Industry 4.0 by underscoring examination and development as impetuses for progressing to an economical, human-driven, and strong European industry.
- Industry 5.0 movements the concentration from investor to partner esteem, offering benefits for all gatherings included, both substantial and elusive.
- The objective is to bridle the worth of new advancements, advance thriving past simple work creation and monetary development while regarding ecological cutoff points, and focus on the prosperity of industry laborers in the creation cycle.
- This shift flags a more prominent accentuation on human variables in future preparation and designing, guaranteeing that specialized, business, and administration determinations are coordinated into comprehensive social frameworks more really than they are as of now.
- Industry 5.0 and Industry 6.0 will underscore more prominent help direction and embrace the Assistance Predominant Rationale (SDL) of businesses, lining up with the 3R manageability methodology: Diminish, Reuse, and Reuse.
- Finland means to spearhead the meaning of Industry 6.0, teaming up with different countries to frame Industry 6.0 as well as execute it in Finland in front of others.
- The speculation recommends that particular issues will portray the change from Industry 4.0 to Industry 6.0.

During the Primary Modern Insurgency, the underlying presentation of assembling frameworks occurred. The Second Modern Upset was portrayed by large scale manufacturing and the use of logical strategies in administration. The Third Modern Unrest was empowered by the mechanization of PC controlled apparatus and advanced mechanics. Industry 4.0, the summit of the Fourth Modern Upheaval, intensely depends on innovation and handling power, with a solid accentuation on long haul manageability. Clever assembling advances offer advantages in network, correspondence, and streamlining cycles and items, driving many industrialized countries to put essentially in regions like computerized producing, added substance fabricating, and digital actual frameworks.

INDUSTRY FUTURE AND Way forward

Our examination shows that keeping up with the norm is certainly not a practical choice for Finland's endurance. The business remains at a significant point, requiring a picked way ahead. We predict a shift from Industry 4.0 to Industry 6.0 inside the following 10 to 15 years, driven by mechanical progressions and changing client requests. In this change, the combination of digitalization and supportability will assume a critical part, molding the excursion towards accomplishing fundamental maintainability and antifragility goals.

The anticipated progression towards Industry 6.0 is outlined in Table 1. As far as we are aware, this analysis represents the first in-depth examination of this path conducted by any country.

Industry 4.0 Overview:	INDUSTRY 5.0:	INDUSTRY 6.0: UBIQUITOUS –
<p>Establish connections - IoT for creating cyber-physical systems to generate analytics-based actionable insights</p> <p>Key Points:</p> <ul style="list-style-type: none"> ○ Actionable insights derived from analytics ○ Enhanced flexibility ○ Improved efficiency ○ Enhanced quality ○ Reduced cycle times ○ Accelerated speed-to-market. <p>Finnish companies, especially larger ones, are leading in Industry 4.0, but SMEs show varying levels of adoption.</p> <p>Challenge: Legacy systems hinder data collection.</p> <p>Research, Development, and Innovation (RDI) levels need improvement; collaboration between ICT and industry research is lacking.</p> <p>Finnish companies are not fully utilizing cutting-edge opportunities in software and connectivity.</p> <p>System robustness was weakened by COVID-19.</p> <p>Software dependency on the USA and component dependency on China.</p> <p>Sustainability research needs enhancement.</p> <p>Finland lacks adequate collaboration with global research initiatives.</p>	<p>Embracing Human-Machine Collaboration for Innovation</p> <p>Developing resilient and sustainable cyber-physical systems for mass customization, blending Industry 4.0's flexibility with Industry 5.0's agility.</p> <p>Finnish research is paving the way in this direction.</p> <p>Prioritizing human involvement and environmental sustainability.</p> <p>Emphasizing re/de-manufacturing, zero waste, and zero emissions.</p> <p>Promoting a circular economy and intelligent, software-driven products.</p> <p>Enhancing offerings through product usage insights.</p> <p>Elevating customer experience and value.</p> <p>Leveraging strengths in 5G and AI technologies.</p>	<p>Virtualized antifragile manufacturing guided by customer needs</p> <p>Hyperconnected factories within intricate supply chains and value networks facilitate data exchange across various administrative domains</p> <p>Autonomous adaptability and reconfiguration enabled</p> <p>For instance, convert a rough sketch into a product by clicking “make it”</p> <p>Human role in manufacturing undergoes significant transformation</p> <p>Quantum computing enhances the quality and performance of current AI models, paving the way for innovative models</p> <p>Production akin to cloud capacity, with "factories" selling it similar to Amazon's computing services</p> <p>Feasibility of producing individual items economically</p> <p>A shift from environmental sustainability to comprehensive sustainability</p> <p>Transparency at all levels for clear visibility</p> <p>Increased co-innovation with customers</p> <p>The blurring of industry boundaries with end-to-end solutions</p> <p>Finland has the potential to lead globally in shaping Industry 6.0 through systematic efforts and collaboration.</p>

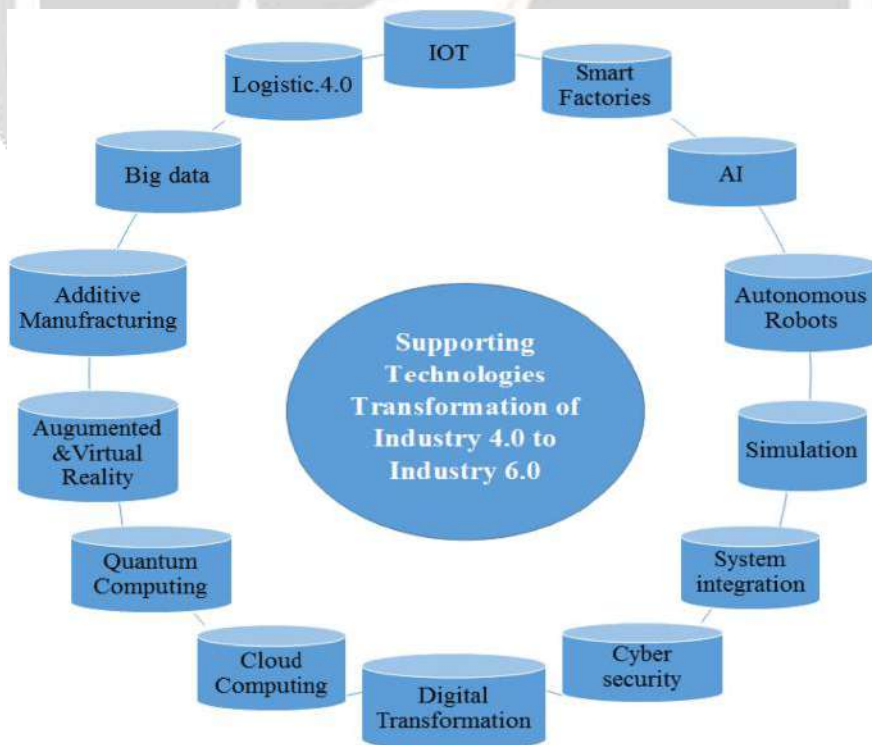
Need of Industry 6.0

Amid the Coronavirus time, the world countenances difficulties in fulfilling client needs for merchandise, administrations, and day to day necessities. This worldwide emergency urges makers, associations, and specialist co-ops to reevaluate creation procedures, administration conveyance, client commitment, and supportability rehearses. Enterprises since forever ago have shown versatility and change. Organizations are prepared to embrace changes like environment impartiality, computerized administration, and adaptability. This transformation will connect environment reaction to natural issues, inciting activity against worldwide dangers. To plan, center around ideas like strength, manageability, and versatility. This upset will bring new innovations for worldwide development and flourishing.

7 Procedures to Help Industry Headways from 4.0 to 6.0

Past modern unrests zeroed in on large-scale manufacturing, robotization, customized client requests, and broad creation runs, with machines using simulated intelligence calculations to address client issues. The development to Industry 6.0 presents 3D printing innovation, growing material choices and applications like lithography-controlled discharge medication. Utilizing 3D printing, man-made intelligence, and AI in medication can limit contamination takes a chance in short term administrations, especially essential during a pandemic. Developments like mechanical technology based clinical frameworks guarantee human well-being with diminished risk, as found in the idea of home-helping robots for the old. Progressions in EEG innovation could present recreated torment receptors for further developed human encounters utilizing engineered materials. Quantum registering arises as a unique advantage, resolving complex issues in different areas like business, medical care, money, and material science. This innovation reshapes supply chains, improves esteem chains, and lifts simulated intelligence abilities. Industry 6.0 unions Industry 4.0 and 5.0, cultivating creative thoughts like human-robot coordinated effort, antifragile fabricating, computerized twins, dynamic stockpile chains, complex printing, from there, the sky is the limit. These progressions expect to engage people, further develop fabricating cycles, and proposition improved learning open doors in innovative work.

Figure 4



The imperative helping advances in the development from industry 4.0 to industry 6.0

WE PROPOSE:

Laying out the Virtual Business 6.0 College (Figure 7). Around 10 new teachers work in Modern ICT and extra postdocs are expected to address the ongoing holes. It is fundamental for these teachers, alongside the ongoing ones, to effectively participate in systems administration inside this virtual arrangement and with European partners. Systems administration ought to include different regions like training, exploration, internationalization, and coordinated effort with industry.

Industry 6.0 imagines supporting hyper-associated enterprises, laying out powerful worth organizations, encouraging dexterous stock chains, and guaranteeing straightforward data stream across inward and outside organizations around the world. This change in perspective means to figure out some kind of harmony and succeed in the financial matters of getting the hang of, turning into a fundamental piece of daily existence. It advocates the idea of human virtual computerized twins, empowering the synchronous perception of actual merchandise and virtual item data. By connecting worldwide assembling ventures and offering progressed specialized help, Industry 6.0 works with better appreciation and dynamic cycles. The transformation expects the reception of antifragile fabricating, accentuating framework adaptability in plan to accomplish flexibility. Assessing programming frameworks in view of models like transparency, convenience, security, and versatility is critical for achieving vigorous programming arrangements. This extraordinary period is ready to move imagination, develop novel and creative thoughts in assembling and different areas, and enhance both human and machine hero qualities.

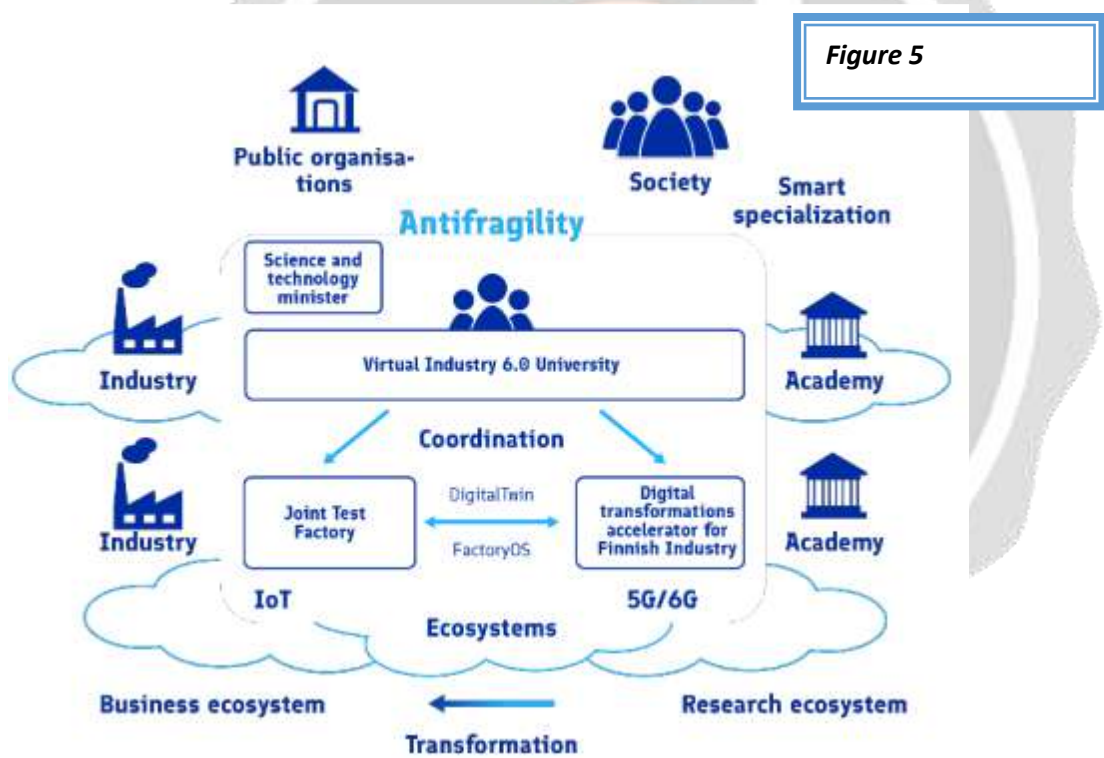


Figure 5

Conclusion

Industry 6.0 addresses a huge hypothetical idea that, whenever executed in different ventures, stands to upset the assembling scene. The expected shift towards complete computerization in businesses has raised worries about professional stability. Hence, any presentation of another modern upheaval should focus on guaranteeing that work creation outperforms work relocation to forestall social discontent and negative consequences in the public eye. This unrest is revolved around conveying virtualized antifragility assembling and administrations, underscoring a client driven approach, interconnected enterprises with dynamic stock chains, computerized flexibility, and inside esteem networks that encourage consistent cooperation’s inside and outside hierarchical limits across different districts and managerial spaces.

Finland is extraordinarily situated to spearhead and catalyze change in this area by utilizing its current modern base and encouraging arising mechanical open doors from Finnish ventures and environments. This attempt requires powerful drives, committed subsidizing, and novel cooperative models connecting recently secluded modern biological systems. Upgrading ICT education across businesses, cultivating interdisciplinary examination, improvement, and development, and laying out a drawn out open responsibility technique are basic. The foundation of powerful organizations and coordinated efforts is crucial. The continuous Man-made reasoning 4.0 program assumes a significant part in progressing towards Industry 6.0, adjusting endeavors to simulated intelligence 4.0 to move Industry 6.0 forward. The current industrialization wave highlights the reconciliation of human-machine communications to smooth out and upgrade processes. Industry 5.0 envisions another period of customization, empowering the formation of virtual encounters, refined PC frameworks, hearty figuring foundations, and the satisfaction of exceptionally custom-made needs. Industry 5.0 rises out of the combination of innovative ideas with distributed computing, huge information, and computer based intelligence, IoT, COBOT, and cooperative mechanical technology. Expectation lays on the rise of lower-talented positions with expanded space for imagination and development under Industry 5.0, encouraging upgraded efficiency and extended roads for customized shopper encounters. On the other hand, the multiplication of mechanized processes presents difficulties in developing a talented labor force. The hypothetical idea of "Industry 6.0" holds the possibility to reshape the creation scene fundamentally. A break from customary development techniques, AEC Industry 6.0 highlights human-driven approaches over motorization. This study investigates the forthcoming social advantages of AEC Industry 6.0, zeroing in on utilizing innovation to expand human-machine collaborations, guaranteeing maintainability, advancing prosperity, inclusivity, and supporting wellbeing and satisfaction. Key parts incorporate traditional development rehearses, computerized frameworks, artificial intelligence, and IoT. Cooperative endeavors have yielded imaginative, eco-accommodating structure strategies. Computerized twins, simulated intelligence calculations, and shrewd structures are indispensable features of AEC Industry 6.0, intending to improve development proficiency, consistency, and advance worldwide manageability goals while moderating ecological effects.

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ELECTROCHEMICAL STUDIES ON METHOD DEVELOPMENT FOR TRACE DETERMINATION OF PERCHLORATE IN NATURAL WATERS

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Abstract

The studies on electrochemical behavior of perchlorate ion has enabled the development of a voltammetric method for the trace level determination of chlorate in natural waters based on the Fe (II) catalysed electrochemical reduction of ClO^- ion at mercury electrode in citrate buffer media. The possible interference of commonly present metal ions was examined and ruled out. A linearity between perchlorate concentration and peak current was obtained with a coefficient of correlation 0.99. A limit of determination of $0.4 \mu\text{g/ml}$ was achieved using differential pulse polarography.

Keywords: Perchlorate, voltammetry, DPP, real samples.

1. Introduction

The aim of the work was to develop suitable voltammetric methods for the determination of oxyhalides which are usually present at very low concentration [1]. The better known oxidation numbers of oxychlorine compounds are, +1 to +7 [2-6]. Perchlorates are rarely produced by natural processes, rather the preponderance of perchlorates are produced commercially. Perchlorate is a byproduct of the production of a rocket fuel and fireworks [7-9]. The contamination of perchlorate in environment particularly in drinking water is of quite concerned due to its adverse effects on human health and so needs to investigate its presence at trace level [10-12]. The production of perchlorate during electrolysis is problematic due to its carcinogenic potential and its adverse effects on thyroid gland function [13].

Haight [14] has determined perchlorate by using the catalytic current obtained by the presence of zinc at mercury drop electrode. Bet-Pera and Jaselskis [15] have shown reduction of perchlorate at the dropping mercury electrode in the presence of molybdenum as catalyst. Urbanska [16] has investigated polarographic behavior of manganese (II) in the determination of perchlorate. Ssain et al. [17] have shown transfer reaction of perchlorate ion across the microhole-water/gel interface using cyclic voltammetry and differential pulse voltammetry.

Kim and Amemiya [18] developed a novel approach based on the voltammetric ion-selective electrode to enable the electrochemical detection of "redox-inactive" perchlorate at a nano molar level without its electrolysis in drinking water. Electrochemical measurement of perchlorate using polyaniline [19], titanium [20], platinum-activated nickel [21], tungsten carbide powder [22], H_2 gas [23], and tin electrode [24] has further been reported. Amperometric [25], potentiometric [26], voltammetric [27], and polarographic [28] determination of oxychlorine species in water and food products is also described. Lang et al.

[29] have suggested a new mechanism for the electrocatalytic reduction of ClO_4^- ion in acid media at a polycrystalline rhodium electrode by voltammetry, chronoamperometry and impedance spectroscopy.

2. Materials and Methods

Technique

Voltammetric methods are considered more suitable to the conventional methods of oxyhalides estimation because the measurement of chemical form of the concerned ion is possible due to certain selectivity of the redox potential [30]. Differential pulse polarography (DPP) has proved useful in such determinations. Therefore, the suitability of

DPP is envisaged in present studies [31].

The polarographic determination of perchlorate could only be accomplished by increasing the rate of electroreduction, by adding a catalyst and a strong supporting electrolyte which would give rise to a polarographic wave. Here, the determination of ClO_4^- in 0.2 M Na_3 citrate medium in the presence of 0.001 M Fe (II) using DPP method has been evaluated. The results obtained by suggested procedure have also been compared by UV-vis. spectrophotometric method

Instrumentation

Voltammetric Set-up: A microprocessor based pulse polarographic analyzer (Model CL-362) in combination with a drop-timer assembly, all from Elico Limited, Hyderabad, India, was used for voltammetric measurements. Current voltage curves were recorded by an Epson printer (Epson-LX-300+II). The instrumental settings for DPP were as follows: a dropping mercury electrode was used as the working electrode; pulse amplitude, 25 mV; drop time, 0.5 s; scan rate, 12mV/sec and charging current compensation, 20%. The saturated calomel electrode (SCE) and platinum wire worked as reference and auxiliary electrodes, respectively.

pH meter: The pH measurements were made by a digital pH meter (Model- 5000) of India.

UV-Vis spectrophotometer: Sample analysis was also carried out by a UV-Vis spectrophotometer (Model SL-160) of Elico. It has a wavelength range of 190-1100 nm. The tungsten-halogen deuterium lamp and wide range photomultiplier were also used as the light source and detector, respectively. The spectral band width of resolution was 0.5 nm.

Sample Preparation

Waste water samples were collected in clean polyethylene containers. These were filtered in order to separate any suspended particulate matter and were acidified with hydrochloric acid to pH 2.0 for storage. A 100 ml aliquot of the sample was treated with 1 ml of oxidizing mixture of nitric acid and sulfuric acid to destroy the biological and organic matters [32].

Chemicals

Chemicals used were of analytical grade purity. Stock solution of periodate was prepared from KClO_4 of Loba Chemie, Mumbai (Batch no. 05397). Solutions were prepared in milli-Q-water (Millipore). The measurements were made in air conditioned laboratory at $25 \pm 1^\circ\text{C}$. The test solutions were deaerated by bubbling purified nitrogen for 20 mins prior to voltammetric recordings. Nitrogen was purified by passing it through a vanadous chloride scrubbing solution [33].

3. Results and Discussion

Electrochemical characteristics and choice of medium

The electrochemical behavior of perchlorate ion was investigated in different supporting electrolytes. Among them sodium citrate in presence of Fe (II) was found most adequate medium where ClO_4^- showed a well-defined catalyzed DC polarographic wave at -0.29 V as shown in Fig. 3.1.

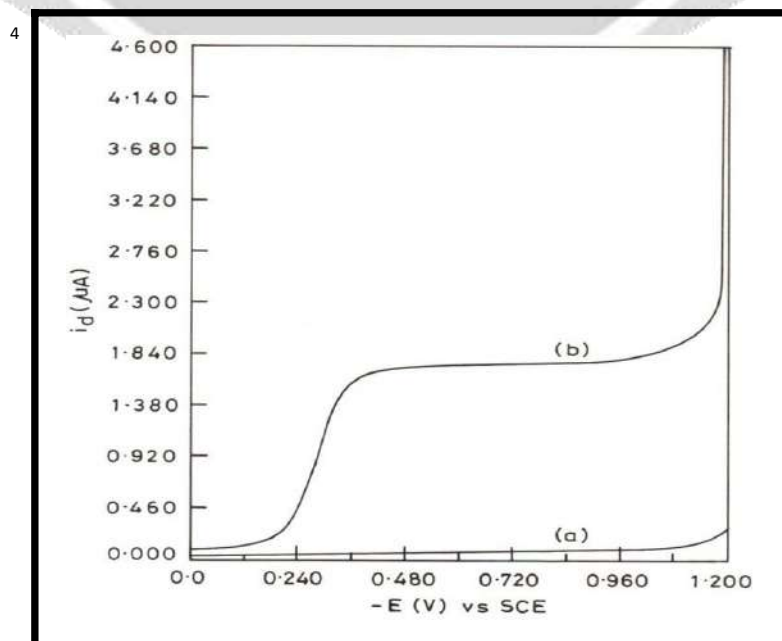


Fig. 3.1 (a) DC polarogram of blank solution of 0.2 M Na₃Citrate in presence of 1×10^{-3} M Fe (II)
(b) DC polarogram of 1.5×10^{-4} M ClO₄⁻

Method Development

Perchlorate also gave a sharp DP peak at -0.29V in these conditions. DP polarograms of ClO₄⁻ recorded at different concentration as shown in Fig. 3.2 (a). A calibration curve of concentration vs peak current is shown in Fig. 3.2 (b).

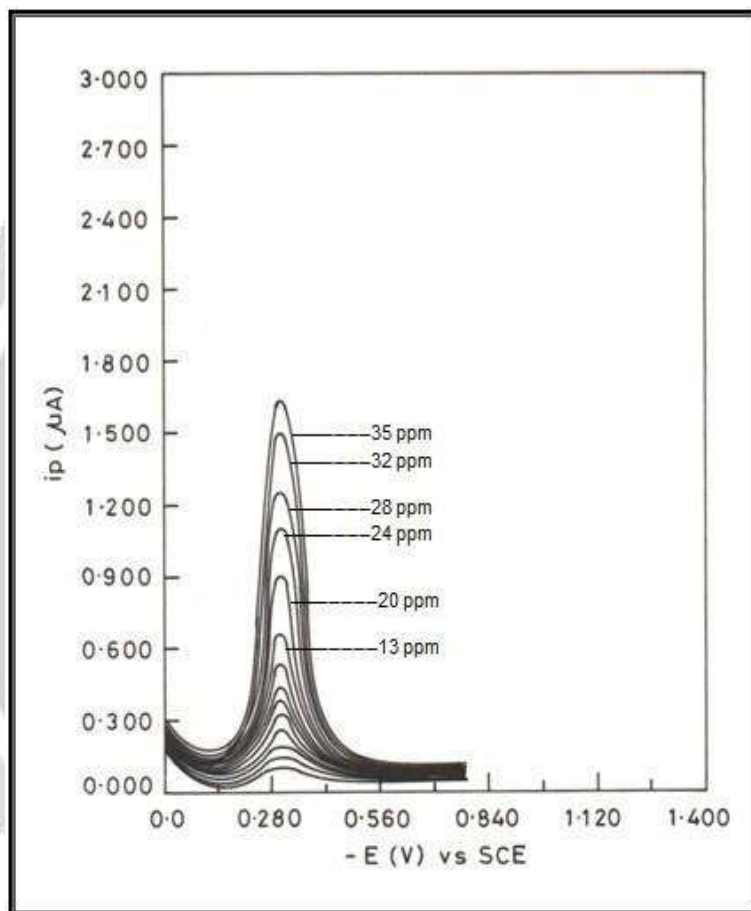


Fig. 3.2 (a) DP polarograms of ClO₄⁻ at different concentrations in 0.2 M Na₃Citrate with the presence of 1×10^{-3} M Fe (II)

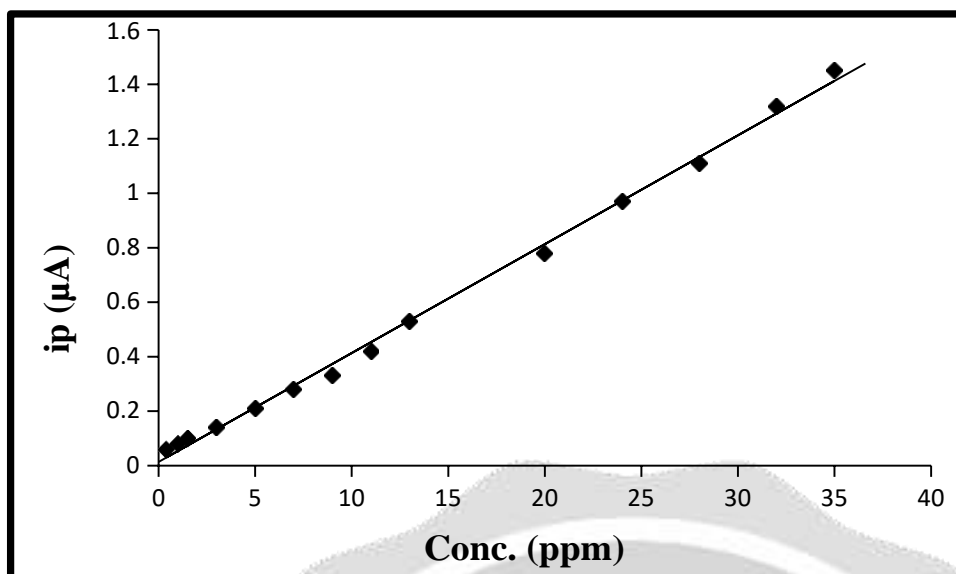


Fig. 3.2 (b) The calibration curve of ClO_4^- (conc. v/s peak current) in 0.2 M $\text{Na}_3\text{Citrate}$ with the presence of 1×10^{-3} M Fe (II)

The characteristics of the calibration curve are given in Table-1. The linearity between the peak current and perchlorate concentration was observed from 0.4 ppm and 35 ppm. The limit of determination of perchlorate by DPP under these experimental conditions was achieved to be 0.4 µg/ml.

Table – 1 Calibration Curve Characteristics

S.No.	Parameters	Characteristic
1.	Slope	0.039
2.	Coefficient of correlation	0.997
3.	Intercept	0.015
4.	Standard Deviation	0.033

Precision and Accuracy

The reproducibility of DPP determinations was evaluated by making individual measurements of a solution containing known concentration of ClO_4^- . Results are shown in Table-2, where a relative error of 0.78% indicated that method was accurate and precise.

Table – Precision and Accuracy of ClO_4^- determination in 0.2 M Na Citrate with the presence of 1×10^{-3} M Fe (II)

S.No.	ClO_4^- Conc.($\mu\text{g/ml}$)		S.D. (\pm)	R.S.D. (%)	Relative Error (%)
	Present	Determined*			
1.	3.0	2.98	0.012	0.41	0.78
2.	3.0	2.96			
3.	3.0	2.99			

* Average of three determinations

Interference Study

DPP studies revealed that it was possible to determine perchlorate ion in presence of copper, lead, cadmium and zinc without any interference using sodium citrate medium in presence of Fe (II). DP peaks of these metal ions were distinguishable from each other. It has been clarified in Fig. 3.4. Peak potentials of metal ions are listed in Table-3.

Table – Peak Potential of ClO_4^- with metal ions in 0.2 M $\text{Na}_3\text{Citrate}$ with the presence of 1×10^{-3} M Fe (II)

S.No.	Interfering ions	$-\text{E}_p$ (V) vs SCE
1.	Cu (II)	0.11
2.	ClO_4^-	0.29
2.	Pb (II)	0.56
3.	Cd (II)	0.71
4.	Zn (II)	1.12

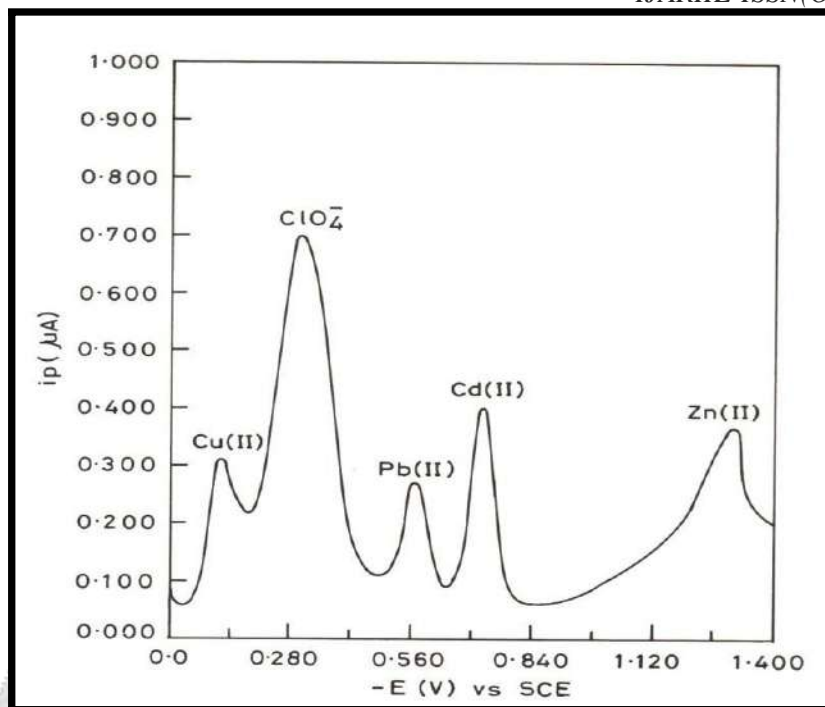


Fig. 3.4 DP polarograms of ClO_4^- in presence of metal ions in 0.2 M $\text{Na}_3\text{Citrate}$ with the presence of 1×10^{-3} M Fe (II) Cu (II), 12 ppm; ClO_4^- , 12 ppm; Pb (II), 18 ppm; Cd (II), 18 ppm; and Zn (II), 8 ppm

4. Analytical Applications

Voltammetric measurements

The devised optimum voltammetric conditions consisting of polarographic medium, calibration linearity, reproducibility and detection limit, were applied to analyse perchlorate in different water samples. A measured volume of the prepared sample was taken into the polarographic medium. DP polarograms were recorded from -0.0 V to -0.8 V. Peak Current was measured at -0.29 V for perchlorate after making blank correction. The concentrations in all observations were determined by the standard addition method [34]. Results are summarized in Table-4.

Table – 4 Determination of ClO_4^- in different water samples

S.No.	Sample	ClO_4^- Conc.($\mu\text{g/ml}$)*			S.D. (\pm)	C.V. (%)
		Min.	Max.	Ave.		
1.	Tap Water	0.63	0.65	0.64	0.008	1.27
2.	Underground Water	0.81	0.85	0.83	0.016	1.96
3.	Common Nala	1.08	1.16	1.11	0.035	3.15
4.	Industrial Waste	2.86	2.92	2.88	0.028	0.98

* Average of three determinations

Comparison

UV-Vis spectrophotometric method was used to compare the results obtained by DPP. The comparative data are included in Table-5.

Table – Comparison of results between DPP and UV-Vis spectrophotometry

S. No.	Sample	ClO ⁻ Conc.(µg/ml)*	
		DPP	UV –vis.
1.	Tap Water	0.64	0.61
2.	Underground Water	0.83	0.83
3.	Common Nala	1.11	1.08
4.	Industrial Waste	2.88	2.87

* Average of three determinations

5. Conclusion

It is difficult to determine trace levels of perchlorate by the conventional methods of estimation of halide and oxyhalides due to either by interference of major ions or sensitivity of the technique. The suggested DPP method for the determination of perchlorate is more specific, sensitive, rapid and no interference from major ions. However, other instrumental techniques are also reported for estimation of perchlorate but most of these techniques are either not sensitive enough or required complicated and expensive instrumentation. The results obtained by proposed procedure are in good agreement in terms of measurement and precision.

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Involvement of parents and teachers in promoting Higher Education

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Abstract: It no wonders that parents and teachers involvement in the school / colleges has become a major educational issue. This is an increasing concern about the quality of education. Countries are taking a greater role in monitoring and maintaining academic standards. Countries are even more watchful of the expense of public education. Govt. and private schools and colleges are concerned about continuing to provide high quality teaching and other services with dwindling resources and parents want assurance that their children will receive adequate preparation to lead rewarding adult lives.

Education: An Introduction

If you are thinking of year, plant rice If you are thinking of decade, plant trees, and if you are thing as century, educate the people.

Education is the key to get our goals in superior way. Higher education is becoming a major driver of economic competitiveness in an increasingly knowledge-driven global economy. The imperative for countries to improve employment skills calls for quality teaching within educational institutions. National and transnational debates like the Bologna Process, direct state regulations or incentives, competition among private and state-owned institutions all prompt institutions to put quality teaching on their agenda. Moreover, national quality assurance agencies push for reflection on the subject, even if their influence is controversial.

Higher Education: The Present Scenario

“The higher education is walk towards perfection” Said **Swami Vivekanand**. The word perfection is significant it does not mean “Jake of all but it means master of all. The process of education is like cutting and shaping of diamonds.

As higher education systems grow and diversify, society is increasingly concerned about the quality of programmes. Much attention is given to public assessments and international rankings of higher education institutions. However, these comparisons tend to overemphasize research, using research performance as a yardstick of institutional value. If these processes fail to address the quality of teaching, it is in part because measuring teaching quality is challenging.

According to the India Economy Review, an academic revolution has taken place in higher education particularly in the past half century marked by a paradigm shift in scope and opportunity. Over the years higher education system has become an enterprise having much of business orientation with all its exposure to fierce competition at different levels of stakeholders. Indian education system considered as one of the largest of its kind in the world also faces/encounters enormous challenges in the new millennium. These challenges are diversified and manifold stretching from contemporary curriculum development, quality assurance and accreditation and ethical value

propositions to policy planning and governance. In a technology driven society knowledge rewrites the fate of a nation and so does higher education. One of the major reasons for India's performance for being not that encouraging was due to suboptimal investment on higher education in the recent past. With unprecedented growth of knowledge typically in the area of information and communication followed by globalization shrinking the world into a global village, competitiveness has become a decisive force of growth. This necessitates massive investment on higher education so that availability of internationally acceptable highly skilled manpower can be ensured. But, this drive for internationalization of higher education is a highly ticklish and delicate move and should not be accomplished at the cost of identity of the nation as rightly quoted "Internationalization of higher education is one of the ways a country responds to the impact of globalization yet, at the same time respects the individuality of the nation (Knight and deWit, 1997)". As a part of India's integration into the world economy the role played by potential foreign participants need a special mention. The impact of potential entrants on Indian higher education system can be felt in most of the functional areas like access, equity and quality.

Quality Education

Quality education means that the majority of the students, if not all, is able to meet the expectation of the "Minimum Level of Learning". It means stimulating creative thinking, developing problem-solving skills and life skills and laying emphasis on application of knowledge. Quality Education refers to the education that makes the person separate from a large group which

Role of Parents

"*Mother is the first teacher of a child*". Charity begins at home; the seed of education must be initiated at parental home. First role model of a child is his parents. Child would watch their behavior their dealing with others their virtues and vices. Out of home is the street or area in which the child resides. Man is known by company he keeps, that scenario is exactly applicable the child growth in the society he belongs.

The first and foremost thing is to recognize that we cannot leave everything to the teachers as we have been doing for so long. If we have to make major headways, we have to start involving ourselves more deeply into the education of our children to prove us as a real guardian. Equally importantly, we have to start thinking in terms of enthusiastic, highly motivated and more importantly, highly competent teachers and head masters.

Parents are the number one motivating factor for most students who decide to attend to college. That's why it is so important that teachers and counselors enlist the help of a student's parent to motivate and help plan for his or her college education. Parents can discuss with their child regarding his/her future perspective and the options available to get them.

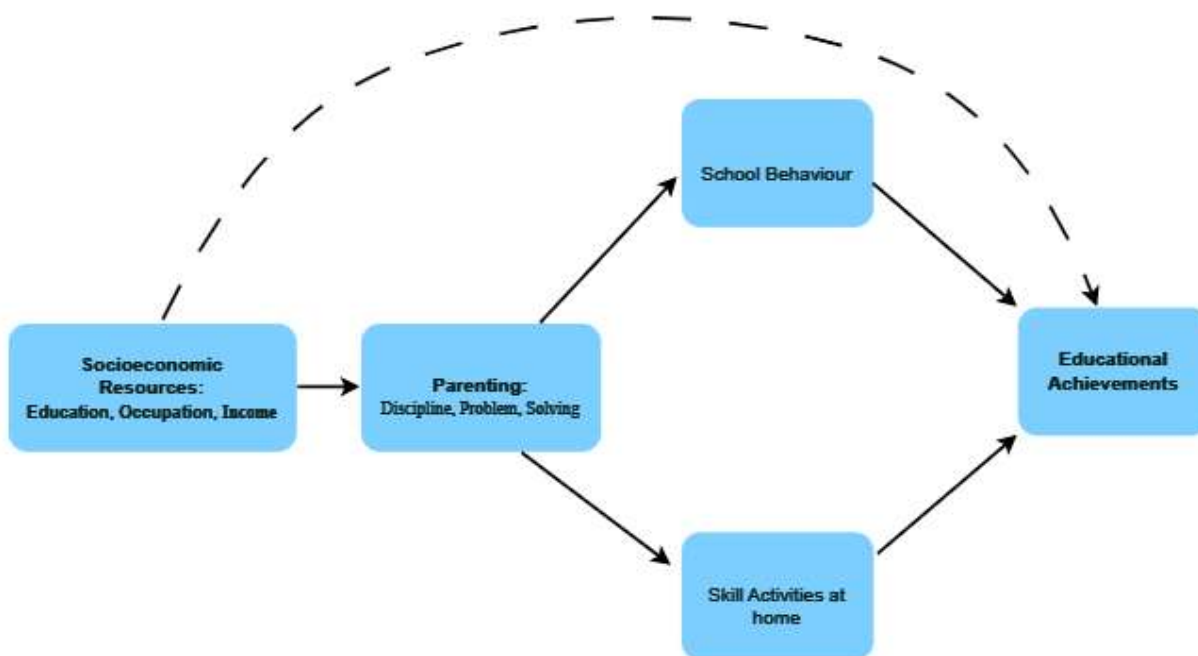
- Discuss higher education plans during teacher/parent conferences.
- Meet with counselors
- Acquire updated information regarding latest trends and options
- Support teachers to guide/control student's and his/her activities
- Encourage student to get opportunity by getting enroll with the course if he/she is feeling hesitation

Role of Teacher

The most successful people often credit their success in part to having had good mentors and role models. The teacher therefore must aim at not imparting formal education or conventional method of education child but impart knowledge so as to enable the child when it grows to stand up to challenges of life to make right choices and leave value based life thru following all pursuits namely socio economics and religious. If the child enters the school he would expect more from teachers to unfold treasures of knowledge which may make him free from bondage of life.

A teacher role as college mentor and role model can't be overestimated. A teacher can help motivate their students by:

- Working one-on-one to motivate students toward higher education.
- Discussing career goals with students
- Exploring personal goals and interests with students.
- Bringing former students who are in college to class to discuss their experiences.
- Organizing group field trips to college campuses and college fairs.
- Inviting admissions representations to school to discuss their program



Parenting practices as mediators of educational achievement Ref: (De Garmo et al, 1999, p.1233)

How teachers can improve quality

Teachers are the important persons because they play the role to direct the student for better career options in the form of higher education. But, it is also necessary for the teachers to improve the quality of teaching so that they can deliver better knowledge to their students. That will be treated as quality Education. There are three important things to improve quality of education -

- Quality Awareness and Self Evaluation
- Professional Freedom
- Professional Ethics

Quality awareness and self-evaluation

It is responsibility of every teacher to improve the quality of own teaching, critically examine the methods used and looking for alternative ways of teaching. To create an increased “quality awareness” among teachers and help teachers to improve their teaching methodology and skills may be of crucial importance to improve quality in education. One major way of doing this is to systematically evaluate the own teaching and its results. Evaluation is a general term used to describe any activity where the quality of provision is the subject of systematic study. There are different ways to organise the evaluation process in education in various countries. In some countries the main focus seems to be to evaluate the whole educational system, while in other countries the emphasis seems to be to evaluate individual schools or even individuals. There are several risks in relation to present developments in the area of evaluation. One main risk is that evaluation will be focused too much on easily measurable school achievement, without taking into consideration the complexity of the reality in schools. In relation to this, there is also a risk that teachers will be sidestepped in the evaluation process and made only objects of the process. In order to make evaluation a tool which teachers can use to improve the quality of education there is a need to find and highlight

alternative methods for evaluation which allow for the consideration of the complexity of the school environment and which give teachers a possibility to be part of the process. One concept that is often used is school-based evaluation, meaning a process by which teachers discuss their own school as a group of professionals in such a way as to improve the quality of education.

Professional freedom

The professional freedom of the teacher is of crucial importance in developing quality in education. Professional freedom does not mean that the teacher can do whatever he or she likes, but that the teacher, who knows the students, is the person best equipped to decide which methods to use in order to create an optimal learning situation. Professional and academic freedom for teachers is also of crucial importance in achieving teaching that is independent of any political, economic, ideological or religious influence, in order to preserve young peoples' right to and democratic exercise of critical creativity. There has to be a general thrust in the creativity of the teacher. How the teaching is done in the classroom should never be prescribed by persons outside the classroom reality. This does not imply that authorities should not suggest new teaching methods through in-service training, professional development and other means. For teachers to be given different approaches and models for their teaching is important and necessary, but it must never turn into a process of dictating which methods to use.

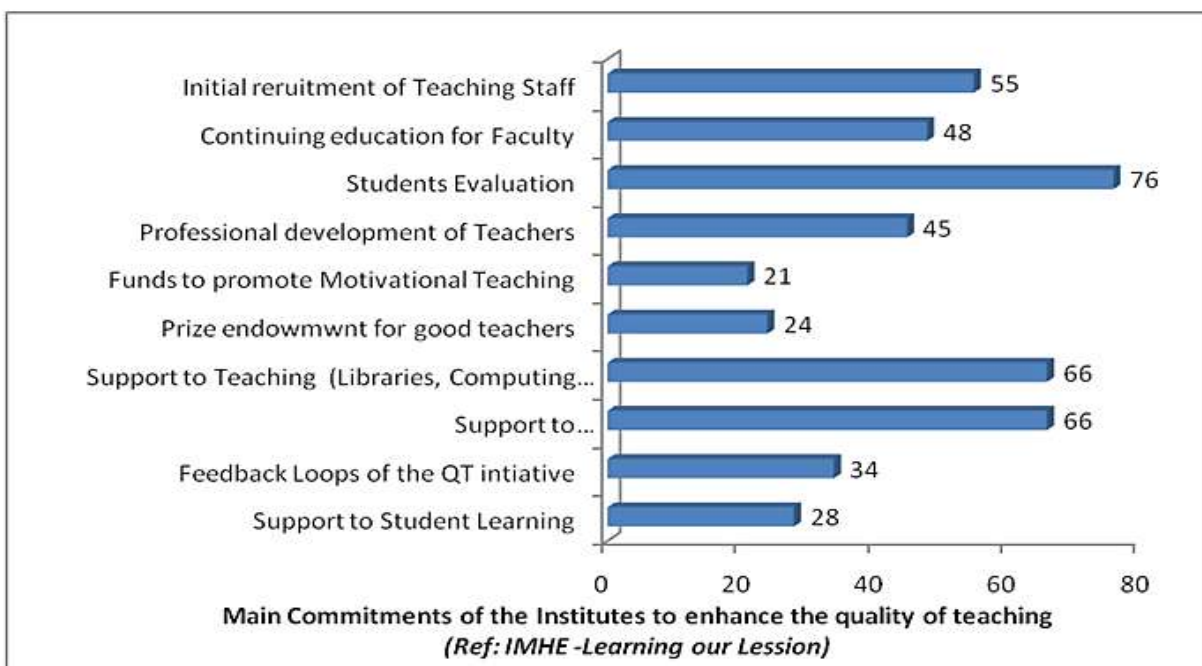
Professional ethics

Another important issue is the professional ethics of teachers. Teaching is becoming a more and more complex task. Teachers meet a large number of children and young persons from different backgrounds. In many education systems teachers have also been given more and more responsibilities. All these developments underline the questions related to the responsibilities and duties of teachers. This has also been reflected in a growing discussion on professional ethics among teachers. In this context it is of special importance to relate the professional ethics of teachers to the Convention of the Right of the Child. It is important that the teaching profession through its organizations discuss and clarify how the provisions of the Convention should be incorporated into the ethics and professional standards of the teaching profession. For example, what does it mean to take full account of the child's best interest in all actions concerning the child, to protect the child from interference with privacy, to protect the child from maltreatment, to protect the child from drug abuse or to protect the child from sexual exploitation.

Another issue related to the professional ethics of teachers, which have been increasingly discussed, is corruption. There is a need to increase the awareness about corruption among teachers, head teachers, principals and other employees in the education sector. Teachers have to reflect on what could be regarded as a corrupt behaviour and see that such behaviours are abandoned in the teaching profession. In order to eliminate corruption there is a need to find measures to monitor critical processes and to make communication and administration in general more transparent.

Role of Institutions

Away from home it is the school or institution which has to provide moral and general knowledge to the students and make them to practice moral codes with tint of education so that child become aware of life and get ready to get on with it bravely without being depressed. Institutes are committed to improve the level of quality education. There are some most important actions that the institutes are taking to improve the quality education.



Conclusion

Quality Education is not only a responsibility of the teachers and parents. There must be a public responsibility to ensure all citizens the right to receive quality education. Such an important matter cannot be left to individuals, private companies or to the market. To create quality education, it is necessary to establish a good practice and to meet demands at all levels (the classroom, the school/institution and the educational system in which classrooms and schools/institutions exist). It is not possible in the long run to establish good teaching in the classroom if schools and the educational system as a whole are functioning badly. Even if individual teachers are able to establish good classroom practice in spite of badly functioning schools/institutions and non-supportive educational authorities, this can only last for short periods.

Dr. S. Radhakrishnan the then president of India had stated in the year 1962 at time of inauguration Jai Narain Vyas University Jodhpur. - "it is my hope and it is my earnest desire that the young people who will be educated in this university, will go forward not as prisoners of past, but as pilgrims of the future; will develop in them a spirit of dedication, a spirit of renunciation, a spirit of whole heartedness single minded concentration on the advancement of knowledge whether in science or in humanities....." this should be the aim of our higher education to prepare such pilgrims of the future.

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RELATION BETWEEN PHYSICO-CHEMICAL PARAMETER AND BACTERIAL STATUS OF BICHERLI POND BEAWAR, RAJASTHAN.

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Abstract

To assess the water quality status of Bicherli pond (Beawar), bacteriological study was carried out during February 2012 to January 2014. Physico-chemical parameters that directly or indirectly affect the water quality were also determined. Correlation of coefficient 'r' was calculated. The study has revealed that coliform bacteria increased upto $2400/100\text{ml} \times 10^2$ in the monsoon and decreased ($110/100\text{ml} \times 10^2$) in the winter. Seasonal variations in bacterial density were recorded with maximum density in monsoon and minimum density in winter. The result of analysis show that the water quality has deteriorated and water become unsuitable for human use.

Keywords Physico-chemical characteristics, coliform, bacteria, Correlation.

Introduction

The bacteriological examination of water has a special significance in pollution studies, as it is a direct measurement of deleterious effects of pollution on human health. The presence of coliform in water sample indicated the possibility of the presence of pathogenic forms such as *Salmonella*, *Shingella*, *Enterobacteria* and some strains of *Klebsiella*. In the present investigation, total coliform bacteria present in Bicherli pond during February 2012 to January 2014 has been estimated. Theieremann (1927) observed that the greatest need in limnological studies is bacteriological information, which has immense applications in productivity study.

Study Area

Bicherli pond (Fig 1) is an artificial pond of shallow fresh water, situated above the Municipal garden and located in the eastern corner of Beawar city (longitude $74^{\circ}22'$ and $74^{\circ}30'E$ and latitude $26^{\circ}9'$ and $26^{\circ}30'N$) on southern part of National Highway No.8, 53 Km from Ajmer. The pond receives an average rainfall of 434 mm annually (Table 1). The water of this pond is being used for washing and irrigation purposes by people and drinking and bathing purposes by cattle. This pond is also used as a dumping ground for domestic effluents and sewage by people residing in residential area near the pond.

Four sampling sites (1 to 4: Figure 1) of the pond were selected for regular monitoring. Water sample were collected at monthly intervals from these sites for a period of two year February 2012 and January 2014. For coliform bacteria enumeration water samples were collected from the selected sites in small (60 ml) sterilized glass bottles and carried to laboratory in an icebox.

The methods for analysis of physico-chemical parameters were followed according to Trivedi and Goel (1986) and APHA (1995). The MPN (Most Probable Number) values of total coliforms (TC) and faecal coliforms (FC) were determined by Multiple tube fermentation technique (APHA, 1995) comprising of presumptive phase for coliform group of bacteria.

Bacterial density was calculated as per MPN table. The MPN index was computed using the following

$$\text{MPN}/100\text{ml} = \frac{\text{MPN table value} \times 100}{\text{Volume of sample in ml}}$$

Starting dilution

Correlation coefficient 'r' was calculated directly by using Pentium machine (Computer MS- office –2000). Significance at 5% level using student t- test was determined.

Observation

The range of physico-chemical parameters of water is shown in Table 2. MPN of total coliforms ranged from 110 to 1600 / 100 ml X 10² at the site I, 140 to 2400 / 100 ml X 10² at the site II, 110 to 1600 / 100 ml X 10² at the site III and 180 to 2400 / 100 ml X 10² at the site IV (Table 3 and Fig 2). Seasonal fluctuations of bacterial density were observed in all the water samples with maximum density in monsoon and minimum density in winter.

Faecal coliform showed similar trend of fluctuations as total coliforms MPN of faecal coliform ranged from 8 to 140 / 100 ml X 10² at site I, 7 to 130 / 100 ml X 10² at site II, 9 to 140 / 100 ml X 10² at site III and 11 to 180 / 100 ml X 10² at site IV (Table 4 and Fig 3).

The correlation coefficient values between various physico-chemical parameters and bacterial density are given in Table 5 and table shows significant positive relationship with COD (0.506), Nitrate Nitrogen (0.660), Phosphates (0.820). Faecal coliforms indicated negative significant relationship with Transparency (-0.816), TDS (-0.609) and Total alkalinity (-0.759).

Discussion

Bacteriological analysis determines the water quality status. Increase in the bacterial density in pond water during summers could be attributed to high water temperature. Bacteria can survive and reproduce more successfully under warm conditions. Similar observations have been recorded by Hendricks and Morrison (1967) and Chatterjee and Raziuddin (2001). Positive correlation between bacterial density and water temperature was recorded. Verma and Paul (1996) also recorded a positive correlation.

In the present investigation, pH, DO, Chloride, Total hardness and Total alkalinity show inverse correlation with the bacterial population. Similar observation were also reported by Bligamy *et al.* (1986) while studying impact of abiotic factors on bacterial population of river Ganga at Bhagalpur concluded that the pH, DO, Chloride, Total hardness and Total alkalinity of water had inverse relationship with the bacterial population. The correlation coefficient determination greatly facilitates the tasks of rapid monitoring of water quality parameters and control of water pollution.

The luxurious growth of total coliforms during monsoon (August, 2014 and 2013) could be the out come of the influx of washed organic matter in Bicherli pond from the surrounding areas. Collins (1963) has suggested that the rains bring in particulate matter, which serve as sites of absorption for bacteria thereby increasing the bacterial load. The lower values of total coliforms were recorded during winter season (January 2000 and 2001). These finding are in accordance with the work of Verma and Paul (1995), Latif *et al.* (1997,) Chatterjee and Raziuddin (2001) and Baghel *et al.* (2005).

High faecal coliform density in water samples indicated faecal contamination of the pond water. The highest faecal coliform density at all sites in August (1999 and 2000) could be attributed to the monsoon rainwater. The influx of fresh water carrying faecal matter into the pond brought about maximum level of faecal coliform density in the water. Similar observations also recorded by Verma and Paul (1996) and Chatterjee and Raziuddin (2001).

The bacterial population is invariably higher in nutrient rich or eutrophic water. Further nitrates and phosphates are brought in the pond through natural run off and on this basis, the higher bacterial population on surface water of Bicherli pond is also explainable. Increase in bacterial population due to nitrates and phosphates were also observed by Hephher (1958), Rohlich (1964), Lonsane *et al.* (1967), Coleman (1974) Ray and Hill (1978), Aleem (1990), Mwachiro and Durve (1997) and Singh (2005).

For inland surface water when used as raw water for public supplies the tolerance limits for MPN of coliform should not exceed 5000/100 ml (Trivedi and Goel, 1986). The present investigation highlights severe deterioration of water quality of Bicherli pond. MPN of coliforms

was very high indicating poor quality of water. The quality of water may be improved by removing the bacteria from disinfections and filtration methods. Filtration alone may not be completely effective, but can improve the performance of disinfectants by removing sediment that can shelter the bacteria.

Table 1. Morphometric Features of Bicherli Pond.

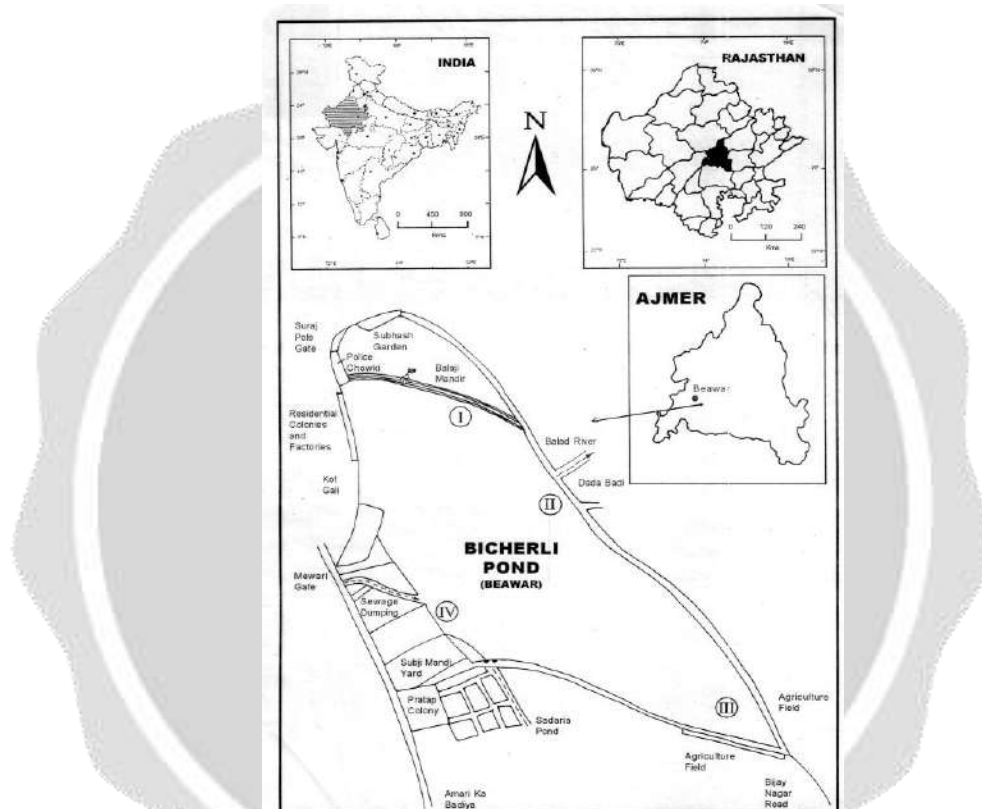
Morphometric	Features
1	Longitude 74 ⁰ 22' and 74 ⁰ 30'E
2	Latitude 26 ⁰ 9' and 26 ⁰ 30'N
3	Accesses 53 km from Ajmer
4	Altitude 486 meters
5	Average rainfall 434 mm
6	Mean depth 3.2 meters
7	Water spread 21.35 hectares
8	Gross catchment 8.98 sq km
9	Net catchment 5.99 sq km
10	Storage capacity 6.87 million cubic feet
11	Tehsil Beawar
12	District Ajmer

Table 2. Ranges of Physico-chemical parameters at Bicherli pond from February 2012 to January 2014.

Parameters	Values
Water Temperature	17.1 to 33.8 °C
pH	8.36 to 9.9
Transparency	15.2 to 30.2 cm
TDS	415 to 898 mgL ⁻¹
Conductivity	802 to 1327 umhos/cm
DO	6.46 to 10.62 mgL ⁻¹
BOD	60.6 to 173.5 mgL ⁻¹
COD	96.7 to 222.7 mgL ⁻¹
Total Hardness	80 to 267 mgL ⁻¹
Nitrates	0.00 to 0.242
Phosphates	13.2 to 38.7 mgL ⁻¹
Chloride	41.3 to 410 mgL ⁻¹

Fluoride	0.13 to 0.54 mgL ⁻¹
Total alkalinity	158.7 to 395 mgL ⁻¹
F CO ₂	nil to 6.21 mgL ⁻¹

Fig. 1. Study Area



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Table 3. Monthly Variations in Total Coliforms (MPN/100ml X10²) of Bicherli Pond.

Months	Sites				Overall Mean	Standard Deviation
	I	II	III	IV		
February 2012	180	170	170	240	190	33.67
March	210	210	180	280	222.5	41.93
April	210	280	240	350	287.5	45.73
May	280	350	280	540	362.5	122.85
June	350	350	280	540	380	111.65
July	920	920	540	1600	995	441.32

August	1600	1600	1600	2300	1800	400.00
September	920	2400	1600	1600	1630	605.20
October	920	920	540	920	825	190.00
November	540	540	350	540	492.5	95.00
December	280	350	240	350	305	54.47
January2013	110	140	130	220	150	48.30
February	170	180	140	240	182.5	41.93
March	270	240	180	280	235	41.23
April	280	280	280	350	297.5	35.00
May	280	350	280	350	315	40.41
June	350	540	350	540	435	109.70
July	920	920	540	920	825	190.00
August	1600	2400	1600	2400	2000	451.88
September	1600	2400	920	1600	1630	605.20
October	920	1600	920	540	995	441.32
November	350	920	350	540	540	268.70
December	280	350	240	350	305	54.47
January2014	140	170	110	180	150	31.62
Total Mean	572.08	774.17	502.50	744.58	648.33	

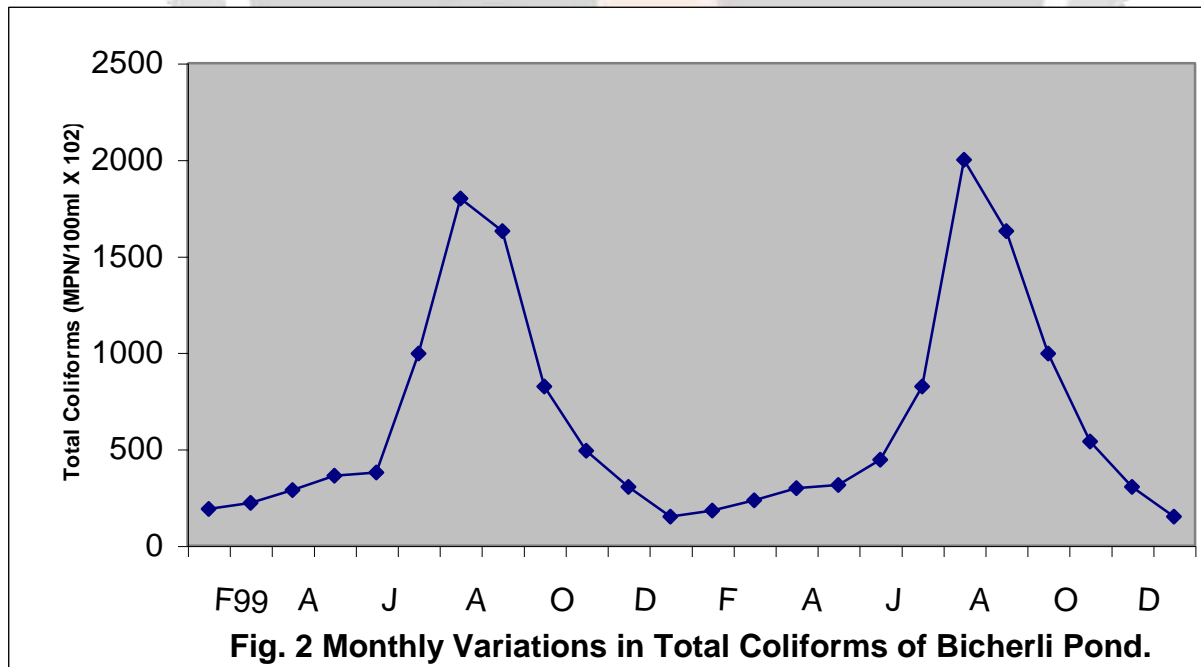


Table4 :Monthly variations in Faecal Coliforms (MPN/100mlX10²) of Bicherli Pond.

Months	Sites				Overall Mean	Standard Deviation
	I	II	III	IV		
February 2012	14	12	13	17	14	2.16
March	21	22	21	24	22	1.41
April	14	17	13	17	15.25	2.06
May	26	27	22	26	25.25	2.22
June	13	14	13	17	14.25	1.89
July	46	63	49	70	57	11.40
August	110	130	140	170	137.5	25.00
September	79	70	63	94	76.5	13.38
October	33	31	33	34	32.75	1.26
November	22	26	23	26	24.25	2.06
December	17	14	13	17	15.25	2.06
January 2013	8	7	9	11	8.75	1.71
February	13	13	11	14	12.75	1.26
March	14	17	13	21	16.25	3.59
April	21	26	21	22	22.5	2.38
May	22	26	26	27	25.25	2.22
June	14	17	13	17	15.25	2.06
July	31	33	31	34	32.25	1.50
August	140	130	110	180	140	29.44
September	63	94	69	70	74	13.69
October	34	33	31	34	33	1.41
Noveber	26	27	26	33	28	3.37
December	17	14	14	21	16.5	3.32
January2013	11	11	9	14	11.25	2.06
Total Mean	33.71	36.42	32.75	42.08	36.24	

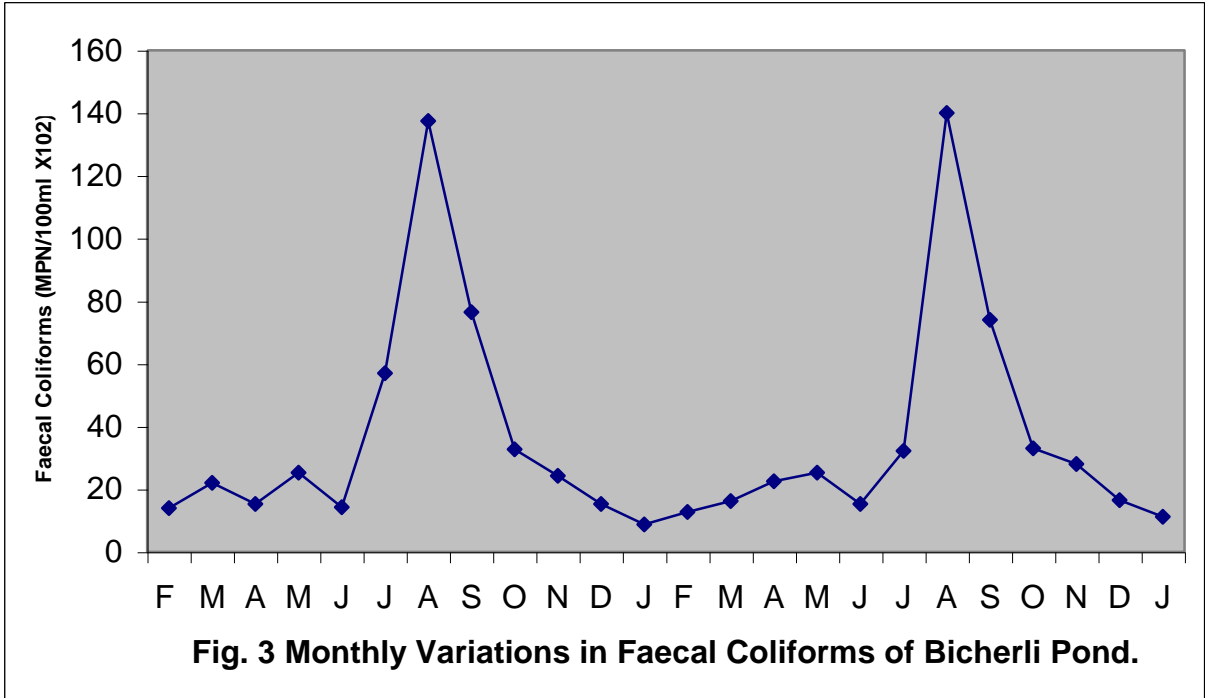


Table 5. Correlation Coefficient Between Physico-Chemical Parameters and Total and faecal Coliforms Bacteria.

Parameters	Total Coliforms	Faecal Coliforms
Water temperature	0.35	0.282
pH	-0.109	-0.079*
Transparency	-0.924*	-0.816*
Total dissolved solids	-0.474	-0.609*
Conductivity	-0.326	-0.264
Dissolved Oxygen	-0.031	-0.068
BOD	0.362	0.293
COD	0.506*	0.417
Total hardness	0.166	-0.57*
Nitrate-Nitrogen	0.66	0.552*
Phosphates	0.82*	0.712*
Chloride	-0.598*	-0.493

Fluoride	-0.491	-0.259
Total alkalinity	-0.743*	-0.759*
Free carbon dioxide	0.255	0.299



Basic Structure of the Constitution: Development and Challenges to India's Democracy

Dr. Surbhi Gupta

Abstract

The introduction of the basic structure doctrine by the Supreme Court of India has been hailed as a constitutional revolution that encapsulated the very soul of the Constitution of India. It has been seen that one of the primary means of democratic subversion is constitutional amendment. Therefore it is important to include substantive constraints on the amending power as a hedge against the polity's uncertain commitment to the rule of law. Although the Indian Constitution has no such provision, its Supreme Court has taken the controversial position that the Constitution has an unalterable "basic structure". Under the basic structure doctrine, as it has become known, constitutional amendments that purport to abrogate basic norms of constitutional governance are void. In India today, the doctrine is evolving from a substantive limit on the amending power into a restriction on antidemocratic conduct, broadly understood.

My paper will focus on whether the 'basic structure doctrine' provides a coherent theory by which constitutional arbiters can address some of the pathologies that are common to postauthoritarian societies and dominant-party democracies. I will also analyse how this doctrine has shielded constitution from being misused for vested interests.

Key Words: Basic Structure, Constitution, Judiciary, Amendment, Arbitrary

Introduction

The Indian political project was the inauguration of the decolonizing movement, it was a break from the past in the attempt to unlock the country from the waiting room of colonial historicism. The constitutional text was believed to be a means to achieve a social revolution. Therefore, the process of amending the Constitution had to be a very flexible one. Whereas the American debate was between Madison's reverence for the past and Jefferson's point that wisdom is not the monopoly of a single generation, B. R. Ambedkar – who was the chief draftsman in the Indian Constituent Assembly – was very clearly citing Jefferson in favour of a flexible amendment process.

In this sense, the constitutional text is a means to an end of a social revolution. However powerful the state can be, India was working with a dynamic concept, a dynamic understanding of constituent power. Conventionally it is said that India picked up the "basic structure" doctrine through a lecture given in Banaras Hindu University by Dieter Conrad, who was a German academic working both in Heidelberg and South Asia. As already mentioned, the German constitutional model reflects an anxiety with sovereignty: among other things, the text includes the so-called "eternity clause", whereby certain articles, such as on the principle of dignity and the federal arrangements, are unamendable. In this regard, Conrad, borrowing from Carl Schmitt and the French thinker Maurice Hauriou, was even arguing that there are certain implicit limits to the amending power. All this certainly came to India from the German model, but the two Constitutions are set apart from each other because of the Indian political culture in favour of a dynamic constituent power.

The process of amending the Indian Constitution was a rather simple one, whereby for most of the text a 2/3 majority of both Houses of Parliament would be adequate to amend the Constitution, while for certain other provisions half of the state assemblies were additionally required for the amendment to be ratified.

Since the Constitution of India came into force in 1950, there had been a plethora of amendments – there were already 23 by 1971. Most of these amendments were passed between 1959 and 1967, a period in which there was not only one-party rule – with the dominance of the Congress Party – but also more than a 2/3 majority for the Party which lasted from 1952 to 1967. In the ensuing years, up until 1971, the loss of that majority made the process of amending the Constitution more difficult. Immediately after the landmark victory of Congress in elections, the ruling party brought about three very radical constitutional amendments – 24, 25, and 26. In fact, in the years from 1971 to 1977, which was the given term of the Lok Sabha (the lower house of the Indian Parliament), as many as 19 constitutional amendments were approved. All this was a real threat to the sanctity

of the constitutional text. These were not just routine amendments, nor amendments regarding specific issues of implementation. This was a radical overhaul of the Constitution's promise. Therefore, KesavanandaBharati became very important.

The KesavanandaBharati judgement is one of the most important judgements in the history of Indian and even global constitutionalism. It was unprecedented: it was decided by a 13-judge constitutional bench of the Supreme Court. This is one of the longest judgments in the history of Indian constitutionalism, thereby making it one of the longest in global constitutionalism as well. The judgment was decided by a majority of 7 to 6, it has travelled far and wide, and it is now regarded as a basic postulate in global constitutionalism. In KesavanandaBharati vs State of Kerala case (1973), the Supreme Court ruled that the Parliament could amend any part of the Constitution so long as it did not alter or amend the basic structure or essential features of the Constitution. However, the court did not define the term 'basic structure', and only listed a few principles — federalism, secularism, democracy — as being its part. The Constitution of India does not define the basic structure, it is a judicial innovation.

Before the KesavanandaBharati judgement, three other very important judgments were given: Sankari Prasad, Sajjan Singh and Golak Nath. Golak Nath was an important signpost. Afterwards, the process of amending the Constitution became much more difficult and the Court even argued that fundamental rights were unamenable.

Basic Structure of the Constitution: Need of the Hour

Some constitutional amendments are not amendments at all. They are self-conscious efforts to repudiate the essential characteristics of the constitution and to destroy its foundations. They dismantle the basic structure of the constitution while at the same time building a new foundation rooted in principles contrary to the old. Changes on this scale are not properly called constitutional amendments. They are better understood as constitutional dismemberments. A constitutional dismemberment is incompatible with the existing framework of the constitution. It intends deliberately to disassemble one or more of the constitution's elemental parts by altering a fundamental right, an important structural design, or a core aspect of the identity of the constitution. To use a rough shorthand, the purpose and effect of a constitutional dismemberment are the same: to unmake the constitution. The most important feature of an amendment is its scope, which at all times must not exceed the boundaries of the existing constitution. This was the underlying reason behind bringing the basic structure doctrine.

Constitutions sometimes codify unamendable rules. These unamendable rules are resistant to legal forms of change. They cannot be altered using the codified rules of amendment. Nor can they be repealed. The only properly legal way to change them is to rewrite the constitution. Unamendability can arise in two other forms. First, interpretive unamendability emerges from a judicial decision or an unwritten constitutional norm rooted in the dialogic interactions of political actors. Examples include the basic structure doctrine in India and the substitution of the constitution doctrine in Colombia. Second, constructive unamendability arises as a result of the practical impossibility of gathering the majorities required to amend a rule despite that rule being freely amendable in theory.

The basic structure doctrine shields certain provisions of India's Constitution from amendment. The court took its inspiration from Professor Dietrich Conrad's lecture on limiting the amending powers of the legislature (implied limitation theory). The doctrine allows parts of the Constitution to be permanently beyond the reach of the amending powers of the national legislature, thereby keeping it superior even to the will of the general populace, which Conrad describes as being ultimately responsible for the validity of the document. The doctrine has been used to shield Articles from amendment; for example, in *I.R. Coelho v. State of T.N.*, a case involving the power of the judiciary to review constitutional amendments dealing with agrarian reform, Articles 14, 19 and 21 were shielded. However, it has also been applied to discover the intent of the constitution makers in framing the constitutional provisions, as in the case of *Indira Gandhi v. Raj Narain*, where the legislature passed an amendment blocking the judiciary from deciding on matters relating to national elections. The court decided that the legislature cannot limit the functions of the judiciary without violating the principle of separation of powers, which was considered to be important to the framers of the Constitution. There remains a general consensus among constitutional scholars that the doctrine is a necessary moral good. The legal community believes that the country was unrecognisably transformed after the Supreme Court introduced the doctrine. This judgement introduced what is known as the "basic structure" doctrine which is also often referred to as the doctrine of "unconstitutional constitutional amendments". Since then, the doctrine has travelled to many other jurisdictions and is seen by numerous defenders of liberal constitutionalism as a possible bulwark against rule of law or democratic backsliding.

Issues and Challenges

The main difficulty with the basic structure doctrine is the vagueness and elusiveness of the basic and essential features of the Constitution. This is best illustrated by judicial attempts to identify the parts of the constitution that are 'basic'. In *Kesavananda Bharti v. State of Kerala*, each of the judges on the bench had their own conclusion. According to Sikri, J, what were essential included the supremacy of the Constitution, secularism and federalism. None of these items made it to the list prepared by Shelat and Grover, JJ, who identified the Directive Principles of State Policy and the maintenance of the unity and integrity of the State. Disagreeing with the rest of the bench, Hegde and Mukherjee, JJ, prioritised individual rights.

When the highest law of a country is not defined, persons in authority can manufacture definitions that can serve their political ambitions. It is, thus, dangerous to leave the meaning of 'basic structure' open-ended. The Supreme Court acknowledged in *J&K National Panthers Party v. Union of India* that defining the basic structure would be dangerous as values of the citizenry change over time. Professor Conrad advocated for the basic structure doctrine because he wanted some values to be written in stone no matter how many times other values change. Not defining the concept defeats the purpose of having a basic structure. In any case, having a defined basic structure is also precarious because it steals the power of the citizenry to determine the provisions of their constitution.

When it comes to actually defining the basic structure, the court in *Glanrock Estate (P) Ltd. v. State of T.N.* claimed that some fundamental rights are not the basic structure while all of the basic structure are some fundamental rights. In its own words, "Violation of fundamental rights, may not, therefore, ipso facto, violate the basic structure doctrine, but a law which violates the basic structure invariably violates some of the rights guaranteed under Part III, but not vice versa." This argument begs the question of what the difference is between the 'fundamental' and the 'basic'. It is a tautological mishap to say that fundamental rights are those that are inviolable (as held in innumerable cases including *Sajjan Singh*), but violable (a) when outside the basic structure, and (b) when bound by reasonable restrictions despite being within the basic structure. In the case of *Raghunathrao Ganpatrao v. Union of India*, the court hiccupped its way into defining the basic structure as the essential features that need not be 'integral'. "Basic but not fundamental" and "essential but not integral" are tricky guidelines for values meant to be the fundamental law of a society.

Conclusion

The basic structure doctrine has left a successful legacy. Indeed, the "basic structure" doctrine has addressed the ease of amendments and the misuse of the amendment powers has been adequately dealt with. One cannot think of a single constitutional amendment passed after *Kesavananda Bharati* which would seem perverse. Of course, there were attempts in this sense. Perhaps the most relevant case refers to the 42nd amendment in 1976, which tried to expressly address and then undo the "basic structure" doctrine: it tried to change 59 provisions – including Article 368 – but was struck down. The doctrine is an extreme solution to an extreme problem. Therefore, it should be deployed very carefully – as if it were a nuclear weapon.

Unfortunately, the Court has been very inconsistent in its use of the doctrine: Initially, it should have been used only for constitutional amendments but, over the years, it has been deployed also for questioning the constitutionality of statutes. In my view, this is both unnecessary and dangerous. It is unnecessary because I can hardly think of any instances where a provision would be constitutional with regard to the text of the Constitution but would require the "basic structure" doctrine to strike it down. Also, the basic doctrine structure is needed when there is no other basis to strike down amendments whereas there are other grounds available for statutes. It is dangerous because of the judicial indiscipline present in India, whereby the judiciary is not sticking to basic norms of functioning by relying upon judicial minimalism. This is partly a result of the Indian judicial culture itself.

If one compares the quote from Ambedkar with Madison's famous quotes "enlightened statesmen will not always be at the helm" and "if men were angels, no government would be necessary", we get to an axiomatic idea of checks and balances. This was not taken as seriously as it should have in the Indian constitutional design.

There was a certain faith in the elected government being able to carry out policies in a sort of bona fide manner with good faith. This is perhaps an instance of what the historian Francis G. Hutchins called the “illusion of permanence” referring to the late 19th century when the British thought that their empire would never end. The trajectory of the basic structure doctrine confirms that it evolves and gets consolidated when the representative institutions fail to ‘maintain democratic essentials’ of the country. Hence, the importance of the doctrine cannot be so easily dismissed; in fact, it has gained credibility to the extent of being part and parcel of constitutional democracy in India.



Rethinking Educator Learning to Unlock the Future of Learning

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ABSTRACT

Over the beyond 100 years, frameworks of free, state funded training have been strong motors of progress, pushing social orders to acknowledge more noteworthy potential socially and monetarily and socially. We are at a second where training is again expected to assist with tending to the huge and complex difficulties confronting our individual countries and the planet. Teachers are a basic piece of designing that change in outlook. There is the need to in a general sense reevaluate the construction of how we train and backing teachers, which can open their capability to be more viable problem solvers, subsequently advancing more noteworthy manageability and prosperity in understudies, among individual instructors and on the more extensive framework itself. In this section, we recount the narrative of how our arrangement of schooling is at present not working for youngsters or the greater part of the grown-ups in it; we set the setting by looking at megatrends for what's as of now influencing training; we spread out the rationale for why reevaluating how grown-ups in the framework learn is vital with an illustration of what the eventual fate of teacher learning could be. All in all, this part argues for why reexamining proficient learning has the ability to change school systems pushing ahead.

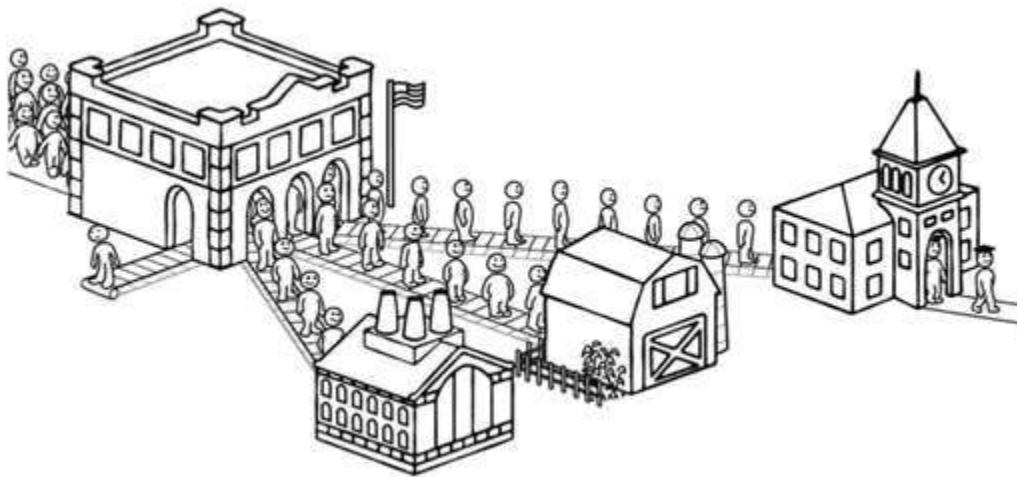
Keywords: Adult learning ,Skills and dispositions, Collaboration, Communication Creativity, Self-direction, Personalized learning ,Competency-based learning Ecosystem of learning ,Education technology

The present Model of Learning: Our Test

Our frameworks of government funded schooling were inherent an alternate period, with a bunch of clear basic goals — to sort and channel understudies to a bunch of clear results, as well as to instill them with a public personality.

Contingent upon the general public, there might have been some change, however there were clear shared characteristics across all frameworks. Those goals appeared to be legit at that point and all around, numerous frameworks had effective results. We wanted residents as a matter of some importance, bound along with a typical story — both a comprehension of a brought together history and an optimistic story for their fates. Moreover, we really wanted an arranging system as delineated in Fig. 7.1, that sent individuals to the homestead, the industrial facility and over the long haul, a developing information economy through which school was the entryway. As public economies developed, propels in transportation and broadcast communications contracted distances, and a worldwide economy arose in the last part of the 20th century that generally moved our work needs. Homestead and manufacturing plant jobs progressively moved to cheaper regions of the planet, and lower wage, less development situated positions in the retail area and so forth created as disappointing other options. The effect of these movements was intensified by essentially diminished interest for low-expertise occupations due to enhancements in

innovation. Our worldwide economy had moved, however the construction of our frameworks of instruction remained generally in salvageable shape. This bungle represented a rising issue for schooling systems across the globe.



The conveyer belt (Still taken from 2Revolutions' Future of Learning video)

Throughout the course of recent many years, worldwide approach producers have invested huge energy and monetary assets gradually tweaking our current schooling systems. This has been particularly evident in the US where these changes have not been sufficiently wide to outperform the monetary and cultural changes in progress. Today, there is an unmistakable and vocal agreement among all partners that our model of tutoring isn't really planning understudies for now, let alone for the difficulties and chances of tomorrow.

Our model of tutoring is to be sure a remnant of an obsolete framework. Yet, we have not yet created the models to which we can all say "OK." to close an accomplishment hole and set up all understudies in our developing social orders for outcome in vocations and what's to come difficulties that look for them, a profoundly unique methodology is required.

Arising Indications of Commitment

We are acquiring a more profound comprehension about the components required for schools to work all the more successfully. Research is starting to store up proof on connects to understudy outcome in college and then some. We presently have motivation to accept that students improve in conditions that go past center substance information, in which there is an emphasis on a bunch of fundamental abilities and manners connected with coordinated effort, correspondence, imagination and self-heading. School models that emphasis on these abilities and attitudes frequently yield more fruitful understudies (Dymnicki et al. 2013; Chicago Exploration Consortium 2013).

Arising work around personalization is showing some early reason for positive thinking on zeroing in on the novel requirements of every understudy (Sheet et al. 2015). While still formative and without a critical exploration base, there is a developing development of teachers in the US and globally moving toward considering the understudy a unit of examination and learning, as opposed to by partner, class or grade level groupings. Related improvements among teachers and schooling strategy in the US are pushing toward to a greater extent a capability based evaluation model, or supporting understudies to continue on when, however not until, prepared. Here the emphasis is on the capacity to exhibit information, understanding and expertise procurement in a more profound manner. This raises doubt about the pertinence of grade levels and many designs of educational systems, including time and grown-up jobs, subsequently testing the very atmosphere supporting most school models.

We contend emphatically that customized and capability based learning conditions are basic for understudies, yet that they are fundamental for instructors to encounter as a feature of their expert learning. We should generally update our frameworks of pre-administration and in-administration preparing for teachers. The two frameworks are right now demonstrated on an obsolete framework — one that is focused on individuals who run the framework, as

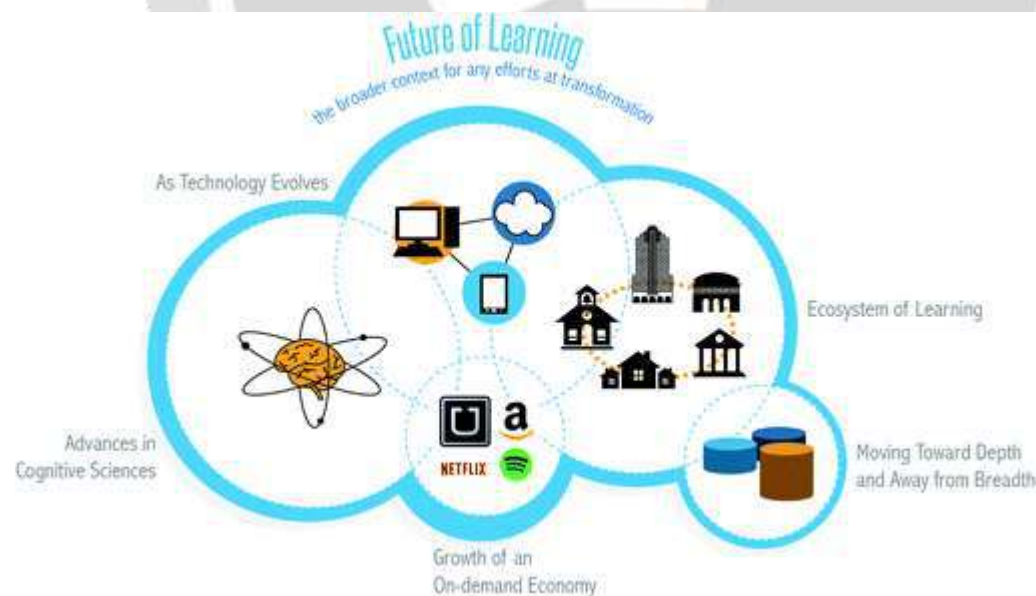
opposed to the members. This thusly treats these grown-up students solidly as opposed to separately, to a great extent overlooking a huge and developing collection of examination about the study of insight, as well as grown-up learning hypothesis. These endeavors likewise disregard a bunch of significant patterns influencing the schooling system all the more comprehensively.

As opposed to the ongoing spotlight on satisfied and teaching method solely in preparing, we really want to give an alternate sort of student experience for our instructors. This approach should work from their particular workplace, and the genuine issues they face in that specific situation, as opposed to zero in on ideas that are taken out from their everyday encounters. On the off chance that we can do that, we will make learning more important and, consequently, higher effect, taking advantage of variables that spur really learning. The work needs to meet teachers where they are as students and permit them the adaptability to draw in with content in light of their status, as opposed to in lockstep with different partners who might have various necessities or require an alternate speed. This sort of customized learning will be a superior fit for grown-up students independently. There is likewise the need to adjust credentialing to verifiable proof of moved practice. This is the manner by which it will be ability based. This approach holds huge commitment since it shows the sort of discovering that we need for understudies. Accordingly, the actual cycle, as well as the learning, can possibly be groundbreaking.

This cycle shift addresses a methodology that is more manageable and guarantees more prominent prosperity for grown-up students as members, and likewise for their understudies and the frameworks wherein they work.

Patterns Affecting All Students

Setting matters extraordinarily. Prior to diving into understanding how our teachers are right now prepared, it means quite a bit to zoom out for a more extensive viewpoint since grown-up students don't exist in a vacuum. Rather, they are fundamentally impacted by a bunch of outside patterns, which influence them as people and as a component of a developing procedure for learning. Figure 7.2 delineates a bunch of patterns molding the Fate of Learning. Better comprehension these patterns can really impact how we shape another arrangement of instructor preparing and learning.

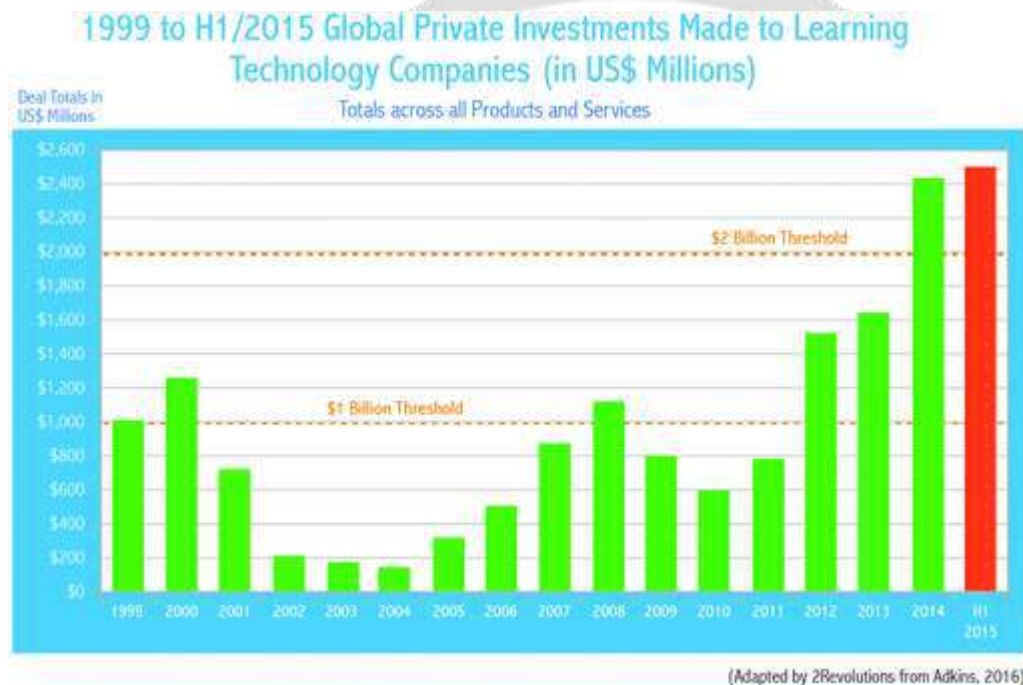


Trends shaping the future of learning

These patterns include:

As Innovation Develops: What started around the turn of the twenty-first 100 years as electronic learning (e-learning) is advancing quickly from rigorously web based figuring out how to man-made reasoning, wearables and a

sped up development toward mechanical peculiarity. While there is an unmistakable continuum, the pattern line is a huge one. On the e-learning end of the range, content is presently democratized in manners that we have never seen. We are seeing the rise of a developing measure of free and open learning content (called open instructive assets or OER), from educational program to example plans to a variety of information and abilities securing open doors, including Enormous Open Internet based Courses (MOOCS), schedules, books, and so on. While it is as yet divided, a rising number of endeavors are in progress to better taxonomize and sort out this substance. "Open web tests" are on the ascent in schools, as data is presently not the actual ware; rather, the expertise with which a student can use and definitively apply content to show further comprehension is what we progressively care about. Man-made reasoning is as yet youthful yet being utilized to find out about understudies' inclinations, propensities and examples to push opportunities for growth in view of those remarkable requirements. Critical expansions in capital interests in learning innovation organizations highlight expanded certainty and gives one more sign of the developing conspicuousness of schooling innovation. As shown in Fig. 7.3, these increments arrived at a high-water characteristic of more than \$2.6B worldwide in the main portion of 2015, becoming by more than half from only a couple of years sooner (Adkins 2016).



Private investments in educational technology increase

Which job should innovation play as a method for bettering address the issues of teachers in their expert learning? We accept that there is a valuable chance to ponder time, space and speed for teacher learning. We figure it tends to be a significant approach to arriving at these students to get to same and different substance from each other, at same or various degrees of intricacy. Instead of "educate to the center" the manner in which most expert learning happens, innovation offers the amazing chance to separate both substance and the "dose" of that substance. While innovation is an undeniably important instrument, it is in no way, shape or form the response. By and by, understanding and utilizing this pattern addresses a significant opportunity to reexamine the designs of teacher learning.

Progresses in Mental Science: We know more now than we at any point have before about how individuals learn, particularly the convergence on the physiological, the psycho-social and the effect of existing information on learning (Public Exploration Board 2000). These advances are illuminating educational program and instructional method, as well as the construction of school itself. For example, our insight into neuroscience is empowering teachers to consolidate greater development and continuous breaks to expand understudy learning. It is pushing underlying changes in schools, for example, later beginning times in a few secondary schools to represent understudy readiness; and less summer breaks since research shows the more drawn out understudies are away from school, the more they neglect. Versatile programming, for example, online substance, learning games and online

mental coaching instruments have arisen. This permits us to reexamine how content is conveyed inside learning models and the job of grown-ups in those models, all structure from a more profound comprehension of how various students can draw in with content and emotionally supportive networks.

Are there potential open doors where these patterns can assist teachers themselves with advancing in an unexpected way? We accept that there are numerous ways of utilizing versatile programming and different learning designs to advance more noteworthy commitment among instructors and at last, better meet their novel necessities and boost their expert turn of events.

Development of an On-Request Economy: Innovation and advances in mental science are being utilized together to quickly grow an on-request economy for quite a bit of what we consume. We watch our films on Netflix or Amazon Prime; we request our boarding passes on Orbitz or Google Flights; we book our get-aways on Airbnb or VRBO; we now Uber or Lyft when we land in a city as opposed to flagging down a taxi. These patterns address a critical change in client conduct, setting labor and products readily available, open through our workstations or cell phones. How is this pattern starting to illuminate schooling and shift how we learn? Publicly supported illustration plan sites (i.e., Educators Pay Instructors, Better Example, Offer My Example, Curriki) are multiplying and free learning the board frameworks (i.e., Google Rooms, Moodle, Slate Associate, Edmodo) are changing the scene, giving gaining stages as well as satisfied distribution centers from which we can collect opportunities for growth for understudies. We at 2Revolutions are cooperating with eleven other public associations in the US to make web based learning assets (diagnostics, playlists and courses) free and downloadable for use in other learning frameworks.

At the point when you take a gander at the gigantic size of interest in proficient learning, with late gauges proposing the US every year spends more than \$400 billion on formal and casual preparation by bosses (Matlach and Poda 2016), we firmly accept that teacher learning is soon to arise as all the more a market an open door in the on-request economy. Collecting interest for content (topic explicit, connected with educational abilities and practices, miniature qualifications, and so on), as well as designated on-request master upholds ("pose an inquiry", virtual instructing, and so on) address opportunities for growth sure to move the scene. The model that we frame for the fate of instructor learning utilizes both the interest for content and on-request master upholds.

Pushing Toward Profundity and Away from Expansiveness: Studying single points, and accomplishing more with that substance, is a concluded change in homeroom learning. Throughout recent years in the US, there has been a transition to a bunch of normal and more thorough principles across many states — the Normal Center Guidelines. We see a developing number of endeavors that are requesting that understudies work further, as proven by the emphasis on more noteworthy profundity and thinking abilities on new high stakes tests inside K-12, like PARCC and More astute Adjusted endeavors. In the US territory of New Hampshire, an earth shattering drive has earned a waiver from the US Division of Schooling and is as of now being copied by other American states. The Presentation Evaluation for Capability Training (Speed) drive use a government waiver to permit few school regions to supplant high stakes tests with excellent execution appraisals aligned across various locale for unwavering quality. These endeavors and a more extensive push toward more profound learning have brought up issues about expansiveness versus profundity. In a developing arrangement of school models, there is a shift in progress to ponder what understudies realize and how they learn it. Portfolio protections or learning compositions are advancing as a method for estimating understudy learning in manners that require the exhibit of information and abilities, and progressively, the capacity to apply that figuring out how to a certifiable setting.

As we reevaluate teacher learning, we are sure that this pattern will impact both the substance and cycle by which instructors are prepared, with an accentuation on going further in their learning versus more extensive to cover more points. This shift will push our teacher learning models toward less needs, a more meaningful treatment of those need regions, and deliberate manners by which key needs — like substance information and twenty-first century abilities and demeanors — can be nicely coordinated in educational program and guidance. It will start to address thoughts of seat time (going to meetings and getting credit for participation alone) for building a proof base by which to prove one's singular learning.

Biological system of Learning: Inside the beyond hundred years, learning was believed to be focused on the school building — kids advanced between 9 a.m.- 3 p.m. Nonetheless, this is starting to move, as confirmed by new and various perspectives about and advancing an understudy's learning direction. Working class and affluent families have generally enhanced their youngsters' school learning with improving extra-curricular learning in the evenings, nights and ends of the week traversing sports, artistic expression, the universe of work and other interest regions.

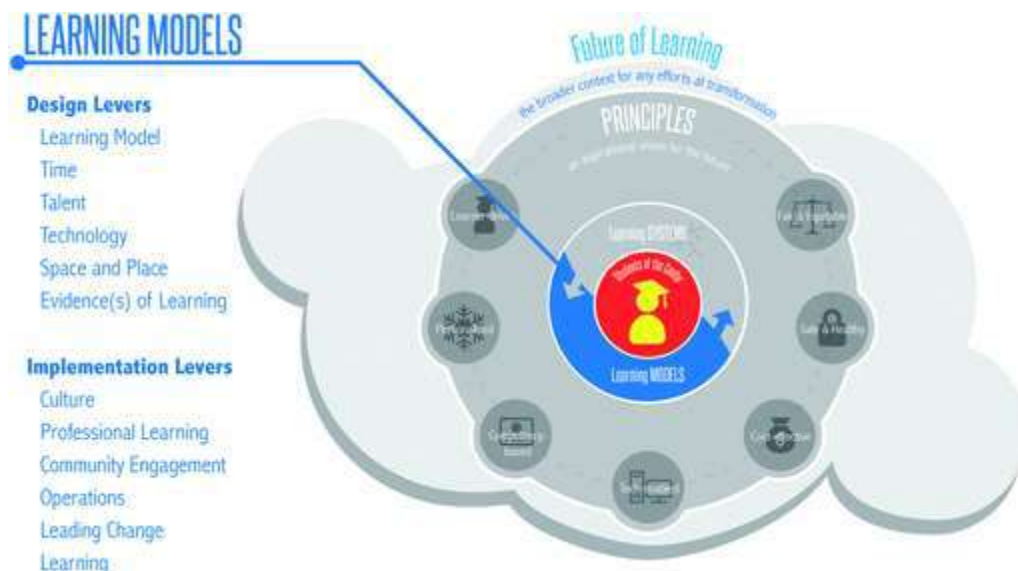
Given the expansiveness and profundity of this extra-curricular learning, and the effect it has on the understudy's general information, abilities and demeanors, there is a developing development to contemplate instruction as opposed to learning. The school building used to have the market cornered on learning, and it was expected that it was where somebody "got taught." Presently, there is an obscuring of the lines among formal and casual learning. In the US territory of Nevada, strategy was passed inside the beyond couple of years where 90% of the students per understudy designation go straightforwardly to the family to decide how they could spend it, as opposed to 100 percent going straightforwardly to the school region, just like the case in many places now. That brings up a wide range of issues around our opinion on learning. In the US territory of Colorado, a drive called ReSchool is posing various inquiries about existence ways and learning, with a bunch of new models testing how casual learning could enhance or supplant formal learning conditions like school. Throughout recent years, the MacArthur Establishment has grown a drive called the Hive Learning Organization. The Hive endeavored to officially arrange casual learning among non-benefit associations and organizations zeroed in on human expression, youth improvement and business. After some time, this extended from Chicago and New York City to a bunch of urban communities all over the planet. It has kept on developing into a moderately new drive, LRNG, across 12 American urban communities, with an emphasis on interest-driven discovering that is accessible whenever/wherever through a web-based stage. One more prominent part of the work is what LRNG calls obvious and tenable learning through identifications that have money at school and in the working environment.

This push toward a more extensive biological system of learning is another significant pattern that will start to influence teacher learning. For a really long time, proficient improvement has been a solid space, where learning was scheduled to occur during a couple of yearly in-administration days and at region wide expert learning meetings. Presently, learning is pushing toward interest and need-driven, and will progressively be democratized as whenever, anyplace. We are intently seeing the way in which teacher learning can take advantage of the characteristic and extraneous inspirations of grown-up students close by a developing scope of additional adaptable monetary standards that are being created to confirm and credit teacher opportunities for growth, from proceeding with schooling credits to identifications, graduate credits, and expert educator status through a variety of miniature qualifications.

Every one of these patterns gives us a more extensive setting, yet additionally are, of themselves, significant pieces of information. As we consider the teachers inside our frameworks, these outer powers are influencing them actually and expertly. We should know about their true capacity and look to use these patterns to emphatically influence how instructors learn. The methodology we are building and testing inclines vigorously on these patterns since we emphatically accept that they are as of now having recognizable effect, on instructors as well as on the future procedure for learning.

Why Educators are the Basic Component

While learning can and ought to happen extensively, school stays an essential point of interaction of learning for most understudies. Schools are exceptionally complicated frameworks. At the point when we take apart schools, there are a bunch of part parts that need to cooperate to streamline the learning for understudies. Figure 7.4 beneath gives a representation of a bunch of switches expected to plan and execute powerful learning models.



Future of learning design and implementation levers

As an association, 2Revolutions has helped help the improvement of a significant number of new and changed school models throughout the long term. While each school model switch is vital to the progress of an understudy's growth opportunity, teachers are the shared factor and, alongside school administration, are driving a large portion of these plan switches (learning model, time, ability, innovation, space and spot, proof of learning), and profoundly partaking in — in the event that not driving — all of the execution switches.

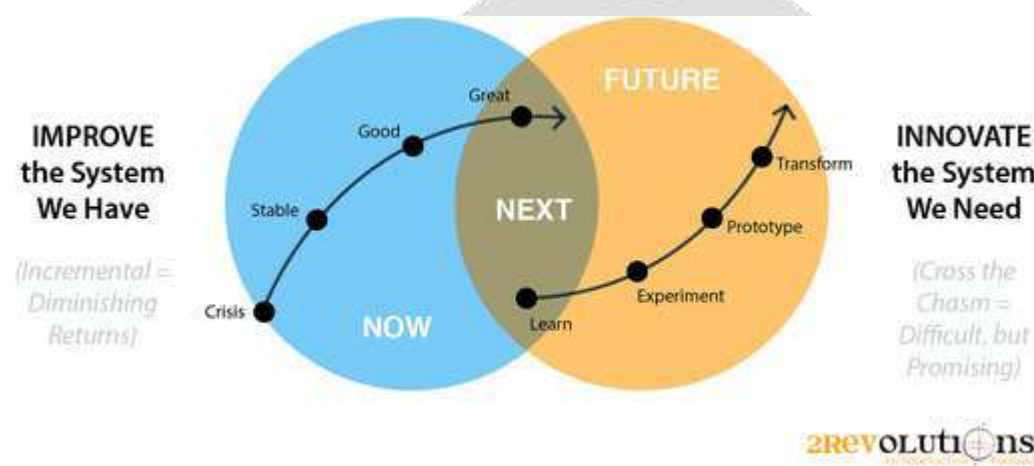
There is an extremely impressive examination base solidly highlighting the viability of educators as one of the greatest drivers of understudy achievement. A concentrate by the RAND Organization (2012) on estimating instructor viability found that the greatest school-related elements to understudy accomplishment are educators. We realize that the connections among understudies and educators are significant drivers for understudy achievement (Schieb and Karabenick 2011), and such understudies' reality results, as estimated by procuring potential, are straightforwardly influenced by the nature of their instructors (Hanushek 2011). As a matter of fact, the impacts of instructors on understudy learning are very high as well as total and durable. The impacts of only one instructor can influence an understudy's future learning for as long as four years (McCaffrey et al. 2003), and possibly even subsequent to graduating: when understudies are shown by top notch educators, they are bound to go to school, have more significant compensations after entering the labor force, and save something else for retirement (Chetty et al. 2011). Understudy achievement, essentially, is profoundly subject to powerful teachers both in and outside the study hall.

How would we amplify the worth of powerful teachers? What could we at any point do as a framework to increment and support the amount of great teachers? To influence learning, at scale, our teachers need a better way to deal with preparing and support. It is these grown-up students who, when connected with, engaged and upheld to advance in an unexpected way, can use that experience to drive genuine and enduring change of understudy learning. In the total, this addresses a huge chance for foundational influence.

All in all, where to put — pre-administration or in-administration preparing? We frequently end up expecting to pick on account of asset impediments, administrative compromises or due to what is inside our control from our seat inside the framework. We would contend that it is a bogus decision. Change of both starting educator schooling and in-administration preparing are frantically required. The rest of this part is centered around reexamining in-administration preparing, which we are sure gives some academic and plan suggestions ideas to change beginning educator schooling.

A Trend-setter's GPS: Looking for an Answer

To change our ongoing frameworks, we want a structure for tracking down our direction. This system furnishes us with a way to arrange where we are versus where we are attempting to go. The picture in Fig. 7.5 delineates the shift we propose to take. Commit no error that most associations exist decisively in the Now — our ongoing the truth is restricted and has unavoidable losses. It was made and propagated as much by the limits of the administrative climate as by a variety of social standards around what proficient advancement was intended to do and how it functions for certain grown-ups in the framework. In the interim, we don't have collected and efficient interest for a new and better way to deal with teacher preparing. We really want to comprehend the impediments of our ongoing circumstance to graph a reasonable course for What's in store. This Future addresses spaces ready for the advancement of developments, unburdened by the ongoing frameworks' restrictions. When we archive our Now and solidly frame the Future, the Following is the vital extension to assist us with jumping the gorge among to a great extent. As we frame in this section, we construct the extension to the Following on a center arrangement of plan standards. Crossing the gorge to what's in store is troublesome, however the iterative course of learn — explore — model assists us with accomplishing a culture of development expected for change.



Innovator’s GPS improvement to innovation

<i>Now</i>	<i>Next</i>	<i>Future</i>
PD is largely passive, inefficient, isolated, and stagnant	Adult Learning that is personalized, competency-based, modular, motivating, relevant, respectful, collaborative, and sustainable	Better outcomes for students; sustainability and well-being for students, teachers and systems

Presently

We ought to look to be individual understudies with the student, and ought to learn of, as well likewise with him, in the event that we would be generally useful to him.

—Henry David Thoreau

The present way to deal with proficient improvement for instructors is disturbed by a lot of people of the complicated difficulties confronting our more extensive schooling systems. While there is an incredible arrangement about the framework that is improving, we would fight that there is a lot of about the ongoing arrangement of instructor proficient discovering that isn't working. Obviously we are spending a colossal measure of asset on proficient learning, with sketchy results and results. By naming and better comprehension these components, we have a chance to make the change to the future we look for.

In this segment, we look at certain restrictions inside the ongoing expert improvement framework connected with viability, supportability, and prosperity.

Adequacy

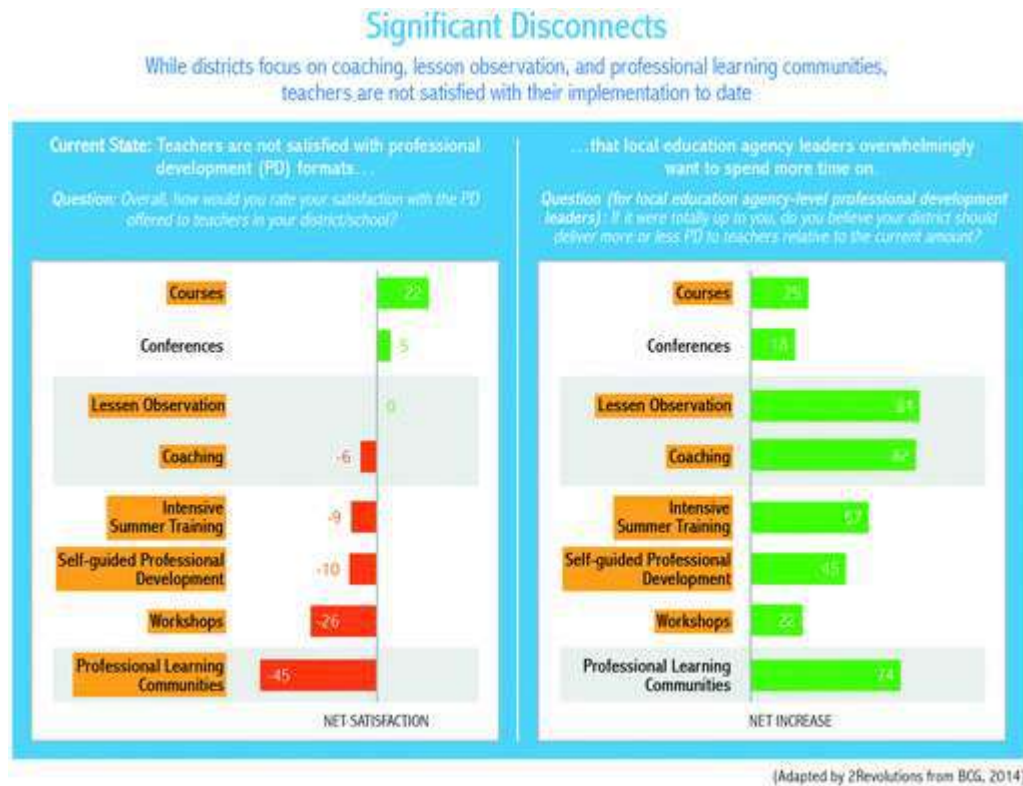
While research has proactively recognized the stuff for teacher figuring out how to be genuinely compelling, our momentum circumstance is a far various reality. The manners by which we as of now support instructor learning are obliged by huge underlying difficulties to viability. These difficulties can be separated into a few center issue streams: learning is detached, time is being utilized in problematic ways, the work is disconnected from the requirements of teachers, and there is a general dormancy to a large part of the preparation. These taken together feature this pattern of inefficacy.

Learning is Uninvolved: Presently, one of the best boundaries to powerful instructor learning is its innate detachment. Truth be told, less than one out of three educators can pick most or all of their expert learning amazing open doors, while almost one of every five educators never have anything to do with their expert turn of events (BCG 2014). Both pre-administration and in-administration improvement frequently will in general default to the amount of seat time as opposed to the nature of dynamic, pertinent and work implanted learning (Dunne 2002). This "one-size-fits-all" approach sustains an arrangement of insufficient teacher learning. Less than one of every three educators pick most or all of their expert learning valuable open doors. Almost, one out of five never has something to do with their expert turn of events (BCG 2014).

Wasteful Utilization of Time: Regardless of whether the nature of the underlying experience is high, teacher learning is still habitually wasteful in view of the restricted time devoted to further developing practice. It takes on normal 20 separate cases for an educator to dominate another expertise (Joyce and Showers 2002), yet a new report uncovered that American educators get restricted help and need adequate chance to profoundly participate in additional successful educational systems (Gulamhussein 2013).

Separated: A report by the Boston Counseling Gathering (2014) for the Entryways Establishment, wherein north of 1300 instructors were studied, discovered that the greater part of teachers don't really accept that that the expert improvement they get is assisting them with planning for the changing idea of their work as twenty-first century teachers. Teacher learning was viewed as most missing around compelling utilization of innovation and advanced learning devices, exact examination of understudy information for separated guidance, and adjusted execution of the Normal Center State Guidelines. Nonetheless, topic isn't the main component confined from their preparation: current instructor advancing additionally needs cooperative associations with different teachers. Over portion of all American instructors have never noticed a partner's instructing (OECD 2014). Without a cooperative, setting based center in teacher learning, massive change in educators' training won't happen (Sturko and Gregson 2009). Stale: different reviews and reports on American instructor learning revealed an efficient organization of discontent. Just 29% of instructors studied were profoundly happy with current expert advancement contributions, and just 34% felt the arrangement of expert improvement has worked on over past cycles (BCG 2014). This disappointment is additionally validated by the way that the aftereffects of instructor learning have generally deteriorated. For some educators, proficient development watches out for level after just the fifth year of educating; truth be told, the distinction in assessment evaluations between a normal first-year educator and a typical fifth-year educator was in excess of multiple times the contrast between an educator in her fifth year and an instructor in his 20th (TNTP 2015). This unavoidable culture of low assumptions for instructor advancement and execution forestalls teacher gaining from turning out to be genuinely successful.

Also, it is vital to analyze the ongoing scope of approaches utilized in instructor preparing, to figure out the viewpoints of the two educators and area administration. In Fig. 7.6, we pull information from the Boston Counseling Gathering concentrate as proof of instructor assessment, as well as an approach to inspecting explicit separates between the assessments of educators and framework level leaders.



Perspectives on professional learning component parts

In conditions where we are working profoundly in association with state schooling organizations, school regions and sanction the executives associations, there is many times an absence of soundness between and among proficient learning contributions, which makes a huge detach for the teachers and adds to the absence of viability in the preparation. These information highlight a botched an open door for influence with the instructors.

Maintainability

At the point when we consider the significance of this work, the potential for effect and current consumptions against the need, there is a huge disengage, particularly when one thinks about the powerful assets — both in time and cash — used for teacher learning.

Proficient improvement is large business. In 2014, around USD 8B was spent on proficient improvement in the 50 biggest regions inside the US alone (TNTP 2015). Gauges range, yet a few put the yearly expenses of K-12 expert learning in the US at USD 18B/year (BCG 2014). A run of the mill educator burns through 68 hours every year — over a week and a half — on proficient learning exercises regularly coordinated by locale. At the point when independent expert learning and courses are incorporated, the yearly all out comes to 89 hours (BCG 2014). Superior grade, customized proficient turn of events, for example, a tutoring program, is connected to expanded educator maintenance (Sweetheart Hammond et al. 2009). Whenever educators feel that they have open doors for development, their feeling of adequacy and capability increments, making them more roused to stay in their ongoing position (Huang and Cho 2010).

Given the profit from speculation exhibited by the information point by point above, inquiries concerning the ongoing framework endure and extend. However, past the immediate effect on understudy learning, these uses likewise bring up issues about more extensive issues of maintainability. Could it be said that we are developing and

holding a future-prepared labor force? Might it be said that we are fostering the actual people, yet additionally being aware of the fast improvements in the field and the requirement for these experts to remain pertinent in the midst of colossal change, as the work and the setting wherein the work occurs (e.g., quickly advancing understudy populaces) keeps on moving?

All over the planet, there have been leap forwards in instructor learning in some high-performing nations, shown by the rates at which more noteworthy educator fulfillment and adequacy are much of the time associated to more significant levels of understudy accomplishment (OECD 2014). By and by, these frameworks of expert learning are as yet a work underway, in light of self-reports and outside examination, especially in high-needs schools across the globe. Moreover, teachers in a different scope of nations frequently feature a "support hole" (OECD 2014) in their cooperative expert turn of events, exhibiting huge space for development that could well profit from genuine advancements in instructor learning.

To progress from the present status to the Future, and for our arrangement of expert figuring out how to function better at scale, there is the need to enable instructors as proprietors of their learning while at the same time recognizing that the school head and locale administration have fundamental obligations and significant viewpoints that should be considered.

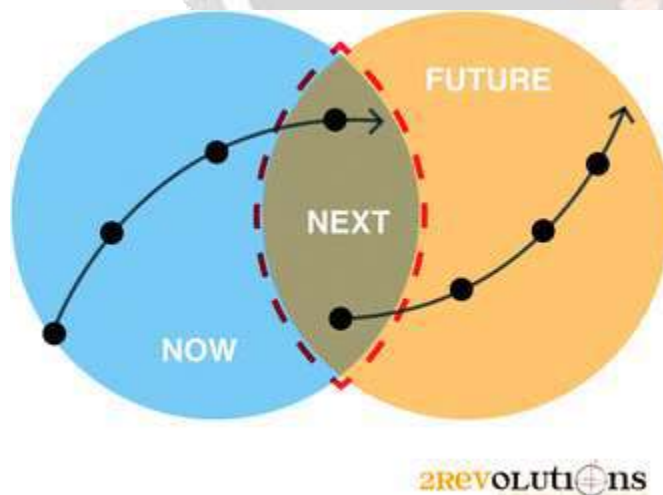
Next: Crossing the Gorge

What I hear I neglect, what I see I recall, what I do I know

—Xunzi

How would we cross the gorge among Now and Future?

There is an extension, based upon a bunch of center plan standards, educated by a set regarding hypothetical systems around learning. These structures center around the improvement of abilities, information, and demeanors, individually. At the point when we contemplate these structures and influence them in a more integrative style, as opposed to in seclusion from each other, we validate the contention for and the possibility of the methodology illustrated for teacher learning from here on out (Fig. 7.7).



Crossing the chasm to the future

Getting on clear subjects from the Now, we start with the reason that instructors are to a great extent underserved by the worth of the learning open doors accessible to them. This is a point about the cycle and construction of the learning. While we additionally disagree with the substance, which frequently is propagating more customary ways to deal with guidance and appraisal that are less successful with developing populaces of additional different

students, with regards to this part, we emphatically trust that by tending to primary difficulties around the course of instructor learning, we can yield genuine movements for understudies, educators and frameworks.

In this segment, we frame a bunch of builds for expertise, information and demeanor improvement. In the Now, a constraint that we distinguished is that we start with expertise improvement or information improvement as a purpose in section for teacher learning. Taken without anyone else, these are great yet lacking for the Future we look for. Rather, there is the need to all the more really coordinate these places of section; we want a more purposeful and critical methodology that is about information, expertise, and demeanor improvement. It is through this approach that we will actually want to traverse the expansiveness and profundity of the gap, to help a change to What's in store.

The expert learning framework itself can and ought to act as the enlistment into a better approach for instructing and learning, by connecting with instructors in encounters that model creative and integrative ways to deal with educating and learning. This new framework starts with manners as central and fabricates information and abilities on those demeanors.

Much accentuation has been put on information improvement in training writ huge. There is normal arrangement among instructors and scientists that the capacity to deftly move calculated understanding to different certifiable circumstances is the sign of information (Wiggins and McTighe 2005). Developing Sprout's Scientific categorization, Webb's Profundity of Information empowers us to compute mental profundity by ordering learning errands across four degrees of mental interest: review and propagation, abilities and ideas, vital reasoning, and unique reasoning (Webb 1997). While information is imperative to the teacher's expert learning, it is lacking in moving practice. The improvement of teacher ability should likewise be focused on.

There has been a lot of late accentuation on more profound learning skills, for example, Michael Fullan's "6 C's" as a feature of the New Teaching methods for More profound Learning (Fullan and Langworthy 2014). The Middle for Advancement in Schooling presented research-based formative movements for coordinated effort, correspondence, imagination, and self-bearing in the Fundamental Abilities and Manners System (Lench et al. 2015). Showing systems, for example, a task based learning at Cutting edge High, New Tech Organizations, and 10,000 foot view Learning have gotten momentum among instructors, yet questions stay about how to guarantee that substance and expertise are enough evolved close by more profound learning capabilities. Besides, really supporting teachers in carrying out techniques, for example, these, when numerous teachers themselves have not experienced realizing this way stays a basic inquiry. Past these inquiries stays a bigger one: what is the catalyst for teachers to fundamentally move their training when such a lot of stays obscure?

Research on development mentality and human inspiration highlights the fundamental job of attitudes in learning and advancement. Hymn Dweck's qualification between a development and fixed outlook uncovers how compelling our own perspectives on insight and ability are on our true capacity for kept learning (Dweck 2007). Daniel Pink's exploration uncovers how persuasive independence, authority, and design are in spurring us and focuses the far past customary prizes and disciplines to accomplish the most noteworthy human potential (Pink 2009). John Hattie's Eight Brain Casings contextualize development attitude inside schooling and determine specific instructor demeanors that correspond to the best effect on understudy learning (Hattie 2012).

To make a shift, we advocate an alternate way to deal with proficient gaining — one that starts according to the point of view that teachers have a remarkable arrangement of requirements. They are above all else grown-up students; thusly, the two of them advance distinctively and require a methodology that distinctions and works from their life and work encounters. As opposed to treat them solidly, there is the need to recognize that they have various necessities and are on a continuum in their insight and expertise improvement. Hence, there is the need to lay out an alternate method for supporting them and their learning.

This approach is one that ought to be more grounded in andragogy (from the Greek *andra* signifying "grown-up" and *agogos* signifying "head of") versus teaching method (from the Greek *paid* signifying "kid" and *agogos* signifying "head of"). Malcolm Knowles (1992) states the rationale that grown-up students have a generally unique arrangement of necessities, and subsequently, instructional method as a driving supposition for instructor learning comes up short. In Fig. 7.8, Knowles offers an examination among andragogy and instructional method.

Assumptions		
ABOUT	PEDAGOGICAL	ANDRAGOGICAL
Concept of the learner	Dependent personality	Increasingly self-directed
Role of the learner's experience	To be built on more than used as a resource	A rich resource for learning by self and others
Readiness to learn	Uniform by age-level & curriculum	Develops from life tasks & problems
Orientation to learning	Subject-centered	Task- or problem-centered
Motivation	By external rewards and punishment	By internal incentives and curiosity

(Adapted by 2Revolutions from Knowles, 1992)

Pedagogic vs. andragogic assumptions

In this specific circumstance, looking at teaching method and andragogy brings up main problems with respect to how our future arrangement of teacher learning should work. It likewise drives us to think about what sort of expert will better meet the rapidly advancing jobs needing to be done. In the flow framework, research delineates that expert learning is in many cases more latent, consistence situated, and extraneously propelled. Rethinking the learning valuable open doors from a perspective of andragogy gives a new and different method for organizing and support learning open doors for our teachers, most importantly starting from the reason that they are grown-ups with a rich arrangement of information and encounters.

Do we maintain that our instructors should be reliant or independent students? Do we maintain that they should be a vault of data or generative students utilizing their own encounters to extend understudies' information and getting it? Which job do their own concerns of training play in their gaining versus hypothetical develops again and again separated from genuine necessities they have in their homerooms?

We would unequivocally battle that the sort of teacher we need maps plainly to the sort of procedure for learning we currently need for understudies. As economies shift and requests on the work market change with more noteworthy recurrence, our social orders need students to be more flexible, developing from an emphasis on a particular sort of happy information to a bunch of adaptable demeanors and abilities. Content information matters, particularly at a basic level for understudies, yet as an understudy develops, that content is more open today than any time in recent memory through a large number of open sources. Understanding what you really want, where to track down it, and how to apply it is undeniably more important in our insight economy than being an information storehouse all by itself. In this way, these shifts obviously need to assist with directing our arrangement of expert learning for teachers.

In the event that we get ready and further develop our teacher students through a new and different methodology that honors the individual and pushes toward evident learning versus seat time, by prudence of their preparation, we are probably going to engrave them with a more deft and responsive model for their educating. Subsequently, the import of instructor learning is multi-overlay — it straightforwardly affects students and it constructs a more effective and feasible model for the teacher students, all of which adds to more noteworthy instructor prosperity.

As we think about a more integrative methodology that mixes information, abilities, and demeanors, a developed arrangement of teacher learning arises. This new methodology requires a bunch of directing plan standards, upheld by the hypothetical examination base framed in this part. These standards give the rampart from which we can construct a more successful arrangement of instructor learning. Pushing ahead, we accept that expert learning ought to be:

Customized: Focuses on the exceptional necessities of every teacher inside their training instead of one-size-fits-all expert learning.

Ability based: Starts by laying out a comprehension of what instructors know and can do instead of educating to the center. It likewise propels a teacher in their learning in light of evident authority of content, as confirmed by moved practice inside the study hall. Dominance corresponds to accomplishment, which addresses a takeoff from proficient learning in light of seat time.

Measured, not Solid: Breaks the intricacy of learning into a bunch of part modules. This considers individual spotlight on areas of need or interest as opposed to a more extensive subject wherein the instructor might have proactively dominated a portion of the substance or their setting might have moved and the extra satisfied is as of now not important.

Spurring: Recognizes the requirement for inherent and extraneous inspiration for members, that there is clear consolation for teachers to need to learn. The inspirations stretch out past a transient consistence work out, obviously connected into the profession pathway, whether this consolidates identifications, graduate credits or an emphasis on dominance with a chance for various work liabilities.

Significant: Seriously lines up with school-and region wide endeavors instead of a bunch of gaining exercises disengaged from one's immediate areas of concentration (study hall or potentially school). This guarantees that the expert learning is a current fundamental piece of the work instead of something outer and, subsequently, not straightforwardly significant.

Deferential: Deals with individuals like experts by regarding the mastery they bring, their exceptional setting, and their learning style. It gives individuals decision in what they do secured to intrigue and need, when they do it, and how they are evaluated. All of this can yield critical upgrades in both adequacy of the work and fulfillment with the cycle.

Cooperative: Use the force of gatherings as suitable to push one's reasoning, advance learning together, and benefit from various ranges of abilities and attitudes. Cooperative expert learning is as much about the person as the system. Moreover, in view of the force of innovation, there are valuable open doors that can end up working with joint efforts across a school working, around a region or across more extensive regions.

Supportable: Huge measures of cash are spent on proficient improvement in many frameworks. There ought to be consideration paid to the results and how it adds to proficient development as proven by understudy results, educator maintenance, instructor fulfillment, and prosperity.

These standards should be educated by the examination yet secured in a nearby, contextualized vision for understudy learning. Nearby setting matters profoundly and ought to be the driver for the development of the following.

Future

Each individual of learning is at last his own educator.

—Thomas Paine

Envision a situation in which every grown-up student was regarded as an expert, met where they are in their learning process, and upheld from that spot to additional phases of their turn of events. This situation reflects the sort of learning we believe our understudies should insight: discovering that is customized, applicable, and outfitted to understudies' ongoing degrees of learning, while at the same time driving them to their learning brink. In Fig. 7.9, we give a system to this future-situated process in which teachers experience another sort of learning.



Anchoring in adult learning theory

The methodology, framed above and nitty gritty in the accompanying segment, addresses a method for understanding this vision, with the unmistakable conviction that teachers need to encounter learning in a manner that purposefully coordinates the information, abilities, and demeanors they should be successful and develop their ability as professionals.

There are clear phases of this educational experience. While comprised of unmistakable components, for everything to fall into place over the long haul, the embodiment of the work is integrative, not direct. In this part, we will detail the accompanying stages: Causing Possession; Customized Learning; Capability Based Learning; and Moving Convictions.

Inducing Proprietorship

Most teachers are attracted to their work by a mission to assist understudies with realizing, which is a huge natural inspiration. Instructor learning is propelled by mission, yet in the midst of the genuine and persevering difficulties of the work, there is the need to keep up with and extend this inspiration over the long run. The significance of inspirational brain science is indispensable to the growing experience. Basically, in the event that there is no inspiration to realize, there is no learning (Walberg and Uguroglu 1980). There is a genuine need to cause proprietorship in the growing experience. Teachers who feel included and in charge of their learning are bound to be involved and dynamic in their turn of events (Wlodkowski 2008) — in this manner building teacher organization is basic to the drawn out progress of the work. This is additionally highlighted by Knowles' work on andragogy point by point prior in the section and proof of better progress in the homeroom when educators announced having more organization in their learning (BCG 2014).

To accomplish this work successfully requires a valid cycle by which teacher voice is genuinely connected with to assist with illuminating their learning, as well as more extensively shape the setting in which they work. This approach assists with causing their figuring out how to feel applicable to them.

A couple of key exercises in this stage include:

Visioning: It is critical to lead with greeting as opposed to order. Instructors all work inside a current setting, which has a culture and a bunch of assumptions, standards, and pathologies. As opposed to separate these from the realizing, which occurs very frequently, there is the need to secure the work inside that culture, to all the more likely comprehend it and position advancing inside it, which will assist with advancing genuine maintainability in the actual work. Key components of visioning include:

Understudy credits: What are the key ascribes (information, abilities and demeanors) of fruitful students upon culmination of their learning at your school?

Learning standards: for understudies to encapsulate these properties, what should be valid about your learning climate and the characteristics of the understudy opportunity for growth? What are words that catch these qualities?

Hindrances: What are snags that are disrupting everything for you in understanding this vision for learning at your school?

This movement gives a chance to be more clear collectively about the heading you need for your school, secured in a co-built thought of what understudy achievement resembles. Figure 7.10 gives a representation of one school's vision. The vision fills some needs. It goes about as a guidepost by setting an unmistakable objective at which to point. It shows correspondence and coordinated effort in real life. It likewise gives a substantial open door to teachers to assist with educating the result regarding their work all the more extensively, prodding self-heading, and engaging them as drivers of their work — as opposed to uninvolved vessels who just do orders without the capacity to shape them.



School vision artifact

All learning is relevant and individual. By welcoming instructors to illuminate their current circumstance, there is a potential chance to secure their expert learning against the mission of their work, in this way actuating and arranging their attitude toward kept learning and improvement.

Issues of Training: Out of the visioning system comes an unmistakable feeling of obstructions. These self-revealed difficulties are broke down and examined. What is forestalling the acknowledgment of the vision — at the degree of individual and the system? That which arises here helps drive the advancement of issues of training. These issues convert into request driven, applicable learning open doors, lined up with the novel requirements of the individual

and additionally gatherings of educators. There is the need to assess issues and approve them as dependable and squeezing hindrances to understudy getting the hang of; expanding on Harvard's Educational Rounds, it is vital to use companion and pioneer criticism to guarantee issues of training meet a center arrangement of standards reflected in Fig. 7.11 (City et al. 2009).

Draft Problem(s) of Practice

Now combine your personal interests/aspirations with the priorities and/or barriers you just identified to draft one or more (but no more than 3) problems of practice to focus your continued learning.

HOW CAN I INCREASE STUDENT INTRINSIC MOTIVATION, AS EVIDENCED BY INCREASED ENGAGEMENT IN LEARNING TASKS AND PERSISTENCE IN THE FACE OF CHALLENGE?

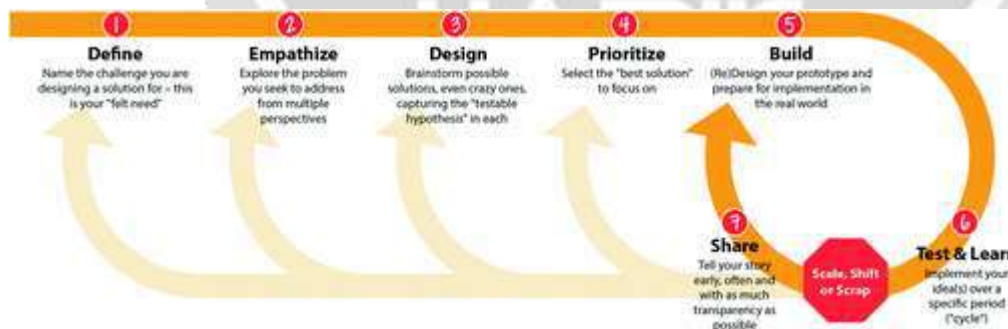
Refined Problem(s) of Practice

Now review your draft problem(s) of practice against the following criteria. Ideally, gather feedback from at least one other colleague or coach as well.

- **Relevant:** Related to work you're already doing or something you need to work on
- **Connected:** Has a connection to the larger school vision and priorities
- **Central:** Focused on the instructional core - the interactions between the teacher, students, and content
- **Actionable:** Specific, time-bound, and controllable enough for you to take on
- **Observable:** Grounded in some kind of evidence so you can see improvement and share results
- **High-Leverage:** If you can act on the problem, it would make a significant difference for student learning

Problem of practice artifact

Networks of Activity: A bunch of clear patterns rise up out of the investigation yielding normal issues of training. Around these normal issues, there is a chance to frame activity situated instructor coordinated efforts by which groups cooperate to advance by doing. These people group of activity, likened to more customary expert learning networks, are time-restricted and secured in an improvement science technique of short-cycle prototyping — resolving an unmistakable issue of training, with a speculation to be tried and a strategy that by configuration, is intended to rapidly test, learn, and refine to further develop practice. Through this cycle, instructors encounter information and abilities holes. Figure 7.12 delineates an illustration of the short-cycle prototyping process that 2Revolutions uses to help groups in critical thinking inside a Networks of Activity setting.



2Revolutions' short-cycle prototyping process

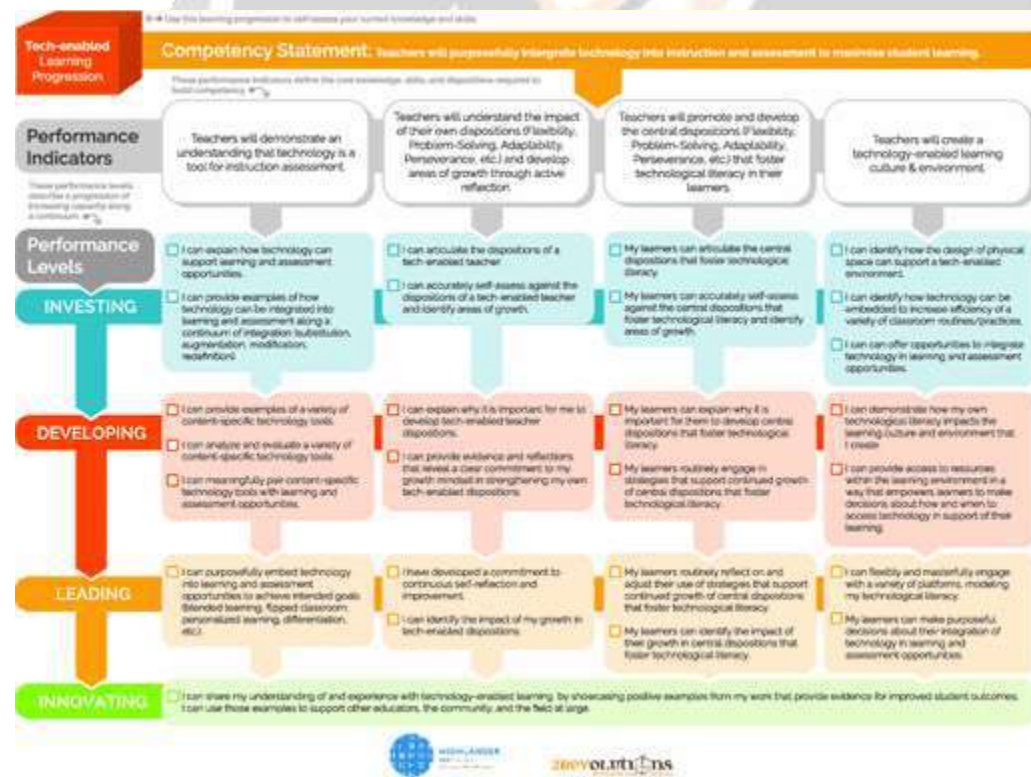
Customized Learning

Whenever we have recognized areas of need, a bunch of subjects will arise as areas of concentration for the Networks of Activity. Before groups can jump into testing draws near, there is the need to construct information and abilities. This is where customized learning meets people and groups.

Every student lays out an Individual Learning Plan that catches their exceptional requirements, establishing the opportunity for growth in their experience, interests, working/learning style, and a stock of their demeanors. With a superior image of the student, we have a better possibility addressing instructors' requirements and powering their natural inspirations to learn.

Individualized instructing furnishes each partaking instructor with somebody to assist them with dealing with their learning plan and give progressing criticism and approval of their learning. The mentor job is expected to give reliable backings to help teachers in accomplishing their own learning objectives. Mentors challenge teachers to embrace and deal with the snapshots of uneasiness that normally happen in the change cycle and lay out the connections important to help instructors at the edge of their learning. In view of their nitty gritty information on every grown-up student, mentors coordinate various backings in light of their coachees' particular advancing requirements. Training supports can come as admittance to pertinent learning assets, demonstrating, co-arranging, co-educating, perception and criticism, and then some. Assigned mentors need not act as the sole supplier of expert backings to their coachees; innovation empowered on-request learning can and ought to be utilized to support students. However long grown-up students experience a reasonable continuum of supports secured in their customized advancing requirements and there is clear correspondence across all suppliers in arrangement with these necessities, skill can be diverted from different sources.

A continuum of effective grown-up learning movements meets the student where they are and asks them to self-evaluate their ongoing skills across a continuum of execution pointers from Contributed to Creating, Driving and Enhancing. See Fig. 7.13 for a curio of a grown-up learning movement around Tech-empowered Learning. When the student self-evaluates, they can get to effective playlists adjusted to important learning movements. These playlists give evened out learning assets that students can peruse, watch, or pay attention to increment interest in different capabilities and fabricate pertinent information and abilities. In a boundless organization, we have as of late delivered a summary of superior grade, free teacher learning assets open through <https://getinspired.2revolutions.net/outer/information exchange>.



Adult learning progression artifact

These methodologies are customized in light of the fact that they work inside the setting of the remarkable teacher, permitting them to chip away at content pertinent to their work and considering their earlier information while giving open doors to information and expertise advancement. Every instructor can get to the substance generally pertinent to them and move at a speed lined up with their advancing requirements and style.

Ability Based Learning

Making the shift from information to expertise advancement requires true shows of learning by and by. Understanding a guide of the skills and the continuum or movement on which those capabilities exist formatively is basic. While there are various great arrangements of skills accessible to pull from (remembering rich work for more cutting edge capabilities by Occupations for the Future in 2015), this ability advancement work should be secured to the neighborhood setting and consider what the developing educator job has to be aware and have the option to do. In a skill based setting, the result from learning is special above activities of learning. Subsequently, proved based approvals of instructor explicit capabilities are the point.

There are a more profound arrangement of more intuitive learning open doors accessible through effective miniature qualifications. These growth opportunities give members the opportunity to show their insight and expertise procurement for accreditations, in light of the introduction of clear confirmations of learning. A teacher can take a miniature qualification growth opportunity on the web, which permits them to make variable their speed and spot of learning. Members can take a full miniature certification or simply move straightforwardly to a developmental evaluation, which will request that they present obvious proof of moved practice inside the study hall, through significant relics and clarification. This can incorporate understudy work, video documentation, or another reasonable showing of learning. As a teacher needs to go further into a subject, there are "stacks" of various miniature qualifications, which give more noteworthy profundity and permit to verifiable information and expertise improvement.

Moreover, past the exhibitions of learning are valuable open doors for more profound reflection on training through a continuous discourse with a mentor lined up with one's very own learning plan. These plans are living archives with both the teacher and the mentor going this way and that around information, abilities, and demeanor advancement.

The push toward skill based gaining is a critical shift away from estimating time sensitive learning open doors, which generally had the vibe and viability of a consistence based work out.

Moving Convictions

One of the last parts of get sorted out is convictions. Convictions are the permanently set up social components supporting one's training. Preparing and support, while basic is deficient until there is responsibility for's learning and proof of genuine and enduring understudy execution shifts. At the point when you run a compelling course of grown-up realizing, that typifies the plan standards determined in the Following part of this section, you are building ability to move convictions.

Advancing Supportability and Prosperity

Reevaluating how teachers continue filling in their training through continuous expert learning addresses a critical switch to drive the change of frameworks. This interaction likewise offers an amazing chance to advance manageability and prosperity all the more extensively for understudies, instructors, and the actual framework.

Maintainability addresses more noteworthy proficiency in the utilization of assets, which commitments accomplishing more with less and broadening the effect of endeavors. With a more creative way to deal with teacher preparing from here on out, there is a chance for huge reserve funds by they way we invest energy inside the framework and the worth of the time we do spend. There are likewise huge open doors for monetary effectiveness as far as how much assets spent on proficient turn of events and the profit from venture of those assets. Past the quantitative estimations of time and cash, there are both subjective and quantitative information that we care about profoundly, for example, the capacity to draw in and hold ability in the area, in this way advancing more prominent supportability for schools and learning models. Each progress of staff has huge monetary expenses, as well as costs on culture with the deficiency of institutional memory, cohesiveness of staff, and coherence of connections among

grown-ups and understudies. There are additionally open doors for more noteworthy supportability that can emerge out of reinvesting investment funds from inadequate and wasteful expert growth opportunities to more understudy — confronting costs.

At the point when we consider how this work adds to the prosperity of people, there are heap benefits from reevaluating proficient learning. For the instructors, research gives significant proof that more joyful, more drew in, more regarded individuals have higher paces of occupation fulfillment across ventures (Revesencio 2015). They feel more associated with the work they are improving. Maintenance is higher and open doors arise for more clear vocation pathways to remain seriously drew in while managed the cost of the chance to play different jobs which develops one's very own speculation and keeps up with interest. The subsidiary advantages of prosperity are better experts who are more inspired to do a good job for understudies and more talented to execute against those longings. Understudies benefit from this new reality as the beneficiaries of better instructing and learning. As teachers have a greater amount of the encounters of the learning conditions that are better for understudies — with regards to content, abilities, and manners — the lingering benefits for understudies will be found in more powerful, understudy focused learning conditions where the center will move to a more extensive meaning of understudy achievement.

As we find in a lot of our work, brokenness streams down from frameworks to teachers to understudies. At last, notwithstanding teachers and understudies, by reconsidering proficient learning in the ways we have illustrated, we have a more prominent likelihood of realizing the sort of change we need for understudy learning. Frameworks themselves become more economical and socially more grounded, better places. By mooring proficient learning in regard and impressive skill, there is a chance to reset the actual tenor of how frameworks work.

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The Types of Transmission Media in Computer Network: A Study

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ABSTRACT

Transmission media is a communication channel that transmits information from the source/transmitter to the receiver. It is a physical path for data transfer through electromagnetic signals. Information is carried over in the form of bits through LAN. It can mediate the propagation of signals for telecommunication. Signals are imposed on a wave that is suitable for the chosen medium. Transmission media is a Pathway that carries the [information](#) from sender to receiver. We use different types of cables or waves to transmit data. Data is transmitted normally through electrical or electromagnetic signals. An electrical signal is in the form of current. An electromagnetic signal is series of electromagnetic energy pulses at various frequencies. Means by which a communication signal is carried from one system to another and wireless links (for example, satellite, microwave and radio and infrared systems). There are two type of transmission media including guided media and unguided media. In guided transmission media, waves are guided along solid mediym such as transmission line. Transmission and reception in unguided transmission media are achieved through antenna.

Key Word: Backdrop, Types, Methods and Conclusion

Backdrop

Transmission media is a communication channel that transmits information from the source/transmitter to the receiver. It is a physical path for data transfer through electromagnetic signals. Information is carried over in the form of bits through LAN. It can mediate the propagation of signals for telecommunication. Signals are imposed on a wave that is suitable for the chosen medium. These media lie underneath the physical layer that regulates them. While designing a transmission, it is important to keep the following pointers in mind:

from the ground plane by a dielectric layer called subtrated. These transmission media convert microwave frequency signals. Microstrip is also used for building microwave components such as couplers, filters, power dividers, antennas, etc. In comparison with the traditional waveguide technology, it is less expensive.

Transmission media is a communication channel that carries the information from the sender to the receiver. Data is transmitted through the electromagnetic signals.

The main functionality of the transmission media is to carry the information in the form of bits through LAN(Local Area Network).

It is a physical path between transmitter and receiver in data communication.

In a copper-based network, the bits in the form of electrical signals.

In a fibre based network, the bits in the form of light pulses.

In OSI(Open System Interconnection) phase, transmission media supports the Layer 1. Therefore, it is considered to be as a Layer 1 component.

The electrical signals can be sent through the copper wire, fibre optics, atmosphere, water, and vacuum.

The characteristics and quality of data transmission are determined by the characteristics of medium and signal.

Transmission media is of two types are wired media and wireless media. In wired media, medium characteristics are more important whereas, in wireless media, signal characteristics are more important.

Different transmission media have different properties such as bandwidth, delay, cost and ease of installation and maintenance.

1. Coaxial cable

These guided transmission media contain an insulation layer that transmits information in baseband mode and broadband mode. Coaxial cables are made of PVC/Teflon and two parallel conductors that are separately insulated. Such cables carry high frequency electrical signals without any big loss. The dimension of cable and connectors are controlled to give them constant conductor spacing for efficient functioning as a transmission line.

1.1 Hardline Coaxial Cable: These are used for high signal strength applications including long-distance telephone lines. These look like any regular coaxial cable but these are 1.75" thick. This type of cable has the capability to carry hundreds of channels of cable tv. Such cables have sufficient interent capacity for medium sized office building.

1.2 RG-6 Coaxial Cable: This is mainly used for cable and satellite signal transmission for the purpose of residential and commercial installation. These are thin and are easily bendable for wall or ceiling installation. Such cables are preferred for relaying cable television signals.

1.3 Triaxial Cable: Also known as triax, these are the electrical cable that come with an add on layer of insylation and second conducting sheat. These cables provide greater bandwidth as well as rejection of interference as compared to coax. However, triaxial cable are expensive type of transmission media.

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1.4 Stripline

This is a transverse electromagnetic (TEM) transmission media that is built on the inner layers of multi-layer printed circuit boards. These are used in high or low-level RF signals that require isolation from surrounding circuitry. It is a type of printed circuit transmission line in which a signal trace is sandwiched between the upper and lower ground place. Stripline minimizes emissions electromagnetic radiation is completely enclosed within homogeneous dielectric. Along with the reduced emissions, it also shields against incoming spurious signals.

1.5 Microstripline

While Microstripline is simiar to stripline, it is not sandwiched and are present above the ground plane. These can be fabricated with any technology where the conductor is separated from the ground plane by a dielectric layer called subtrated. These transmission media convert microwave frequency signals. Microstrip is also used for building microwave components such as couplers, filters, power dividers, antennas, etc. In comparison with the traditional waveguide technology, it is less expensive.

2.3.2 Satellite type microwave transmission: Signals are transmitted to those spaces where satellites are positioned and they retransmit the signal to appropriate locations. Since they only receive and retransmit the signal, they act as repeaters. It is a much more flexible and reliable method of communication in comparison with cables and fiber systems.

Different Types of Transmission Media

The transmission phenomenon can be explained in layman terms as it is an objective conduit between two physical elements, namely the transmitter and the receiver. This trail lane is used for sending and receiving various signals, depending on the material used for connecting the transmitters and receivers, that is, the Transmission Media.

The Transmission Media are chiefly categorized as below, which can be further classified in accordance to the type and quality of the transmission.

Shielded cables are nothing but the transmission media that has exceptional casing to obstruct any or all the peripheral intrusions during the transmission process. These cables are known for their high performance that doesn't allow signal crossings and faster transmission rates. A typical application of the Shielded Twisted Pair Cable is the telephone lines seen in domestic utilities. Like any other medium, shielded twisted pair cables have their own cons in them, which are the difficulty faced in installation, a huge volume of wires is required, and they are expensive than other cables.

This type of cable doesn't have the casing, as the name says, and has many qualities inversely proportional to the shielded cable type. These cables are a less expensive, effortless installation process, with faster transmitting abilities. It also lets out interferences, which leads to lesser performance qualities.

Conclusion

Transmission Media are the essential constituents to setup a flawless network, which can operate on its own without any glitches in sending and receiving the data across the network. Without a medium to transmit the contents inside a network, the network setup cannot be complete and cannot become a completely functioning system.

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Evaluating stored insect pest's status under climate change scenarios: Combining experimental data and population dynamics in prolonged conditions.

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Abstract

The explosive growth of the world's population and technological advances has greatly influenced agriculture and food production. However, this progress is threatened by climatic change, which poses a number of problems such as- increase in carbon dioxide (CO₂), frequent droughts and temperature fluctuations, which pose a significant obstacle to crop yields and food security. The insect pest problems are of such a huge magnitude that in order to understand them in their true perspective our thoughts process has to work at the highest level of comprehension. The investigations of stored houses have demonstrated that the conditions of grain storage are favourable for the development of different insects. Organisms which jeopardize crop or stored grain, cultivated plant, forest are termed as pest. Insects are poicliothermic organisms. Therefore, temperature is one of the most important environmental factors affecting their metabolism and physiology. Pests reduce quality and quantity of crop or stored grain. Cereal Grains make up the majority of commodities maintained in storage and represent an important component of the world food supply. Loss of cereal grains and their products via insect infestations pose a serious problem especially in developing countries. Stored product pests generally prefer at an ambient temperature of 27-33 °C and a humidity of 65-70% R.H. They cause very high losses under specified optimum conditions. Generally, insects are not active at storage temperature below +10 °C and humidity below 10-12%. Their metabolism slows down when the temperature drops below 25°C, they cannot be fed below 17°C and they usually die below 10°C. Pearl millet (*Pennisetum glaucum*) flour stored for longer duration increases the risk of insect infestations. Variety of insects infests stored grains and their products. The most common species of insects inhabiting wheat flour are *Tribolium castaneum*, *Tribolium confusum*, *Rhyzopertha dominica*, *Trogoderma granarium* and *Oryzaephilus surinamensis*. Experimental population data shows *Tribolium castaneum* was found to be highest in population followed by *Tribolium confusum*, whereas *Oryzaephilus surinamensis* ranked lowest in all samples.

The difference in the peak periods of the adult insects is due to the difference in stored varieties, storage management and differences in temperature and humidity conditions that favour some insects over the other.

Keywords- Stored grain insects, grain loss management, integrated pest management, economic loss management.

Introduction

Insects appeared on the scene of existence, according to various estimates about 250 to 500 million years ago. The extent of antiquity of this origin of insects can be gauged from the fact that the human being has come on that scene only a million year ago. The insect pest problems are of such a huge magnitude that in order to understand them in their true perspective our thoughts process has to work at the highest level of comprehension. The investigations of stored houses have demonstrated that the conditions of grain storage are favourable for the development of different insects. Food systems are complex entities that affect food, human health, and a variety of other outcomes, including economic growth, natural resources and environmental resilience, and socio-cultural factors. Cereal Grains make up the majority of commodities maintained in storage and represent an important component of the world food supply. Loss of cereal grains and their products via insect infestations pose a serious problem especially in developing countries. Before processing, the harvested grains are stored for some time. The profitability of such storage depends only upon maintaining grain quality. In developing temperate countries the % of damage is 5-10% whereas it varies to 20-30% in tropical zones. (Dubey *et al.*,2008; Rajashekhar and Shivanandappa,2010; Ileke and Oni, 2011; Akinneye and Ogunbite, 2013). Insects are often considered a nuisance

to human beings and mere pests for crops and animals. These pests cause damage to stored grains resulting in both qualitative and quantitative losses. Qualitative loss in stored grain is caused by chemical changes in proteins, carbohydrates, amino acids which negatively affect the nutritional value of grains. Apart from visible damage, pest attacks may also initiate a chain of biochemical changes inside the grains affecting the nutritive value and quality in general, a fact which is not quite realized by the common man. Stored product insects are diverse in terms of their biology and the products they infest. Twenty-six families of insect pests are found in stored products worldwide, in everything from beans and cereals to museum exhibits. In the bulk, storage infestation usually occurs from top to bottom through gradual migration of coleopterans and vice versa is known cases of “vertical infestation”. *Oryzaephilus surinamensis*, *Tribolium castaneum* and *Sitophilus oryzae* are the examples of vertical infestation. Stored product insect pests probably cause a 5-10% loss in commodities worldwide, with this number likely to be higher in tropical regions Mondal and Port (1994).

In this regard Khare *et al.*, (1979); White (1982) and Fleming (1988) reported that damaged kernels are more susceptible than whole kernels to insect attack by *Oryzaephilus surinamensis*, *Tribolium castaneum* and *Sitophilus oryzae*. Pearl millet flour stored for longer duration increases the risk of insect infestations. Variety of insects infests stored grains and their products. The most common species of insects inhabiting Pearl millet grains are *Tribolium castaneum*, *Tribolium confusum*, *Rhyzopertha dominica*, *Trogoderma granarium* and *Oryzaephilus surinamensis*.

MATERIALS AND METHODS

During the year 2019-2022, damaged samples of Pearl millet (*Pennisetum glaucum*) were collected from different bags in the first week of every month from Basni grain mandi & Siwanchi gate mandi and stored in an Insect cabinet culture box present in laboratory of Lachoo college of Science and Technology (Autonomous), Jodhpur (Raj).



FIG-1: BASNI KRISHI MANDI (EXPERIMENTAL SITE)

Three samples of grains weighing 250 gm each were stored for further studies. The population of different adult insects and immature stages and the percentage of the damage grains present in the samples were recorded. Damage percentage of grains was calculated on weight basis by determining the difference in weight of 200 uninfected and 200 infected grains. Two lots of 200 grains were randomly picked out from each sample. One lot was of healthy grains and another was of damaged grains. Both the groups were weighed on an analytical balance, and the percentage weight loss of Bajra was determined.



FIG-2: STUDY OF POPULATION DYNAMICS OF DIFFERENT STORED GRAINS INSECT PESTS INFESTING PEARL MILLET (*Pennisetum glaucum*) OBSERVED IN SAMPLES COLLECTED MONTH WISE.

RESULTS AND DISCUSSION

The adult insects of *Tribolium castaneum*, *Tribolium confusum* and *Oryzaephilus surinamensis* were observed in samples (Table 1). The peak period of *Tribolium castaneum* and *Tribolium confusum* was found to be in August (Average Max. Temp.= 33.9 Min. Temp.= 26.15 and Relative humidity= 70%) and that of *Oryzaephilus surinamensis* in September (Average Max. Temp.= 34.9 Min. Temp.= 22.55 and Relative humidity= 64.5%) during the years of study. *Tribolium castaneum* was found to be highest in population followed by *Tribolium confusum*, whereas *Oryzaephilus surinamensis* ranked lowest in all samples. The difference in the peak periods of the adult insects is due to the difference in stored varieties, storage management and differences in temperature and humidity conditions that favor some insects over the other.

TABLE:1- CUMULATIVE (MEAN) POPULATION OF INSECTS INFESTING BAJRA GRAINS DURING THE STUDY YEAR AT JODHPUR REGION

Month of Observation	Name of Insects					
	<i>Tribolium castaneum</i>		<i>Tribolium confusum</i>		<i>Rhizopertha dominica</i>	
	A	B	A	B	A	B
January	4.00	3.67	1.67	2.67	0.67	1.33
February	1.67	2.67	1.00	1.33	1.00	0.67
March	3.67	4.00	1.67	1.67	1.67	2.00
April	4.33	4.67	2.67	2.33	2.33	2.33

May	7.67	7.33	4.33	4.67	4.33	4.00
June	8.00	8.33	5.00	5.33	5.00	4.67
July	13.33	14.00	8.67	8.00	5.67	6.00
August	<u>16.67</u>	<u>17.00</u>	<u>14.00</u>	<u>12.33</u>	7.00	7.33
September	13.67	14.00	10.67	10.67	<u>8.00</u>	<u>8.33</u>
October	11.67	11.00	8.00	8.00	2.67	4.00
November	7.00	7.67	3.67	3.00	1.00	1.67
December	4.00	4.00	1.33	1.00	0.33	0.67

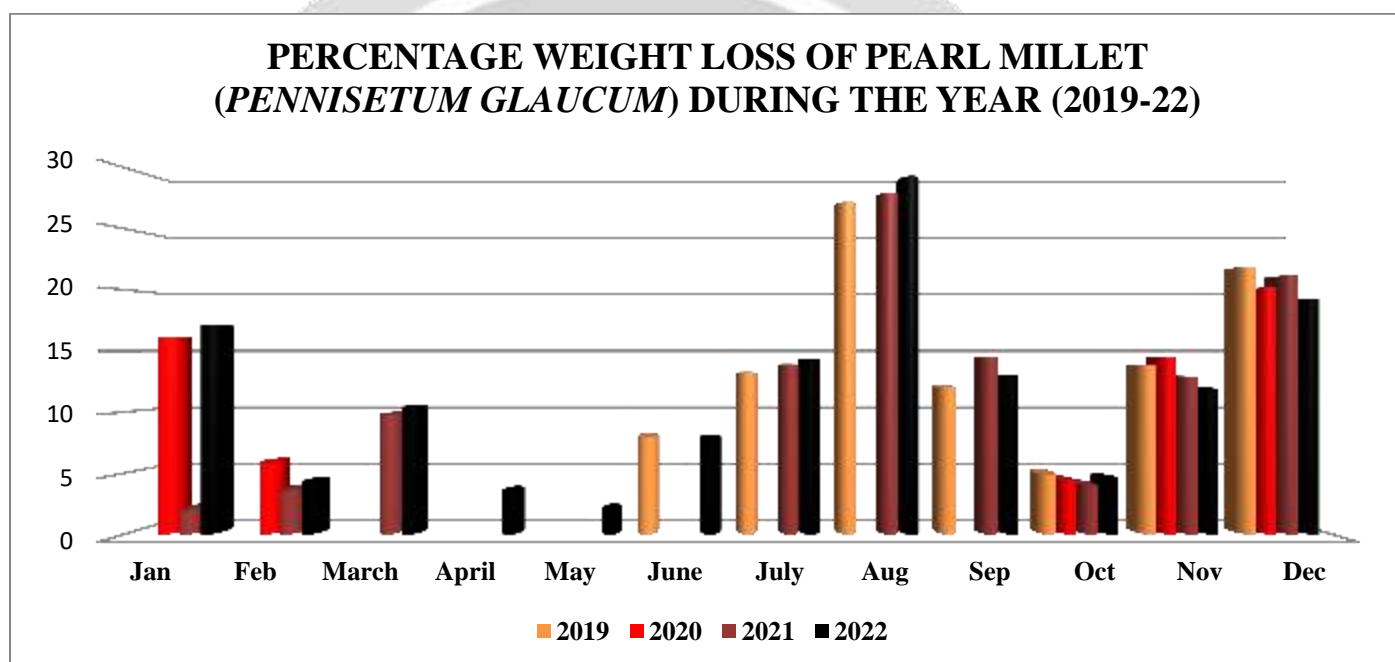


FIG-3: PERCENTAGE WEIGHT LOSS OF STORED PEARL MILLET (*PENNISETUM GLAUCUM*) AT GRAIN MANDIS, JODHPUR (RAJ.)

KHARE AND AGARWAL (1962) studied the population of stored pest *Sitophilus oryzae* and *Rhyzopertha dominica* abundant during July, August and September and it was maximum during August in Kanpur district (India). SINGH *et al.*, (1977) calculated approximately damage caused by insect pests to wheat grains during storage near Varanasi. *Sitophilus oryzae*, (Lo), *Trogoderma granarium* (Events), *Tribolium castaneum* (Herbst) and *Rhyzopertha dominica* (Fab.) species were found to be reported. PRAKASH *et al.*, (1981) recorded the population fluctuation of insect pests in stored paddy under natural and controlled conditions and concluded that *Sitotroga cerealella* appeared first, then *Rhyzopertha dominica*, *Sitophilus oryzae* and *Tribolium castaneum*.

Gerken and Campbell (2020) worked on the *Tribolium castaneum*, pest of wheat and rice. They used 18 different commercially available flours (almond, amaranth, barley, buckwheat, cassava, coconut, corn, garbanzo, millet, oat, potato, quinoa, rice, rye, sorghum, spelled, teff, and wheat. Eggs lying were highest for teff flour, with wheat, rice, buckwheat, sorghum, barley, rye, and spelled flour also having high oviposition.

Abdel-Hady *et al.*, (2021) exposed stored beetles to temperature shock (42 °C for 60, 80, 100 min; 45 °C for 40, 60, 80 min; 48 °C for 15, 30, 45 min; 51 °C for 5, 10, 15 min, 54 °C for 2, 4, 6 min). In species, life cycle, and survival rates were decreased, pupa and recovery time were prolonged, the larval period was shortened.

Falah.A.S. (2023) evaluated three stored product pests viz., *Trogoderma granarium*, *Tribolium castaneum*, and *Oryzaephilus surinamensis* for their competitiveness at 35, 25 and 40°C. The results revealed that within 6 months, *Tribolium castaneum* and *Oryzaephilus surinamensis* could not displace the *Trogoderma granarium*, but at 35 °C, *Trogoderma granarium* was able to displace the *Oryzaephilus surinamensis*. It was in the dormant larval or egg stage despite the death of all adults, and the increased at 40°C.

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Cyber Security: An essential need of the modern era

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साइबर सिक्योरिटी :- आधुनिक युग की जरूरी आवश्यकता

टेक्नोलॉजी के बढ़ने से आजकल हर फील्ड में कम्प्यूटर और इन्टरनेट का इस्तेमाल किया जा रहा है। आज के समय में हमारा हर कार्य इन्टरनेट के जरिये ही किया जाता है फिर चाहे वह सरकारी कम्पनी का कामकाज हो या प्राइवेट कम्पनी पैसो का लेन-देन भी ऑनलाईन ही किया जाता है। यानि की डेटा का आदान-प्रदान किसी न किसी रूप में इन्टरनेट पर हो रहा है। और यूजर की डिवाइस जैसे कम्प्यूटर, लेपटॉप, टेबलेट, मोबाईल फोन तथा दूसरी सभी डिवाइसिस इन्टरनेट पर Connect होकर रहती है। जिस स्तर पर इन्टरनेट का इस्तेमाल पूरी दुनिया में किया जा रहा है प्रतिदिन लाखों करोड़ों यूजर इन्टरनेट का इस्तेमाल करते हैं तो बहुत जरूरी है कि इसकी सिक्योरिटी पर भी ध्यान दिया जाये। क्योंकि आये दिन इन्टरनेट पर फ्रॉड, हैकिंग, वायरस, अटैक, डेटा थैफ्ट, के शिकार बन रहे लोगों की खबरे आती रहती है। इसलिए यूजर के डेटा का सिक्योरिटी प्रदान करना बहुत ज्यादा जरूरी हो गया है। इन्टरनेट के यूजर को साइबर क्राइम से बचाने के लिए साइबर सिक्योरिटी का इस्तेमाल किया जाता है। जिसमें यूजर के डेटा को सुरक्षा प्रदान की जाती है। साइबर सिक्योरिटी के बारे में हम सभी जरूर सुनते हैं लेकिन हमें इसके बारे में पूरी जानकारी नहीं होती है। साइबर सिक्योरिटी एक सुरक्षा है जो इन्टरनेट से जुड़े सिस्टम के लिए होती है। ये दो शब्दों से बना है पहला है साइबर और दूसरा है सिक्योरिटी तो जो कुछ भी इन्टरनेट, Information, Technology Computer नेटवर्क एप्लीकेशन डेटा से सम्बन्धित है उसे हम साइबर कहते हैं। जबकि सिक्योरिटी सुरक्षा से सम्बन्धित है जिसमें सिस्टम सिक्योरिटी, नेटवर्क सिक्योरिटी, एप्लीकेशन और Information सिक्योरिटी शामिल है साइबर सिक्योरिटी मजबूत करने के लिए इन्टरनेट के माध्यम से हार्डवेयर व सॉफ्टवेयर के डेटा को भी सिक्योर बनाया जाता है जिससे किसी भी तरह से डेटा की चोरी न हो। और सभी दस्तावेज व फाइले सुरक्षित रहे। आज के समय में पूरी दुनिया में साइबर क्राइम रोकने के लिए साइबर सुरक्षा की जा रही है।

1. साइबर अपराध किसे कहते हैं?

यह एक ऐसा अपराध है जिसमें कम्प्यूटर का उपयोग ऑनलाईन अपराध **Hecking, Phishing, Spamming** आदि करने के लिए किया जाता है। सीधे शब्दों में किसी के कम्प्यूटर से उसकी निजी जानकारी को निकाल लेना या चोरी कर लेना और उसका गलत इस्तेमाल करना ही साइबर क्राइम है।

अगर साइबर क्राइम बड़ा रूप ले लेता है तो साइबर आंतकवाद कहते हैं साइबर क्राइम के अंदर किसी की निजी जानकारी चुराने के अलावा दस्तावेज या डाटा चोरी, धोखाधड़ी, बाल अश्लीलता और नफरत इत्यादि अपराध आते हैं।

इस साइबर क्राइम को जो लोग अंजाम देते हैं उन्हें साइबर अपराधी कहा जाता है। ये साइबर क्राइम्स कम्प्यूटर और इन्टरनेट टेक्नोलॉजी का उपयोग करके लोगों के सिस्टम को Access करके उनके Personal Information, Bank Details, Business Trade को चोरी करते हैं जो Criminal इन illegal Activities को करते हैं उन्हें Heckers या Crackers कहा जाता है। हैकर साइबर क्राइम करने के लिए कम्प्यूटर का इस्तेमाल करते हैं इसलिए इसे कम्प्यूटर क्राइम भी कह सकते हैं।

साइबर क्राइम के बहुत सारे प्रकार हैं जिनमें Common Type कुछ निम्न प्रकार हैं :-

1. फिशिंग :- फिशिंग उस क्राइम को कहते हैं जिसमें यूजर को फ्रॉड मेल भेजकर भ्रमित किया जाता है और निजी जानकारी चुराई जाती है।
इसमें ऑकर, इनाम, लॉटरी, लगने जैसे मैसेज किये जाते हैं ताकि यूजर लालच में आकर अपनी बैंक डिटेल, एड्रेस और अन्य प्रकार की डिटेल सबमिट कर दे।
2. साइबर बुलिंग :- सोशल मीडिया साइट्स पर अशोभनीय कमेंट करना इन्टरनेट पर धमकियां देना किसी व्यक्ति का इस स्तर तक मजाक बनाना कि वो परेशान हो जायें, इन्टरनेट पर किसी को दूसरी के सामने शर्मिंदा करना इसे साइबर बुलिंग कहते हैं। सबसे ज्यादा इससे नये लोग और बच्चे इसका शिकार होते हैं।
3. बाल अश्लीलता :- इस प्रकार के क्राइम में Criminals ज्यादातर चार्ट रूम का उपयोग करते हैं और खुद की Identify छिपाकर Minor से बातचीत करते हैं, नये लोगों और छोटे बच्चों को इसकी समझ नहीं होती है। जिसके चलते वो बच्चों को Abuse करते हैं, उन्हें डराते हैं, धमकाते हैं और Pornography के लिए उकसाते हैं। इस अपराध के शिकार बच्चे, लड़कियाँ ज्यादा होते हैं।
4. स्पेमिंग :- इस प्रकार के क्राइम में उपयोगकर्ता को अनेक प्रकार के ईमेल आते हैं जिसमें ऐसे ईमेल शामिल होते हैं जो केवल कम्प्यूटर को नुकसान पहुँचाते हैं। उन ईमेल से कम्प्यूटर में खराबी आ जाती है। ऐसा तब होता है जब यूजर मेल को ओपन करके उसमें दिये लिंक पर क्लिक करता है। और इससे उनके सिस्टम में वायरस ऑटोमेटिक डाउनलोड हो जाते हैं।
5. चोरी :- इस क्राइम में किसी की जानकारी या सामग्री चोरी करना आता है। ये अपराध तब होता है जब कोई व्यक्ति किसी कॉपीराइट लॉ का उल्लंघन करता है।
जैसे कि Music, Movies, Games और Software को डाउनलोड करना। ऐसी बहुत सी Private Websites हैं जो Original Content Owners की Permission के बिना Free Movies Songer, Games और Software Download करवाती हैं यह सब चोरी की श्रेणी में आते हैं।
6. फर्जी बैंक कॉल :- इस क्राइम में Bank Consumer को Fake Call करके उनसे उनकी Bank Details पूरी जाती है। इसमें अधिकतर Credit Card, Debit Card की Details मांगी जाती है ताकि वे Consumer पर दबाव बनाने के लिए उन्हें विभिन्न प्रकार की चेतावनी दी जाती है। जैसे- जानकारी न देने पर उनका खाता बंद कर दिया जायेगा या उनके खाते से बैलेंस काट लिया जायेगा इत्यादि।

साइबर क्राइम से कैसे बचे।

1. किसी भी वेबसाइट पर अपनी Personal Details शेयर न करे केवल Verified Site पर ही करे।
2. जहाँ तक हो सके, अपनी Personal Information को Online Publish करने से बचे।
3. किसी भी सॉफ्टवेयर या ऐप को डाउनलोड करने से पहले अच्छे से Confirm कर ले कि आप कुछ गलत तो नहीं कर रहे है।
4. कोई भी ऑनलाईन स्कीम जिसमें पैसे जीतने और प्राइज मिलने की बात होतो उसके लालच में न पड़े और उन पर बिल्कुल भी विश्वास न करे।
5. हमेशा अपने इन्टरनेट ब्राउजर (Chrome, Firefox, Opera) जो भी यूज करते हो उसे अपडेट करके रखे।

Free WiFi का इस्तेमाल करने से बचे और हमेशा अपने WiFi Accounts के लिए Secure Password का इस्तेमाल करे।

2021 में देश में साइबर अपराध के मामलों में पाँच प्रतिशत की वृद्धि हुई। भारत में अपराध 2021 रिपोर्ट के अनुसार साइबर अपराध के 70 प्रतिशत मामले तेलगाना, उत्तरप्रदेश, कर्नाटक, महाराष्ट्र और असम से सामने आये।

2023 में भारत में कुल 13,10,329 ऑनलाईन वित्तीय धोखाधड़ी की सूचना मिली। हाल ही में साइबर क्राइम के साल दर साल बढ़ते आंकड़ों से परेशान केन्द्र सरकार ने इंजीनियर की पढ़ाई करने वाले युवाओं को आमंत्रित किया है। तथा केन्द्र सरकार ने इससे निपटने के लिए 'कवच' नाम से अभियान छेड़ा है। जिसमें साइबर क्राइम से जुड़े अपराधों का समाधान तलाशने के प्रयास किये जा रहे है।

केन्द्र सरकार ने साइबर अपराध की रोकथाम पर जागरूकता फैलाने के लिए कई कारगर कदम उठाये है।

गृह मंत्रालय (MHA) ने साइबर अपराधों की रोकथाम पर जागरूकता फैलाने के लिए @ Cyberdost ट्विटर हैंडल लांच किया है। इस ट्विटर हैंडल पर शार्ट विडियो, तस्वीरों और क्रिएटिव के माध्यम से 1066 से अधिक साइबर सुरक्षा युक्तियों को ट्विट किया जा चुका है। इसके 3.64 लाख फॉलोअर्स है।

साइबर क्राइम की रोकथाम पर जागरूकता के लिए अधिक से अधिक रेडियो के माध्यम से भी देशभर में साइबर सुरक्षा की जागरूकता को बढ़ाया जाना चाहिए। क्योंकि आज के युग में मोबाईल का यूज करने में ग्रामीण लोगों की संख्या भी अधिक है। क्योंकि वह मोबाईल फोन की सुविधा के बारे में तो जानते है लेकिन उसकी सिक्योरिटी को कैसे ध्यान में रखते है? बहुत कम लोग जानते है। अतः ऐसे में साइबर सिक्योरिटी के बारे में जागरूकता फैलाना हमारा ही कर्तव्य बनता है।

Impact of religion and magic in Indian society – a sociological study

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भारतीय समाज में धर्म एवं जादू का प्रभाव— एक समाजशास्त्रीय अध्ययन

घनश्याम सिंह चौहान

असिस्टेंट प्रोफेसर

ऐष्वर्या कॉलेज, जोधपुर

धर्म समाजशास्त्रीय विश्लेषण के प्रयास के साथ ही धर्म का वैज्ञानिक अध्ययन प्रारंभ हुआ मानव शास्त्र में धर्म एवं जादू के क्षेत्र में जितना अध्ययन किया गया उतना शायद ही किसी अन्य क्षेत्र में हुआ है तथा आदिम धर्म पर साहित्य भी बहुत लिखा गया है और उच्च कोटि के मानव शास्त्रियों के नाम इस क्षेत्र में अन्य क्षेत्रों की अपेक्षा अधिक ही हैं। जिन्होंने अपना मूल कार्य धर्म एवं जादू से ही प्रारंभ किया ऐसे लोगों में टायलर जेम्स फ्रेयर विलियम्स रॉबर्टसन स्मिथ दुर्खीम एवं मैक्स वेबर आदि प्रमुख हैं। धर्म एवं जादू का क्षेत्र अन्य विषयों की तुलना में विस्तृत एवं जटिल है। धर्म एवं जादू समाजशास्त्र एवं मानव शास्त्र दोनों विषय की महत्वपूर्ण अवधारणाएं हैं। परंपरागत एवं आदिम समाजों से लेकर समकालीन समाजों तक में धर्म एवं जादू का प्रचलन देखा जा सकता है। इस प्रकार धर्म और जादू प्रत्येक समाजों के महत्वपूर्ण अंग रहे हैं।

धर्म का अर्थ

रिलिजन(धर्म) शब्द रेलिजेयर से बना है जिसका अर्थ है बांधना अर्थात् मनुष्य को ईश्वर से संबंधित करना धर्म शब्द की व्युत्पत्ति संस्कृत भाषा के धृ शब्द से मानी जाती है जिसका अर्थ है धारण करना अर्थात् सभी जीवों के प्रति मन में दया धारण करने को ही धर्म कहा गया है

धर्म की परिभाषा

एडवर्ड टायलर के अनुसार धर्म आध्यात्मिक शक्ति में विश्वास है

मैलिनोबस्की ने धर्म में समाजशास्त्रीय एवं मनोवैज्ञानिक दोनों ही पहलुओं का समावेश करते हुए लिखा है धर्म क्रिया की एक विधि है और साथ ही विश्वासों की एक व्यवस्था भी धर्म एक समाजशास्त्रीय घटना के साथ-साथ एक व्यक्तिगत अनुभव भी है

कार्ल मार्क्स के शब्दों में धर्म दलित वर्ग की आ है निर्दय विश्व की भावना है और निष्प्राण स्थितियों की आत्मा है यह जनता के लिए अफीम का काम करता है

धर्म की विशेषताएं

1. अति मानवीय शक्ति में विश्वास यह विश्वास किया जाता है कि संसार में कोई ऐसी अलौकिक शक्ति है जो कि मानव से उच्च एवं श्रेष्ठ है।
2. पवित्रता की भावना धर्म की यह विशेषता होती है कि उसमें संबंधित सभी वस्तुओं प्रतीकों क्रियाओं व पुस्तकों आदि को पवित्र माना जाता है
3. धार्मिक क्रियाएं प्रत्येक धर्म में अनेक प्रकार की क्रियाएं की जाती हैं जैसे कर्मकांड पूजा प्रार्थना बलियश आदि।
4. भावनात्मक संबंध धर्म हमारी भावनाओं से संबंधित होता है व्यक्ति उसअलौकिक शक्ति से डरता है और उसे प्रसन्न करके अपना हित कराने के लिए श्रद्धा व भक्ति के साथ आराधना व अर्चना करता है।
5. तर्क का अभाव धर्म की एक विशेषता यह है कि तर्क के लिए कोई स्थान नहीं होता है यह तो विश्वास व भावनाओं पर आधारित होता है। विज्ञान भी इस विषय में कुछ नहीं कर सकता

धर्म का स्वरूप

धर्म के सरल रूप में धर्म के जटिल रूप की तरह दार्शनिक रूप देने की प्रवृत्ति नहीं है धर्म का व्यावहारिक पक्ष तथा तंत्र मंत्र इसमें विद्यमान है

1. **जीववाद या आत्मवाद** : विभिन्न सामाजिक संगठनों में अलौकिक तत्व के बारे में जो अनेक अवधारणाएं हैं उनकी जांच करना विकासवादी नृवैज्ञानिकों के लिए एक बहुत ही दिलचस्प विषय रहा है आदिम समाजों में धार्मिक विश्वासों तथा उनके उदय को व्याख्यायित करने का सर्वप्रथम प्रयास ईबी टायलर द्वारा किया गया। उन्होंने जीववाद का सिद्धांत प्रतिपादित किया। जो जीव तत्व में विश्वास रखता है। अतः वे इसे जीववाद कहते हैं। उनका कहना है कि धर्म के अस्तित्व में आने के अनेक कारण हो सकते हैं
2. **मानवाद** : मैरेट के द्वारा प्रतिपादित प्राणवाद का मूल रूप “मानवाद” है यह सिद्धांत इस धारणा पर आधारित है कि आदिम जाति का समस्त धार्मिक जीवन उनकी कतिपय पक्ष में ना आने वाली व्यक्ति निरपेक्ष अब अभौतिक तथा सर्वव्यापी अलौकिक की शक्ति में विश्वास है। यह शक्ति विश्व में गोचर अथवा अगोचर सभी पदार्थों में विद्यमान है यह मानव की इंद्रियों की पहुंच से बाहर है।
3. **प्रकृतिवाद** : प्रकृति तथा प्राकृतिक वस्तुओं की पूजा अर्चना से धर्म की उत्पत्ति मानने वाला विचार प्रकृतिवाद कहलाया है मैक्स मूलर इसके प्रतिपादन है उनके अनुसार प्रारंभ में सूर्य चंद्रमा पृथ्वी इत्यादि की पूजा की जाती थी

जादू

मानव ने अति मानवीय शक्ति के प्रति अपने विश्वासों को दो रूपों में प्रकट किया जब वह यह समझता है कि अलौकिक शक्ति उसे श्रेष्ठ है और यदि उसकी पूजा आराधना व प्रार्थना की जाए तो वह लाभकारी होगी तब वह अपने को उसे शक्ति के सम्मुख समर्पित कर देता है क्योंकि उसे पर विजय पाना वह अपनी शक्ति से बाहर समझता है। ऐसी दशा में वह धर्म के क्षेत्र में प्रवेश करता है। इसके विपरीत जब वह इस अलौकिक एवं अति मानवीय शक्ति को अपने नियंत्रण में लाने का प्रयत्न करता है।

जादू के अर्थ व परिभाषा

डॉक्टर एस सी दुबे के अनुसार जादू उसे शक्ति विशेष का नाम है इसके विषय में यह धारणा हो की वह स्वत ही प्रभावपूर्ण है चाहे लक्ष्य लौकिक हो या पारलौकिक

फ्रेंजर का मत है कि जादू मनुष्य के विश्वासों तथा व्यवहारों का वह संग्रह है जिन पर किसी प्रकार की आलोचना व पुनः परीक्षण नहीं हो सकता वे जादू को एक आभासी विज्ञान मानते हैं और आभासी कला भी।

जादू के तत्व

डॉक्टर एससी दुबे के अनुसार किसी भी जादू क्रिया में हम तीन तत्वों को शामिल करते हैं

- 1. कतिपथ शब्द :** यह वह शब्द है जो पूर्णतया गुप्त होते हैं। इनका प्रयोग केवल उन्हीं व्यक्तियों के द्वारा किया जाता है जो जादू करने की विधि में निपुण होते हैं। कभी-कभी जब जादू को एक सामान्य सामाजिक घटना के रूप में स्वीकार किया जाता है तब उसे समाज के सभी सदस्य इन शब्दों से परिचित होते हैं किंतु इस स्थिति में यह सावधानी रखी जाती है कि गुप्त शब्दों का ज्ञान समाज के बाहर के किसी सदस्य को ना हो।
- 2. शब्दों उच्चारण के साथ कतिपथ विशिष्ट क्रियाएं :** मंत्रों के प्रतिफलित होने के लिए उनके उच्चारण के साथ-साथ कुछ क्रियो का करना भी आवश्यक है।
- 3. जादू करने वाले व्यक्ति की विशेष स्थिति :** जिन दिनों जादू की क्रिया की जाती है उन दिनों में जादू कर्ता को सामान्य जीवन से भिन्न प्रकार का जीवन व्यतीत करना पड़ता है।

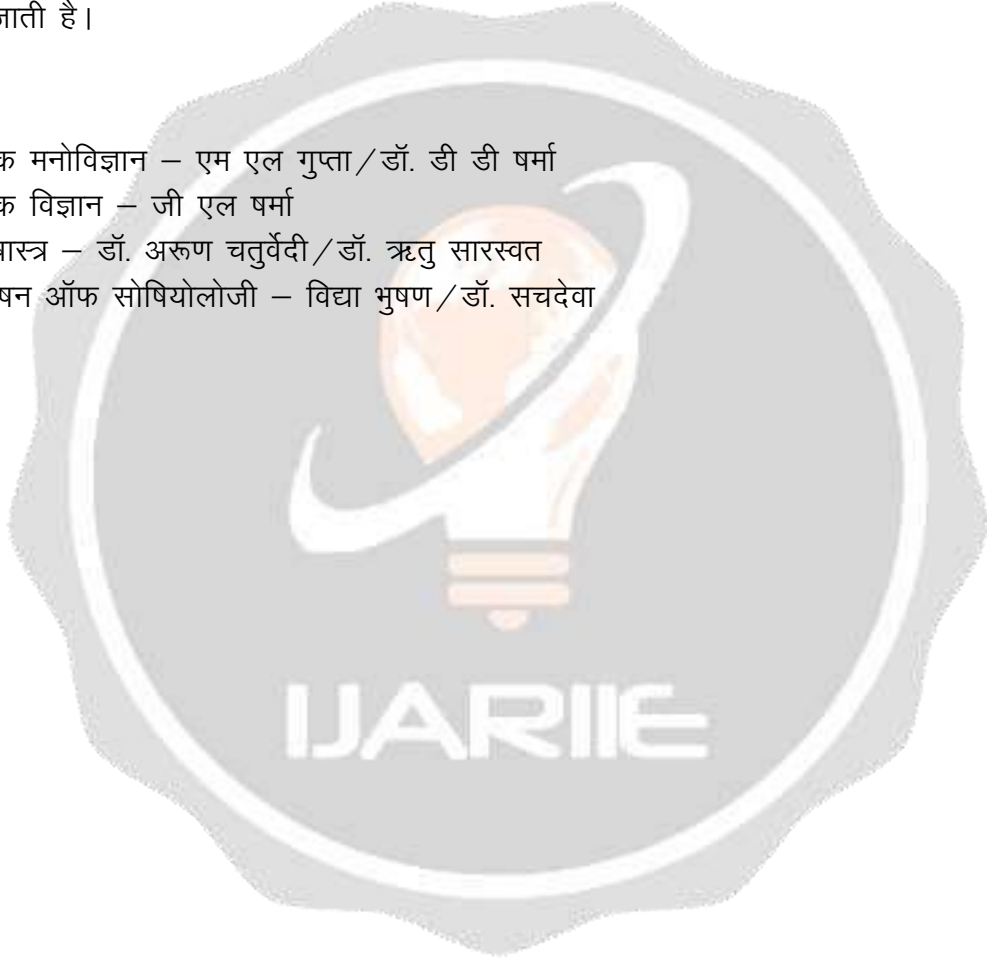
धर्म और जादू में अन्तर

1. धर्म और जादू दोनों ही संसार के रहस्यों से भरे पड़े हैं। धर्म में व्यक्ति अलौकिक शक्ति को अपनी शक्ति से श्रेष्ठ समझता है। अतः उसके सामने नतमस्तक होता है। उसकी पूजा आराधना आदि करता है। जबकि जादू में व्यक्ति उसे अपने दबाव में रहकर उसे अपने उद्देश्यों की पूर्ति करता है।
2. दुर्खीम ने धर्म को पवित्र माना है। जबकि जादुई क्रियो को अपवित्र यदपि यह अंतर सदा सही नहीं है। कभी-कभी जब जादू सामूहिक भलाई के लिए काम में लिया जाता है तो पवित्र माना जाता है।
3. धर्म में व्यक्ति अलौकिक शक्ति से डरता है। उसके प्रति भय एवं श्रद्धा की भावना रखता है। जबकि जादू में वह अलौकिक शक्ति से डरता नहीं वरन यह समझता है कि वह उन शक्ति का भेद जानता है। अतः वह उसे श्रद्धा व सम्मान की दृष्टि से नहीं देखता है।
4. धर्म एक सामाजिक तथ्य है जबकि जादू एक व्यक्तिगत तथ्य है। दुर्खीम ने कहा कि जादू कोई चर्च नहीं होता इसका प्रयोग एक व्यक्ति दूसरे व्यक्ति के लाभ के लिए करता है। धर्म एक सामाजिक शक्ति है जो लोग अनुष्ठानों में भाग लेते हैं। वह समाज द्वारा निर्धारित सीमाओं को जानते हैं। जादू समाज विरोधी है। लोग साधारणतः व्यक्तिगत उद्देश्यों की पूर्ति के लिए इसका प्रयोग करते हैं। धर्म सामूहिक प्रतिनिधित्व का प्रतीक है परंतु जादू नहीं।
5. धार्मिक नेता पुजारी आदि को समाज में सम्मान की दृष्टि से देखा जाता है। जबकि जादूगर की सामाजिक प्रतिष्ठा ऊंची नहीं होती उसे भय एवं शंका की दृष्टि से देखा जाता है। पहले को हितकारी व दूसरे को अहितकारी माना जाता है।
6. धर्म की उत्पत्ति जादू के बाद हुई है जैसा कि फ्रेंजर मानते हैं कि पहले आदिमानव जादू टोने का सहारा लिया करते थे। जब जादू असफल हुआ तो धर्म अस्तित्व में आया इस प्रकार जादू धर्म की तुलना में अधिक प्राचीन है।
- 7 जादू में विज्ञान की ही भांति कार्य कारण पर जोर दिया जाता है परंतु धर्म में ऐसा नहीं है।

- 8 जादू में कुछ निश्चित पदार्थ जैसे गूगल कटार, श्मशान की राख, खोपड़ी ताबीज आदि में विशेष शक्ति मानी जाती है। जबकि धर्म में इस प्रकार की वस्तुओं में कोई शक्ति नहीं मानी जाती।
9. धर्म में आत्मा व परमात्मा से संबंध स्थापित किया जाता है जबकि जादू में पर आत्मा से संबंध स्थापित न कर किसी शक्ति विशेष या आत्मा विशेष से ही संबंध स्थापित किया जाता है।
10. धर्म में प्रार्थना सफल या असफल भी हो सकती है परंतु इसका प्रभाव धर्म के अनुयायियों पर नहीं पड़ता दूसरी ओर यदि जादू असफल हो जाता है तो उसका प्रभाव समाप्त हो जाता है।
11. फ्रेजर का मत है कि दुनिया के विभिन्न भागों में धार्मिक भिन्नताएं देखने को मिलती है जबकि सभी जगह जादू में समानताएं पाई जाती है।

संदर्भ सूची

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Applications of Automated Attendance System Using Face Recognition: A Comprehensive Review

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Abstract

Facial recognition technology has transformed the landscape of various sectors, including security, finance, and healthcare, due to its accuracy, efficiency, and non-intrusive nature. Among the applications of facial recognition, the automated attendance system has gained immense popularity recently. This paper conducts a comprehensive review of the applications of automated attendance systems using face recognition technology. We discuss the benefits and challenges of facial recognition-based attendance systems in different domains, focusing on the last five years of research. Additionally, we identify future directions and research gaps in this ever-evolving field.

Keywords: Face Recognition, Applications, Challenges

1. Introduction:

Automated attendance systems using facial recognition have grown exponentially in recent years. They offer numerous advantages, including improved accuracy, quick response times, and reduced chances of cheating or proxy attendance. Due to their wide range of applications, facial recognition-based attendance systems find themselves integrated into various sectors, such as education, healthcare, travel, and leisure (Elharrouss et al., 2020). This section provides a brief overview of facial recognition technology and the basics of automated attendance systems.

2. Literature Review:

Since 2017, numerous studies explored various aspects of facial recognition-based attendance systems. Table 1 summarizes selected papers according to their primary focus and research questions.

Table 1. Selected Papers on Automated Attendance Systems using Face Recognition, sorted chronologically.

Year	Authors	Title	Main Focus	Research Questions
2017	Li et al.	A Robust Face Recognition Method...	Noise filtering, anti-spoofing	How does spoofing occur?
2018	Singh et al.	Real-time Face Recognition System...	GPU-based acceleration, low-power devices	Can GPUs handle real-time tasks?
2019	Rajput et al.	Ensemble-learning based Face Recognition...	Ensemble models, hyperparameter tuning	Which ensemble performs best?
2020	Ramalingam et	Face and Palm Recognition	Multi-biometric fusion,	What benefits arise

	al.	System...	attendance tracking	from fusion?
2021	Narayanan et al.	Face Recognition in the Post-COVID Era...	Temperature screening, masked faces	How do masks influence accuracy?

3. Applications of Automated Attendance Systems Using Face Recognition:

3.1. Education:

Facial recognition-based attendance systems have shown great success in educational institutions, replacing old-fashioned roll-call methods. Teachers benefit from having more free time, no longer needing to spend precious minutes calling out names (Kumar et al., 2020). Students appreciate the swiftness of the new system, which allows classes to start promptly.

3.2. Healthcare:

Healthcare professionals have embraced facial recognition-based attendance systems to ensure proper documentation and billing for medical services rendered (Ali et al., 2020). When combined with wearables, facial recognition can predict disease outbreaks and alert authorities (Pramanik et al., 2021).

3.3. Travel and Tourism:

Airports and amusement parks use facial recognition-based attendance systems extensively for ticketing, queue management, and crowd control (Basiri et al., 2019). Airlines integrate facial recognition into self-service check-in kiosks and baggage drops, streamlining passenger flow and minimizing wait times (Lau et al., 2018).

3.4. Banking and Finance:

Financial institutions adopt facial recognition-based attendance systems to strengthen security measures and deter fraud (Mishra & Dubey, 2020). Financial analysts estimate annual savings worth millions of dollars due to the prevention of payroll fraud alone (Singh et al., 2021).

According to Li et al. (2017), noise filtering and anti-spoofing are crucial for recognizing faces accurately. Meanwhile, Singh et al. (2018) highlighted the necessity of GPU-based acceleration and low-power devices in real-world applications.

4. Materials and Methods:

Our meta-analysis comprises studying research articles, surveying industry whitepapers, and consulting experts in the field. We identified common themes and evaluated their significance in improving attendance systems' performance. Four dimensions guided our selection criteria:

- Accuracy: Degree of correct recognition despite varying lighting, poses, angles, skin tone, and makeup.
- Speed: Seconds taken from initial face detection until final confirmation.
- System architecture: Device setup, networking configuration, and server load distribution.
- Integration: Easy installation, maintenance, and compatibility with popular operating systems.

4. Results:

Three dominant trends emerged among recent publications on facial recognition-based attendance systems:

1. Deep Learning: Many studies adopted deep learning techniques (convolutional neural networks, recurrent neural networks) instead of classic shallow models (support vector machines, linear discriminant analysis). Deep models learn richer features and produce higher accuracies.

2. Multi-biometric Fusion: Two-factor authentication became increasingly common, involving iris scans, palm prints, or voice samples alongside facial images. Fusing modalities compensates for single-modality failures and increases confidence levels.
3. Mobile Device Compatibility: With the rise of remote workforces, portable devices play a vital role in attendance tracking. Thus, Android/iOS SDKs, RESTful APIs, and microservices attracted significant attention.

Research by Rajput et al. (2019) showed that ensemble models perform better than single ones in facial recognition tasks. Likewise, Ramalingam et al. (2020) confirmed the benefits of multi-biometric fusion in attendance tracking.

4. Challenges and Future Directions:

Though facial recognition-based attendance systems bring numerous benefits, they come with significant challenges, such as privacy breaches, cybercrime, and fake credentials. Future research should focus on solving these pressing issues to unlock the true potential of facial recognition technology.

5. Conclusion:

Automated attendance systems using facial recognition technology proved beneficial for various sectors, mainly education, hospitality, and workspace management. Thanks to deep learning, multi-biometric fusion, and mobile device compatibility, accuracy and efficiency improved drastically since 2017. Yet, future endeavors should consider privacy issues, legal restrictions, and user acceptance to maximize positive impacts.

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- Make sure to double-check the formatting against the latest APA guidelines, as they may have been updated since my last knowledge update in January 2022.

Unemployment in youth

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Research Summary

Unemployment has severely gripped modern society, but educated unemployment has become a big problem and serious issue for India, which creates confusion and disorientation among the educated unemployed. Due to unemployment, poverty increases and the problem of hunger arises. In case of mental disturbance due to unemployment, people are more likely to engage in theft, robbery, violence and criminal activities. The main reason for the problem of unemployment is the lack of employment-related, practical and experimental education. Excessive competition just to get government jobs, computer and robotic based production, self-employment and aversion from ancestral work, widespread privatization etc. are also the reasons for unemployment. The problem of unemployment in the country can be solved by promoting self-employment. Emphasis should be given to vocational and practical education. Cottage industries should be promoted. Today the first need is that meaningful thinking should be done at the national level on the basis of priorities regarding the future of unemployed youth.

प्रस्तावना

बेरोजगारी आधुनिक समाज की मुख्य समस्या बन गई है। इसने समाज को बुरी तरह जकड़ रखा है, लेकिन शिक्षित बेरोजगारी भारत के लिए एक बड़ी समस्या और गंभीर मुद्दा बन गई है। जो पढ़-लिखे बेरोजगारों में भ्रम और भटकाव की स्थिति पैदा करती है। जिसके कारण अधिकांश युवा तनाव का शिकार हो जाते हैं। शिक्षित बेरोजगारी की समस्या सबसे अधिक कष्टप्रद है। प्रत्येक वर्ष विश्वविद्यालयों से शिक्षित युवाओं की बड़ी भीड़ रोजगार के क्षेत्र में कदम रखती है, लेकिन उन सभी को जीविका उपलब्ध कराना एक बड़ी समस्या है। उनमें से कुछ प्रतिशत लोग ही रोजगार पाने में सफल हो पाते हैं, उसके बाद भी कितने मेधावियों को उनकी शैक्षिक योग्यता के अनुरूप जॉब नहीं मिल पाती है।

व्यक्तिगत तौर पर 15 से 24 साल की आयु चुनौती पूर्ण होती है और इस आयुवर्ग के लोग अर्थव्यवस्था के लिए बहुत महत्वपूर्ण होते हैं। अर्थव्यवस्था को शिक्षा पूरी करने के बाद संक्रमण काल से गुजरे इन युवाओं को रोजगार मुहैया कराने के लिए तैयार रहना चाहिए। ये लोग युवा होते हैं, ऊर्जावान होते हैं और हाल में शिक्षा पूरी की हुई आबादी होती है। अगर इस आबादी को सही ढंग से उपयोग किया जाता है तो यह विकास, बचत और समृद्धि का मार्ग प्रशस्त कर सकती है। यदि इस आबादी का लंबे समय तक सही ढंग से उपयोग नहीं किया जाता है तो वे समाज में परेशानी पैदा करने का कारण बन सकती है।

बेरोजगारी के दुष्परिणाम

आज का युवा इसलिए शिक्षा प्राप्त करना चाहता है ताकि उसे अच्छी नौकरी मिले जिससे भोगपरक जीवन जीने का आनंद उठाया जा सके। इसी आनंद के तलाश में असफल होने पर वह अवैध तरीके से धन कमाने की चेष्टा करता है, जो उसके जीवन में जहर बोलता है। अपराधियों और अराजक तत्व ऐसे ही युवाओं को गुमराह कर अपना उल्लू सीधा कर रहे हैं, आज शराब तस्करी में युवाओं को प्रलोभन देकर शामिल किया जा रहा है। अगर युवा रोजगार विहीन है, तो परिवार और समाज उसे प्रोत्साहन देने की जगह हतोत्साहित करता है, जिससे वह जीवन से निराश होकर विघटनोन्मुखी हो जाता है।

बेरोजगारी के कई दुष्परिणाम होते हैं। बेरोजगारी के कारण निर्धनता में वृद्धि होती है तथा भुखमरी की समस्या उत्पन्न हो जाती है। बेरोजगारी के कारण मानसिक अशांति की स्थिति में लोगों की चोरी, डकैती, हिंसा, अपराध की ओर प्रभावित होने की भी पूरी संभावना रहती है। अपराध एवं हिंसा में हो रही वृद्धि का सबसे बड़ा कारण बेरोजगारी ही है। युवाओं की बेरोजगारी का लाभ

उठाकर एक ओर जहां स्वार्थी राजनेता इनका दुरुपयोग करते हैं तो वहीं दूसरी ओर धनी वर्ग भी इनका शोषण करने से चूकते नहीं है। मानव तस्करी, आतंकवाद, साइबर क्राइम आदि जैसे जघन्य अपराधों के लिए भी काफी हद तक बेरोजगारी जिम्मेदार है।

आज युवा कम समय और मेहनत के कामयाब होना चाहते हैं। जिसके कारण उनका काम करने में मन नहीं लगता है, जो बेरोजगारी को बढ़ावा दे रहा है। बेरोजगारी के कारण ही अपराध और हिंसा में वृद्धि हो रही है और सबसे बुरी बात तो यह है कि बेरोजगार व्यक्ति को अपने अस्तित्व के लिए संघर्षरत रहते हुए अपने घर ही नहीं बाहर के लोगों द्वारा भी मानसिक रूप से प्रताड़ित होना पड़ता है। युवाओं को स्वावलंबी बनाया जाए और मेधावियों को उनकी योग्यता के आधार पर जाब दी जाए ना कि सिर्फ डिग्री देखकर।

भारत में बेरोजगारी के कारण

1. केवल अच्छे अंक पाने के लिए शिक्षा। रोजगार परक, व्यावहारिक एवं प्रायोगिक शिक्षा की कमी।
2. खेती किसानों को कम पढ़े लिखों का कार्य न मानने वाली मानसिकता।
3. अच्छे पेशवैनी कामों से मुंह मोड़ लेना।
4. केवल सरकारी नौकरी पाने के लिए अत्यधिक होड़।
5. स्वरोजगार को रोजगार न मानने वाली मानसिकता।
6. अत्यधिक जनसंख्या विस्फोट।
7. नए उद्योग धंधों और फैक्ट्री का विकास न होना।
8. एक दूसरे के होड़ में अपनी योग्यता को न पहचान कर भेड़ चाल में शामिल होना।
9. व्यापक निजीकरण।
10. कंप्यूटर और रोबोटिक आधारित उत्पादन।

बेरोजगारी की समस्या का एक मुख्य कारण आधुनिक तकनीकी और मशीन भी है। इन मशीनों को तैयार करने के लिए भी मशीनों का ही सहारा लिया जाता है। इस कारण भी नई तकनीक भारत में रोजगार के लिए अभिशाप साबित हो रही है। फिर ऑनलाइन बाजार कुछ ही हाथों तक सीमित कर रह गया है। हमारा देश कृषि प्रधान है लेकिन कुछ मौसम की मार से कुछ सरकारों के ढुलमुल रवैया की वजह से उपेक्षित है। इसके अलावा युवा पीढ़ी की कृषि में रोजगार के प्रति दिलचस्पी न होने के कारण भी कृषि भी रोजगार का जरिया नहीं बन पा रही है।

बेरोजगारी की समस्या का समाधान

हमारे देश में बेरोजगारी की समस्या का समाधान तभी संभव हो सकता है जब शिक्षा प्रणाली में व्यापक सुधार करते हुए व्यावसायिक एवं व्यावहारिक शिक्षा पर जोर दिया जाए। कुटीर उद्योगों को बढ़ावा दिया जाना चाहिए तथा नए उद्योगों को स्थापित कर रोजगार के अवसरों को बढ़ावा दिया जाना चाहिए। इसके अलावा जनसंख्या वृद्धि पर नियंत्रण करके और ग्रामीण क्षेत्रों में सरकारी योजनाओं और रोजगारों की जानकारी देकर काफी हद तक बेरोजगारी की समस्या का समाधान हो सकता है।

स्वरोजगार को बढ़ावा देकर भी देश में बेरोजगारी की समस्या का समाधान हो सकता है। अगर सरकारें कृषि, मत्स्य पालन और हर गांव में दूध की डेरी खोलने के लिए लोगों को विशेष पैकेज जारी करें तो इससे सरकारों को भी काफी कमाई हो सकती है और दूसरी ओर खेती बड़ी अच्छी हो सकती है। सरकारों और निजी क्षेत्र को चाहिए कि नौकरी से सेवानिवृत्त होने वाले जो कर्मचारी पेंशन की सुविधा लेते हों, उसे नौकरी देने की बजाय वैसे बेरोजगार युवाओं को रोजगार देने का प्रावधान किया जाए, जो रोजगार पाने के लिए तरस रहे हैं।

कभी युवकों को बेरोजगारी भत्ता का झुनझुना थमाकर बहलाया जाता है, तो कभी उसे ऋण उपलब्ध कराने के जुगनू दिखाकर फुसलाया जाता है, तो कभी नौकरी के लुभावने आंकड़े दिखाकर बहलाया जाता है, इससे कुछ गोरखधंधों की भी चांदी हो जाती है जो प्रोजेक्ट बनाने के नाम पर पन्द्रह से बीस हजार वसूल लेता है, पर इस दिशा में सार्थक पहल की जानी अभी बाकी है। आज पहली आवश्यकता यह है कि बेरोजगार युवाओं के भविष्य को लेकर प्राथमिकताओं के आधार पर राष्ट्रीय स्तर पर सार्थक चिंतन किया जाए। क्योंकि युवाओं के भविष्य के साथ ही इस देश का भविष्य जुड़ा है। इसलिए आज युवा को सरकारी नौकरी के भरोसे हाथ पर हाथ रखकर नहीं बैठना चाहिए। स्वरोजगार की ओर कदम बढ़ाना चाहिए। यह सत्य है कि युवाओं के लिए सरकारी नौकरियों के दरवाजे बंद है, पर युवाओं को उनसे सिर टकरा-टकराकर अपने आपको लहलुहान नहीं करना चाहिए

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Research paper on “EMOTIONAL INTELLIGENCE IN THE IMPLEMENTATION OF PoSH ACT 2013 IN THE HOTEL INDUSTRY”

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Abstract

Here, research paper attempt to connection between emotional intelligence and the successfully implementation of the sexual harassment of women at workplace (Prevention, Prohibition and Redressal) The Posh Act 2013, within the Hotel Industry. This study tries to find how emotional intelligence influence employee’s behavior and organizational culture. And also find out impact of usefulness of the PoSH Act 2013. The research conducted a mixed methods approach including qualitative interview, survey and policy analysis. The primary results explain the role of emotional intelligence effect on employee’s behaviour and also employee’s performance. We show the results how manager can manage his own emotions and understand the emotions around people. Moreover, the research study explains how, emotional intelligence contributes their role in organisational culture with PoSH Act implementation. Emotional intelligence and posh Act creates work culture and safe workplace environment for women. At the end, the research will inquired the role of emotional intelligence on workplace. Purpose of this research is to make aware and to guide the hotel industry how to manage and control emotional intelligence at workplace and provide safe work environment to women.

Key Word: Emotional Intelligence, PoSH Act 2013, The Hotel Industry.

Introduction of emotional intelligence and POSH Act 2013

Research starts with the quotation of -

“Anyone can become angry—that is easy. But to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way—that is not easy.”

ARISTOTLE, the Nichomachean Ethics

First of all we understand what emotional intelligence is. Emotional intelligence is an art to understand and manage your own (employer) emotions and also understand and manage emotions of people around you. (Employee) .To balances your own emotions as well as people around you. The introduction gives an idea about the study, outlining the importance of implementing the prevention of sexual harassment (POSH) Act 2013, within the hotel industry. The POSH Act 2013 provides a safe and harassment-free workplace for all employees. With specific focus on preventing and suggesting sexual harassment. Emotional intelligence can handle with four domains. (i) Self -awareness (ii) self - Management (iii) social-awareness (iv) Relationship Management. These four domains are help to identify and regulate one’s emotions and understand the emotions of others. Emotional intelligence also helps you to build relationship and reduce employee’s stress and improve job satisfaction.

“Emotional intelligence has become a major topic of interest in scientific circles as well as in the lay public since the publication of a bestseller by the same name in 1995 (Daniel Goleman 1995)”

The EQ-i is a self-report measure of emotionally and socially intelligent behaviour that provides an estimate of emotional-social intelligence.

In Working with Emotional Intelligence I proposed an expanded framework that reflects how the fundamentals of EI—self-awareness, self-management, social awareness, and the ability to manage relationships—translate into on-the-job success. In doing so, I borrowed a concept from David McClelland, the Harvard psychologist

who had been my mentor in graduate school: competency. While our emotional intelligence determines our potential for learning the fundamentals of self-mastery and the like, our emotional competence shows how much of that potential we have mastered in ways that translate into on-the-job capabilities. To be adept at an emotional competence like customer service or teamwork requires an underlying ability in EI fundamentals, specifically social awareness and relationship management. But emotional competencies are learned abilities: having social awareness or skill at managing relationships does not guarantee that one has mastered the additional learning required to handle a customer adeptly or to resolve a conflict. One simply has the potential to become skilled at these competencies. (Daniel Goleman 1995)

What is PoSH Act, now we can understand in brief.

Now, lights on PoSH Act 2013, this Act is Introduced on 23 April 2013. Moreover, give information about PoSH Act 2013 is a legislation enacted by Government of India in 2013 to address the issue of sexual harassment of women on workplace. The aim of the Act is to provide safe work environment to women and any other employees. This Act works against sexual harassment of women on workplace.

PoSH Act need to build in the banner of VISHAKHA of 1997, formulated Bhanwari Devi gang rape case of Rajasthan these guidelines deal with foundation of the Act sexual harassment at workplaces. In 1992, Bhanwari Devi a Dalit woman who was a social worker employed with the Rural Development programme of the government of Rajasthan was gang raped. This incident high lights the sexual harassment of women at work place. The Supreme Court framed guideline and issued direction to the union of India for a law of sexual harassment.

This PoSH policy aims to make the workplace safer environment for women by preventing, prohibiting and redressing acts of sexual harassment against them. The POSH Act basically enacted for women sexual harassment. An organisation's HR department can have make policies and guideline that PoSH policies apply for men and women both. And also HR department has rights to change the PoSH policy. HR department make PoSH policy for thirdgender or transgender too. Every hotel has their HR department and their HR department fix hotel's PoSH policy according to the PoSH Act 2013. Every group hotels regulate PoSH policy and PoSH committee. In committee there are 3 to 4 members, one must be woman.

Now we get idea about what is The Hotel Industry?

As the hospitality industry is known for its dynamic service, where employee gives service to the respective guests and satisfied them by giving their best. In the hotel industry employee gives their service in various departments. For instance, waiter gives service into restaurant or food court of the hotel

The hotel industry or hotel sector is the subsector of the service business that deals with guest lodgings. Most definitions of the term hotel business include numerous additional types of overnight accommodations. In simple way, the hotel industry is the section of the service industry that deals guest accommodation or lodging. By most definitions, the hotel industry refers to hotels and many other forms of overnight accommodation, including hostels, motels, inns, and guest houses. A hotel is a place where traveller can receive food and shelter.

Objectives

To evaluate the level of emotional intelligence included in employees and management in the Hotel Industry.

To examine the effectiveness of emotional intelligence in promoting awareness and understanding of PoSH act 2013.

To analyse the influence of emotional intelligence on the implementation of announce the system for sexual harassment incidents..

To provide guidance for increasing emotional intelligence and promoting a more supportive workplace environment for PoSH Act implementation.

Purpose of the study

Main purpose of this research is to explore the impact emotional intelligence on the implementation of the PoSH Act 2013 in the Hotel industry. This study motto is to construct the emotional intelligence level of employees and management. The promoting awareness and understanding of PoSH Act. To provide safe work

environment of women with help of emotional intelligence. Here, we try to establish relation between emotional intelligence and PoSH Act. Also How they asset each other in the hotel industry. Purpose of the study is to stop sexual harassment of women at workplace. And to protect them. Also to Motivate women to take stand against harassment.

Purpose of the study is to investigate harassment incident in the hotel industry by emotional intelligence. And how emotional intelligence and PoSH Act2013 are related in the hotel industry. Mental harassment occurs while employee fails in relationship with management. So, this is a reason for mental harassment and day by day mental harassment convert into sexual harassment at workplace.

Methodology

Survey – To conducts survey of employees and manage to measure their emotional intelligence levels and collect their feedback or reply on their personal opinion regarding the PoSH Act implementation.

Interviews – To conduct personal interviews including, HR professionals, managers and employees and to obtain qualitative data on the emotional intelligence on the perception of POSH Act observation.

During personal interviews and some of casual / informal communication getting knowledge about real-world incidents about sexual harassment at workplace. Moreover, in the Hotel industry sexual harassment is very major and common issue. But no one raise voice against harassment. Even victim is not willing to take action against individual or firm. In the Hotel Industry women sexual harassment is very casual thing. Verbal harassment is so much common in the hotel industry. While in the Hotel industry men sexual and mental harassmentmerely happens. Information will also be obtained through personal interviews.

While, doing detailed examination of how emotional intelligence implementation occur in this cases – and manager of the hotel can control emotional intelligence and also control and handle employees emotional intelligence.

For instance, manager must Examine why individuals become emotional or irritated on workplace with minor reason. Most of the time the common reasons for weak emotional intelligence are like, financial problems, family dispute, social issues and some may job dissatisfaction.

Documents analysis –To examine current policies, materials and incident reports and evaluate emotional intelligence policies within the Hotel industry.

Each Hotel has its own PoSH policies under PoSH Act 2013. And every group of hotels have their PoSH committee, committee has four to five members and one of them is woman.

Case study – To select few case studies from the hotel industry and to provide real-world examples of how emotional intelligence has influenced PoSH Act 2013 implementation. Case study information will be gathers mostly from personal experiences of the Hotel staff.

Conclusion

The research paper will summarise the study of the main findings, discusses the valuable insights into the introduction of emotional intelligence and the effective implementation of the POSH Act in the hotel industry. By understanding the role of emotional intelligence in creating a safe and harassment-free workplace culture. This study discusses broader way and recommendation for the Hotel management to enhance emotional intelligence and ensure effective implementation of PoSH Act.

This research will endeavour the relationship between emotional intelligence (EI) and the effective implementation of the Prevention of Sexual Harassment (POSH) Act 2013 within the unique context of the hotel industry. Through a mixed-methods approach surveys, interviews, document analysis, and case studies, here, explore the impact of emotional intelligence on various aspects of POSH Act. The main motive is to provide safer work environment using emotional intelligence (EI) under provision of PoSH Act.

Key Findings

The finding of study will exposes correlation between emotional intelligence and successfulness of PoSH Act implementation. Employees and managements department with higher emotional intelligence acted the great understanding of the act's provisions. Moreover, case studies highlight example where emotional intelligence play a major role to stop and addressing incidents of sexual harassment

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Status of Teacher Education in Rajasthan

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Introduction

Education is the transmission of knowledge, skills, and character traits and comes in many forms. Formal education happens in a complex institutional framework, like public schools. Non-formal education is also structured but takes place outside the formal schooling system, while informal education is unstructured learning through daily experiences. Formal and non-formal education is divided into levels that include early childhood education, primary education, secondary education, and tertiary education. Other classifications focus on the teaching method, like teacher-centered and student-centered education, and on the subject, like science education, language education, and physical education.

Development of Teacher Education

Teacher education has been greatly influenced over the years by developments in the field of education as well as those in society at large. The major trends within the area of teacher education, their conceptual articulation and the emerging issues have been presented in Part I of this volume. These have been constructed based on the understanding gained through experience as well as a study of evidence from several documents. With changes in the role and expectations of a teacher and school education, the relevance of teacher education has become increasingly pronounced.

While this has led to the expansion and differentiation of teacher education, several issues and aspects of it have persistently come in for criticism and scrutiny. These have found serious consideration on the part of various academic and advisory bodies which have influenced decision-making in this regard. Among other measures, these have included various commissions and committees set up at different points in time, to appraise and recommend suitable courses of action on matters related to education in general, and teacher education in particular. The views and recommendations of various reports represent the major concerns that have provided direction to decision-making on teacher education over time.

After Independence, the emerging socio-economic and political situations influenced the national scenario of teacher education. The Government of India set different Committees and Commissions for addressing the specific issues of Teacher Education. The first Commission on the formulation of the vision of education in Independent India was known as the Indian University Education Commission in 1948-49 under the Chairmanship of Dr. S. Radhakrishnan. This Commission laid the foundation for moving towards qualitative improvements in the training programmes for school teachers.

Thereafter, a secondary Education Commission was appointed under Dr. A. Lakshman Swami Mudaliar in 1952-53 to suggest measures for reorganization and improvement of Secondary Education in the Country.

During the sixties, NCERT was established as an autonomous organization to advise and assist the Government in formulating and implementing policies and programmes in the field of education, particularly school education. In 1964 an Education Commission was set up under the Chairmanship of Dr. D.S. Kothari. The Commission suggested various ways to improve the quality of teacher education.

During the seventies, there was much emphasis on reforms in teacher education. In 1973, the Government of India set up the National Council for Teacher Education (NCTE) which was to work as a national advisory body for teacher education.

Eighties saw the evolution of the National Policy on Education (NPE) and Programme of Action (POA). The National Policy on Education (NPE) 1986 emphasized that the teacher education programme. Training schools were upgraded to District Institutes of Education and Training (DIETS) and training Colleges were upgraded to Colleges of Teacher Education (CTES) and Institutes of Advanced Studies in Education (IASES).

The revised National Policy on Education 1992 also emphasized the functioning of teacher education institutions. In 1990 the NEP was revised by the Acharya Ramamurthy Committee and it gave a humane approach to education emphasizing more value-oriented education. It also saw the emergence of NCTE as a statutory body of the Government of India. NCTE came into effect on 17th August 1995 for the planned and coordinated development of the teacher education system across the country. The first decade of the twenty-first century had the privilege of the liberalization policy introduced in the early nineties. After the universalization of education and the flagship programme of Sarva Shiksha Abhiyan (SSA), now efforts are being made to Universalize Secondary education through Rashtriya Madhyamika Siksha Abhiyan (RMSA).

The Indian Ministry of Education established the National Council of Educational Research and Training (NCERT) on July 27, 1961, and the council began formal operation on September 1, 1961. It was formed through the merger of seven government organizations:

- the Central Institute of Education,
- the Central Bureau of Textbook Research,
- the Central Bureau of Educational and Vocational Guidance,
- the Directorate of Extension Programmes for Secondary Education,
- the National Institute of Basic Education,
- the National Fundamental Education Centre,
- and the National Institute of Audio-Visual Education.

It evolved as a premier educational body devoted to educational research, development, training, extension and dissemination. For the development of teacher and teacher education, it established an exclusive department of teacher education which became a pace-setter in the country to initiate new thinking for reorientation of these important concerns in education. The significant contributions of the NCERT are included:

- Revamping of Elementary Teacher Education Curriculum.
- Revamping of Secondary Teacher Education Curriculum.
- Reorganization of Student Teaching and Evaluation.
- Institute of All-India Surveys on Teacher Education.
- Focus on continuing education of teachers through the establishment of centers of continuing education.

Thus, the NCERT played a pioneering role as a national autonomous body not only in school education but also in teacher education.

The recent regulatory change started from two related national frameworks for reforms in teacher education: the National Curriculum Framework for Teacher Education (NCFTE), powered by Justice Verma Commission (JVC) on teacher education in 2012 (Ministry of Human Resource Development 2012). As an outcome of the report of the Justice Verma Commission, NCTE Regulations 2014 have been implemented.

The National Knowledge Commission (NKC) has observed that teachers are the single most important element of the school system and the country is already facing a severe shortage of qualified and motivated school teachers at different levels. It is urgent to restore the dignity of school teaching as a profession and provide more incentives for qualified and committed teachers. Non-teaching official duties such as election-related responsibilities should not be allowed to interfere with the teaching process. Forums that allow and encourage teachers to exchange ideas, information and experiences including a web-based portal should be developed. At the same time, there should be transparent systems for ensuring the accountability of school teachers. As far as possible, teachers should be recruited to particular schools.

Teacher Education Programme

The following are the types of teacher training institutes for various levels of education.

1. Teachers Training for Pre-primary or Nursery schools- Catering to the needs of teachers for Kindergarten, BAL Vihar's, and Montessori Schools. The minimum qualification for admission to this course is Matriculation.
2. Teachers Training for Primary Schools- The duration of the course is two years and the minimum qualification is higher secondary.
3. Secondary Training Schools- These schools provide teachers for the middle and junior secondary schools, after completions of training they are either awarded a certificate or a diploma in education.

4. Training Colleges or Colleges of Education- These colleges provide teachers for secondary and senior secondary schools. Normally it is a one-year course leading to a B.Ed. degree and the minimum qualification is graduation.
5. Training College for Special Subjects- These are special colleges for preparing teachers in certain subjects like physical education, home science, craft, language, etc.
6. Institute of Advanced Study in Education- These provide M.A., M.Ed., and Ph.D. in education.
7. Training College for Special Education- These prepare for teaching handicapped, deaf, and dumb children.

Teacher Education Institutions

There are nearly 13014 Teaching & Education colleges in India. Out of these 13014 Teaching & Education colleges in India, there is a split of colleges by ownership, private: 8754, public / government: 1419 & public private: 1296. VBGSTC, established in 1942, is one of the earliest colleges in Rajasthan and a pioneer in the master's and doctoral programmes for teachers in the state.

As per the NCTE, there are around 200 teacher training institutions are functional in Rajasthan. Who are offering D.Ed., B.Ed. STC, BSTC, NTT, BTC, Pre-Primary, Shiksha Shastri, BA-B.Ed., B.Sc.-B.Ed., etc.

Competencies of Teacher Educators

There are various variables for predicting teacher education competencies, such as: research aptitude, educational administration and management aptitude, techno-pedagogic skills, life skills and teacher education disciplinary profile.

- Teaching aptitude: It is defined as the potential in the areas of teaching interest, teaching skills and acquisition of knowledge, disseminating capacity, and management ability and teaching behavioural patterns.
- Social sensitivity: is defined as the intensity with which an individual interacts with social environment based on appropriate norms related to status, socialization, religious beliefs, social institutions, and structure like family, class, caste, tribe, economy, as well as marriage and values, for example, individual, institutional, health, moral aesthetic and professional.
- General mental ability: is defined as the numerical ability, semantic ability, behavioural ability and analytical reasoning ability a person possesses, as a basic asset (both in-born and developed through education and experience) to solve the practical problems faced in day-to-day life.
- General language ability: it refers to the ability to use appropriate expressions in various interactive situations in accordance with the rules of grammar.
- Research Aptitude: It is the natural inclination of a person towards research. Particular to this context it is the ability to think in different ways to find solutions to educational problems.
- Educational Management Aptitude: Management is an important aspect of any system to work efficiently and effectively.
- Techno-pedagogic Competencies: Tremendous improvements in science and technological fields have brought the Information and Communication Technology (ICT) era into the education field.
- Living Competencies: Democratic ideas emerging after the Second World War led to the development of liberal education aspects where education is provided to all, irrespective of caste, creed, and gender. It is not the privilege of a few as in the past.
- Adjustment Capacity: The complexities of present-day life in human existence led to serious thought on the adjustment capacity of an individual.
- Teacher Education Disciplinary Profile: A person coming to the post-graduate level programme in teacher education has a preliminary understanding of the various issues related to the system.

Challenges of Teacher Education Institutions

Professional Status: The fact that students habitually aspire to be everything from doctors and engineers to pilots and models but a teacher says a lot about the status of this role.

Contrarily, in countries like South Korea and Finland, only the top 10 percent of merit holders are considered for this role. Although, the bar of scores should not be set so high for becoming a teacher. But there should be some kind of screening beyond B.Ed. and M.Ed. to select individuals who have the best skills for teaching.

The general perception that anyone can become a teacher as it doesn't require a specific skill set and is not a primary career choice should be changed. This mindset is one of the main teacher problems that clearly reflects

the status teachers hold in our country. Because this is not a highly regarded profession and people assume that anybody and everybody can become a teacher, they don't consider it to be phenomenal.

Lack of Planning Time:The majority of the highly potential teachers would attest to the fact that they don't get sufficient time to plan and implement their ideas. Teachers face a lot of pressure from management, administration, and parents for the completion of the course. When you ask a teacher about the problems they face, you will get to know how the time they get to plan their lessons is not enough.

The units are pre-decided for formative and summative assessments. Alongside, there is always one thing or other going on during the session. Sometimes an event or a celebration requires students to rehearse daily and teachers to be involved in non-academic activities. Such distractions often delay lesson deliveries.

Teachers often end up finishing the chapters hurriedly instead of applying innovative teaching methodologies to improve the quality of education. This kind of chaos and mismanagement can be avoided by planning sessions well in advance and assigning duties to non-teaching staff members or hiring specific professionals.

Non-Teaching Tasks: This brings us to the point of non-teaching tasks that are often handed over to the teachers in schools. They are loaded with surveys, documentation, typing exam papers, scorecard preparations, admissions, and much more. These jobs can be performed by administrative staff equally efficiently, and teachers would get ample time to prepare for their lessons.

The time post-final exams and at the end of summer vacations is mostly used by schools for admissions. If teachers utilize this time to work on developing and assembling essentials for developing innovative teaching techniques, they can deliver education more effectively throughout the academic year.

Inefficient Professional Training:Every organization conducts timely training sessions for its employees. But for some reason, teachers are not provided with this kind of learning opportunity.

The problems of teacher education in India are real. Every profession evolves with advancements in technology and trends. Hence, there should always be regular training programs for teachers to help them stay updated and upgrade their teaching styles accordingly.

Unfortunately, this is not a common trend in India. Teachers in most parts of our country have limited access to on-the-job learning programs. Even during the pandemic, when everyone was forced to work from home, many teachers were recording lectures for the first time. Especially elderly teachers suffered a lot due to this sudden shift.

If our system had already integrated teacher-learning programs, this transition would have been way smoother for all generations of educators. The world is continuously advancing with innovative teaching methodologies, some of which are not even known to teachers in India.

This inefficiency of professional training limits the teachers in this nation from developing additional skills and matching international standards.

Challenges in The Classroom:There can be a long list of pointers in response to what challenges teachers face in the classroom. Teachers don't have to deal only with the ordeal of the outward challenges of this profession. There are plenty of issues that need to be managed inside the classroom as well.

Students often become the naughtiest creatures when they are not willing to study. There are many teacher problems in the classroom, to name a few:

- Apathy
- Lack of students' participation
- Late homework submissions
- Misbehaviour
- Unnecessary cell phone usage

Work-Life Balance:The problems of teacher education do not end here. Striking a proper work-life balance has become a real struggle for teachers, especially after the pandemic.

Government teachers were even assigned COVID-19 duties in several parts of India along with the responsibility to deliver online education. After a stressful day, teachers can be seen checking assignments or assessments as they don't get sufficient time during their shift at the school.

Besides, those new to the online learning modules have been spending too much time recording lectures or understanding technology to deliver seamless lessons to their students on time.

Lack of clarity about career growth: Most teachers don't get enough clarity about what their career path will look like if they continue in this profession. Not all teachers can be promoted, however a clear path based on merit can be established by schools. Teachers can be made aware of what exactly is expected from them to ensure they are motivated and clear about objectives.

Conclusion

Although there are many more challenges that teachers struggle with daily in India, the above are the ones that should be addressed and resolved on priority. Our education system needs a systematic plan. Teachers are the root of an advanced or backward nation. When we take care of the roots, we will reap the best fruits. And no, you can't wait for the policy-makers to bring the change. Every individual can bring some changes on their very own level. And the change can begin with you.

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Study of educational achievement, adjustment and personality of students of higher secondary level of Muslim (minority) government and non-government schools of Jodhpur district.

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जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय विद्यालयों के उच्च माध्यमिक स्तर के विद्यार्थियों की शैक्षिक उपलब्धि, समायोजन एवं व्यक्तित्व का अध्ययन”

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सारांश— शिक्षा एक मौलिक एवं मानवाधिकार है, सशक्तिकरण का मार्ग है और समाज तथा व्यक्ति के विकास का साधन है। जनसंख्या वृद्धि को नियन्त्रित रखने के लिए गरीबी उन्मूलन के लिए, बाल मृत्युदर को कम करने के लिए तथा सतत विकास और लोकतन्त्र की सुनिश्चितता के लिए शिक्षा आवश्यक है। मुस्लिम अल्पसंख्यक वर्ग के विद्यार्थियों की वर्तमान शैक्षिक स्थिति को देखते हुए उनके शैक्षिक पिछड़ेपन को दूर करने का प्रयास किया है। आर्थिक दृष्टि से सक्षम न होने के कारण प्रायः कई विद्यार्थी शिक्षा प्राप्त नहीं कर पाते हैं और अपने पारिवारिक दायित्वों एवं जिम्मेदारियों के कारण किसी न किसी व्यवसाय को करने लगते हैं और शिक्षा प्राप्ति से विमुख हो जाते हैं। इनके अभिभावक भी आर्थिक तंगी के कारण शिक्षा प्राप्त करने के लिए प्रेरित नहीं करते, इस प्रकार अक्सर शैक्षिक क्षेत्र में अव्वल रहने वाले छात्र भी उच्च शिक्षा प्राप्त नहीं कर पाते हैं। अशिक्षित बालक—बालिकाएं समाज के किसी भी क्षेत्र में पूर्णतया समायोजित नहीं हो पाते और न ही उनके व्यक्तित्व का सर्वांगीण विकास हो पाता है। अतः उनकी शैक्षिक उपलब्धि की जानकारी प्राप्त होने से मुस्लिम विद्यार्थी के समायोजन और व्यक्तित्व की भी पूर्ण जानकारी मिलेगी और उन्हें उचित मार्गदर्शन मिलता रहेगा।

मूलशब्द—अल्पसंख्यक, शैक्षिक उपलब्धि, समायोजन, व्यक्तित्व

प्रस्तावना—शिक्षा मानव जगत की धरोहर है। जिससे समाज के विकास की सही दिशा व दशा निर्धारित की जाती है। प्रत्येक आवश्यकता मनुष्य में भावनों से जुड़कर कर्म का निर्धारण

करती है तथा मनुष्य समायोजन द्वारा अपने को स्थितर व सन्तुष्ट रखता है। मनुष्य को किसी कार्य के प्रति अभिप्रेरित कर उसके समायोजन स्तर को बढ़ाया जा सकता है लेकिन अगर कोई व्यक्ति किसी कार्य के प्रति अभिप्रेरित नहीं होता है तो उसके समायोजन को बनाए रख पाना बहुत कठिन हो जाता है।

समायोजन की प्रक्रिया पर बालक के व्यक्तित्व का बहुत अधिक प्रभाव पड़ता है। व्यक्तित्व दो प्रकार के होते हैं (i) अन्तर्मुखी प्रवृत्ति का व्यक्तित्व (ii) बहिर्मुखी प्रवृत्ति का व्यक्तित्व।

बहिर्मुखी व्यक्तित्व के बालक सहज ही समाज की प्रत्येक कार्यविधि में सम्मिलित हो जाते हैं। और प्रत्येक कार्य को सरलता से सीख लेते हैं साथ ही अध्ययन क्षेत्र में भी बिना किसी संकोच या शिक्षक के हर कार्य को करने एवं सीखने हेतु तत्पर रहते हैं। इस कारण उनकी शैक्षिक उपलब्धि उच्च स्तर की रहती है इसके विपरीत अन्तर्मुखी व्यक्तित्व के बालक प्रत्येक क्षेत्र में स्वयं को समायोजित करने में संकोच का अनुभव करते हैं। अन्तर्मुखी व बहिर्मुखी व्यक्तित्व के बालको कार्यक्षेत्र में विविधता पाई जाती है इस प्रकार बालक के व्यक्तित्व एवं समायोजन का उसकी शैक्षिक उपलब्धि पर भी प्रभाव पड़ता है।

डब्ल्यू आर. बॉर्ग के अनुसार "किसी क्षेत्र का साहित्य उस आधारशीला के समा है जिस पर सम्पूर्ण भावी कार्य आधारित होता है।

सामाजिक, सांस्कृतिक एवं शैक्षिक मूल्यों के आधार पर मुस्लिम वर्ग की प्रस्थिति को मूल्यांकित करने का प्रयास किया है—

(शिंदे और जॉन) (2012) ने अपने शोधपत्र में भारत में मुस्लिमों की शिक्षा का एक सिंहावलोकन प्रस्तुत करते हैं। वे पूर्व में किए गए अध्ययनों में वर्णित परिकल्पनाओं जैसे मुसलमानों को रूढ़िवादी समुदाय मानना मुस्लिम पर्सनल कानून को मुस्लिम महिलाओं के विरुद्ध मानना और मुसलमानों के बीच साक्षरता दर में क्षेत्रीय मतभेद आदि का परीक्षण करते हुए इस तथ्य की पहचान करते हैं कि यद्यपि प्राथमिक स्तर पर महिला साक्षरता दर हिन्दुओं और मुसलमानों में लगभग समान है। लेकिन इसके उपरान्त शिक्षा का स्तर बढ़ने के साथ-साथ हिन्दू मुस्लिम अन्तर भी तेजी से बढ़ रहा है। वही मुस्लिम वर्ग की उच्चतर शिक्षा में कम भागीदारी के लिए जिम्मेदार कारकों में गतिशीलता और परिवहन सुरक्षा में कमी शैक्षिक संस्थाओं की कमी एवं दूरी, कम उम्र में विवाह आदि भी पहचान करते हैं।

(कोटाय) (2013) ने अपने शोधपत्र में विभिन्न शैक्षिक संकेतकों द्वारा मुस्लिम वर्ग की शैक्षिक स्थिति को देखने का प्रयास किया है। विभिन्न सरकारी रिपोर्टों से शैक्षिक एवं रोजगार सम्बन्धी आँकड़ों का उपयोग कर पत्र में यह दिखाया गया है कि भारत में मुस्लिम वर्ग को विभिन्न स्तरों पर भेदभाव का सामना करना पड़ता है। वे कम गुणवत्ता वाली शिक्षा के साथ शिक्षा के निम्न स्तर के साथ दोहरे नुकसान पर हैं। सच्चर कमेटी की सिफारिशों को लागू करने के बाद भी शिक्षा क्षेत्र समेत मुस्लिम वर्ग की समग्र स्थितियों में कोई उल्लेखनीय प्रगति नहीं हुई है। आज भी मुस्लिमों को असुरक्षा, शैक्षणिक पिछड़ापन, सरकारी व निजी रोजगार क्षेत्र और विकास कार्यक्रमों में निराशाजनक प्रतिनिधित्व जैसी कई समस्याओं का सामना करना पड़ रहा है।

सच्चर समिति (2005-06) ने मुस्लिम वर्ग की शैक्षिक स्थिति सन्दर्भ में निम्नांकित प्रस्थिति दर्शायी है—

1. मुस्लिम शिक्षा की कमी का प्रमुख कारण शिक्षा की औपचारिकता रोजगार साधनों के लिए आवश्यक न माना जाना।
2. मुस्लिम बहुल इलाकों में प्राथमिक स्तर के विद्यालय बहुत कम हैं।
3. 6-14 वर्ष के बच्चे 25 प्रतिशत बच्चे या तो विद्यालय बीच में छोड़ देते हैं या कभी विद्यालय गये ही नहीं।
4. ग्रामीण क्षेत्रों में स्थापित जवाहर नवोदय विद्यालयों व मुस्लिम भागीदारी असंतोषजनक हैं।

5. मुस्लिम सम्प्रदाय में हस्त कौशल रोजगार का साधन होने के बावजूद इनके पास तकनीकी प्रशिक्षण की कमी है।
6. अधिकतर महाविद्यालयों में 25 में 1 स्नातक 250 में 1 परास्तानक विधार्थी मुस्लिम मे।
7. विद्यालय जाने वाली उम्र में 3 प्रतिशत मुस्लिम छात्र ही मदरसे जाते हैं।
8. उर्दू माध्यम के विद्यालयों में निम्न पंजीकरण का कारण ऐसे विद्यालयों की प्राथमिक स्तर पर निम्नतर स्थिति है।

इस प्रकार जस्टिस राजिन्दर सच्चर द्वारा तैयार की गई रिपोर्ट भारत के मुस्लिम समुदाय की सामाजिक, आर्थिक और शैक्षिक दशा जानने के लिए इस समिति का गठन किया गया और विशेष तौर पर शैक्षिक सुविधा हेतु 14 वर्ष तक के मुस्लिम बच्चों को मुफ्त और उच्च गुणवत्ता वाली शिक्षा उपलब्ध कराने एवं मुस्लिम बहुल क्षेत्रों में सरकारी स्कूल खोलना, स्कॉलरशिप देना, मदरसों का आधुनिकीकरण करना आदि की सिफारिश की गई। रोजगार में मुस्लिम वर्ग का हिस्सा बढ़ाना, मदरसों को हायर सैकण्डरी स्कूल बोर्ड से जोड़ने की व्यवस्था का प्रस्ताव दिया गया।

- शोध का उद्देश्य—
1. जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय उच्च माध्यमिक स्तर के विधार्थियों की शैक्षिक उपलब्धि का अध्ययन करना।
 2. जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय उच्च माध्यमिक स्तर के विधार्थियों के शैक्षिक समायोजन का अध्ययन करना।
 3. जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय उच्च माध्यमिक स्तर के विधार्थियों के व्यक्तित्व का अध्ययन करना।

उपकल्पना—

1. जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय विद्यालयों में उच्च माध्यमिक स्तर के बालकों की शैक्षिक उपलब्धि में कोई सार्थक अन्तर नहीं है।
2. जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय विद्यालयों के उच्च माध्यमिक स्तर के विधार्थियों के शैक्षिक समायोजन में कही सार्थक अन्तर नहीं है।
3. जोधपुर जिले के मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय विद्यालयों के उच्च माध्यमिक स्तर के विधार्थियों के व्यक्तित्व में कोई सार्थक अन्तर नहीं है।

अनुसंधान की सीमाएं

वर्ग	कक्षा—स्तर	लिंग	आयु	जिला	विद्यालय
मुस्लिम (अल्पसंख्यक)	उच्च माध्यमिक स्तर	बालक व बालिका	15 से 18 वर्ष	जोधपुर	मुस्लिम (अल्पसंख्यक)वर्ग से सम्बन्धित राजकीय और गैर राजकीय विद्यालय

न्यादर्श— प्रस्तुत शोध हेतु निम्न न्यादर्श का चयन किया जाएगा।

क्रस	राजकीय विद्यालय (बालक)	राजकीय विद्यालय (बालिका)	निजी विद्यालय (बालक)	निजी विद्यालय (बालिका)	कुल
1	30	30	30	30	120

अनुसंधान क्रिया विधि

अनुसंधान कार्य सर्वे प्रवृत्ति का होने के कारण प्रस्तुत अनुसंधान कार्य के लिए सर्वेक्षण विधि का उपयोग किया जायेगा। प्रस्तुत शोध में प्रमाणीकृत उपकरण का उपयोग किया जायेगा।

क्र.सं.	प्रश्न पत्र का नाम	प्रश्न पत्र निर्माता का नाम
1	व्यक्ति प्रदत्त सूची (1918)	राबर्ट वुड वर्थ
2	समायोजन – क्षमता परीक्षण	प्रो. ए. के.पी. सिन्हा, आर.पी.सिंह
3	उच्च माध्यमिक स्तर की कक्षा	पिछले वर्ष का परिणाम

अनुसंधान कार्य में तत्व-विश्लेषण व्यवस्थापन हेतु निम्न सांख्यिकीय विधियों का प्रयोग किया जायेगा-

- क. मध्यमान
- ख. प्रमाप विलचन
- ग. टी. परीक्षण

निष्कर्ष-इस प्रकार शोधार्थी ने जोधपुर जिले मुस्लिम (अल्पसंख्यक) राजकीय और गैर राजकीय विद्यालयों के उच्चमाध्यमिक स्तर के विद्यार्थियों की शैक्षिक उपलब्धि, समायोजन एवं व्यक्तित्व का अध्ययन किया है उसके लिए उपरोक्त परीक्षण किए गए हैं एवं न्यायदर्श के रूप में 120 विद्यार्थियों का चयन किया गया है उसका निष्कर्ष यह निकल कि मुस्लिम वर्ग की बालक-बालिकाओं की शिक्षा में कोई अन्तर नहीं पाया गया।

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NEP2020: ROLE OF “NDEAR” FOR ICT IN EDUCATION

Rajpurohit, L. S.¹, & Rathore, L. S.². (2024). NEP 2020: Role of NDEAR for ICT in Education., Jai Narain Vyas University, Jodhpur

सारांश

राष्ट्रीय डिजिटल शिक्षा वास्तुकला (एनडीईएआर) एक वास्तुशिल्प दृष्टिकोण है जो पूरे शैक्षिक पारिस्थितिकी तंत्र में एक समान डिजिटल बुनियादी ढांचा बनाकर राष्ट्रीय शिक्षा नीति, 2020 में उल्लेखित उद्देश्यों को प्राप्त करना एवं उन्हें आसान बनाने का प्रयास करता है। यह भारत में एक डिजिटल रूप से सशक्त शिक्षा पारिस्थितिकी तंत्र बनाना है जो सभी के लिए समान पहुंच, उच्च गुणवत्ता वाली शिक्षा और आजीवन सीखने के अवसर सुनिश्चित करता है। यह एक अभूतपूर्व पहल है जो भारत में डिजिटल रूप से सशक्त शिक्षा पारिस्थितिकी तंत्र की कल्पना करती है। प्रौद्योगिकी का लाभ उठाकर, एनडीईएआर शिक्षा को सुलभ, समावेशी और उच्च गुणवत्ता वाला बनाने का प्रयास करता है। एनडीईएआर छात्रों के लिए एक परिवर्तनकारी शिक्षण अनुभव की सुविधा प्रदान करता है और शिक्षकों को प्रभावी शिक्षण के लिए आवश्यक उपकरणों के साथ सशक्त बनाता है।

भारत 1.4 अरब आबादी वाला एक विविधतापूर्ण देश है, जिसमें से दो-तिहाई युवा हैं (जनगणना-2011). अगर दृ

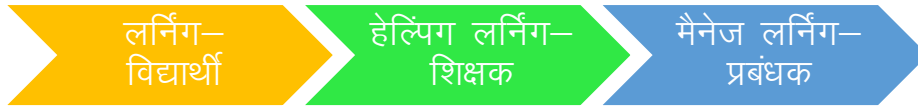
प्रस्तावना

हम किसी भी देश की आर्थिक वृद्धि और विकास की बात करें तो शिक्षा को ज्ञानपूर्ण समाज के निर्माण और जीवन स्तर में योगदान के लिए एक राष्ट्रीय निवेश माना जाता है। 1.5 मिलियन स्कूलों, 900 से अधिक उच्च शिक्षा संस्थानों, 85 लाख शिक्षकों और लगभग 33 करोड़ छात्रों के साथ भारत में शिक्षा किसी से पीछे नहीं है। आंकड़ों के अनुसार वर्तमान समय में लगभग 50 करोड़ बच्चे विद्यालयों की मुख्य धारा से बाहर हैं तथा साथ ही स्कूल ड्रॉपआउट बच्चों की संख्या इससे भी अधिक है, साथ ही ग्रामीण क्षेत्रों में ई संसाधनों की पहुंच को सुनिश्चित करने का उद्देश्य पूर्ण करना एक कठिन संकल्प है, जिसे NDEAR के माध्यम से पूरा किया जाना है। NDEAR एक प्रयास है जिसमें न केवल

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विद्यार्थी बल्कि, शिक्षक, परिजनों और प्रबंधकों को एक ही इकोसिस्टम में लाना है। ताकि सीखने के प्रतिफल किसी एक स्कूल से न आकर संपूर्ण भारत से समान रूप से प्राप्त हो। इस व्यवस्था में सीखना केवल विद्यार्थी तक ही सीमित न होकर शिक्षकों तथा प्रबंधकों को भी समान रूप से लाभ प्रदान करना है



यदि भारत को विश्व नेता "विश्व गुरु" के रूप में देखा जाना है तो प्रौद्योगिकी के उपयोग के साथ शिक्षा के लिए योजना और कार्यान्वयन को मजबूत करने की आवश्यकता है। शिक्षा में शैक्षिक प्रौद्योगिकी और सूचना संचार प्रौद्योगिकियों (आईसीटी) का उपयोग समय की मांग है। इसमें देश के हर कोने तक पहुंचने और पैमाने और गति प्राप्त करने के साथ-साथ कहीं भी किसी भी समय शिक्षण, सीखने, मूल्यांकन और निरंतर व्यावसायिक विकास समाधान प्रदान करके डिजिटल विभाजन को पाटने की क्षमता है। इन्हीं दृष्टिकोणों के साथ राष्ट्रीय शिक्षा नीति 2020 शैक्षिक पहुंच बढ़ाने के लिए शैक्षिक प्रौद्योगिकी के उपयोग पर बहुत जोर देती है। ताकि शिक्षा की गुणवत्ता में सुधार, समावेशन और विविधता की बाधाओं को दूर कर देश में शैक्षिक प्रणाली की पहुंच, गुणवत्ता, समानता, सामर्थ्य और जवाबदेही में सुधार लाया जा सके। दुनिया भर में तकनीकी विकास की गति और गहराई को देखते हुए, एनईपी 2020 शिक्षा के लिए प्रासंगिक विघटनकारी प्रौद्योगिकियों के व्यापक परिणामों को संबोधित करने का आह्वान करता है। इनमें हमारी शिक्षा प्रणाली को तेजी से और विघटनकारी परिवर्तनों से निपटने में सक्षम बनाने के लिए अनुसंधान, डी-स्किलिंग और जागरूकता बढ़ाना शामिल है। तकनीकी हस्तक्षेपों का जोर शिक्षण-सीखने और मूल्यांकन प्रक्रियाओं में सुधार लाने, शिक्षक की तैयारी और व्यावसायिक विकास का समर्थन करने, शैक्षिक पहुंच बढ़ाने और प्रवेश, उपस्थिति, मूल्यांकन आदि से संबंधित प्रक्रियाओं सहित शैक्षिक योजना, प्रबंधन और प्रशासन को सुव्यवस्थित करने के उद्देश्य से होगा। इन उद्देश्यों को प्राप्त करने के लिए भारत के प्रधानमंत्री ने फरवरी 2021 में राष्ट्रीय डिजिटल शिक्षा वास्तुकला (NDEAR) की घोषणा की। इस पहल का उद्देश्य भारत में शिक्षा क्षेत्र के डिजिटल बुनियादी ढांचे को मजबूत आधार देना है।

"भावि-शिक्षणस्य-प्रभावि-तन्त्रम्"

इस आदर्श वाक्य के साथ राष्ट्रीय डिजिटल शिक्षा वास्तुकला (NDEAR), शैक्षिक प्रौद्योगिकी और अनुसंधान के क्षेत्र में प्रसार, प्रयोग और नवाचार में भारत को विश्व में अग्रणी बनाने की ओर प्रयत्न करेगा तथा प्रौद्योगिकी के विकास, विकास और प्रभावी उपयोग के लिए विचारों के मुक्त आदान-प्रदान के लिए एक मंच प्रदान करता है, सुविधा, क्षमता निर्माण, नवाचार और अनुसंधान को बढ़ावा देने और

³<https://netf.aicte-india.org/about-netf.html>

उभरने के लिए मानकों और बेंचमार्किंग के माध्यम से सीखने, मूल्यांकन, योजना और प्रशासन को बढ़ाने पर बल देता है। राष्ट्रीय डिजिटल शिक्षा वास्तुकला (एनडीईएआर) एक वास्तुशिल्प दृष्टिकोण है जो पूरे शैक्षिक पारिस्थितिकी तंत्र में एक समान डिजिटल बुनियादी ढांचा बनाकर राष्ट्रीय शिक्षा नीति, 2020 (एनईपी 2020) में उल्लिखित उद्देश्यों को प्राप्त करना एवं उन्हें आसान बनाने का प्रयास करता है।

“UPI इकोसिस्टम कनेक्टर है जिसने वित्त क्षेत्र में क्रांति ला दी है। इसी तरह एनडीईएआर राष्ट्रीय शिक्षा नीति (एनईपी 2020) का एक प्रमुख प्रवर्तक है और पारिस्थितिकी तंत्र क्षमताओं का लाभ उठाने और कौशल और शिक्षा में नवाचार को उत्प्रेरित करने के लिए एक सुपर कनेक्टर के रूप में कार्य करता है।”⁴

Shri Narendra Modi

(भारत के माननीय प्रधानमंत्री)

नए युग की शिक्षा सुनिश्चित करने की दिशा में तथा दीर्घकालिक शिक्षण रणनीति के रूप में डिजिटल शिक्षा की कल्पना करना और उसे आकार देना महत्वपूर्ण है। हम शिक्षा के क्षेत्र में तभी ऊंची छलांग लगा सकते हैं जब हम एक अरब भारतीयों की सीखने और एक-दूसरे को सीखने में मदद करने की क्षमता को उजागर करें। यह सीखना केवल स्कूलों तक ही सीमित नहीं रह सकता है। यह सबके द्वारा सीखना, सबके लिए सीखना, सबके साथ सीखना होना चाहिए। शिक्षण कार्य के साथ प्रौद्योगिकी के उपयोग को एकीकृत करना वर्तमान समय की मांग है।⁵ NDEAR भारत में शैक्षिक पारिस्थितिकी तंत्र के लिए एक रोडमैप है। यह सिद्धांतों, मानकों, विशिष्टताओं, दिशानिर्देशों और नीतियों के एक सेट की रूपरेखा तैयार करता है जो शिक्षा के लिए डिजिटल बुनियादी ढांचे को मजबूत करने में सक्षम हैं। एनडीईएआर इलेक्ट्रॉनिक्स और सूचना प्रौद्योगिकी मंत्रालय के सहयोग से शिक्षा मंत्रालय की एक पहल है। जिसके तहत सरकार सीधे तौर पर शिक्षा क्षेत्र के लिए प्रौद्योगिकी समाधान तैयार नहीं करेगी इसके बजाय, यह एक ढांचा प्रदान करेगा जो किसी को भी प्रौद्योगिकी विकसित और निर्मित करने की अनुमति देगा।

NDEAR विज़न:

राष्ट्रीय डिजिटल शिक्षा वास्तुकला (एनडीईएआर) का दृष्टिकोण भारत में एक डिजिटल रूप से सशक्त शिक्षा पारिस्थितिकी तंत्र बनाना है जो सभी के लिए समान पहुंच, उच्च गुणवत्ता वाली शिक्षा और आजीवन सीखने के अवसर सुनिश्चित करता है। प्रौद्योगिकी की शक्ति का लाभ उठाकर, एनडीईएआर का

⁴<https://www.ndear.gov.in/index.html>

⁵Sharma, Ramnath, and Rajendra Kumar Sharma. *Shekshik Samajshastra*. Atlantic Publishers & Dist., 2006.

लक्ष्य डिजिटल विभाजन को पाटना, हितधारकों के बीच सहयोग बढ़ाना और एक सहज और व्यक्तिगत शिक्षण अनुभव प्रदान करना है जो शिक्षार्थियों को भविष्य की चुनौतियों के लिए तैयार करता है।

NDEAR परियोजनाओं में भारत में डिजिटल शिक्षा को बदलने के उद्देश्य से कई पहल शामिल हैं।

- **सामग्री विकास और क्यूरेशन:** एनडीईएआर प्लेटफॉर्म को समृद्ध करने के लिए सभी विषयों और सीखने के स्तरों पर उच्च गुणवत्ता वाली डिजिटल शैक्षिक सामग्री को क्यूरेट करना और विकसित करना।
- **शिक्षक प्रशिक्षण कार्यक्रम:** शिक्षकों को उनकी शिक्षण प्रथाओं में एनडीईएआर का प्रभावी ढंग से उपयोग करने के लिए आवश्यक कौशल और ज्ञान से परिपूर्ण करने के लिए व्यापक प्रशिक्षण कार्यक्रम आयोजित करना।
- **बुनियादी ढांचे में वृद्धि:** दूरदराज के इलाकों में भी एनडीईएआर संसाधनों तक निर्बाध पहुंच सुनिश्चित करने के लिए इंटरनेट कनेक्टिविटी और प्रौद्योगिकी बुनियादी ढांचे में सुधार में निवेश करना।
- **पायलट कार्यान्वयन:** राष्ट्रव्यापी सफल कार्यान्वयन सुनिश्चित करने के लिए एनडीईएआर कार्यक्षमताओं का परीक्षण और परिशोधन करने, फीडबैक इकट्ठा करने और किसी भी चुनौती का समाधान करने के लिए चुनिंदा क्षेत्रों में पायलट परियोजनाएं शुरू करना।

NDEAR के उपयोग

छात्रों को अंग्रेजी और अन्य क्षेत्रीय भाषाओं में डिजिटल रूप से उपलब्ध पाठ्यपुस्तकों, वीडियो और एनिमेशन सहित विभिन्न प्रकार की अध्ययन सामग्री तक पहुंच प्रदान करके, एनडीईएआर में छात्रों के सीखने के अनुभवों को बेहतर बनाने की क्षमता है। एनडीईएआर एक डिजिटल लर्निंग पासबुक बनाकर अकादमिक क्रेडेंशियल्स को केवल एक क्लिक के साथ और कागजी दस्तावेज की आवश्यकता के बिना संस्थानों में साझा करने की अनुमति देता है। सरल ऐप जैसे डिजिटल उपकरण, प्रशिक्षकों को छात्रों के ग्रेड और सीखने की प्रगति को सत्यापित करने, रिकॉर्ड करने और मूल्यांकन करने में लगने वाले समय को कम करते हैं। शैक्षणिक संस्थानों को संस्थागत रिकॉर्ड (जैसे नामांकन, ड्रॉपआउट दर आदि पर जानकारी) को डिजिटल रूप से संरक्षित करने की क्षमता देता है। एनईपी 2020 स्कूली शिक्षा में आईसीटी के एकीकरण के कई क्षेत्रों पर जोर देता है, एनईपी के इन्ही तथ्यों एवं उद्देश्यों को ध्यान में रखकर राष्ट्रीय सरकार ने प्रौद्योगिकी का शिक्षा में समावेशन हेतु निम्नलिखित नवाचार लागू किए ताकि एक शिक्षण इन संसाधनों का उपयोग कर अपने प्रभावी अध्यापन में सक्षम हो, इसी उद्देश्य को ध्यान में रख कर भारत में सूचना तकनीकी एवं साइबर संसाधनों की उपलब्धता सुनिश्चित करने हेतु कई नवाचार सरकार द्वारा प्रस्तुत किए गए हैं जो इस प्रकार हैं –

- दीक्षा DIKSHA– डिजिटल इन्फ्रास्ट्रक्चर फॉर नॉलेज शेयरिंग)⁶
- विद्या समीक्षा केंद्र⁷
- ऊर्जावान पाठ्य पुस्तकें (ETB) Energised Textbook's⁸
- एनआईओएस (NIOS) वर्चुअल ओपन स्कूल⁹
- पीएम ई–विद्या :¹⁰
- विद्यादान:¹¹
- राष्ट्रीय शैक्षिक प्रौद्योगिकी फोरम NETF¹²
- ई–पाठशाला ¹³
- मुक्त शैक्षिक संसाधनों का राष्ट्रीय भंडार (NROER, National Repository of Open Educational Resources¹⁴
- स्वयंSWAYAM ¹⁵
- Phygital - Saral¹⁶
- E-Kakshaई–कक्षा:¹⁷

NDEAR के सिद्धांत

⁶<https://diksha.gov.in/explore?board=CBSE&selectedTab=textbook>

⁷<https://vsk.ndear.gov.in/#/dashboard>

⁸<https://ciet.nic.in/upload/Energized%20Textbook%20and%20Digital%20Resources.pdf>

⁹<https://virtual.nios.ac.in/>

¹⁰<https://pmevidya.education.gov.in/>

¹¹<https://vidyadaan.net/online-sessions.php>

¹²<https://netf.aicte-india.org/about-netf.html>

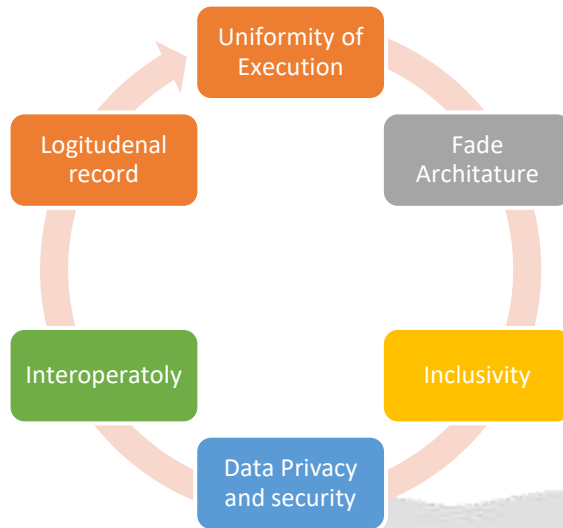
¹³<https://epathshala.nic.in//pages.php?id=download-app&ln=en>

¹⁴<https://scert.cg.gov.in/ict2014/pdf/NROER.pdf>

¹⁵<https://onlinecourses.nptel.ac.in/>

¹⁶<https://www.ndear.gov.in/solution-capabilities.html>

¹⁷<https://missiongyan.com/ekaksha/>



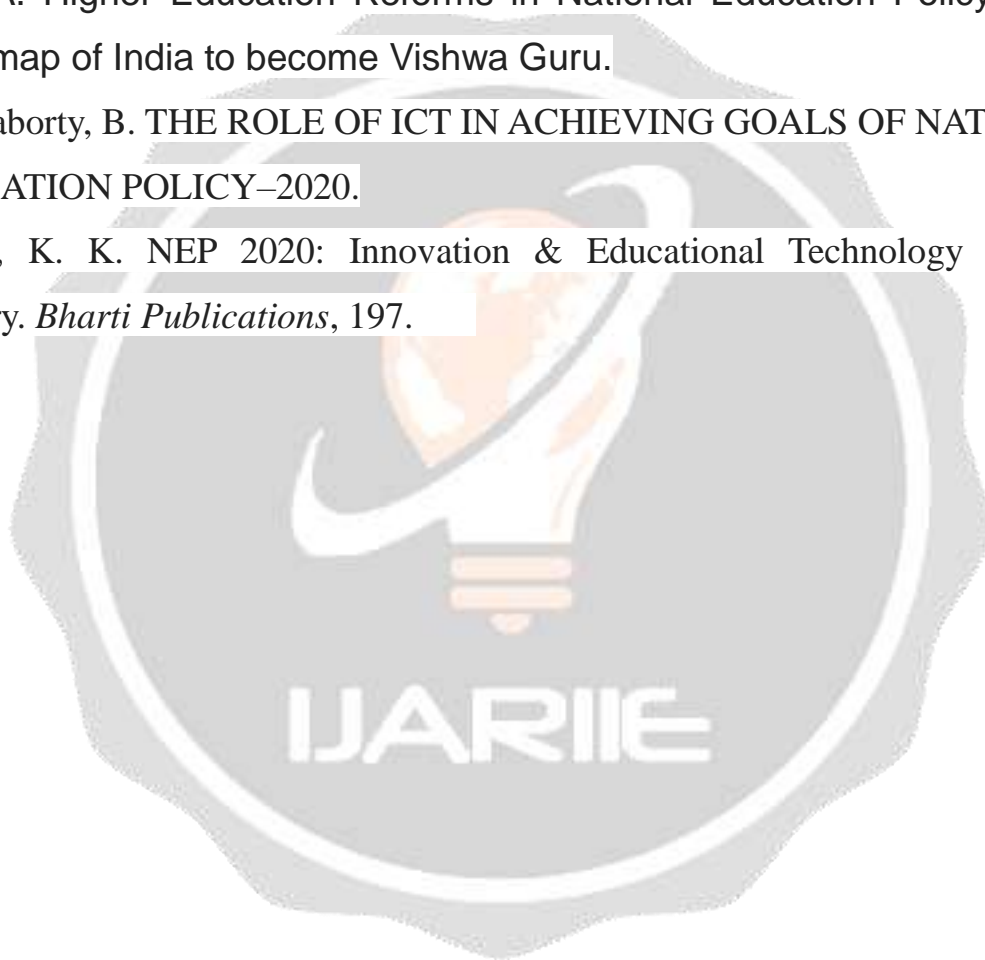
उपसंहार,

नेशनल डिजिटल एजुकेशन आर्किटेक्चर (एनडीईएआर) एक अभूतपूर्व पहल है जो भारत में डिजिटल रूप से सशक्त शिक्षा पारिस्थितिकी तंत्र की कल्पना करती है। प्रौद्योगिकी का लाभ उठाकर, एनडीईएआर शिक्षा को सुलभ, समावेशी और उच्च गुणवत्ता वाला बनाने का प्रयास करता है। एनडीईएआर छात्रों के लिए एक परिवर्तनकारी शिक्षण अनुभव की सुविधा प्रदान करता है और शिक्षकों को प्रभावी शिक्षण के लिए आवश्यक उपकरणों के साथ सशक्त बनाता है। जैसे-जैसे एनडीईएआर का कार्यान्वयन और विकास जारी है, यह एक ऐसे भविष्य को आकार देने का वादा करता है जहां गुणवत्तापूर्ण शिक्षा सभी के लिए सुलभ हो, आजीवन सीखने वालों का पोषण हो और शिक्षा पारिस्थितिकी तंत्र में नवाचार को बढ़ावा मिले।

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A study in the perspective of holistic education and awareness of human rights

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“मानवाधिकार के प्रति जागरूकता : समग्र शिक्षा के परिप्रेक्ष्य में एक अध्ययन”

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सारांश

सृष्टि ने समस्त मानव को विशिष्ट गुणों एवं शक्तियों से अलंकृत किया है। मानव अधिकार इन समस्त मानवों के समक्ष जाति, धर्म, लिंग, क्षेत्र आदि का भेदभाव किए बिना ऐसे समान वातावरण को सुनिश्चित करता है जिसके अंतर्गत मानव सृष्टि प्रदत्त अपने गुणों का समुचित विकास करके "पूर्णता" को प्राप्त करने में सक्षम हो पाता है। ऐसी अर्जित पूर्णता मानव के स्वयं के विकास के साथ-साथ संपूर्ण वैश्विक समाज में शांति, परस्पर प्रेम, सहयोग, भाईचारा एवं विकास का सशक्त वाहक सिद्ध होता है। मानवाधिकार की अवधारणा के अंतर्गत अधिकार एवं कर्तव्य दोनों ही एक सिक्के के दो पहलू हैं।

समग्र शिक्षा मात्र अक्षर ज्ञान प्रदान करने और जीविकोपार्जन हेतु रोजगार प्राप्त करने हेतु श्रम-शक्ति तैयार करने तक ही सीमित नहीं है अपितु समग्र शिक्षा का वृहत उद्देश्य है राष्ट्र को ऐसे नागरिक प्रदान करना जो अपने शैक्षिक क्षेत्र की विशेषज्ञता के साथ ही उन सामाजिक एवं मानवीय मूल्यों से ओत-प्रोत हो जो उन्हें अन्य नागरिकों के अधिकारों का सम्मान करने हेतु प्रेरित करें तथा स्वयं के मानवाधिकारों की रक्षा हेतु सक्षमता प्रदान करें। स्पष्टः, मानव अधिकार उन्मुख शिक्षा राष्ट्र के भावी कर्णधारों को उनके अधिकारों के साथ-साथ समाज एवं राष्ट्र के प्रति कर्तव्यों का भी बोध कराती है। इस संतुलित जागरूकता से ही वैश्विक समाज में शांति एवं विकास के प्रबल आधार का निर्माण होता है।

प्रस्तुत शोध-पत्र में मानवाधिकार के प्रति जागरूकता का अध्ययन किया गया है जिसके अंतर्गत यह अध्ययन किया गया है कि शैक्षिक- पाठ्यक्रम के साथ साथ अन्य निकाय एवं संस्थाएं किस प्रकार से मानवाधिकार के प्रचार एवं प्रसार में प्रभावी भूमिका का निर्वाहन करके समग्र शिक्षा के उद्देश्य की प्राप्ति में महती योगदान प्रदान कर रहे हैं ।

तकनीकी शब्दावली : मानवाधिकार , जागरूकता , समग्र शिक्षा , मानवाधिकार- शिक्षा

मानवाधिकार की अवधारणा

मानव जीवन का अभिप्राय मात्र “जीना अथवा साँस लेते रहना” ही नहीं है अपितु एक “सार्थक-जीवन” जीना है । ऐसे अधिकार उस न्यूनतम परिस्थितियों को परिभाषित करती है जो मानव को एक गरिमापूर्ण जीवन से अलंकृत करते है । गरिमापूर्ण जीवन से तात्पर्य ऐसे जीवन से है जो समानता के धरातल पर, बिना किसी भौगोलिक बाधा के, धर्म, जाति, सम्प्रदाय एवं लैंगिक भेदभाव से परे समस्त मानव को केवल “मानव-मात्र” होने की शर्त पर सहज उपलब्ध होते हैं । मानव-अधिकार की अवधारणा में अधिकार एवं कर्तव्य को सहगामी माना गया है । “मैं आपके अधिकारों का सम्मान करूँ और आप हमारे अधिकारों का”यही मानव अधिकार की अवधारणा का मूल- मन्त्र है । उत्तरोत्तर , यही अधिकार वैश्विक समाज में परस्पर प्रेम, भाईचारा एवं सहयोग की भावना को बल प्रदान करते हुए एक “आदर्श मानव – समाज” की अवधारणा को मूर्त –रूप में विश्व पटल पर प्रस्तुत करते है । काल के प्रवाह में मानव के मूल –अधिकारों की शृंखला में नए नए अधिकार जुड़ते चले गए । परन्तु मूल रूप से यह सभी अधिकार मानव –जीवन की गरिमा को ही सशक्तीकरण प्रदान कर रहे है ।

मानवाधिकार के सिद्धांत

(1) प्राकृतिक अधिकार का सिद्धांत (Theory of Natural Rights):

इस सिद्धांत के अनुसार प्रकृति में सभी मानव स्वतंत्र और समान हैं और प्रत्येक मानव अपनी इच्छानुसार जीवन जीने को स्वतंत्र है। इस सिद्धांत के अनुसार प्रकृति द्वारा प्रदत्त समस्त संसाधनों पर सभी मानवों का समान रूप से अधिकार है। नागरिकों को उनके मूल अधिकारों को सुनिश्चित करना राज्य का दायित्व है ।

(2) विधिजन्य अधिकार का सिद्धांत (Legal Theory of Rights):

इस सिद्धांत के अनुसार ऐसे कोई अधिकार नहीं होते हैं, जो मानव में अन्तर्निहित हों । वास्तव में,

“राज्य” ही समस्त अधिकारों के स्त्रोत हैं, जो अधिकारों को सृजित और उनका संरक्षण करते हैं।

(3) अधिकार का आदर्शवादी सिद्धांत (The Idealistic Theory of Rights):

इस सिद्धांत के अनुसार मानवाधिकार वह वाह्य परिस्थितियाँ हैं जो मानव के आंतरिक एवं वास्तविक विकास को सुनिश्चित करती हैं। इसके अनुसार किसी भी अधिकार का मूल्यांकन इस आधार पर होगा कि वह मानव व्यक्तित्व के विकास में कितना योगदान देती है। समाज द्वारा ऐसे किसी भी अधिकार को जल्द किया जा सकता है, जो इस विकास में बाधक बन रहे हों।

(4) अधिकारों का ऐतिहासिक सिद्धांत (Historical Theory of Rights):

इस सिद्धांत के अनुसार इतिहास ही समस्त अधिकारों की जननी है। वास्तव में, अधिकार परम्पराओं से जन्म लेते हैं। कोई भी परंपरा समय के साथ-साथ एक पीढ़ी से दूसरी पीढ़ी में प्रवाहित होती है और अंततः अभिन्न दावों के रूप में मान्यता प्राप्त करके “मानव – अधिकार” बन जाती है।

(5) सामाजिक कल्याण का सिद्धांत (The Social Welfare Theory of Human – Rights):

इस सिद्धांत के अनुसार मानवाधिकार सामाजिक कल्याण की वह दशाएं हैं, जिन्हें सामाजिक रीति – रिवाज़, परम्पराओं एवं विभिन्न कानूनों द्वारा सृजित किया गया है। ऐसे अधिकार वांछनीय होते हैं, जो समाज में अधिकतम लोगों के लिए वृहत सुखमय स्थिति को सुनिश्चित कर सकें।

मानवाधिकार के प्रति जागरूकता के निम्नलिखित निहितार्थ हैं –

- (1) विद्यार्थियों में मानवाधिकार के प्रति सार्वभौमिक चेतना को जागृत करना।
- (2) विद्यार्थियों को उन व्यवहारों एवं घटनाओं के प्रति जागरूक करना, जो मानवाधिकारों के उल्लंघन की श्रेणी में आते हैं।
- (3) विद्यार्थियों में परस्पर दया, प्रेम, करुणा, भ्रातृत्व एवं सहयोग की भावना का विकास करना।
- (4) विद्यार्थियों में उन मानव मूल्यों का विकास करना, जो उन्हें एक सजग वैश्विक नागरिक के रूप में विकसित कर सकें।
- (5) विद्यार्थियों को उन राष्ट्रीय और अंतर्राष्ट्रीय संस्थाओं के बारे में जागरूक करना, जो मानवाधिकारों के संरक्षण एवं विकास की दिशा में कार्यरत हैं।
- (6) मानवाधिकार – शिक्षा के माध्यम से राष्ट्र के भावी पीढ़ी में मानवता के प्रति संवेदनशीलता एवं प्रतिवद्धता को सशक्त करना।

वास्तव में, मानवाधिकार शिक्षा के माध्यम से मानवीय गरिमा के संरक्षण एवं विकास के प्रति विद्यार्थियों के मनोस्थिति, दृष्टिकोण एवं व्यवहार में एक सकारात्मक परिवर्तन लाने का प्रयास होता है। इस उद्यम में शिक्षक एवं विद्यालय परिवेश एक सशक्त भूमिका का निर्वाहन कर सकते हैं।

तकनीकी शब्दों की व्याख्या

[1] **मानवाधिकार –शिक्षा** : शिक्षा की वह विधा जो विद्यार्थियों को उनके गरिमापूर्ण जीवन से सम्बंधित समस्त सार्वभौमिक अधिकारों के प्रति जागरूक बनाती हो तथा उन कर्तव्यों के प्रति संवेदनशील बनाती हो जो समाज एवं समस्त विश्व में परस्पर दया, प्रेम, सम्मान एवं सहभागिता तथा “जियो और जीने दो” के पावन सिद्धांत का पोषण करती हो।

(2) **जागरूकता** : मानवाधिकार के प्रति जागरूकता को निम्न तथ्यों के प्रति चेतना अथवा सजगता के परिप्रेक्ष्य में वर्णित कर सकते हैं

(अ) मानवाधिकार से सम्बंधित दस्तावेजों एवं सामान्य कानूनों का ज्ञान।

(ब) मानवाधिकार के विभिन्न अवधारणा (Concepts) का ज्ञान।

(स) उन परिस्थितियों और घटनाओं को चिन्हित करने में सक्षम होना जिन्हें मानवाधिकार –हनन और मानवाधिकार के प्रति सम्मान के श्रेणी में रख सकें।

(3) **समग्र –शिक्षा** : ऐसी शिक्षा –व्यवस्था जो विद्यार्थियों को मात्र किताबी – ज्ञान से परे ले जाकर वह ज्ञान प्रदान करे जो उनके व्यक्तिगत, सामाजिक, नैतिक एवं राष्ट्रीय मूल्यों का विकास करके उन्हें एक सच्चे एवं संवेदनशील वैश्विक नागरिक के रूप में तैयार कर सकें। ऐसे नागरिक जो माव अधिकारों के साथ साथ मानव कर्तव्यों के प्रति सजग रहकर उनका सम्मान करें।

शोध का महत्त्व

मानवाधिकार – शिक्षा की गुणवत्ता और प्रभावशीलता हेतु पारंपरिक विषय पर आधारित पुस्तक ज्ञान के स्थान पर एक समग्र शिक्षा व्यवस्था को लागू करना ही सबसे प्रभावी तरीका है। मानवाधिकार के प्रति जागरूकता उत्पन्न करने में विभिन्न सरकारी एवं गैर-सरकारी अभिकरणों के योगदान का भी अत्यधिक महत्त्व है। वास्तव में, शिक्षकों का सशक्तिकरण एक प्रमुख मुद्दा है। समाज के विभिन्न अभिकरण, शिक्षक के इस प्रयास को सशक्त एवं सर्वव्यापी बनाने में अपना वृहत योगदान प्रदान कर सकते हैं।

उपर्युक्त परिप्रेक्ष्य में, प्रस्तुत शोध का शैक्षिक एवं सामाजिक उन्नयन की दृष्टि से अत्यधिक महत्त्व है।

प्रस्तुत शोध के सन्दर्भ में सम्बंधित साहित्य के अध्ययन से निम्न तथ्य प्राप्त हुए

मानवाधिकार की अवधारणा का प्राचीन काल से ही किसी न किसी रूप में धर्म एवं साहित्य में वर्णन

होता रहा है। तथापि, मानवाधिकार के एक प्रथम औपचारिक दस्तावेज के रूप में ब्रिटेन के “मैगना –कार्टा” को माना जा सकता है जो 1215 में घोषित की गयी थी। इसी क्रम में, दी इंग्लिश बिल ऑफ़ राइट्स (1689), दी फ्रेंच डिक्लेरेशन ऑन दी राइट्स ऑफ़ मेन एंड सिटीजन्स (1789) एवं दी यूनाइटेड स्टेट्स बिल ऑफ़ राइट्स (1791) महत्वपूर्ण है।

21वीं सदी इस रूप में अत्यधिक महत्वपूर्ण है क्योंकि इसी काल अवधि में राष्ट्रीय एवं अन्तर्राष्ट्रीय – स्तर पर विभिन्न प्रलेखों एवं संधियों के आधार पर मानवाधिकार को वृहत रूप में परिभाषित किया गया। साथ ही, संस्थागत एवं वैधानिक स्तर पर विभिन्न कानूनों के सृजन द्वारा मानव अधिकारों के सशक्तीकरण हेतु विभिन्न कदम उठाये जा रहे हैं।

द्वितीय विश्व युद्ध की विभीषिका से त्रस्त विश्व –समुदाय ने परस्पर विश्वास एवं शांति की स्थापना हेतु 1945 में संयुक्त राष्ट्र संघ की स्थापना किया। 10 दिसंबर, 1948 को संयुक्त राष्ट्र संघ के मानव –अधिकार के सार्वभौमिक घोषणा –पत्र में प्रतिपादित कुल 30 अनुच्छेदों के माध्यम से विश्व के सभी देशों ने मानव-अधिकार की सुरक्षा के प्रति अपनी प्रतिबद्धता को व्यक्त किया।

भारत में मानवाधिकार शिक्षा:

मानवाधिकार की अवधारणा का उल्लेख भारत के प्राचीनतम धार्मिक ग्रंथों में भी मिलता है। यद्यपि उस अवधारणा को “मानवाधिकार “ शब्द से परिभाषित नहीं किया गया था परन्तु दया, प्रेम, करुणा, परस्पर –सहयोग, पर्यावरण-प्रेम, भ्रातृत्व एवं विश्व –बन्धुत्व की भावना आदि वर्तमान मानवाधिकार के ही आवश्यक तत्व थे। गुरु –कुल परम्परा के अन्तर्गत विद्यार्थियों को इन मानव –मूल्यों को विकसित करने हेतु सैद्धान्तिक एवं व्यावहारिक ज्ञान प्रदान किया जाता था। चूँकि भारत, संयुक्त राष्ट्र संघ द्वारा मान्य किये गए मानवाधिकारों के सार्वभौमिक घोषणा पत्र – 1948 का एक पक्षकार है। अतः स्वतंत्रता के पश्चात, नवीन भारत में मानवाधिकारों के संरक्षण एवं संवर्धन हेतु प्रारम्भ से ही प्रयास हो रहे हैं।

संविधान के भाग 3 में देश के नागरिकों के मूलभूत अधिकारों का उल्लेख करके, भारत सरकार ने मानवाधिकार के प्रति अपनी प्रतिबद्धता को व्यक्त किया है। इसके अतिरिक्त, संविधान के भाग 4 में, नागरिकों के हितों के रक्षार्थ नीति – निर्देशक तत्वों (The Directive Principles of the State Policy) का उल्लेख किया गया है, जिसे प्रत्येक लोक कल्याणकारी राज्य अपनी नीतियों एवं कानूनों को बनाते समय ध्यान रखेगी।

इस प्रकार स्पष्ट है कि देश के नागरिकों को मौलिक अधिकार के रूप में प्रवर्तनीय अधिकार एवं नीति – निर्देशक तत्वों के अन्तर्गत अप्रवर्तनीय अधिकार प्राप्त हैं। यह दोनों अधिकार मिलकर नागरिकों के

लिए एक सम्मानजनक एवं गरिमापूर्ण जीवन सुनिश्चित करते हैं। वर्तमान विद्यालयी - शिक्षा के अन्तर्गत इन सभी संवैधानिक अधिकारों का उल्लेख पाठ्यक्रम - पुस्तकों में समाहित है।

मानवाधिकार के प्रति जागरूकता के प्रसार हेतु विगत कुछ वर्षों से मानवाधिकार - शिक्षा का राष्ट्रीय शिक्षा नीति के अन्तर्गत पाठ्यक्रम की रूपरेखा में प्रमुखता से उल्लेख होता है। विद्यालयी - स्तर पर मानवाधिकारों के प्रति छात्रों में जागरूकता उत्पन्न करने हेतु राष्ट्र, राज्य एवं जिला स्तर पर शिक्षक - प्रशिक्षण के विभिन्न कार्यक्रम निरंतर आयोजित किये जाते हैं। इसी प्रकार, उच्च- शिक्षा स्तर पर विश्व विद्यालय अनुदान आयोग द्वारा विभिन्न कार्यक्रम, सेमीनार एवं शोध - कार्यक्रम को प्रोत्साहित किया जाता है जो शिक्षण - व्यवस्था के पूरक होकर समग्र शिक्षा प्रणाली को बल प्रदान करती है।

देश में मानवाधिकार के संरक्षण एवं संवर्धन की दिशा में, भारत सरकार द्वारा मानवाधिकार संरक्षण अधिनियम, 1993 पारित किया गया, जिसके तहत राष्ट्रीय मानवाधिकार आयोग (National Human Right Commission) एवं राज्य मानवाधिकार आयोगों की स्थापना की गयी। यह सभी संवैधानिक संस्थाएं, शैक्षिक संस्थानों में शिक्षण एवं शोध के माध्यम से, मानवाधिकार शिक्षा के प्रचार प्रसार हेतु कृत संकल्प हैं। विभिन्न शिक्षा आयोगों की सस्तुतियों के आधार पर, मानवाधिकार शिक्षण एवं प्रशिक्षण हेतु पाठ्यक्रम विकसित किये जा रहे हैं जो समग्र - शिक्षा के उद्देश्यों के पूरक हैं।

मानवाधिकार का संरक्षण एवं संवर्धन एक जटिल प्रक्रिया है। अतः मानवाधिकार उन्मुख सामाजिक - मूल्यों को एक दीर्घ- कालिक रणनीति के तहत ही पुष्पित एवं पल्लवित किया जा सकता है। इस दृष्टि से, समग्र शिक्षा एक सशक्त भूमिका का निर्वाहन कर सकती है।

एक विद्यार्थी अपना अधिकाँश सक्रिय समय विद्यालय में ही व्यतीत करता है। अतः, समग्र - शिक्षा के अन्तर्गत एक शिक्षक अपने शिक्षण में ऐसी गतिविधियों का समावेश कर सकता है जो विद्यार्थियों में भाईचारा, सहयोग, परस्पर सामंजस्य तथा समाज के प्रति रचनात्मक भावना का विकास, पर्यावरण-संरक्षण तथा मानवाधिकार के अन्य विभिन्न आयामों से उनका परिचय करा सकें।

निष्कर्ष :

मानवाधिकार के प्रति समुचित समझ एवं जागरूकता ही, एक मानव को उसके अधिकारों के संरक्षण एवं विकास की दिशा में प्रोत्साहित कर सकती है। समग्र - शिक्षा के माध्यम से शिक्षक देश के भावी नागरिकों में अमूल्य मानवीय गुणों का विकास करके उन्हें एक "सशक्त मानवाधिकार - योद्धा" बना सकते हैं जो प्रतिकूल परिस्थितियों में भी समाज में मानवीय - गरिमा को स्थापित करने हेतु कृत - संकल्प रहेंगे।

विद्यालय ऐसा स्थान है जहां बच्चा अपने अधिकारों एवं कर्तव्यों से व्यवहारिक रूप से प्रथम बार परिचित होता है। उसे ना केवल अपने अधिकारों की जागरूकता मिलती है, अपितु दूसरों के प्रति कर्तव्यों की समझ भी विकसित होती है। विद्यार्थियों में इस प्रकार की भावना विकसित करने में समग्र-शिक्षा के अन्तर्गत मानवाधिकार संरक्षण की दृष्टि से पाठ्यक्रम विकसित करने के साथ साथ सरकार एवं विभिन्न संस्थाएं अपनी प्रभावशील भूमिका का निर्वाहन कर रही हैं।

समग्र-शिक्षा के माध्यम से ही देश के भावी कर्णधारों में मानवाधिकार के प्रति जागरूकता उत्पन्न करके उन्हें एक संवेदनशील, समता मूलक एवं उत्कृष्ट मानव-मूल्यों पर आधारित समाज के निर्माण की दिशा में प्रोत्साहित कर पाएंगे।

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ABSTRACT

In India, the incidence of dengue fever (DF) and dengue hemorrhagic fever (DHF) has increased dramatically over the past two decades. Dengue cases in Jodhpur are increasing rapidly every year. In our study, semi-arid Jodhpur, district of Rajasthan was selected based on climatic conditions. Retrospective data were collected from January 2019 to December 2019 for the past 12 Months to study the impact of fluctuation in temperature for incidence of dengue. The data was collected with the help of Chief Medical and Health Office (CMHO) of the district and the National Vector Borne Disease Control Program (NVBDCP). In this study, we obtained a total of 1300 peoples reported positive for dengue fever in Jodhpur, Rajasthan. Maximum 542 positive cases seen in the month of November and minimum zero positive cases seen in the month of February and July.

KEYWORDS: Dengue fever; Dengue hemorrhagic fever; temperature, Jodhpur, Rajasthan.

INTRODUCTION

Dengue is a viral infection transmitted by mosquitoes that can cause serious flu-like illness and sometimes fatal complications. The mosquito transmitter (or vector) plays a role in the life cycle of the dengue fever virus and is the main food and human source of infection. The dengue virus belongs to the genus *Flavivirus*, which belongs to the *Flaviviridae* family. The main carrier of the virus that causes dengue is the *Aedes aegypti* mosquito. The virus is transmitted to humans through the bite of an infected female *Aedes aegypti* mosquito, which mainly gets the virus when it eats the blood of an infected person. Once infected, humans become major carriers and modules of the virus, acting as the source of the virus for infected mosquitoes (Ebi and Nealon, 2017).

The spread of dengue may be partly due to the several factors such as increase of unplanned urbanization, rapid increase in population growth, lack of clean water supply, inappropriate waste disposal and management, lack of effective vector management and control system, climate change and extreme weather events (rainfall, temperature, humidity, precipitation etc.), international travel, and poor socio-economic status (Carrington et al., 2013, Morin et al., 2013; Brady et al., 2014). Temperature and precipitation are important climatic factors driving the mosquito population and disease transmission dynamics (Patz et al., 1998). According to the Intergovernmental Panel on Climate Change, global average temperature has risen by $\sim 0.6^{\circ}\text{C}$ and variability in precipitation has increased over the past 35 years. Warmer temperatures and higher humidity are favorable for the longevity of adult mosquitoes and reduce the duration of viral incubation and its blood-feeding period within the vector, leading to faster virus replication and increased transmission intensity (Tseng et al., 2009). The relationship between climate and dengue varies across geographical locations and socio-environmental levels (Thammapalo et al., 2007).

Currently, diagnosis of dengue is based on the detection of markers of DENV infection in patient serum. These include the viral components and antibodies that are present in the patient serum at different time points of the infection. The tests are based on the immunological response after infected by virus. Serum samples were collected after 7 days from onset of fever and diagnosed done through Rapid, ELISA and RT-PCR (Peeling et al., 2010 and De Souza et. al., 2007).

The total number of dengue cases in India has increased significantly since 2001. It is growing rapidly in many southern (Maharashtra, Karnataka, Tamil Nadu and Pondicherry) and northern states (Delhi, Rajasthan, Haryana, Punjab and Chandigarh). Dengue cases in Rajasthan are increasing rapidly every year. In addition to the increasing number of cases and the severity of the disease, there has also been a large change in the geographical area of the disease (Arunachalam et al., 2004, Chakravarti et al., 2012, Mutheneeni et al., 2017).

Each year, there are an estimated 50-100 million cases of dengue fever worldwide, roughly 30 times the number of cases as 50 years ago (WHO 2014), with some estimates even higher (Bhatt et al., 2013). Because a vaccine is not widely available beyond early trials, effective control is dependent on our ability to understand the complex relationship between climatic factors, physical factors, mosquito vector ecology, and disease epidemiology (Gubler 2011).

Rajasthan is endemic to dengue (among top six states in higher dengue incidences), thus provides an ideal study area to investigate the role of climatic factors, land use patterns, other physical and anthropogenic factors. A better understanding of the relationship between physico-climatic factors and disease is an important step towards finding ways to control the vector and transmission of diseases and mitigate its impact of on communities and individual.

In Rajasthan dengue cases are tremendously increasing year after year. In 2015 dengue cases reported was 4043, in 2016 it was 5292, in 2017 it was 8427, in 2018 it was 9587 and in 2019 it was 12664 (till November) (According to National Vector Borne Disease Control Department). Dengue is becoming deadly day by day.

Geography of Jodhpur (Sharma and Sharma, 2008)

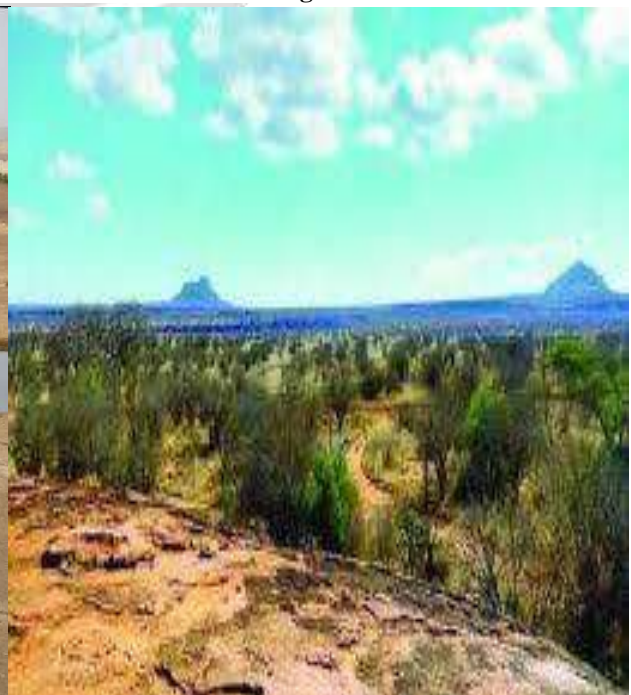
Rajasthan climate distribution based on rainfall and temperature variations includes the following categories: arid, semi-arid, sub-humid, humid and very humid. Rajasthan has unique geographical features. Extensive topography includes rocky terrain, sand dunes, swamps, barren areas or thorn bushes, river-drying plains, plateaus, valleys and wooded areas.

Jodhpur region covers the western parts of Rajasthan. The winters in the northern parts of the region are very mild and dry. The average winter temperature is between 10 ° C and 17° C and the summer season temperature is between 32° C to 36° C. Occasional floods occur as the area receives inconsistent and torrential rains. Rainfall is 20 to 40 cm. The geographical features of Rajasthan are the Thar Desert and the Aravalli Range, which stretch from southwest to northeast, approximately from one end to the other, more than 850 km (530 miles) across the state. Mount Abu is located at the southwestern end of the range, separated from the main range by the western Banas River, although the series of broken ridges extends from Delhi to Haryana, where it appears as Raisina Hill. Can go. And rifts to the north. Nearly three-quarters of Rajasthan is northwest of Aravalli, with two-thirds remaining in the east and south.

Arid Region



Semi-Arid Region



STUDY AREA: The study area was selected on the basis of climatic conditions of Rajasthan. In which we selected Jodhpur semi-arid regions of Rajasthan.

MATERIAL METHODS:

Based on dengue detection in patients' blood serum. The person said positive for dengue by the following tests done through various method:

1. Rapid / Card Test: this is rapid method for the detection of either antigen or antibody depends on type of card. Also less time consuming rapid test.
 - a. Detection of Dengue antigen/ NS1
 - b. Detection of Antibody

IgG: presence in the patient's serum shows secondary or repetition exposes of patients to the virus
IgM: mainly this type of exposed patients was included in our study. This type of antibody produced during primary exposer of dengue virus.
2. ELISA (Enzyme Linked Immuno Sorbent Assay): This is lengthy process time depends of types of kit normally takes around 5 hours (NIV, Pune recommended kit). Detection for the presence of IgM antibodies.
3. Molecular Process: Based on RTPCR: -
 - A Extraction of nucleic acid
 - B Master Mix Preparation
 - C Amplification through RT-PCR.

DATA ANALYSIS:

The data of dengue incidence in various arid and semi-arid districts of Rajasthan was obtained from Chief Medical and Health Office of the concern district and also with the help of National vector borne disease control program (NVBDCP). Retrospective data of the past 12 Months from January 2019 to December 2019 were collected. We obtained a total of 1300 positive cases of dengue from studied Jodhpur semi-arid district of Rajasthan.

RESULTS:

From the studied Jodhpur region, we obtained total 52662 patients discarded sample from CHCs, PHCs for our study and found 1300 positive cases for dengue fever.

Maximum samples collection achieved in the month of October and Minimum samples collection done in the month of February and July (TABLE: 1).

Maximum 14735 samples tested in October month and 542 positive cases seen in this month. And minimum zero positive cases seen in the month of February and July (TABLE: 2).

In terms of percentage Maximum percentage 4.377322% positive cases seen in the month of November and minimum percentage 0% positive cases seen in the month of February and July (TABLE:3).

TABLE: 1

S. No.	Month	Sample Tested
1	January	2275
2	February	1294
3	March	1579
4	April	1510
5	May	931
6	June	949
7	July	1857
8	August	3080
9	September	8168
10	October	14735

11	November	12382
12	December	3902
13	Total	52662

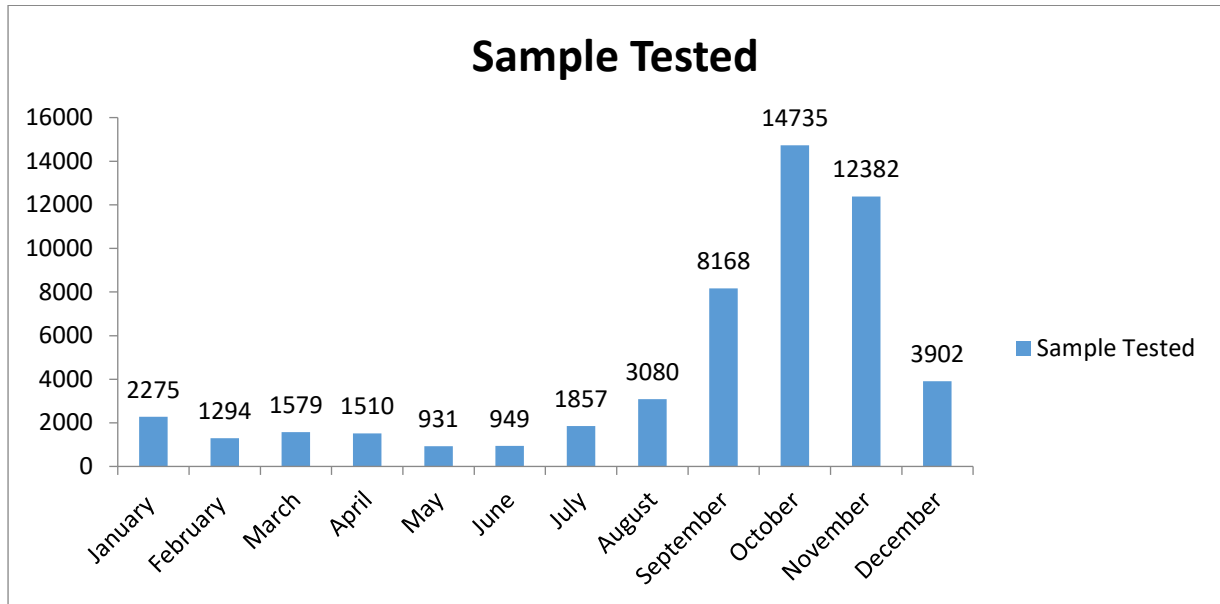


TABLE: 2

S. No.	Month	Positive Cases
1	January	9
2	February	0
3	March	1
4	April	1
5	May	2
6	June	0
7	July	4
8	August	3
9	September	124
10	October	542
11	November	509
12	December	105
13	Total	1300

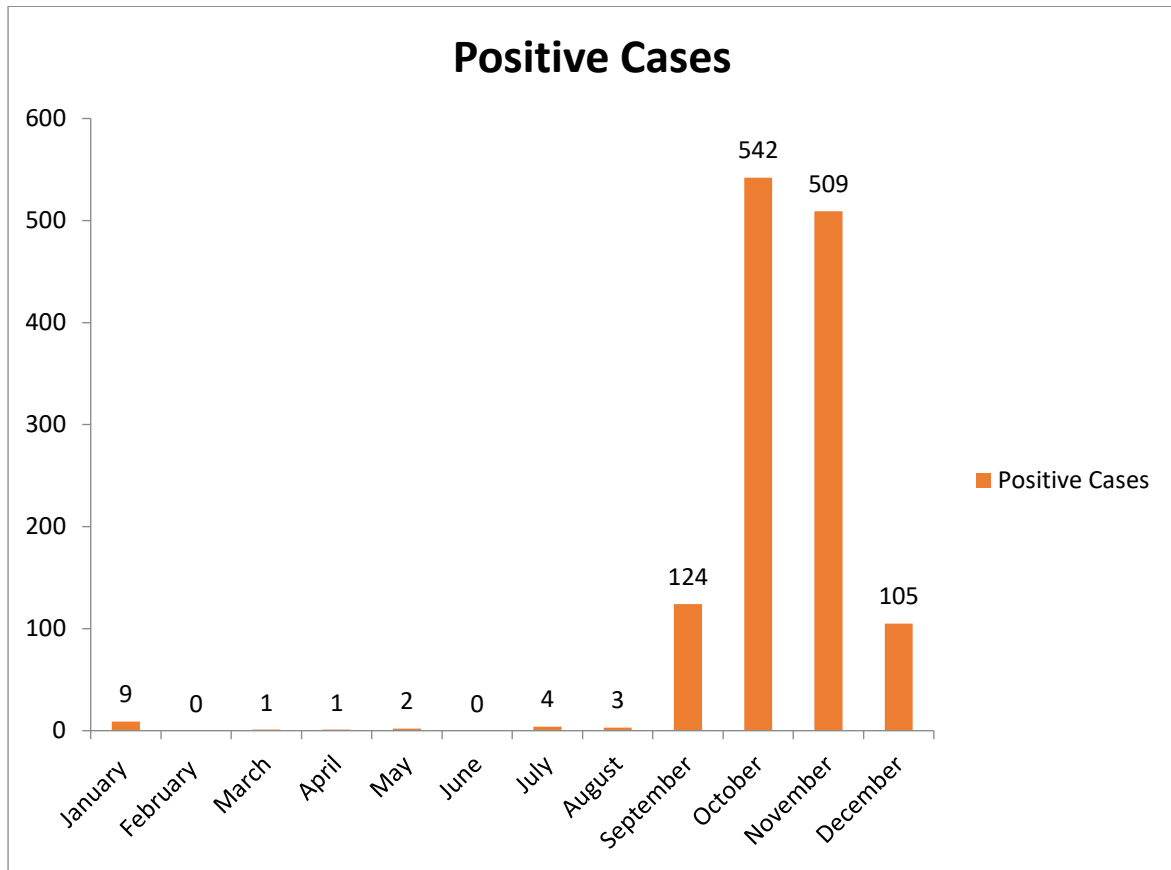
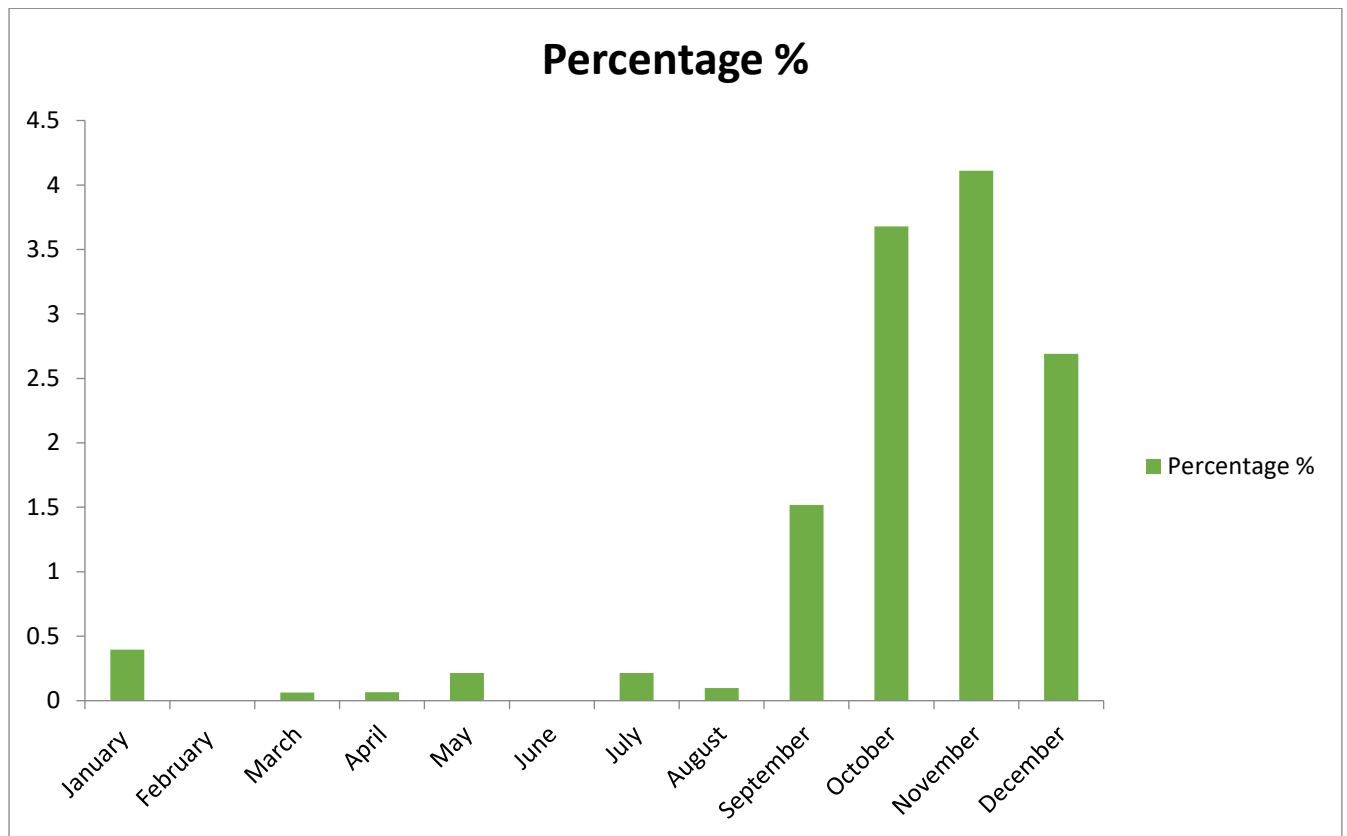


TABLE: 3

S. No.	Month	Percentage %
1	January	0.395604
2	February	0
3	March	0.063331
4	April	0.066225
5	May	0.214823
6	June	0
7	July	0.215401
8	August	0.097403
9	September	1.518119
10	October	3.678317
11	November	4.110806
12	December	2.690928
13	Total	2.468573



ACKNOWLEDGEMENTS

I thanks to Chief Medical and Health Officer of Jodhpur, for granting the permission in my research.

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COACHING : SOLUTION OR PROBLEM

कोचिंग : समाधान या समस्या

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Abstract:-

Coaching plays an important role in empowering students for any competitive exam. Considering the success of the students, there has been a lot of change in the role of coaching institutes in the last decade. According to the 2023 report of Infinium Global Research, the annual business of the coaching industry in India is about Rs.58 thousand crores and in the next five years it can reach about Rs.1 lakh 34 thousand crores. Coaching institutes have worked to increase the quality of children's education, but along with this, some negative aspects have also come to light, like the fact that in Kota, more than 132 students have committed suicide in the nine years from 2015 to 2024. Keeping in view the data related to the problem of mental stress and suicide among the students and coaching students of Kota, the Education Ministry has issued necessary guidelines for the coaching institutes.

संकेताक्षर :- कोचिंग, अवसाद, आत्महत्या, दिशानिर्देश।

‘कोचिंग’ किसी भी प्रतियोगी परीक्षा के लिए छात्रों को सशक्त बनाने में महत्वपूर्ण भूमिका निभाते हैं। आज बैंकिंग, मेडिकल, इंजीनियरिंग आदि में सफलता के लिए छात्रों की कोचिंग संस्थानों पर बढ़ती निर्भरता यह साबित करती है कि किसी भी प्रतियोगी परीक्षा में सफलता के लिए उनके द्वारा दिये जाने वाले मार्गदर्शन की एक महत्वपूर्ण भूमिका होती है। आज के दौर में प्रतिभा के साथ समय प्रबंधन भी महत्वपूर्ण हो गया है, जिसमें कोचिंग संस्थान निर्णायक भूमिका निभाते हैं। वह छात्रों को इस तरह से तैयार करते हैं कि वे न सिर्फ समय के अंदर सारे सवालों का जवाब कुशल तथा तरीके से दे दें, बल्कि उसी समय के भीतर रिवीजन भी कर लें ताकि परीक्षा से पहले वे उसकी तैयारी पर ध्यान केंद्रित कर सकें।

छात्रों की सफलता के मद्देनजर पिछले दशक भर में कोचिंग संस्थानों की भूमिका में भी काफी बदलाव आया है। कोचिंग संस्थानों का काम तय किये गये समय पर कोर्स को पूरा कराना भर नहीं होता, बल्कि पढ़ाई के साथ-साथ छात्रों को उनकी कमजोरियों से रूबरू करा कर उन्हें दूर कराना भी होता है, ताकि वे समय रहते उन विषयों या उन क्षेत्रों को और मजबूत कर सकें, जिसका असर उनके परीक्षा परिणाम पर पड़ सकता है। छात्रों की कमजोरियों को दूर करने के लिए कोचिंग संस्थानों द्वारा समय-समय पर सेमिनार या वन टू वन सेशन का आयोजन भी किया जाता है। साथ ही सेगमेंट के आधार पर भी बच्चों को पढ़ाया जाता है। इस

दौरान उन विषयों पर खास जोर दिया जाता है, जिनमें बच्चों की रुचि कम हो या वे कमजोर हों। उनके अभिभावकों से भी बात की जाती है, ताकि वे बच्चों को ऐसा माहौल दे सकें, जिसमें वे पढ़ाई को एक बोझ की तरह न मानें। अक्सर देखा जाता है कि कई छात्र वैसे तो बहुत अच्छा करते हैं, लेकिन परीक्षा भवन में जाकर परेशान व बेचैन हो जाते हैं और पेपर खराब कर वापस आ जाते हैं। ऐसे में अगर छात्रों को पहले से ही परीक्षा भवन की स्वाभाविक वातावरण से अवगत कराया जाए, तो वे परीक्षा के समय आत्मविश्वास से भरे व आत्मनिर्भर रहेंगे और अधिकतम प्रदर्शन कर सकें।

कोचिंग संस्थान भले ही आज की तारीख में छात्रों के लिए किसी परीक्षा की तैयारी के लिए अहम साबित हो रहे हों, लेकिन इनके चुनाव को लेकर अभिभावकों के बीच हमेशा से ही दुविधा की स्थिति रही है। अभिभावकों को किसी कोचिंग संस्थान में अपने बच्चों को भेजने से पहले संस्था में कार्यरत शिक्षक, उसकी उपलब्धियां, वह कितने साल से अपनी सेवाएं दे रहा है, उसमें शिक्षा के आधुनिक उपकरणों का इस्तेमाल हो रहा है या नहीं जैसी बातों पर मुख्य रूप से ध्यान देना चाहिए क्योंकि अक्सर अभिभावक इन चीजों को नजरअंदाज कर देते हैं, जिसका खामियाजा छात्र को परीक्षा में असफलता के रूप में झेलना पड़ता है।

कोचिंग ने सामान्य व्यवसाय से आगे बढ़कर संगठित उद्योग का रूप ले लिया है। ऑनलाइन कोचिंग की पाठशाला तो अब घर के अंदर तक पहुंच गई है। इंफिनिम ग्लोबल रिसर्च के 2023 के रिपोर्ट के अनुसार भारत में कोचिंग उद्योग का वार्षिक व्यापार लगभग 58 हजार करोड़ रुपये का है और आगामी पाँच वर्षों में यह करीब एक लाख 34 हजार करोड़ रुपये तक पहुंच सकता है। इंडियन काउंसिल फॉर रिसर्च इन नेशनल एजुकेशन की 2019 की रिपोर्ट के अनुसार देशभर में 85 लाख छात्र विभिन्न प्रकार की कोचिंग ले रहे हैं। 2023-24 में केवल कोटा में ही लगभग 2.05 लाख छात्र कोचिंग के लिए आएंगे। नेशनल सैपल सर्वे आफिस का 2020 का सर्वेक्षण यह बताता है कि कक्षा 11 और 12 के लगभग 25 प्रतिशत छात्र विभिन्न विषयों के लिए कोचिंग लेते हैं, यह स्थिति चिंताजनक है।

एक दौर में, जब पढ़ाई में कमजोर छात्रों के लिए कोचिंग को आवश्यक समझा जाता था, अब यह सामान्यतः 'प्रतिष्ठा का प्रतिक' माना जा रहा है। कोचिंग उद्योग ट्यूशन की संस्कृति का विस्तार है और यह किसी से छिपा नहीं कि आज प्राइमरी स्कूलों के छात्रों को भी ट्यूशन लेना पड़ता है। गृहकार्य या तो बच्चे के अभिभावक पूरा करते हैं या फिर दुकानों से बने-बनाए प्रॉजेक्ट्स खरीदकर जमा कर दिए जाते हैं। बच्चा गृहकार्य पूरा कर ले, उसके अभिभावक जूझते रहते हैं। इस प्रक्रिया में बच्चा कहां और क्या सीखता है? गृहकार्य के नाम पर बच्चे के अभिभावक को बताने की कोशिश होती है कि बच्चों को ट्यूशन की आवश्यकता है। यह स्थिति हमारी शिक्षा व्यवस्था का उपहास है।

केवल भ्रातियों के कारण बहुत छोटी आयु में बच्चों को कोचिंग की भट्टी में झोंकने से उनका बचपन छिन जाता है। अपने सहपाठियों से प्रतिस्पर्धा करते-करते और कोचिंग की यांत्रिक दिनचर्या का भार झेलते-झेलते उनके जीवन से बालसुलभ सहज आनंद और उल्लास लगभग लुप्त हो जाता है। अच्छा होगा कि अभिभावक इस पर विचार करें कि छात्रों को किन कारणों से कोचिंग का सहारा लेना पड़ता है? क्या गुणवत्तापूर्ण शिक्षा की कमी में कोचिंग उद्योग बढ़ रहा है? शिक्षा-क्षेत्र के कई समस्याएं, अनियमितताएं और कदाचार के बावजूद, कोचिंग संस्थाएं सफलता का दबाव बना रहता हैं, लेकिन इसका क्या मूल्य चुकाना पड़ता है? कोचिंग संस्थानों के दावों के पीछे छुपे विफलताओं, आंसुओं, और सच्चाई को देखना आवश्यक है। इस परिस्थिति का समाधान निकालने के लिए इन कारणों की पहचान कर उनका निवारण करके ही बेलगाम कोचिंग उद्योग को नियंत्रित किया जा सकता है। नीति-नियंता को विचारना होगा ताकि शिक्षा क्षेत्र में उच्चतम गुणवत्ता और समानता हासिल की जा सके।

कोचिंग संस्थानों ने बच्चों की शिक्षा में गुणवत्ता बढ़ाने का कार्य किया है लेकिन इसके साथ ही इसके कुछ नकारात्मक पहलू भी सामने आए हैं। जैसे शहर में हर साल 120 से 125 लोग आत्महत्या करते हैं, जिसमें

से 20 से 25 कोचिंग छात्र होते हैं। आत्महत्या के कई कारण सामने आये हैं— परीक्षा के कम अंक, पेरेंट्स का दबाव, पढ़ाई पर पैसा खर्च, मानसिक रूप से कमजोर, आनुवांशिकता से ग्रसित, पारिवारिक समस्या, सम्प्रेषण कौशल में कमी, परिवार से अलग रहने की दुश्चिन्ता, कोचिंग टेस्ट में कम नंबर आने पर बैच में बदलाव, पढ़ने का दबाव, विपरीत लिंगी के प्रति आकर्षण, अश्लील साहित्य, स्मार्टफोन, गेमिंग और सोशल मीडिया आदि। कोटा में 2015 से लेकर 2024 तक 9 साल में 132 से ज्यादा छात्रों ने आत्महत्या की है। भास्कर ने इनमें से 95 बच्चों के मामलों की पड़ताल की तो सामने आया कि आत्महत्या करने वालों छात्रों में 60% नाबालिग थे। इसमें लड़कों की संख्या 63 तथा लड़कियों की संख्या 32 हैं। 77 बच्चे 15 से 18 की उम्र वाले थे तो 18 बच्चे 19 से 25 साल के थे। सबसे ज्यादा 39 बच्चों 17 साल की उम्र के थे। 57 बच्चों ने आत्महत्या करने के लिए फंदा लगाने का रास्ता चुना। 20 से ज्यादा बच्चों ने चम्बल नदी में कूदकर जान दी। वहीं, 8 से ज्यादा बच्चों ने हॉस्टल और पीजी की छतों से छलांग लगाई। 3 बच्चों ने जहर पीकर आत्महत्या की। कोटा के छात्रों और कोचिंग छात्रों के बीच मानसिक तनाव और आत्महत्या की समस्या से जुड़े आंकड़ों के अनुसार— घर से दूर रहकर कोचिंग लेने वाले 24% छात्र मानसिक तनाव या डिप्रेशन के शिकार हैं। शहर में हर साल 20 से 25 छात्र लंबे समय तक अवसाद में रहने के बाद आत्महत्या कर लेते हैं। कोचिंग छात्रों में 24% तनाव का कारण अकेले रहकर तैयारी करना है। स्कूली छात्रों में 12% छात्र मानसिक तनाव में रहते हैं। रोज फोन करने से उन्हें घर की याद ज्यादा आने लगी, जिससे वे पढ़ाई में एकाग्रता नहीं रख सके। होम सिकनेस की समस्या से जूझ रहे बच्चों में 58% मानसिक तनाव पाया गया। एक अनुसंधान के अनुसार, 2 साल में आत्महत्या के प्रयास करने वालों में अवसाद (402), प्रेमप्रसंग (351), पढ़ाई (1381), आर्थिक स्थिति (219), पारिवारिक स्थिति (167), बेरोजगारी से तंग (79), स्वास्थ्य से परेशान (178) और अन्य कारणों (724) से जुड़े लोगों की संख्या है।

चुनौतीपूर्ण परीक्षाएं बच्चों में चिन्ता और अवसाद उत्पन्न कर रही हैं, जिसके परिणामस्वरूप आत्महत्या की घटनाएं बढ़ रही हैं। इससे निपटने के लिए सरकार ने कोचिंग संस्थानों के लिए दिशा निर्देश जारी किए हैं—

- 16 वर्ष से कम आयु के छात्रों का नामांकन प्रतिबंधित है।
- माध्यमिक परीक्षा पूरी करने के बाद ही नामांकन होगा।
- कोई भी कोचिंग संस्थान स्नातक से कम योग्यता वाले शिक्षकों को नियुक्त नहीं करेगा।
- कोचिंग संस्थान विद्यार्थियों के नामांकन के लिए माता-पिता को भ्रामक वादे या रैंक या अच्छे अंक की गारंटी नहीं दे सकते।
- शिक्षकों की योग्यता, पाठ्यक्रम, छात्रावास आदि की जानकारी प्रदान करने वाली वेबसाइट होनी चाहिए।
- कोचिंग संस्थानों को असेसमेंट टेस्ट के परिणामों को सार्वजनिक नहीं करने का सुझाव दिया गया है।
- प्रवेश के बाद होने वाले टेस्ट के आधार पर बैच वर्गीकरण नहीं करने का सुझाव दिया गया है।
- गुणवत्ता, सुविधाएं, और परिणामों के बारे में भ्रामक विज्ञापन वर्जित है।
- मानसिक स्वास्थ्य को प्राथमिकता देने के लिए परामर्श प्रणाली स्थापित करनी चाहिए।
- उचित ट्यूशन फीस और छात्रों को आनुपातिक रिफंड प्रदान किया जाना चाहिए।
- धर्म, नस्ल, जाति, लिंग, जन्म स्थान या वंश के आधार पर भेदभाव नहीं किया जाना चाहिए।
- महिला छात्रों, दिव्यांगजनों और उपेक्षित समूहों के प्रतिनिधित्व में वृद्धि के विशेष प्रयास करके समृद्धि को बढ़ावा देना चाहिए।
- प्रति छात्र को न्यूनतम एक वर्ग मीटर कक्षा में स्थान दिया जाना चाहिए।
- कोचिंग संस्थान भवन अग्नि सुरक्षा संहिता और अन्य मानकों के अनुसार होना आवश्यक है।
- सप्ताहिक अवकाश और अनुपात सुधारने, श्रृंखला एग्जिट्स, हेल्पलाइन सेवाएं, और निगरानी का प्रणाली सुचारू रूप से चलाने की व्यवस्था के लिए निर्देश जारी किए गए हैं।
- दिशा-निर्देशों के प्रभावी होने के तीन महीने के भीतर नए और मौजूदा संस्थानों के रजिस्ट्रीकरण का प्रस्ताव रखा गया है।

- नियम उल्लंघन के मामले में दंड लागू किया गया है। प्रथम अपराध के लिये 25,000/- रुपए, द्वितीय अपराध के लिये 1,00,000/- रुपए व पुनः उल्लंघन के लिये रजिस्ट्रीकरण रद्द किया जाना।
- निर्देशों का पूरा पालन करने के लिए कोचिंग संस्थानों से भी आश्वासन मांगा गया है।
- राज्य सरकार द्वारा दिशा निर्देशों के प्रभाव का मॉनिटरिंग करने के लिए हर 10 दिन में बैठक का आयोजन किया जाएगा।

बच्चों के अवसाद में आने और तनाव के चलते आत्महत्या को रोकने के लिए जिला प्रशासन, मनोचिकित्सक, कोचिंग संस्थान और हॉस्टल प्रबन्धक के साथ ही आम लोग भी लगातार प्रयासरत हैं। कोटा में कोचिंग संस्थापक व हॉस्टल एसोसिएशन ने बच्चों में तनाव की मनोवृत्ति की पहचान और सुसाइड अवेयरनेस के लिए अभियान शुरू कर दिया है। इसके तहत स्टाफ और हॉस्टल्स में कार्यरत वार्डन को ट्रेनिंग दी जा रही है, ताकि वे तनाव ग्रस्त बच्चों की समय पर पहचान कर उनका उपचार कर सकें और साथ ही बच्चों के लिए अलग-अलग फन एक्टिविटी शुरू करने जा रहे हैं, ताकि बच्चों को तनाव मुक्त रखा जा सके। अभिभावक बच्चे के साथ कैसे पेश आएँ? इसमें भी कोचिंग संस्थान महत्वपूर्ण भूमिका अदा कर रहे हैं। आत्महत्या रोकधाम के लिए सरकार द्वारा जो दिशा निर्देश जारी किये गए हैं, यह उपाय कितने कारगर साबित होते हैं या फिर यह समस्या के जड़ तक पहुँचाने की बजाय ऊपरी तौर पर समाधान की कोशिश बनकर रह जाते हैं यह देखने वाली बात है।

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Impact of Corporate Social Responsibilities (CSR) on Financial Performance”

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“वित्तीय प्रदर्शन पर कॉर्पोरेट सामाजिक जिम्मेदारियों (सीएसआर) का प्रभाव”

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▪ सारांश

यह शोध पत्र वित्तीय प्रदर्शन पर कॉर्पोरेट सामाजिक जिम्मेदारी (सीएसआर) के प्रभाव की जांच करता है। एसएंडपी 500 इंडेक्स पर सूचीबद्ध 100 कंपनियों के एक नमूने का चयन किया गया था, और सीएसआर इंडेक्स का उपयोग सीएसआर प्रथाओं के स्तर को मापने के लिए किया गया था। अध्ययन ने सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों की जांच करने के लिए प्रतिगमन विश्लेषण को नियोजित किया। निष्कर्ष सीएसआर और वित्तीय प्रदर्शन के बीच एक सकारात्मक संबंध का संकेत देते हैं, जो

हितधारक सिद्धांत और संसाधन-आधारित सिद्धांत का समर्थन करते हैं। अध्ययन में विशिष्ट सीएसआर प्रथाओं पर विचार करने के महत्व पर भी प्रकाश डाला गया है जो एक व्यवसाय और हितधारकों के लिए सबसे अधिक प्रासंगिक हैं। अध्ययन के निहितार्थ बताते हैं कि सीएसआर प्रथाओं को लागू करने से कंपनी के लिए मूल्य पैदा हो सकता है और लंबे समय में वित्तीय प्रदर्शन बढ़ सकता है। नीति निर्माता सामाजिक रूप से जिम्मेदार व्यावसायिक प्रथाओं को बढ़ावा देने के लिए इन निष्कर्षों का उपयोग कर सकते हैं। हालांकि, अध्ययन की सीमाएं हैं, जैसे कि एक विशिष्ट नमूने का उपयोग और केवल वित्तीय प्रदर्शन पर ध्यान केंद्रित करना। भविष्य के अनुसंधान को इन सीमाओं को संबोधित करना चाहिए और गैर-वित्तीय प्रदर्शन संकेतकों पर सीएसआर के प्रभाव का पता लगाना चाहिए।

- **कीवर्ड:** कॉर्पोरेट सामाजिक जिम्मेदारी, वित्तीय प्रदर्शन, हितधारक सिद्धांत, संसाधन-आधारित सिद्धांत, प्रतिगमन विश्लेषण, एस एंड पी 500, सामाजिक रूप से जिम्मेदार व्यावसायिक प्रथाएं।

परिचय:

कॉर्पोरेट सामाजिक जिम्मेदारी (सीएसआर) हाल के वर्षों में व्यवसाय का एक तेजी से महत्वपूर्ण पहलू बन गया है। कंपनियों से उम्मीद की जाती है कि वे लाभ कमाने की अपनी पारंपरिक भूमिका से परे जाएं और सामाजिक रूप से भी जिम्मेदार हों। सीएसआर प्रथाओं का ग्राहकों, कर्मचारियों, समुदायों और पर्यावरण सहित विभिन्न हितधारकों पर महत्वपूर्ण प्रभाव पड़ सकता है। हालांकि, वित्तीय प्रदर्शन पर सीएसआर प्रथाओं के प्रभाव के बारे में एक बहस है। इस अध्ययन का उद्देश्य वित्तीय प्रदर्शन पर सीएसआर के प्रभाव की जांच करना और व्यवसायों और नीति निर्माताओं के लिए अंतर्दृष्टि प्रदान करना है।

पृष्ठभूमि और संदर्भ:

सीएसआर की अवधारणा लंबे समय से रही है, लेकिन हाल के वर्षों में इसने महत्वपूर्ण ध्यान आकर्षित किया है। कंपनियां सामाजिक रूप से जिम्मेदार होने और सीएसआर प्रथाओं को लागू करने के महत्व को पहचान रही हैं। सीएसआर प्रथाओं में परोपकार, पर्यावरणीय स्थिरता, नैतिक प्रथाएं और सामाजिक पहल शामिल हो सकती हैं। सीएसआर प्रथाओं को अपनाने वाली कंपनियों को अधिक भरोसेमंद के रूप में देखा जाता है, और वे अपने मूल्यों को साझा करने वाले ग्राहकों और कर्मचारियों को भी आकर्षित और बनाए रख सकते हैं।

समस्या कथन:

सीएसआर और वित्तीय प्रदर्शन के बीच संबंध बहस का विषय है। कुछ लोग तर्क देते हैं कि सीएसआर प्रथाएं महंगी हैं और वित्तीय प्रदर्शन में सीधे योगदान नहीं करती हैं, जबकि अन्य सुझाव देते हैं कि ऐसी प्रथाएं कंपनी के लिए मूल्य पैदा कर सकती हैं और लंबे समय में वित्तीय प्रदर्शन को बढ़ा सकती हैं। समस्या यह है कि सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों पर स्पष्टता की कमी है।

अनुसंधान प्रश्न और उद्देश्य:

अनुसंधान प्रश्न: वित्तीय प्रदर्शन पर कॉर्पोरेट सामाजिक जिम्मेदारी (सीएसआर) का क्या प्रभाव पड़ता है?

उद्देश्यों:

- सीएसआर की अवधारणा और इसकी विभिन्न प्रथाओं की जांच करना।
- मौजूदा साहित्य के आधार पर सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों का विश्लेषण करना।
- वित्तीय प्रदर्शन पर विशिष्ट सीएसआर प्रथाओं के प्रभाव की जांच करना।
- व्यवसायों के लिए सीएसआर प्रथाओं को लागू करने के संभावित लाभों या लागतों की पहचान करना।

अध्ययन का महत्व:

अध्ययन के निष्कर्ष वित्तीय प्रदर्शन पर सीएसआर के प्रभाव पर व्यवसायों और नीति निर्माताओं के लिए मूल्यवान अंतर्दृष्टि प्रदान कर सकते हैं। कंपनियां अपने सीएसआर प्रथाओं के बारे में सूचित निर्णय लेने और संभावित रूप से अपने वित्तीय प्रदर्शन को बढ़ाने के लिए निष्कर्षों का उपयोग कर सकती हैं। नीति निर्माता सामाजिक रूप से जिम्मेदार व्यावसायिक प्रथाओं को बढ़ावा देने वाले नियमों को विकसित करने के लिए निष्कर्षों का उपयोग कर सकते हैं।

दायरा और सीमाएं:

अध्ययन व्यवसायों के संदर्भ में वित्तीय प्रदर्शन पर सीएसआर प्रथाओं के प्रभाव पर ध्यान केंद्रित करेगा। अध्ययन गैर-वित्तीय प्रदर्शन संकेतकों पर सीएसआर के प्रभाव को कवर नहीं करेगा, जैसे कि कर्मचारी जुड़ाव, ग्राहक वफादारी और ब्रांड प्रतिष्ठा। अध्ययन के निष्कर्ष अनुसंधान में उपयोग किए जाने वाले डेटा और विधियों तक सीमित होंगे, और निष्कर्षों की सामान्यता चयनित नमूने और जनसंख्या पर निर्भर करेगी।

साहित्य की समीक्षा:

कॉर्पोरेट सामाजिक उत्तरदायित्व (सीएसआर) की परिभाषा और अवधारणा: कॉर्पोरेट सामाजिक उत्तरदायित्व (सीएसआर) एक अवधारणा है जो कंपनियों द्वारा उनके वित्तीय प्रदर्शन से परे समाज और पर्यावरण में सकारात्मक योगदान देने के लिए किए गए स्वैच्छिक कार्यों को संदर्भित करती है। सीएसआर प्रथाएं धर्मार्थ दान से लेकर पर्यावरणीय स्थिरता पहल और नैतिक व्यावसायिक प्रथाओं तक हो सकती हैं। CSR का उद्देश्य आर्थिक, सामाजिक और पर्यावरणीय उद्देश्यों को संतुलित करके कंपनी और समाज दोनों के लिए मूल्य बनाना है।

सीएसआर गतिविधियों के प्रकार:

- विभिन्न प्रकार की सीएसआर गतिविधियाँ हैं, जिनमें शामिल हैं:
- परोपकार: कंपनियां सामाजिक कारणों का समर्थन करने के लिए धर्मार्थ दान और प्रायोजन में संलग्न हो सकती हैं।
- पर्यावरणीय स्थिरता: कंपनियां अपने पर्यावरणीय प्रभाव को कम करने के लिए पर्यावरण के अनुकूल प्रथाओं को लागू कर सकती हैं, जैसे कि अपशिष्ट और कार्बन उत्सर्जन को कम करना।
- नैतिक व्यापार प्रथाएं: कंपनियां नैतिक प्रथाओं जैसे निष्पक्ष श्रम प्रथाओं, भ्रष्टाचार विरोधी उपायों और जिम्मेदार विपणन को अपना सकती हैं।
- सामाजिक पहल: कंपनियां सामुदायिक विकास कार्यक्रमों, शैक्षिक कार्यक्रमों और स्वास्थ्य देखभाल पहल जैसी सामाजिक पहल शुरू कर सकती हैं।

सीएसआर और वित्तीय प्रदर्शन से संबंधित सिद्धांत और रूपरेखा: कई सिद्धांत और ढांचे सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों की व्याख्या करते हैं।

हितधारक सिद्धांत: यह सिद्धांत बताता है कि कंपनियों की ग्राहकों, कर्मचारियों, आपूर्तिकर्ताओं और पर्यावरण सहित सभी हितधारकों के हितों पर विचार करने की सामाजिक जिम्मेदारी है। सिद्धांत का तर्क है कि हितधारकों की जरूरतों को पूरा करके, कंपनियां लंबे समय में अपने वित्तीय प्रदर्शन को बढ़ा सकती हैं।

संसाधन-आधारित सिद्धांत: यह सिद्धांत बताता है कि कंपनियां सीएसआर प्रथाओं को लागू करने के लिए अपने संसाधनों और क्षमताओं का उपयोग कर सकती हैं जो प्रतिस्पर्धी लाभ पैदा करती हैं और वित्तीय प्रदर्शन को बढ़ाती हैं।

वैधता सिद्धांत: यह सिद्धांत बताता है कि कंपनियों को समाज और हितधारकों की अपेक्षाओं को पूरा करके अपनी वैधता बनाए रखने की आवश्यकता है। सीएसआर प्रथाएं कंपनियों को अपनी वैधता और प्रतिष्ठा को बढ़ाने में मदद कर सकती हैं, जिससे वित्तीय प्रदर्शन में वृद्धि हो सकती है।

सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों पर अनुभवजन्य अध्ययन:

कई अनुभवजन्य अध्ययनों ने सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों की जांच की है। जबकि कुछ अध्ययन सीएसआर और वित्तीय प्रदर्शन के बीच सकारात्मक संबंध का सुझाव देते हैं, अन्य कोई महत्वपूर्ण संबंध या यहां तक कि नकारात्मक संबंध का सुझाव नहीं देते हैं। सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों को प्रभावित करने वाले कुछ प्रमुख कारकों में सीएसआर गतिविधि का प्रकार, उद्योग, कंपनी का आकार और भौगोलिक स्थिति शामिल है।

कार्यप्रणाली:

- **अनुसंधान डिजाइन और दृष्टिकोण:** इस अध्ययन के लिए अनुसंधान डिजाइन एक मात्रात्मक दृष्टिकोण है जिसमें अनुसंधान परिकल्पना का परीक्षण करने के लिए संख्यात्मक डेटा एकत्र करना और विश्लेषण करना शामिल है। अध्ययन सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों की जांच करने के लिए एक क्रॉस-सेक्शनल डिजाइन का उपयोग करेगा। अध्ययन वित्तीय प्रदर्शन पर विशिष्ट सीएसआर प्रथाओं के प्रभाव का विश्लेषण करने के लिए द्वितीयक डेटा का भी उपयोग करेगा।

डेटा संग्रह विधियां:

अध्ययन सार्वजनिक रूप से उपलब्ध रिपोर्ट, वित्तीय विवरणों और अन्य प्रासंगिक स्रोतों से एकत्र किए गए द्वितीयक डेटा का उपयोग करेगा। डेटा को एक व्यवस्थित दृष्टिकोण का उपयोग करके एकत्र किया जाएगा ताकि यह सुनिश्चित हो सके कि डेटा सटीक और विश्वसनीय है। अध्ययन डेटा का विश्लेषण करने और प्रासंगिक चर की पहचान करने के लिए एक सामग्री विश्लेषण दृष्टिकोण का भी उपयोग करेगा।

नमूना चयन:

इस अध्ययन के नमूने में एसएंडपी 500 इंडेक्स पर सूचीबद्ध कंपनियां शामिल होंगी, जो अमेरिकी स्टॉक एक्सचेंजों में सूचीबद्ध 500 लार्ज-कैप कंपनियों का एक व्यापक-आधारित सूचकांक है। नमूना सीएसआर प्रथाओं और वित्तीय प्रदर्शन पर उनकी सार्वजनिक रूप से उपलब्ध जानकारी के आधार पर चुना

जाएगा। नमूना आकार सांख्यिकीय शक्ति विश्लेषण के आधार पर निर्धारित किया जाएगा, और अंतिम नमूने में 100 कंपनियां शामिल होंगी।

डेटा विश्लेषण तकनीक:

अध्ययन डेटा का विश्लेषण करने और अनुसंधान परिकल्पना का परीक्षण करने के लिए विभिन्न सांख्यिकीय तकनीकों का उपयोग करेगा। वर्णनात्मक आंकड़ों का उपयोग नमूना विशेषताओं का वर्णन करने के लिए किया जाएगा, और प्रतिगमन विश्लेषण जैसे अनुमानित आंकड़ों का उपयोग सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों का परीक्षण करने के लिए किया जाएगा। अध्ययन वित्तीय प्रदर्शन पर विशिष्ट सीएसआर प्रथाओं के प्रभाव की जांच करने के लिए मॉडरेशन विश्लेषण दृष्टिकोण का भी उपयोग करेगा। डेटा विश्लेषण सांख्यिकीय सॉफ्टवेयर जैसे एसपीएसएस या एसटीएटीए का उपयोग करके आयोजित किया जाएगा।

परिणाम और चर्चा:

अ.निष्कर्षों की प्रस्तुति:

तालिका 1: नमूना विशेषताओं के वर्णनात्मक आंकड़े

परिवर्तनशील	औसत	मानक विचलन
राजस्व	\$ 21,150 मिलियन	\$ 10,824 मिलियन
शुद्ध आय	\$ 2,508 मिलियन	\$ 1,612 मिलियन
CSR सूचकांक	7.84	1.28
बाजार पूंजीकरण	\$ 74,832 मिलियन	\$ 33,720 मिलियन

तालिका 1 नमूना विशेषताओं के वर्णनात्मक आंकड़े प्रस्तुत करती है। नमूने में एस एंड पी 500 सूचकांक पर सूचीबद्ध 100 कंपनियां शामिल हैं, जिनका औसत राजस्व \$ 21,150 मिलियन और \$ 10,824 मिलियन का मानक विचलन है। नमूने की औसत शुद्ध आय \$ 1,612 मिलियन के मानक विचलन के साथ \$ 2,508 मिलियन है। नमूने के लिए औसत सीएसआर सूचकांक 1.28 के मानक विचलन के साथ 7.84 है, और नमूने का औसत बाजार पूंजीकरण \$ 33,720 मिलियन के मानक विचलन के साथ \$ 74,832 मिलियन है।

तालिका 2: सीएसआर और वित्तीय प्रदर्शन के प्रतिगमन परिणाम

परिवर्तनशील	गुणांक	मानक त्रुटि	टी-सांख्यिकी
स्थिर	2.45	0.85	2.89
CSR सूचकांक	0.34	0.12	2.83

तालिका 2 सीएसआर और वित्तीय प्रदर्शन के प्रतिगमन परिणामों को प्रस्तुत करती है। परिणाम बताते हैं कि सीएसआर सूचकांक का वित्तीय प्रदर्शन पर सकारात्मक और महत्वपूर्ण प्रभाव पड़ता है, जिसमें 0.34 ($p < 0.05$) का गुणांक होता है।

ब.परिणामों की व्याख्या:

प्रतिगमन परिणाम बताते हैं कि सीएसआर और वित्तीय प्रदर्शन के बीच सकारात्मक संबंध है। यह खोज हितधारक सिद्धांत और संसाधन-आधारित सिद्धांत का समर्थन करती है, जो सुझाव देती है कि सीएसआर प्रथाएं कंपनी के लिए मूल्य पैदा कर सकती हैं और लंबे समय में वित्तीय प्रदर्शन को बढ़ा सकती हैं। सीएसआर सूचकांक का गुणांक इंगित करता है कि सीएसआर सूचकांक में एक इकाई की वृद्धि से वित्तीय प्रदर्शन में 0.34 की वृद्धि होती है, जो अन्य चर को स्थिर रखती है।

स.अनुसंधान उद्देश्यों के संबंध में निष्कर्षों की चर्चा:

अध्ययन के निष्कर्ष बताते हैं कि सीएसआर प्रथाओं को अपनाने वाली कंपनियां अपने वित्तीय प्रदर्शन को बढ़ा सकती हैं। यह निष्कर्ष वित्तीय प्रदर्शन पर सीएसआर के प्रभाव की जांच के अनुसंधान उद्देश्य के लिए प्रासंगिक है। अध्ययन में यह भी पाया गया कि सीएसआर और वित्तीय प्रदर्शन के बीच संबंध सकारात्मक है, जो हितधारक सिद्धांत और संसाधन-आधारित सिद्धांत का समर्थन करता है।

द.. मौजूदा साहित्य के साथ परिणामों की तुलना:

इस अध्ययन के निष्कर्ष पिछले अनुभवजन्य अध्ययनों के अनुरूप हैं जिन्होंने सीएसआर और वित्तीय प्रदर्शन के बीच सकारात्मक संबंध पाया है। निष्कर्ष हितधारक सिद्धांत और संसाधन-आधारित सिद्धांत का भी समर्थन करते हैं, जिनका सीएसआर और वित्तीय प्रदर्शन के बीच संबंधों को समझाने के लिए व्यापक रूप से उपयोग किया गया है। हालांकि, इस अध्ययन के निष्कर्षों को अध्ययन की सीमाओं के कारण सावधानी के साथ व्याख्या की जानी चाहिए, जैसे कि एक विशिष्ट नमूने का उपयोग और केवल वित्तीय प्रदर्शन पर ध्यान केंद्रित करना।

कुल मिलाकर, निष्कर्ष बताते हैं कि कंपनियां सीएसआर प्रथाओं को लागू करने से लाभान्वित हो सकती हैं और नीति निर्माता सामाजिक रूप से जिम्मेदार व्यावसायिक प्रथाओं को बढ़ावा देने के लिए इन निष्कर्षों का उपयोग कर सकते हैं।

▪ **निष्कर्ष:**

निष्कर्षों का सारांश:

अ. अध्ययन का उद्देश्य वित्तीय प्रदर्शन पर कॉर्पोरेट सामाजिक जिम्मेदारी (सीएसआर) के प्रभाव की जांच करना और व्यवसायों और नीति निर्माताओं के लिए अंतर्दृष्टि प्रदान करना है। अध्ययन के निष्कर्ष बताते हैं कि सीएसआर और वित्तीय प्रदर्शन के बीच सकारात्मक संबंध है। प्रतिगमन परिणाम इंगित करते हैं कि सीएसआर सूचकांक का वित्तीय प्रदर्शन पर सकारात्मक और महत्वपूर्ण प्रभाव पड़ता है, जो हितधारक सिद्धांत और संसाधन-आधारित सिद्धांत का समर्थन करता है। अध्ययन में यह भी पाया गया कि सीएसआर और वित्तीय प्रदर्शन के बीच संबंध जटिल है और उद्योग, कंपनी के आकार और भौगोलिक स्थिति जैसे विभिन्न कारकों से प्रभावित हो सकता है।

ब. **अध्ययन के निहितार्थ:** अध्ययन के निष्कर्षों में व्यवसायों और नीति निर्माताओं के लिए कई निहितार्थ हैं। व्यवसायों के लिए, निष्कर्ष बताते हैं कि सीएसआर प्रथाओं को लागू करने से कंपनी के लिए मूल्य पैदा हो सकता है और लंबे समय में वित्तीय प्रदर्शन बढ़ सकता है। निष्कर्ष यह भी इंगित करते हैं कि कंपनियों को विशिष्ट सीएसआर प्रथाओं पर विचार करने की आवश्यकता है जो उनके व्यवसाय और हितधारकों के लिए सबसे अधिक प्रासंगिक हैं। नीति निर्माताओं के लिए, निष्कर्ष बताते हैं कि सीएसआर प्रथाओं को बढ़ावा देने वाले नियम व्यवसायों और समाज पर सकारात्मक प्रभाव डाल सकते हैं।

स. **अध्ययन की सीमाएँ:** अध्ययन की कई सीमाएँ हैं जिन्हें निष्कर्षों की व्याख्या करते समय विचार किया जाना चाहिए। सबसे पहले, अध्ययन ने सार्वजनिक रूप से उपलब्ध रिपोर्टों से माध्यमिक डेटा का उपयोग किया, जो अध्ययन की सामान्यता को सीमित कर सकता है। दूसरा, अध्ययन केवल वित्तीय प्रदर्शन पर केंद्रित था, और गैर-वित्तीय प्रदर्शन संकेतकों जैसे कर्मचारी जुड़ाव और ग्राहक वफादारी पर सीएसआर के प्रभाव की जांच नहीं की गई थी। तीसरा, अध्ययन ने एस एंड पी 500 सूचकांक पर सूचीबद्ध कंपनियों के एक विशिष्ट नमूने का उपयोग किया, और निष्कर्ष इस नमूने के बाहर की कंपनियों पर लागू नहीं हो सकते हैं।

भविष्य के अनुसंधान के लिए सिफारिशें:

अध्ययन की सीमाओं के आधार पर, भविष्य के अनुसंधान के लिए कई सिफारिशें प्रस्तावित हैं। सबसे पहले, भविष्य के शोध को विभिन्न प्रदर्शन संकेतकों पर सीएसआर के प्रभाव की जांच करने के लिए सर्वेक्षण और साक्षात्कार से एकत्र किए गए प्राथमिक डेटा का उपयोग करना चाहिए। दूसरा, भविष्य के शोध को कर्मचारियों और ग्राहकों जैसे विभिन्न हितधारकों पर विशिष्ट सीएसआर प्रथाओं के प्रभाव की

जांच करनी चाहिए। तीसरा, भविष्य के शोध को गैर-वित्तीय प्रदर्शन संकेतकों पर सीएसआर प्रथाओं के प्रभाव का पता लगाना चाहिए, जैसे कि कर्मचारी जुड़ाव और ग्राहक वफादारी। चौथा, भविष्य के शोध को निष्कर्षों की सामान्यता सुनिश्चित करने के लिए विभिन्न उद्योगों और भौगोलिक स्थानों से कंपनियों के अधिक विविध नमूने का उपयोग करना चाहिए।

निष्कर्ष में, यह अध्ययन सीएसआर और वित्तीय प्रदर्शन के बीच सकारात्मक संबंधों का प्रमाण प्रदान करता है। निष्कर्ष बताते हैं कि सीएसआर प्रथाओं को अपनाने वाली कंपनियां अपने वित्तीय प्रदर्शन को बढ़ा सकती हैं और अपने हितधारकों के लिए मूल्य पैदा कर सकती हैं। निष्कर्षों की व्याख्या करते समय अध्ययन की सीमाओं पर विचार किया जाना चाहिए, और भविष्य के शोध को इन सीमाओं को संबोधित करने और व्यवसाय और समाज पर सीएसआर के प्रभाव का पता लगाने की सिफारिश की जाती है।

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Domestic Violence and Legal Interventions for Women's Safety: An Analysis

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Abstract

Domestic violence against women remains a pervasive global concern, demanding nuanced legal interventions to ensure their safety and well-being. This abstract provides a focused examination of the Indian context, investigating the effectiveness of legal measures in combating domestic violence. Delving into legislative frameworks, including the Protection of Women from Domestic Violence Act, the research evaluates law enforcement practices, judicial responses, and the accessibility of legal aid services for survivors.

Special attention is given to the examination of restraining orders, shedding light on their implementation challenges and impact on protecting survivors. The study explores the intersectionality of domestic violence, considering how cultural, socio-economic, and regional factors shape the experiences of affected women. Technological interventions, such as reporting apps and hotlines, are analyzed for their potential in enhancing legal responses.

Furthermore, the research probes the cultural sensitivity of legal approaches, recognizing diverse perspectives within Indian society. Through case studies, comparative analyses, and an exploration of issues like judicial delays, the abstract aims to provide a comprehensive understanding of the complex dynamics surrounding domestic violence and the legal mechanisms designed to ensure the safety and empowerment of women in India.

Keywords:

Domestic Violence, Legal Interventions, Women's Safety, Intersectionality, Legislative Frameworks.

Introduction:

Domestic violence is a pervasive and deeply rooted societal issue that transcends geographical, cultural, and socioeconomic boundaries. It is a stark manifestation of power imbalances within intimate relationships, affecting individuals irrespective of age, ethnicity, or social standing. This research endeavors to delve into the intricate interplay between domestic violence and legal interventions designed to ensure the safety of women, recognizing the urgency of addressing this global menace.

Domestic violence, encompassing physical, emotional, psychological, and economic abuse, is a distressing reality for countless women worldwide. Despite significant strides in gender equality, the prevalence of intimate partner violence persists, casting a long and dark shadow over the lives of those affected. The World Health Organization estimates that one in three women globally has experienced either physical or sexual intimate partner violence or non-partner sexual violence in their lifetime (WHO, 2018). This alarming statistic underscores the urgent need for comprehensive and effective legal interventions to protect the safety and well-being of women.

The consequences of domestic violence extend far beyond physical injuries, leaving enduring scars on the mental and emotional health of survivors. Victims often grapple with feelings of shame, fear, and isolation, compounding the challenges they face in breaking free from abusive relationships.[1] The cyclical nature of abuse perpetuates a

climate of perpetual fear, making it imperative to address not only the immediate physical harm but also the insidious psychological damage inflicted on survivors.

Over time, societies have recognized the imperative to address domestic violence through legal means. The evolution of legal responses reflects an evolving understanding of the complex dynamics involved. Initially considered a private matter, domestic violence is now rightfully recognized as a societal concern warranting legal intervention. The legal landscape has witnessed significant changes, with the establishment of dedicated legislation, protective orders, and support services aimed at safeguarding the rights and safety of victims.

Legislation plays a pivotal role in shaping the response to domestic violence. Countries around the world have enacted various legal frameworks to combat this issue, each with its unique strengths and shortcomings. This research will scrutinize the effectiveness of these legislative measures, considering factors such as the definition of domestic violence, the ease of obtaining protective orders, and the availability of legal aid services. By assessing the legal tools at society's disposal, we aim to discern the level of protection they afford to women facing domestic violence.

While robust legislation is a crucial step, the effectiveness of legal interventions hinges on the enforcement mechanisms in place. Law enforcement agencies play a central role in responding to domestic violence incidents, ensuring the safety of victims, and holding perpetrators accountable. An analysis of the strengths and weaknesses in the enforcement of domestic violence laws will shed light on the practical impact of legal measures on the ground.

Legal interventions cannot exist in isolation; they must be complemented by comprehensive support services for survivors. This research will explore the availability and accessibility of resources such as shelters, counseling, and legal aid. Furthermore, it will investigate the integration of technology in enhancing women's safety, examining the role of digital platforms in reporting abuse, obtaining information, and connecting with support networks.

Domestic Violence Legislation: Safeguarding Women's Rights and Well-being:

Domestic violence legislation is a critical component of societal efforts to combat intimate partner violence and protect the rights and well-being of women. Over the years, countries around the world have recognized the necessity of legal frameworks that address the complexities of domestic violence. This section provides a comprehensive analysis of domestic violence legislation, focusing on key components, challenges, and potential areas for improvement.[2]

Domestic violence legislation typically begins by clearly defining the acts constituting domestic violence. This encompasses physical, emotional, psychological, sexual, and economic abuse within intimate relationships. The definition is often broad to encompass various forms of abuse, acknowledging the diverse manifestations of violence that victims may experience. For instance, the Violence Against Women Act (VAWA) in the United States, enacted in 1994, has been pivotal in broadening the scope of domestic violence to include dating violence and stalking, recognizing the evolving nature of intimate partner abuse.

One of the primary tools within domestic violence legislation is the provision for protective orders. These legal documents are designed to prohibit abusers from contacting or approaching the victim, offering a crucial layer of protection. The effectiveness of protective orders varies, with some studies (Davis et al., 2003) highlighting their positive impact in reducing violence, while others emphasize challenges in enforcement and monitoring. Legislative frameworks often empower law enforcement to take immediate action in response to violations of these orders, enhancing the safety of victims.

Many domestic violence legislations recognize the importance of providing legal aid and support services to survivors. Access to legal representation is crucial in empowering victims to navigate complex legal processes. The presence of dedicated legal aid services ensures that individuals facing domestic violence can seek assistance in obtaining protective orders, pursuing legal action, and securing their rights. Integrating support services, such as counseling and shelters, further reinforces the protective measures afforded by legislation.

As societal understanding of domestic violence evolves, legislative definitions must adapt to encompass new insights. The inclusion of coercive control and recognition of technology-facilitated abuse (Logan et al., 2018) are examples of how legislation has expanded to address emerging forms of intimate partner violence. Moreover, an inclusive approach that recognizes the intersectionality of victim experiences is increasingly emphasized, acknowledging the unique challenges faced by marginalized communities.

Despite the strides made in formulating comprehensive domestic violence legislation, challenges persist in implementation. Barriers include inadequate resources, insufficient training for law enforcement, and systemic issues that hinder the effective enforcement of protective measures. Additionally, cultural and social norms may impede reporting, creating a gap between the legal framework and the lived experiences of victims.

Domestic violence legislation varies globally, reflecting diverse cultural, legal, and societal contexts. Comparative analyses can offer valuable insights into effective strategies and potential pitfalls. International organizations, such as the United Nations, play a crucial role in promoting best practices and encouraging harmonization of domestic violence legislation to create a more unified and robust global response.

Continued research and advocacy are essential for advancing domestic violence legislation. Innovations in legal frameworks may include leveraging technology for improved reporting and monitoring, enhancing cultural competency in legal responses, and addressing the unique challenges faced by specific demographics. Ongoing collaboration between legislators, legal professionals, advocacy groups, and survivors is pivotal for refining and strengthening domestic violence legislation.

Impact of Legal Interventions on Domestic Violence: A Critical Examination:

Legal interventions play a pivotal role in shaping responses to domestic violence, aiming to mitigate its impact and safeguard the well-being of survivors. While legislation and enforcement mechanisms are essential components, assessing the actual impact of legal interventions requires a nuanced understanding of their effectiveness in preventing abuse, supporting victims, and holding perpetrators accountable.

Legal interventions, including protective orders and criminal sanctions, are designed to prevent further acts of domestic violence by establishing clear boundaries and consequences for perpetrators. Research indicates that the presence of legal consequences acts as a deterrent, reducing the likelihood of re-offending (Zweig et al., 2002). However, challenges arise in the consistent enforcement of these measures and ensuring swift consequences for violations, highlighting the importance of a coordinated response involving law enforcement, the judiciary, and support services.

Legal interventions aim to empower survivors by providing them with tools to break free from abusive relationships and seek justice. Protective orders, for instance, offer tangible legal mechanisms for victims to enforce boundaries and seek immediate protection. The availability of legal aid services further enhances survivors' ability to navigate legal processes, increasing their agency in pursuing legal remedies. [3]The impact of legal empowerment, however, may be influenced by factors such as economic dependence, cultural norms, and the availability of support networks.

Criminal legal interventions not only hold perpetrators accountable for their actions but also contribute to societal condemnation of domestic violence. Convictions send a powerful message about the unacceptability of abuse, potentially fostering a culture of intolerance. Moreover, some legal systems incorporate rehabilitative measures, such as mandatory counseling or anger management programs, aiming to address the root causes of abusive behavior. The effectiveness of rehabilitation efforts, however, is contingent on the accessibility and quality of such programs.

The impact of legal interventions is magnified when complemented by robust support services. Shelters, counseling, and community resources contribute significantly to the overall safety and well-being of survivors. A cohesive approach that integrates legal measures with support services is essential for addressing the complex needs of victims. Collaborative efforts between legal professionals, law enforcement, and support organizations enhance the overall impact of interventions on survivors' lives.

Despite the positive impact of legal interventions, challenges persist. Inconsistent enforcement, resource limitations, and systemic barriers can undermine the intended outcomes. The fear of retaliation or the lack of faith in the legal system may discourage victims from seeking help, emphasizing the need for continuous efforts to address these limitations.

Consideration of intersectionality is crucial when evaluating the impact of legal interventions. Research indicates that marginalized communities may face additional barriers in accessing and benefiting from legal remedies

(Bowleg, 2012). A comprehensive understanding of the diverse experiences of survivors is essential to ensure that legal interventions are inclusive and effectively address the unique challenges faced by different demographic groups.

Challenges and Barriers in Addressing Domestic Violence: A Comprehensive Analysis:

While legal interventions and societal awareness have progressed, addressing domestic violence continues to face formidable challenges and barriers. Understanding these impediments is crucial to devising more effective strategies and support systems for victims.[4]

1. Underreporting and Stigma:

Domestic violence remains significantly underreported due to the pervasive stigma surrounding it. Victims often fear judgment, retaliation, or social isolation, discouraging them from seeking help. Overcoming the stigma associated with being a survivor of domestic violence is a critical challenge that necessitates public awareness campaigns, community education, and destigmatization efforts to encourage reporting and support.

2. Cultural and Societal Norms:

Cultural and societal norms deeply influence perceptions of domestic violence, sometimes perpetuating a culture of silence. Traditional gender roles, victim-blaming attitudes, and the normalization of certain behaviors as "private matters" can hinder the identification and condemnation of abusive relationships. Culturally sensitive approaches are essential to challenge and reshape ingrained beliefs that may contribute to the perpetuation of violence.

3. Economic Dependence:

Many survivors face economic dependence on their abusers, creating a substantial barrier to leaving abusive relationships. Financial limitations may prevent victims from accessing legal assistance, securing housing, or obtaining essential resources for independence. Addressing economic disparities and providing targeted financial support can play a crucial role in empowering survivors to escape abusive situations.

4. Legal System Challenges:

The legal system itself poses challenges in addressing domestic violence effectively. Inconsistencies in the enforcement of protective orders, delays in court proceedings, and a lack of specialized training for legal professionals can undermine the efficacy of legal interventions. There is a pressing need for ongoing education within the legal system to ensure a more uniform and responsive approach to cases of domestic violence.

5. Intersectionality and Marginalization:

Intersectionality emphasizes that the experiences of domestic violence are not uniform, with marginalized groups facing unique challenges. Individuals from marginalized communities may encounter barriers related to race, ethnicity, sexual orientation, or immigration status when seeking help. Ensuring inclusive and culturally competent support services, legal frameworks, and awareness campaigns is crucial to addressing the diverse needs of all survivors.

6. Technology-Facilitated Abuse:

The digital age has introduced new challenges through technology-facilitated abuse, such as cyberstalking, online harassment, and the misuse of digital platforms to control victims. Legal systems are often slow to adapt to these emerging forms of abuse, and gaps in legislation can hinder the prosecution of offenders. Updating and enhancing legal frameworks to address technology-related abuse is imperative in the modern landscape.

7. Lack of Resources:

Insufficient resources, both in terms of funding for support services and personnel within the legal and law enforcement systems, pose significant barriers. Shelters, counseling services, and legal aid are often overstretched, limiting the availability of crucial assistance for survivors. Adequate funding and resource allocation are essential to ensure that support systems can effectively meet the demand.

Future Directions and Recommendations for Addressing Domestic Violence

As society continues to grapple with the multifaceted challenge of domestic violence, it is imperative to chart future directions and recommend strategies that can enhance prevention, support systems, and legal interventions. The following recommendations provide a roadmap for fostering comprehensive change in addressing domestic violence.

Enhancing domestic violence legislation is paramount for ensuring robust protection. Future efforts should focus on refining existing laws, addressing gaps in enforcement, and incorporating emerging forms of abuse such as technology-facilitated violence. Legislative reforms should also consider the intersectionality of victim experiences to ensure that legal frameworks are inclusive and responsive to the unique challenges faced by marginalized communities.[5]

A proactive approach involves investing in educational programs to raise awareness about domestic violence, its consequences, and available resources. These initiatives should target schools, workplaces, and community organizations to foster a culture that rejects violence and promotes healthy relationships. Comprehensive education can challenge stereotypes, reduce stigma, and empower individuals to recognize and address abusive behaviors.

Building a network of integrated support services is crucial for providing holistic assistance to survivors. This includes not only legal aid but also mental health counseling, housing support, and financial resources. Strengthening collaboration between law enforcement, legal professionals, and support organizations will create a more seamless and supportive environment for survivors seeking help.

Recognizing the role of technology in both perpetuating and combatting domestic violence, future initiatives should leverage technological advancements. This includes developing digital tools for reporting abuse, providing online resources for education and support, and incorporating technology into protective measures. Embracing innovative solutions can enhance accessibility and effectiveness in reaching those in need.

Engaging communities is essential for fostering a collective commitment to eradicating domestic violence. Building partnerships between government agencies, nonprofits, businesses, and faith-based organizations can amplify efforts to create supportive environments. Community-driven initiatives can contribute to changing norms, challenging stigma, and providing localized resources for survivors.

Continued research on the dynamics of domestic violence and the effectiveness of interventions is vital for refining strategies. Robust data collection and analysis can inform evidence-based policies, identify emerging trends, and guide resource allocation. Ongoing research efforts should prioritize understanding the diverse experiences of survivors and evaluating the long-term impact of support services and legal interventions.

Conclusion:

In conclusion, addressing domestic violence demands a concerted effort encompassing legal reforms, community engagement, and comprehensive support services. While progress has been made, formidable challenges persist, necessitating a commitment to evolving strategies. Strengthening legal frameworks, encompassing emerging forms of abuse and ensuring intersectional inclusivity, remains paramount. Education and awareness initiatives must challenge societal norms and reduce the stigma surrounding domestic violence.

Integrated support services, both legal and holistic, play a pivotal role in empowering survivors. Leveraging technology for reporting and resources, coupled with community partnerships, can amplify the impact of interventions.[6] Ongoing research, particularly focusing on diverse experiences and long-term outcomes, is crucial for evidence-based policies.

The path forward requires sustained dedication from governments, communities, and individuals alike. By fostering a culture intolerant of domestic violence, embracing innovative solutions, and prioritizing the well-being of survivors, society can work towards a future where intimate partner violence is eradicated, and the rights and safety of all individuals are unequivocally protected.

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Role and importance of philosophy in education

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शिक्षा में दर्शन की भूमिका एवं महत्व

डॉ. मेघना सोनी

सहायक आचार्य
दर्शनशास्त्र विभाग
एस डी एस कॉलेज, सुजानगर

प्रस्तावना :-

दर्शन को शिक्षा आधार प्रदान करती है। दर्शन की सहायता के बिना शिक्षण प्रक्रिया पूर्ण नहीं हो सकती। शिक्षा संबंधी समस्याओं को हल करने में दर्शन सहायता करता है शिक्षा के उद्देश्यों का प्रतिपादन करना, शिक्षा के पाठ्यक्रम को समाज और राष्ट्र की दृष्टि से विकसित करना एवं शिक्षण विधियों एवं उसकी उपयोगिता एवं प्रक्रिया का ज्ञान प्रदान करना, यह सब शिक्षा दर्शन के कार्य है। शिक्षा दर्शन के अध्ययन से मानव जीवन के स्वरूप और उसके उद्देश्यों का विस्तृत ज्ञान प्राप्त होता है। इन उद्देश्यों की प्राप्ति के उपायों का ज्ञान और उसके आधार पर सही मार्ग को चुनना शिक्षा दर्शन के अध्ययन से ही संभव है।

मुख्य शब्द :-

शिक्षा, दर्शन, ज्ञान, आन्तरिक एवं बाह्य विकास, शैक्षिक, आदर्श एवं मूल्य

भूमिका :-

शिक्षा जीवन का शाश्वत मूल्य है। मानवीय चेतना जिन दो प्रकार के मूल्यों की परिधि में पल्लवित होती है, उनमें कुछ शाश्वत होते हैं और कुछ परिवर्तनशील। शिक्षा को जीवन का शाश्वत मूल्य कहा जा सकता है क्योंकि कोई भी अज्ञानी अथवा अशिक्षित व्यक्ति अपने जीवन को विकासशील नहीं बना पाता। ज्ञान की अनिवार्यता हर युग में रही है इसीलिए शिक्षा को हर युग में मूल्य एवं महत्व प्राप्त होता रहा है।

शिक्षा का शाब्दिक अर्थ :-

“शिक्षा” शब्द संस्कृत की शिक्ष् धातु से बना है। इसका अर्थ है— सीखना। शिक्ष् शब्द का ही तद्भव रूप “सीख” है जिसका अर्थ है उपदेश देना या सीखना। अतः शिक्षा का अर्थ दोनों ही रूपों में प्रयुक्त किया जाता है— सीखना एवं सिखाना।¹

शिक्षा की अवधारणा :-

“शिक्षा” शब्द प्रक्रिया का द्योतक है। यह एक जीवन पर्यन्त चलने वाली प्रक्रिया है। मनुष्य अपने वातावरण के साथ सामंजस्य स्थापित करने में अनेक नवीन अनुभव अर्जित करता है। ये अनुभव ही शिक्षा हैं। शिक्षा ही व्यक्ति के विचार एवं व्यवहार में समाजोपयोगी परिवर्तन करती है। समाज के लिए उपयोगी विचार कौनसे हैं और समाज की दृष्टि से व्यक्ति का व्यवहार कैसा होना चाहिए जैसे प्रश्नों का उत्तर विचारक एवं

दार्शनिक देते हैं। इस दृष्टि से देखा जाये तो शिक्षा दर्शन पर आधारित हैं। दर्शन सिद्धान्तों का प्रतिपादन करता है और शिक्षा उनको व्यवहारिक रूप प्रदान करती है।

शिक्षा की परिभाषा देते हुए महात्मा गाँधी लिखते हैं— “शिक्षा से मेरा आशय बालक तथा मनुष्य में निहित शारीरिक, मानसिक एवं श्रेष्ठ शक्तियों का सर्वांगीण विकास है।”²

प्रसिद्ध दार्शनिक काण्ट के अनुसार “शिक्षा व्यक्ति की उस पूर्णता का विकास है, जिस पर वह पहुँच सकता है।” शिक्षाशास्त्री रस्क भी इन्हीं विचारों से सहमति व्यक्त करते हुए कहते हैं— “शिक्षा का उद्देश्य व्यक्तित्व को ऊँचा उठाना है। मानव जाति को इस योग्य बनाना है कि परस्पर आत्मीयता का भाव विकसित हो।”

शिक्षा एक प्रभाव है जो मनुष्य के आन्तरिक एवं बाह्य विकास में प्रेरणा देती है। उसे आत्मनिर्भरता की योग्यता प्रदान करती है।

वेदांत के मतानुसार—“समस्त ज्ञान हमारे भीतर ही विद्यमान है।”³ इस ज्ञान को ‘शिक्षा’ के माध्यम से ही जागृत किया जा सकता है। वास्तव में मानव की अंतर्निहित पूर्णता अथवा आन्तरिक संस्कारों के बाह्य प्रकटीकरण को ही शिक्षा कहा गया है।

भारतीय दर्शनों में ज्ञान शब्द वही अर्थ रखता है जो कि व्यापक अर्थों में “शिक्षा” का होता है। भारतीय दर्शनों में केवल सूचना अथवा तथ्यों के लिए “ज्ञान” शब्द का प्रयोग नहीं होता है।

दर्शन शब्द संस्कृत की “दृश” धातु से बना है, “दृश्यते यथार्थतत्त्वमनेन” अर्थात् जिसके द्वारा यथार्थ तत्व की अनुभूति हो वही दर्शन है। अंग्रेजी के शब्द फिलोसफी का शाब्दिक अर्थ “ज्ञान के प्रति अनुराग” होता है।⁴ भारतीय व्याख्या अधिक गहराई तक पैठती हैं, क्योंकि भारतीय अवधारणा के अनुसार दर्शन का क्षेत्र केवल ज्ञान तक सीमित न रहकर समग्र व्यक्तित्व को अपने आप में समा लेता है। दर्शन केवल चिंतन का विषय न होकर “अनुभूति” का विषय माना जाता है दर्शन के द्वारा बौद्धिक तृप्ति का ही आभास नहीं होता बल्कि समग्र व्यक्तित्व बदल जाता है। यदि आत्मवादी भारतीय दार्शनिक की भाषा में कहा जाए तो कहना पड़ेगा कि दर्शन द्वारा केवल आत्म ज्ञान ही न होकर आत्मानुभूति हो जाती है।

शिक्षा के दो प्रधान पक्ष हैं— प्रथम चिंतन—पक्ष तथा द्वितीय व्यवहार—पक्ष। अनुभव अथवा व्यवहार करते समय अनेक समस्याएँ हमारे सम्मुख उपस्थित होती हैं, इन समस्याओं पर चिंतन करके उनके आधार पर सिद्धान्तों का निरूपण करना दर्शन का कार्य होता है। इसके अतिरिक्त शिक्षा भी जीवन का एक पक्ष है और जीवन के मौलिक प्रश्नों से शिक्षा के प्रश्न अंततः जुड़े हुए हैं। इस दृष्टि से भी दर्शन तथा शिक्षा एक दुसरे से जुड़े हुए हैं।

दर्शन हमारी भावनाओं तथा मनोदशाओं को प्रतिबिंबित करता है और ये भावनाएँ हमारे कार्यों को नियंत्रित करती हैं। शिक्षा का एक प्रमुख कार्य स्वस्थ मनोवृत्तियों का निर्माण करना है। अतः दर्शन से शिक्षा को प्रेरणा ग्रहण करनी ही पड़ती है।

दर्शन जीवन के विभिन्न पक्षों को स्पर्श करता है तथा शिक्षा भी जीवन का एक महत्वपूर्ण पक्ष है, जो दर्शन द्वारा सबसे अधिक प्रभावित होता है। इस मान्यता के अनुसार दार्शनिक सिद्धान्तों एवं मान्यताओं का शिक्षा के लिए जो अभिप्रेतार्थ निकलता है, उसका विवेचन किया जाता है। इस विचारधारा के अनुसार व्याख्याता के सम्मुख मूल संदर्भ दर्शन होता है तथा विचार्य बिंदु शिक्षा के विभिन्न अंग जैसे पाठ्यक्रम, अनुशासन, छात्र आदि होते हैं। शिक्षा की समस्याओं का विचार करने के लिए दर्शन की तर्कनापरक विधियों का प्रयोग किया जाता है।

शिक्षा जीवन का एक ऐसा अध्यवसाय है, जिसके द्वारा जीवन के आदर्श एवं मूल्यों को प्राप्त किया जाता है। अतः शिक्षा दर्शन, दर्शन का ही एक क्रियात्मक पक्ष है।

शिक्षा का उद्देश्य तथा जीवन का लक्ष्य :-

जीवन के लक्ष्य का निर्धारण दर्शन करता है और उस लक्ष्य की प्राप्ति के लिए जीवन के विभिन्न पक्ष प्रयत्न करते हैं। शिक्षा भी सामाजिक जीवन का एक महत्वपूर्ण घटक है जो उक्त लक्ष्य की प्राप्ति में महत्वपूर्ण योगदान करती है। गाँधीजी के अनुसार "जीवन का लक्ष्य तथा शिक्षा का लक्ष्य न भिन्न हो सकता है न शिक्षा का लक्ष्य जीवन के लक्ष्य से न्यून ही हो सकता है।"⁵

जीवन के लक्ष्य से जीवन के मूल्यों का निर्धारण होता है। जिन बातों को हम वांछनीय मानते हैं, जिनसे हमें आत्मिक तृप्ति मिलती, उन्हें मूल्य की संज्ञा दी जाती है। शिक्षा द्वारा भी अन्ततोगत्वा हम वही तो प्राप्त करना चाहते हैं जो जीवन को पूर्णता देने वाला हो और इस प्रकार जीवन का लक्ष्य, जीवन के मूल्य निर्धारित करता है और जीवन के मूल्यों तक पहुंचा जा सकता है। इस प्रकार शिक्षा-दर्शन शिक्षा के उद्देश्यों को प्रभावित एवं अनुप्राणित करता है।

श्री विवेकानंद के 'नव्य' वेदान्त के अनुसार—"शिक्षा द्वारा मनुष्य का निर्माण किया जाता है। समस्त अध्ययनों का अंतिम लक्ष्य मनुष्य का विकास करना है। जिस अध्ययन द्वारा मनुष्य की संकल्प-शक्ति का प्रवाह संभावित होकर प्रभावोत्पादक बन सके, उसी का नाम शिक्षा है।"⁶

प्रत्येक व्यक्ति का जन्म किसी न किसी उचित लक्ष्य की प्राप्ति के लिए होता है। प्रत्येक बालक अपने लक्ष्य प्राप्ति की दिशा में अग्रसर हो सके, इसके निमित्त उसे समर्थ बनाना शिक्षा का एक महत्वपूर्ण कार्य है।

रविन्द्रनाथ टैगोर के अनुसार शिक्षा का कार्य केवल जीवनयापन की दक्षताएँ प्रदान करना ही नहीं, अपितु बालक में निहित उस सृजनात्मक तत्व का विकास करना है जिसमें कि जीवन उदात्त, उच्च तथा आनंददायक बनता है। उनका विश्वास था कि प्रत्येक बालक में एक विलक्षण प्रतिभा तथा क्षमता निहित रहती है ; शिक्षा इस प्रतिभा को विकसित करती है।

शिक्षा का दार्शनिक अर्थ :-

"तमसोमा ज्योतिर्गम्य" अर्थात् अंधकार से प्रकाश प्रदान करें अथवा ज्ञान का प्रकाश करने में सहायक है। शिक्षा वस्तुतः ज्ञान एवं प्रकाश का प्रतीक होती है साथ ही शिक्षा उस अग्नि के समान है जो अज्ञान एवं अन्धकार रूपी ईंधन को भस्म कर देती है।

वास्तविक अर्थ में शिक्षा की सार्थकता यही है कि वह ज्ञान के प्रकाश में व्यक्ति को शुभ-अशुभ, भले-बुरे की पहचान करवाकर उसमें आत्मविश्वास एवं आत्मविकास की प्रेरणा प्रदान करे। आत्मविश्वास के द्वारा ही शारीरिक, वैचारिक, मानसिक आदि प्रत्येक स्तर पर व्यक्तित्व का विकास माना जाता है।

डॉ. राधाकृष्णन के शब्दों में "चरित्र भाग्य है। चरित्र वह वस्तु है जिस पर राष्ट्र के भाग्य का निर्माण होता है। तुच्छ चरित्र वाले मनुष्य श्रेष्ठ राष्ट्र का निर्माण नहीं कर सकते।" अतः स्पष्ट है कि शिक्षा द्वारा ही व्यक्तियों में चरित्र निर्माण तथा नैतिक गुणों का परिष्कार किया जाता है तथा निश्चय ही यह परिष्कार विभिन्न गुणों- प्रभाव, इच्छा, त्याग, क्रिया, संकल्प आदि के रूप में चरित्र का निर्माण करता है।

शिक्षा शब्द को तीन अर्थों में प्रयुक्त करते हैं- ज्ञान, विषय और प्रक्रिया।

शिक्षा के भारतीय संप्रत्यय के अनुसार परिभाषाएँ:-

- (1) श्रीमद्भगवत गीता :-"आत्मज्ञान एवं विराट पुरुष का ज्ञान करना ही शिक्षा है।"
- (2) उपनिषद्-"सा विद्या या विमुक्तये।"
- (3) विवेकानंद-"मानव की अंतर्निहित पूर्णता की अभिव्यक्ति ही शिक्षा है।"
- (4) रविन्द्रनाथ टैगोर-"शिक्षा वह है जो जीवन की सम्पूर्ण सत्ता के साथ समन्वय स्थापित करने की शक्ति देती है।"

(5) महात्मा गाँधी—“शिक्षा से मेरा तात्पर्य बालक तथा व्यक्ति के शरीर, मस्तिष्क तथा आत्मा का सर्वोत्तम विकास करना है।”⁷

शिक्षा—दर्शन के कार्य :-

जॉन डीवी का कथन है कि शिक्षा के लक्ष्य निर्धारित करना शिक्षा दर्शन का प्रमुख कार्य है।

शिक्षा—दर्शन के तीन प्रमुख कार्य हैं जिन्हें (1) परिकल्पना (2) मानकीय तथा (3) समीक्षात्मक कहा जा सकता है।

परिकल्पनात्मक भूमिका के अंतर्गत जीवन और जगत के सम्बन्ध में दार्शनिक मान्यताएं तथा परिकल्पनाएँ आती हैं, जिन्हें शिक्षा का आधार बनाया जाता है और जो शिक्षा के सम्पूर्ण क्षेत्र को प्रभावित करती हैं। मानकीय भूमिका के अंतर्गत शिक्षा—दर्शन के मूल्य निर्धारण सम्बन्धी कार्य आते हैं। शिक्षा—दर्शन शैक्षिक आदर्शों एवं मूल्यों का निर्धारण करता है तथा अच्छी शिक्षा के मापदण्ड का निर्धारण करता है। शिक्षा का कार्य केवल परिकल्पनाएं प्रस्तुत करना तथा मान निर्धारण करना ही नहीं है, अपितु प्रचलित शिक्षा प्रणाली तथा शैक्षिक अवधारणाओं की आलोचना करना भी है। शैक्षिक प्रत्ययों का स्पष्टीकरण तथा प्रचलित अर्थों की विवेचना इसी भूमिका के अंतर्गत आते हैं शिक्षा में हम अनेक शब्दों, परिभाषाओं, विश्वासों, आदर्शों तथा अवधारणाओं को लेकर चलते रहते हैं। दर्शन का एक प्रमुख कार्य इन प्रत्ययों एवं अवधारणाओं का विश्लेषण तथा समीक्षा करना भी है।

शिक्षा मनुष्य की जन्मजात शक्तियों के विकास का ही दूसरा नाम है इन शक्तियों के द्वारा ही मनुष्य का सर्वांगीण विकास होता है। शिक्षा केवल ज्ञान देने तक ही सीमित नहीं है। शिक्षा जब तक जीवन के मूल्यों, आदर्शों एवं मान्यताओं का परिचय नहीं देती तब तक वह शिक्षा नहीं कही जा सकती। डॉ. सर्वपल्ली राधाकृष्ण के अनुसार—“शिक्षा सूचना प्रदान करने एवं कौशलों का प्रशिक्षण देने तक ही सीमित नहीं है। इसे शिक्षित व्यक्ति को मूल्यों का विचार भी प्रदान करना है। वैज्ञानिक एवं तकनीकी व्यक्ति भी नागरिक है, अतः जिस समुदाय में वे रहते हैं, उस समुदाय के प्रति उनका भी सामाजिक उत्तरदायित्व है।”⁸

शिक्षा का मूल उद्देश्य व्यक्ति को सांसारिक रूप से संपन्न बनाने के साथ ही आध्यात्मिक रूप से बलवान बनाना भी होना चाहिए। इस तरह भारतीय शिक्षा—दर्शन में आदर्श और व्यवहारिकता दोनों का संगम पाया जाता है।

भारतीय दृष्टिकोण के अनुसार प्रवृत्ति और निवृत्ति का सामंजस्य करना ही शिक्षा का मूल उद्देश्य है। परा और अपरा विद्याएँ जब समन्वय सूत्र में बंध जाती हैं, तब उनसे प्रभावित व्यक्ति केवल प्रिय दिखाई देने वाली वस्तुओं के पीछे नहीं दौड़ता और श्रेय मार्ग का अनुसरण करने के लिए तत्पर हो जाता है। शिक्षा तभी उसी स्तर को स्पर्श करती है जब वह किसी निश्चित वर्ग, समाज या राष्ट्र के लिए सीमित न होकर समस्त लोक कल्याण के लिए अग्रसर होती है।

शिक्षा के माध्यम से मानव को जीवन के लक्ष्य की प्राप्ति होती है। इसीलिए जीवन को पूर्णता के लिए उसके लक्ष्यों को समन्वय शिक्षा के उद्देश्यों के साथ होना अनिवार्य है। जीवन के लक्ष्यों के अनुरूप शिक्षा के उद्देश्य सदैव निर्मित होते रहे हैं। दर्शनशास्त्र इन लक्ष्यों का निर्माण करता है। राष्ट्र की मनोवृत्ति को दार्शनिकों ने राष्ट्र जीवन का लक्ष्य बनाया। उसी विचारधारा के अनुरूप उसकी शिक्षा के उद्देश्यों का निर्माण एवं व्यवस्था हुई।

शिक्षा के आधार पर जीवन के लक्ष्य की प्राप्ति होती है। जीवन के लक्ष्य की खोज एवं निर्धारण दार्शनिक करता है। विचार एवं सामाजिक आवश्यकताओं के अनुरूप जीवन लक्ष्य बदलते रहते हैं। दार्शनिक चिंतन, मनन एवं तर्क के आधार पर समयानुसार जीवन के लक्ष्यों में परिवर्तन कर नवीन लक्ष्यों का निर्धारण किया करते हैं। इस प्रकार जीवन के लक्ष्यों का निर्धारण दर्शन—शास्त्र का परम उद्देश्य है।

जब तर्क तथा विचारों का किसी वस्तु के अध्ययन में क्रमानुसार विधिवत् रूप में सहारा लिया जाता है तो अध्ययन-प्रणाली का समावेश दर्शन के तहत किया जाता है। वस्तुओं पर तर्कपूर्ण तथा विधिवत् रूप में विचार करके उसे अपनाने की शिक्षा दर्शनशास्त्र से प्राप्त होती है।

प्लेटो ने भी कहा है—“शिक्षा उस प्रशिक्षण को कहेंगे जो बच्चों में उचित आदतें उत्पन्न करके उनमें सद्गुणों का विकास कर सके।”⁹

प्लेटो के अनुसार शिक्षा द्वारा युवक उस उचित तर्क की ओर प्रेरित होते हैं, जो नियमानुसार हैं तथा जो वयोवृद्ध एवं उत्तम व्यक्तियों के अनुभवों द्वारा सच्चे अर्थ में समर्पित हैं।

श्री अरविन्द के अनुसार शिक्षा का उद्देश्य छात्रों के शरीर, मस्तिष्क तथा आत्मा का सर्वांगीण विकास करना है, ताकि उनमें निहित दैवी-सत्य को प्राप्त करने के लिए इन्हें उपकरण के रूप में वे प्रयुक्त कर सकें। शिक्षा का उद्देश्य छात्रों को स्वयं का समग्र रूप से विकास करने में सहायता देना है, ताकि वे अपने आपको विश्व का एक अंग समझ सकें। क्योंकि यह विश्व भी तो उनमें निहित सत्य की ही बहुरूपी अभिव्यक्ति मात्र है। श्री अरविन्द लिखते हैं “बालक की शिक्षा उसकी प्रकृति में जो कुछ सर्वोत्तम, सर्वाधिक शक्तिशाली, सर्वाधिक अन्तरंग और जीवन-पूर्ण है, उसको अभिव्यक्ति करने वाली होनी चाहिए। मनुष्य की क्रिया और विकास जिस साँचे में ढलनी चाहिए, वह उसके अन्तरंग गुण और शक्ति का साँचा है। उसे नई वस्तुएँ अवश्य प्राप्त करनी चाहिए, परन्तु वह उनको सर्वोच्च रूप से और सबसे अधिक प्राणमय रूप में स्वयं अपने विकास, प्रकार और अन्तरंग शक्ति के आधार पर प्राप्त करेगा।”¹⁰

जॉन डी. वी. कहते हैं की शिक्षा व जीवन में कोई अंतर नहीं है। वे शिक्षा को जीवन की तैयारी के रूप में स्वीकार नहीं करते इसीलिए वे शैक्षिक उद्देश्यों को शिक्षा प्रक्रिया में ही निहित मानते हैं। उनके अनुसार—“शिक्षा को अनुभव की सतत् पुनर्रचना समझना चाहिए और शिक्षा प्रक्रिया तथा शैक्षिक उद्देश्यों को एक ही समझना चाहिए।”¹¹

अतः हम कह सकते हैं कि शिक्षा एक ऐसी सामाजिक प्रक्रिया है जिसमें मानव की जन्मजात शक्तियों का विकास होता है। मानव के विचारों में परिवर्तन व विकास करने और अपनी सभ्यता व संस्कृति से परिचय करने का कार्य शिक्षा ही करती है।

दर्शन और शिक्षा में संबंध :-

दर्शन और शिक्षा का घनिष्ठ सम्बन्ध है। दर्शन मानव जीवन के विभिन्न पक्षों पर विचार करता है तथा उसके लक्ष्य निर्धारित करता है। लक्ष्यों की प्राप्ति ही मानव का प्रमुख उद्देश्य है। शिक्षा इन लक्ष्यों प्राप्ति में सहायक होती है। शिक्षा के द्वारा ज्ञान एवं कौशल विकसित होते हैं, जो पुनः दर्शन को नवीन रूप देते हैं। नवीन दर्शन नवीन शिक्षा को जन्म देकर इस चक्र को गतिशील रखता है। इसी दृष्टिकोण को शिक्षाशास्त्री डीवी में अपने इस कथन द्वारा स्पष्ट किया है कि “अपनी साधारण अवस्था में शिक्षा-सिद्धांत ही दर्शन है।”¹²

दर्शन और शिक्षा को एक ही सिक्के के दो पहलू कहा जाता है। एक में दूसरा निहित है। दर्शन जीवन का विचारात्मक पक्ष है और शिक्षा क्रियात्मक पक्ष है। एक विचार को जन्म देता है तो दूसरा उस विचार को व्यवहारिक रूप प्रदान करता है।

शिक्षा व दर्शन का उद्देश्य भौतिक तथा मानवीय संसार से संबंधित विज्ञान तथा वैज्ञानिक विधि का अवबोध कराना। साहित्य, कला, संगीत तथा प्राकृतिक सौंदर्य का रसास्वादन कराना व नैतिक अंतर्दृष्टि का विकास तथा सर्वोच्च नैतिक मूल्यों का अवबोध कराना है।

शिक्षा का दर्शन पर प्रभाव :-

जिस प्रकार शिक्षा दर्शन से प्रभावित है उसी प्रकार शिक्षा भी दर्शन को प्रभावित करती है। शिक्षा व्यक्तियों की मानसिक शक्तियों जैसे— विचार एवं चिंतन को विकसित करती है दर्शन के निर्माण एवं विकास के लिए

आवश्यक हैं। शिक्षा किसी दर्शन द्वारा स्थापित सिद्धांतों को आगे आने वाली पीढ़ी को ज्ञान करवा कर दर्शन को जीवित रखने में अपना योगदान देती हैं। शिक्षा दर्शन में नयी समस्याओं से परिचित कराती हैं नवीन समस्याएँ दार्शनिक के लिए चिन्तन का क्लेवर प्रस्तुत करती हैं। इन नवीन समस्याओं पर विचार करते हुए दार्शनिक दर्शन को भी गतिशील बनाते हैं।

व्यक्ति जिस प्रकार का कार्य करता है या जिस प्रकार की शिक्षा-प्रणाली अपनाता है वह उसकी शिक्षा-सम्बन्धी विचारधारा पर प्रभाव डालती हैं। इस प्रकार कभी दर्शन शिक्षा पर प्रभाव डालता है और कभी शिक्षा-प्रणाली दर्शन पर प्रभाव डालती हैं। इस प्रकार दर्शन और शिक्षा-प्रणाली में एक आंतरिक और अन्यान्य सम्बन्ध पाया जाता है।

महात्मा गाँधी के अनुसार सच्ची शिक्षा व्यक्ति को बन्धनों से मुक्त करती है। सच्चा ज्ञान अथवा शिक्षा केवल वही है, जो शरीर को रोग एवं अशक्तता से मुक्त करे, हाथ-पैर तथा अन्य कर्मेन्द्रियों को अकर्मण्यता से मुक्त करे, हृदय को कठोरता एवं ईर्ष्या से मुक्त करे, तथा सम्पूर्ण मनुष्य को सभी प्रकार के बन्धनों से मुक्त करे-भावनाओं को लोलुपता से, शक्ति को मद से तथा आत्मा को क्षुद्रता एवं अभिमान से मुक्त करे।¹³

निष्कर्ष :-

शिक्षा के माध्यम से मनुष्य नए विचारों तथा जीवन शैलियों को अपनाने की कोशिश करता है। शिक्षा से ही वह अपनी बौद्धिक क्षमता तथा ज्ञान को बढ़ाकर प्रकृति को अपनी इच्छा अनुरूप करने का प्रयास करता है। शिक्षा ही सही अर्थों में मानव को मानव बनाती है। जन्म के समय बालक का आचरण पशु के समान होता है। वह अपनी मूल प्रवृत्तियों से प्रेरित होकर आचरण करता है। शिक्षा ही उसे अपनी पाशिवक शक्तियों का दमन कर उसे कल्याणकारी मार्ग की ओर ले जाती है।

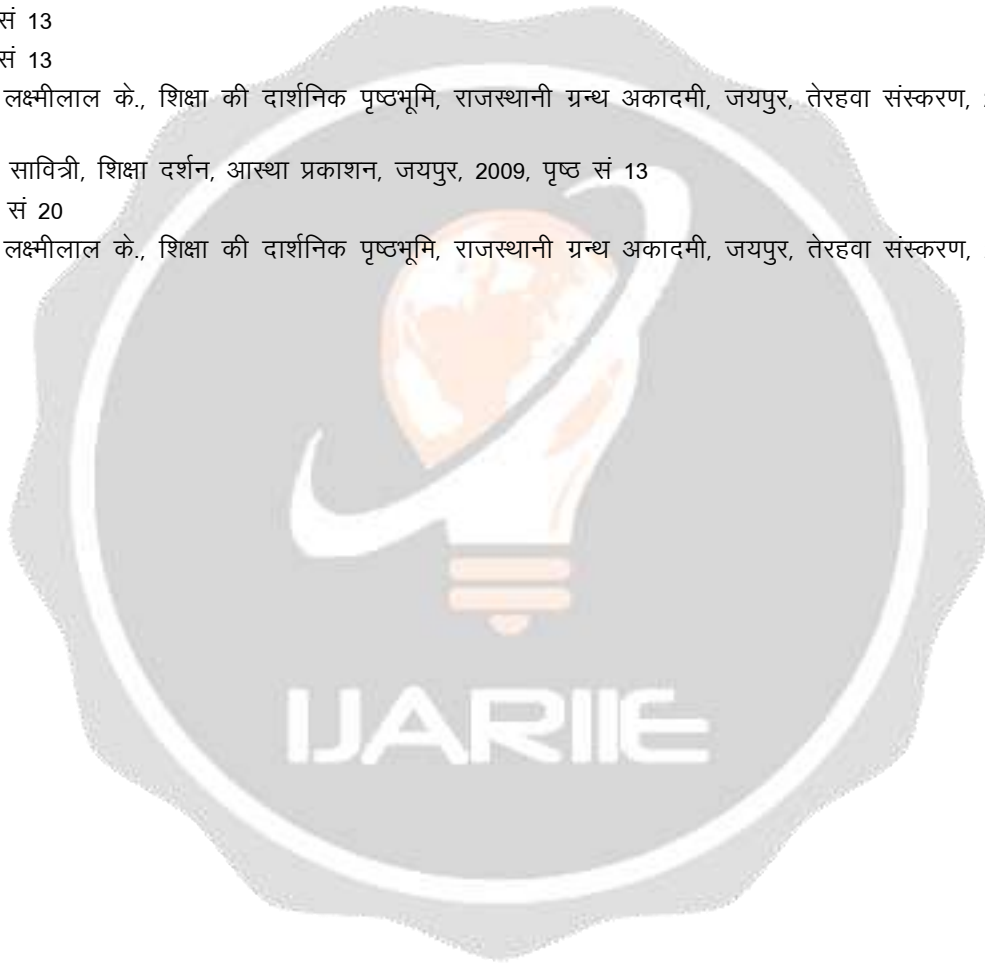
विवेकानंद शिक्षा को जानकारी का समुच्चय नहीं मानते। उनके अनुसार शिक्षा तो वह है जिसके द्वारा हम इस प्रकार के विचारों को आत्मसात करना सीख सकें जिससे जीवन निर्माण हो, चरित्र निर्माण हो। विद्यालय-संगठन, विद्यालय व्यवस्था के नियम, बड़े-छोटे के मध्य पारस्परिक सम्बन्ध, बराबरी वालों के बीच सम्बन्ध, अनुशासन के नियम, छात्रों के कर्तव्य एवं व्यवहार, अनुशासन की विधियाँ इत्यादी सभी विषय नीतिशास्त्र तथा मूल्य-मीमांसा से संबन्ध हैं। दर्शन के विभिन्न अंग शिक्षा के विभिन्न पक्षों से गुंथे हुए हैं।

आज जब व्यक्ति जीवन में भ्रान्ति और कलेश से पीड़ित हैं, जब समाज भ्रष्टाचार, दुराचार तथा अत्याचार की व्याधियों से ग्रस्त है, जब राजनीति मनुष्य के जीवन को उभारने और संवारने के बजाय उसे नष्ट-भ्रष्ट कर रही है, जब विज्ञान मनुष्य की समृद्धियों को बढ़ाने के बजाय हवा, पानी तथा पृथ्वी पर जहर के बीज बो रहा है, तब निश्चय ही हमें इस बात का पूरी तरह चिंतन और मनन करना होगा कि किस तरह इस स्थिति से हमें मुक्ति मिल सकती है। चूँकि शिक्षा ही वही माध्यम है जिसकी सहायता से हम मानव को किसी विशिष्ट दिशा में ले जा सकते हैं, इसीलिए आज की परिस्थिति में शिक्षा के लिए दर्शन एक अत्यंत आवश्यक वस्तु बन गया है।

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ISHEM: Development of Blockchain-Based Intelligent System for Higher Education Management

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Abstract

“Academic credentials must be universally accessible, recognized and verifiable”

Satoshi Takemoto (the father of blockchain) released the whitepaper Bitcoin in 2008

that described a “purely peer-to-peer version of electronic cash” known as Bitcoin, Blockchain technology made its public debut. Since then Blockchain has been considered an emerging technology for decentralized and transactional data sharing across a large network of un-trusted participants. It enables new forms of decentralized distributed software architectures, where agreement on shared states can be established without trusting a central integration point. It enables the creation of a decentralized environment, where transactions and data are not under the control of any third party organization. Any transaction ever completed is recorded in a public ledger in a verifiable, secure, transparent and permanent way, with a timestamp and other details. For these features blockchain has developed into one of today’s biggest groundbreaking technologies with potential to impact every industry from financial to manufacturing to educational institutions. Blockchain based applications are springing up covering numerous fields including financial services, reputation system, Internet of Things (IoT), and so on.

The proposed research is to study and develop the global Blockchain Based intelligent System For Higher Education System in Indian perspective student information ,student verification ,examination process(credit transfer),certificate issuing and verification[Academic credentials]etc This proposed system using Blockchain technology are provide platform for student, University and others for Academic credentials and others related to intelligent system for higher education in Indian perspective.

Introduction:

Blockchain was first established as a method to govern Bitcoin [1], but it has since expanded to the point that it is now regarded as an introduction technology for a variety of decentralised applications [2]. It is being promoted as a useful tool for managing sensitive data, particularly in higher education, healthcare, supply chain, and the Internet of Things (IoT) [3]. Higher education can be viewed as a system composed of two key stakeholders: Higher Education Institutions and students [4]. Privacy and security violations in higher education are allegedly increasing year after year, particularly with relation to academic diplomas and degrees. Blockchain technology can help ensure their legitimacy and maintain accurate records [5]. The increasing digitization of higher education has led to an acknowledgement of concerns about secure storage, whereas blockchain technology allows for decentralised open data, the lack of fraud, safe information storage, and a reduction in transaction fees connected to academic data governance [6]. Blockchain has been proposed as a solution to critical difficulties in higher education, such as diploma recording and a student-centric approach [7]. Nonetheless, past research [8,9–12] attempted to summarise existing information in part by conducting systematic literature reviews. For example, some discuss the application of the latest key technologies for the development of smart campuses and universities [8]; the benefits of this technology as decentralised open data for safe information storage in specific case studies [6], the use of these technologies to assist students in their acquisition of technical knowledge and development in Engineering [9], and the creation of disturbed applications involving multiple actors without the control of a central authority [11].

The Blockchain's emphasis on variety in terms of applications could be attributed to its ability to create a trustworthy [13] and decentralised contract ecosystem [14]. As a result, the higher education industry is a prospective consumer of blockchain technology in terms of smart contracts [15] due to its ability to allow stakeholders to validate learning records [16] and identity management, for example [17]. This may allow institutions to choose which other Higher Education Institutions (HEI) to exchange data with, reducing the possibility of trustworthy qualifications (diplomas or certificates) being counterfeited or faked [18].

Furthermore, blockchain's distributed ledger and lack of reliance on a trusted third party can improve smart contract-based protocols that automatically enforce a contract in students across multiple levels of administration, which is a significant benefit of blockchain for the higher education field. Last but not least, this technology can facilitate operations while reducing the likelihood of error [19].

The field of blockchain in higher education has mostly focused on the development of concepts related to the use of Blockchain in the organisation of HEIs. Through smart contracts, this technology has emerged at these institutions around their informational systems, bibliographic reviews, and knowledge organisation in general. Indeed, the topic is posed on the digitization of degree certificates and academic credits for higher education in developing countries such as Brazil in order to facilitate the organisation of their education system, which, when combined with smart contracts, enables the reliable and decentralised issuance of degree certificates.

The challenge of preventing counterfeit or fabricated certificates has been highlighted by emphasising blockchain technology and smart contracts in order to develop a decentralised verification solution for trustworthy qualifications (diplomas or certificates). It enables HEIs to register the certificates they issue on the blockchain while also hiring entities to validate the authenticity and integrity of these certificates. As a result, existing studies have included blockchain in higher education, emphasising the division of data into secured blocks, protecting anonymity in secure data exchanges [20], and so strengthening HEIs e- governance.

As a result, current research has concentrated on Blockchain as a new platform for tracking learning successes beyond transcripts and certificates, specifically in how learning or teachings were done and gained by retaining digital hashes of learning activities via smart contracts. This system, which is built on a platform of learning logs, allows learners to securely transfer their learning records from one institution to another. It also basically allows learning data analytic platforms to access learning logs from other institutions with the agreement of the students and/or institutions who originally owned the logs [21].

Literature Survey:

M. Turkanović, et al [22] proposed a global higher education credit platform based on blockchain technology, named EduCTX. The European Credit Transfer and Accumulation System is the foundation of this platform. It is a worldwide trusted, decentralized higher education credit and grading system that may provide a worldwide united perspective for students, higher education institutions, and other prospective stake holders including enterprises, institutions, and organizations. A prototype implementation of the environment was given as a proof of concept, and it was built using the open-source Ark Blockchain Platform. EduCTX will process, administer, and govern ECTX tokens, which are credits

earned by students for completing courses such as ECTS, via a globally distributed peer-to-peer network. However, this strategy may run into difficulties if no existing members can recognize a new institute (seeking to join), and hence no one is available to verify the new entrant.

W. Gräther, et al [23] demonstrated the Blockchain for Education platform as a viable alternative for credential issuance, validation, and distribution. We start with a basic system overview and then go through the platform implementation in-depth, covering certification authority and certificate administration, smart contracts, and services for certifiers, learners, and third parties like employers. Finally, we provide use scenarios and preliminary assessment findings from end-user testing with certifiers. However, the real certificates appear to be held (in plaintext) in a centralized system. If an attacker gains access to this document management system, all sensitive personal data might be exposed.

Lizcano, et al [24] examined the advantages of blockchain (or distributed ledger) technology and proposes a decentralized form of transaction confidence based on an academic cryptocurrency. In this method, blockchain is utilized to handle content, teaching, and competency transactions that are judged by consensus among students, trainers, and employers in order to close the gap between the academic and working worlds once and for all. The purpose of the article is to discuss the present issues of higher education as it becomes more scattered, open, and omnipresent. The suggested strategy may be adopted in any training institution to tailor its curriculum to the unique demands of professional profiles certified by industry employers. However, this plan appears to rely on on-chain storage, which is expensive and prone to scaling issues.

Kontzinos, et al [25] presented work from the EU-funded research project QualiChain, which aims to transform and revolutionize the domain of public education, as well as its interfaces with private education, the labor market, public and private organizations, and society at large, by drawing its added value proposition from the challenges that these domains are currently facing. The project's ultimate objective is to build the QualiChain platform, which will provide blockchain-enabled education and other credential verification, as well as data analytics and decision assistance for process improvement. Four separate pilot cases will be used to validate the platform. This concentrates on a pilot project that will be conducted at the National Technical University of

Athens (NTUA) to optimize university operations using semantically enriched data and sophisticated decision support algorithms. Moreover, as the

number of users (and their data) grows, the work appears to employ on-chain storage, which might result in cost and scalability difficulties.

Bessa, et al [26] proposed a Blockchain-based Educational Record Repository (BcER²) for academic and industry professionals to store and share educational assets. Authenticity, immutability, and consensus are intrinsic properties of blockchain-based systems. Furthermore, at any time and from any location, records saved on the Blockchain ledger may be viewed. The use of blockchain to manage and retain educational data has a lot of promise. The BcER² system enables parties to securely transfer, exchange, and distribute educational records such as e-diplomas and e-certificates. They built their architecture using the Hyperledger Composer open-source platform. Even though the architecture is described in the article, but no implementation details or test results are included.

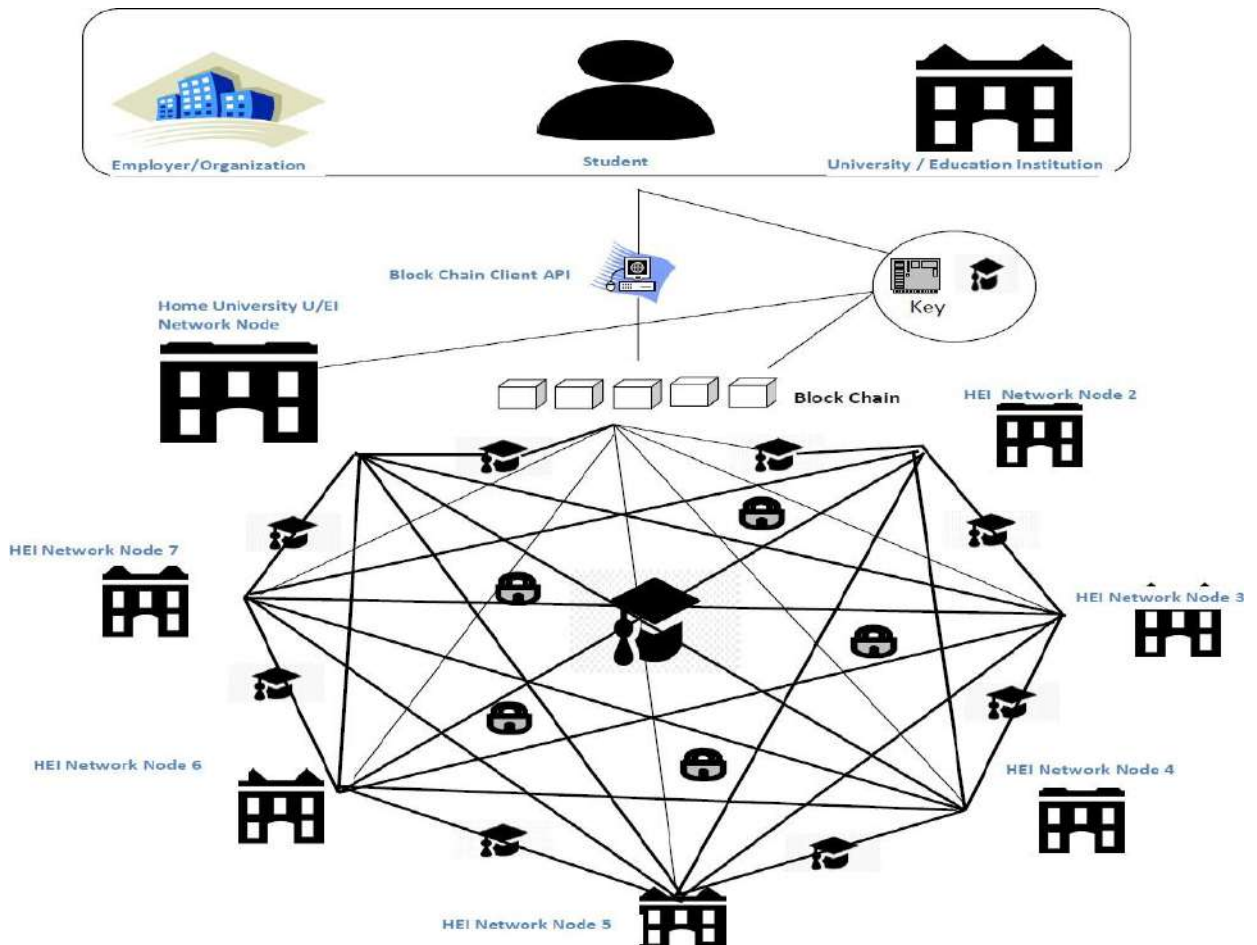
To overcome the above issues a novel block chain model has been developed.

Motivation

Today, higher education institutions (HEIs) are given subsidies to operate campuses in several cities and regions. As a result, safeguarding data exchanges such as student profiles and certificates is a major concern. Blockchain offers a novel technique to storing information, processing transactions, carrying out activities, and establishing trust. Some regard Blockchain as a game-changing technology for cryptography and cybersecurity, with applications spanning from cryptocurrencies to healthcare, smart contracts, the Internet of Things, smart grid governance, supply-chain management, and so on. This research focuses on blockchain security in the field of Education that has to be implemented based on smartcontracts in decentralised manner and it has a major issue in privacy. To overcome the security problem in blockchain based decentralised smart contracts, a secure digital signature scheme has to be identified in an Education Management System.

Proposed Method:

Decentralization is a fundamental tenet of blockchain-based smart contracts. As a security feature, blockchain decentralisation makes the transaction ledger and smart contracts public to all peers in the network. Transparency is not advised in certain situations. The inherent openness in blockchain-based smart contracts is a huge privacy risk. Blockchain security issues have varied degrees of impact on several disciplines, most notably the evolution of the educational system. Because of the increasing development of quantum processing, the existing cryptosystems utilised in blockchain are insufficiently secure. This work describes a Blockchain System based on Enhanced Quantum Honeycomb Signature Cryptosystem using Modified ElGamal Algorithm that can withstand the quantum computation attacks and also the data security and authenticity of the transferred data if the polarisation of photons has been changed which are present in the existing quantum based digital signature mechanism. The Novel Enhanced Quantum Honeycomb Signature Cryptosystem has been proposed in which the original signature replaced with digital signature using Quantum-Conflicting algorithm based on honeycomb code and EdDSA encryption technique has been added to enhance the Cryptosystem and to speed up the encryption process. Further the data security and authenticity has been improved by Modified Elgamal Algorithm in which the block of cipher divides into sub blocks for further encryption and decryption at final the combined sub blocks transmitted to receiver side by adding arbitrary number and an extra key to increase the deciphering complexity and reduce the time complexity. However, the most problematic barrier is that the public keys and digital signatures used by honeycomb cryptosystems are often relatively large. As a result, each blockchain block can only hold a limited number of transactions. It will have an impact on the blockchain's speed and performance. To resolve this problem, an Enhanced Disrupted File System (EDFS) in which the complete content of the hash values of public keys and digital signatures on the blockchain are stored that uses the content-based addressing to uniquely identify each file in a decentralized smart contracts blockchain based model. As a result, the number of bytes occupied by each transaction is drastically reduced and the security of the system has been improved in a decentralized smart contracts blockchain model.

Block Diagram:

Block Diagram of Proposed ISHEM: Development of Blockchain-Based Intelligent System for Higher Education Management

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Impact of Green House Gases and Bio-climatic Variables of different Time Series in Yield Prediction for Semi-Arid Zone Region Using Machine Learning Models: An Overview

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ABSTRACT

As the human population rises exponentially and there are problems like food scarcity prevailed in all over the world. Among all other factors huge variations in weather conditions affect the yield of crops. It is very important to study the various environmental factors which affect the production of agriculture. The most common reason for less food production are unpredictable weather conditions. Prediction of crop yield is very important and it is observed that a variation in climate is an important factor that is responsible for crop yield. If a better yield prediction model develops then farmers can be able to decide which crops is best according to environmental conditions It has been observed that due to variations in climate quality of crop yield has been declined all over the world so now it is required that farmers must use the new advanced tool for taking agriculture- related decisions. In order to predict the annual yield, of any crop so many components must be combined like climate data, weather data, agriculture yield, and chemical data which helps farmers to take the correct decision. The objective is to find solutions to some specific sub-problems related to yield prediction of both rabbi and kharif crops using various machine learning models with consideration of Bio-Climatic variables of different time-frames with Greenhouse Gas Scenarios. The main aim of this work is to propose a system which can predict the yield of rabbi and Khariff crops for the arid and semi-arid zone for the time frame currently, 2050 and 2070 and four Green House Gas Scenarios, RCPs 8.5 and others.

Keyword Bioclimatic variable, Greenhouse Gas Scenario, machine learning models, yield prediction

1. Introduction

Among various factors, significant variations in weather profoundly impact crop yields. Understanding the environmental elements that influence agricultural production is crucial. Urgently, we intend to develop models that can correlate climate change with crop productivity [1]. Accurate yield prediction relies on historical crop data. Improved prediction models empower farmers to devise decisions about crop selection based on prevalent environmental conditions [2]. To forecast annual crop yields effectively, we must integrate multiple components, including climate data, weather patterns, agricultural output, and chemical information. Notably, machine learning models play a key role in shaping agriculture-related decisions. Remember that addressing climate change's impact on agriculture is essential for viable food production and global well-being. [4]. In this work our focus lies on arid region as these area has to face numerous challenges

The duration of rainfall is very short and this region additionally suffers from high solar radiation, stormy winds, and high temperature due to which there is an increase in evapotranspiration which results in a negative water balance and an increase in the potency of greenhouse gases results in Global warming and change in numerous characteristics of weather and it is known that other aspects like diseases, agriculture, forest, and wildlife are all susceptible to climate change.

1.1 Characteristics of Arid Region

The following are the key characteristics of this region land, water, and vegetation are fragmented due to this arid zone mostly suffering from permanent land degradation and desertification. In this region, there is very little chance for water harvesting and recycling. Village clusters, index catchments, and dune-interdune complexes are the only possible option for land resource development. In India total hot arid zone consist of 31.7 m ha, out of which western Rajasthan has the largest portion i.e., 61%, and the remaining portion of the arid zone is in Gujarat (20%) Punjab and Haryana (9%), as well as small parts of Andhra Pradesh and Karnataka (10%) [6].

1.2 Consequences of Greenhouse Effect:

Due to the greenhouse effect the polar ice is melting and as a result sea levels are rising and which results in coastal fertile lands are in underwater, suppose a flood arrives then there will huge loss in agriculture like the whole yield of the crop will be a sink, area of grassland will decrease. The presence of snow decreases and it starts to melt early due to the rise in the temperature of air in over dried soil that is not appropriate for growing crops the absence of moisture is the main reason for the desertification of land. Due to the increase in world ocean water, many wildlife species will be extinct due to changes in their habitat and as a result, some plants. Animals and other living things will vanish and disturb the food chain and equilibrium of ecosystems. The most harmful effect is seen due to an increase in water level changes in climate as a result seasons are shifting.

1.3 List of Bio-Climatic Variables (Environmental Variables):

Bioclimatic variables are defined as biological meaningful variables which are determined from the monthly temperature and rainfall values. These variables show the mean annual temperature, precipitation, seasonality, and limiting environmental factors such as the hottest and coldest month temperature.

As an effect of variation in climate significant amount of information is required for identifying and assimilating vanishing plant species, machine learning with the digital bioclimatic variables and area points where species are presently available can find out the future distribution of species. Table 1 contains a list of 19 bioclimatic variables [8].

Table 1 Description of predictive bioclimatic variables used in this study (downloaded from WorldClim related to four time frames: current, 2050, 2070, and 2090 of Shared Socioeconomic Pathways [8])

Code	Environmental variables and their abbreviations	Scaling factor	Unit
BC-1	Annual mean temperature (AMT)	10	°C
BC-2	Mean diurnal range (MeDR)	10	°C
BC-3	Isothermality (BC-2/BC-7) (x100) (Iso)	100	-
BC-4	Temperature seasonality (standard deviation x 100) (TempS)	100	-
BC-5	Max temperature of warmest month (MeTWaM)	10	°C
BC-6	Min temperature of coldest month (MeTCM)	10	°C
BC-7	Temperature annual range (BC-5 - BC-6) (TAR)	10	°C
BC-8	Mean temperature of wettest quarter (MeTWaQ)	10	°C
BC-9	Mean temperature of driest quarter (MeTDQ)	10	°C
BC-10	Mean temperature of warmest quarter (MeTWaQ)	10	°C
BC-11	Mean temperature of coldest quarter (MeTCQ)	10	°C
BC-12	Annual precipitation (AnPr)	1	mm
BC-13	Precipitation of wettest month (PrWeM)	1	mm
BC-14	Precipitation of driest month (PrDiM)	100	mm
BC-15	Precipitation seasonality (coefficient of variation) (PS)	1	Fraction
BC-16	Precipitation of wettest quarter (PrWeQ)	1	mm
BC-17	Precipitation of driest quarter (PrDiQ)	1	mm
BC-18	Precipitation of warmest quarter (PrWeQ)	1	mm
BC-19	Precipitation of coldest quarter (PrDiQ)	1	mm

1.4 Climate Change: Time-Series View

Intergovernmental Panel on Climate Change (IPCC) proposed a new representative concentration pathway (RCPs) for climate projection in the Fifth Assessment Report. Before this, in the year 2000 IPCC published SRES (Special Report on Emissions Scenarios) scenarios which are now 15 years old so the scientific community developed a new emission scenario known as representative concentration pathways (RCPs). There are four RCP scenarios: RCP2.6, RCP4.5, RCP6.0, and RCP8.5. The naming convention is such that it reflects socioeconomic pathways which reach a specific radiative forcing by the year 2100 [9].

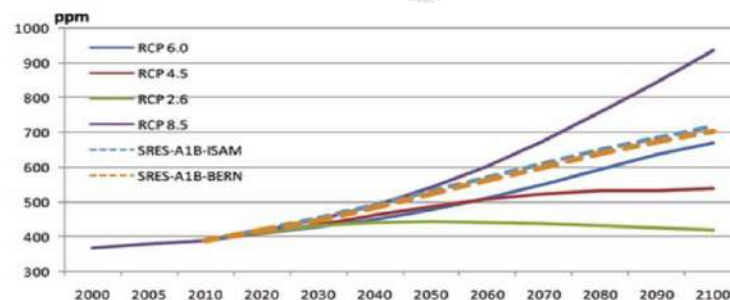


Fig1. Atmospheric CO2 concentration under different RCP scenarios and SRES scenario. RCP scenarios [9].

This pathway shows various future climates based on the volume of greenhouse gases emission in upcoming years. In 2014 in the fifth Assessment Report (AR5) IPCC used these four pathways for climate modeling as well as in research [10].

2. Related Work

Various Machine learning models with large historic data can be utilized to predict the productivity of various crops which helps farmers to minimize the loss due to change in the climate. It is found that so much research work is carried out for the prediction of yield utilizing a machine learning approach, in this section we focused on various machine learning models that was used by researcher for yield prediction **Farnaz Babaie Sarijaloo et al(2021) [12]** were used following machine learning models Adaboost, decision tree, random forest, neural network, XGBoost, and GBM for the prediction of a corn hybrid. **Bappa Das, et al(2020) [17]** develop and compare the performance of linear models with nonlinear regression models with monthly weather indices as input for district-wise coconut yield prediction models of the west coastal region of India, linear models like stepwise multiple linear regression (SMLR), principal component analysis together with SMLR (PCA-SMLR), least absolute shrinkage and selection operator (LASSO), and elastic net (ELNET) with nonlinear models namely artificial neural network (ANN) and PCA-ANN were used for to predict the coconut yield. **Adita Mishra, et al(2022) [19]** develop and compare mustard yield prediction models using SPSS regression, Artificial Neural Network (ANN), and Autoregressive Moving Average (ARIMA) model **Shankarappa Sridhara,etal(2022) [20]** examined the application of the stepwise linear regression method, supervised machine learning algorithms (support vector machines (SVM) and random forest (RF)), shrinkage regression (least absolute shrinkage and selection operator (LASSO) or elastic net (ENET)), and artificial neural network (ANN) model for pigeon pea yield prediction using long-term weather data.

3. Proposed Yield Prediction System

Most of the researchers in this domain focuses on the prediction of a single season crop either rabi or kharif and after reviewing so many papers it has been found that yield prediction is done with the help of machine learning models but not for arid and semi-arid zone since climatic and environmental challenges are much more prevailed in these region so considering future climate change and greenhouse gas effect, proper yield prediction system is required which helps policy maker to take decision. This proposed system mainly focused on application of different machine learning algorithms for yield prediction for both season crops with reference to bio-climatic time frames (current 2050 and 2070) and four greenhouse gas scenario RCPs 2.6,4.5,6.0 and 8.5.

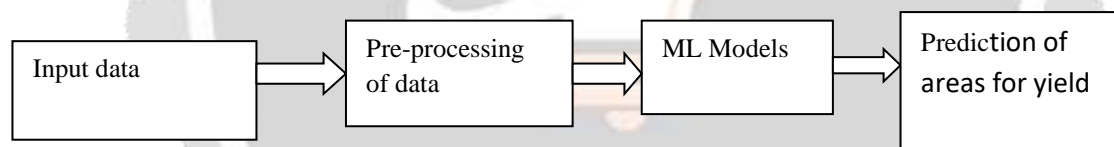


Fig2 Proposed System Flow

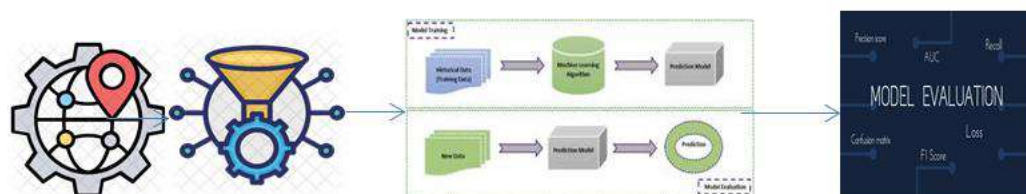


Fig3 Proposed Flow Diagram of Research Implementation

In order to carry out research work there will be the selection of modeling tools (such as Python vs R), selection of learning algorithms, selection of performance parameters, and preparation of data collection template. In this proposed system data can be collected from the Indiatat website/ Agriculture statistic Department (district-wise data). When using data-driven techniques (such as machine learning) it is crucial that data is critically examined before developing the target model. The collected data must be examined before processing. Various data cleaning techniques shall be used to remove irrelevant data fields. Data must be converted into the desired format for computational processing. With the help of the above diagram, we can easily understand the methodology will be adopted for conducting research. Following steps are also help to understand the detailed methodology to be adopted

1. Collected data must be converted in to geo-coordinates.
2. Preprocessing of data is done like removal of duplicates, spatial thinning ,training and testing
3. Processed data with environmental variables will input into various model.
4. Comparison and assessment of various models can be done with the help of various performance metrics like AUC and ROC.

In this proposed system Species distribution modeling (SDM) will be done, this method is used to predict species ranges with climate data as predictors. In SDM location of occurrence of a species are compiled, values of environmental predictor variables at these locations are extracted, environmental values are used to fit a model to estimate similarity to the sites of occurrence than model is used to predict the variable of interest. Data preparation is very tedious task it include series of steps first of all importing species occurrence data than data cleaning is performed by removing duplicate data, sampling bias is also frequently present in occurrence records. Some SDM algorithm such as Bioclim use ‘presence’ data. Logistic regression analyzing presence and absence data .Many algorithm can be used in SDM broadly classified into ‘profile’, ‘regression’ and ‘machine learning’ methods. Profile methods use ‘presence’ data. Regression and machine learning methods use both presence and absence data. Machine learning models include Artificial Neural Networks (ANN), Random Forests, Boosted Regression Tree and Support Vector Machine. Maxent (“Maximum Entropy”) is the most widely used SDM algorithm. MaxEnt is a stand-alone java program. Boosted Regression Tree developed by Friedman (2001)[20] is known by different names like Gradient Boosting Machinr (GBM), Gradient Boost, ”Stochastic Gradient Boosting”, ”Gradient Tree Boosting”. Random Forest is an extension of Classification and regression trees. Support Vector Machine uses simple linear methods to the data but in a high dimensional feature space. Model evaluation is very important as it assess the performance of model, All SDM models are used for prediction so evaluation is based on how accurate the model predict a points that are not used in training. For presence-absence or presence only data evaluating models depends on ‘threshold dependent’ measures. In this first of all thresholds must be set that value above threshold indicates ‘presence’ and value below threshold shows ‘absence’. Some measures are threshold independent like correlation coefficient and Area Under the Receiver Operator Curve (AUROC). AUC is a measure of rank-correlation. A model with AUC value 0.5 is consider as a good model [21].

4. Conclusion

Recently machine learning is widely used in the field of agriculture, it is necessary to use or develop advanced techniques of machine learning for agriculture in every region of the world, especially, in arid and semi-arid regions, where natural risks have frequently occurred. Using the latest technologies and mechanisms in arid and semi-arid zone helps in minimizing the challenges faced by the farmers. Using a machine learning model with environment variables and for the different time frames and greenhouse gas effect, our proposed system can detect the yield of a crop. This work proposed a yield prediction model for arid and semi-arid zone and then comparing different machine-learning models for rabi and kharif crops. In this work, we will try to provide a detailed comprehensive comparative analysis of various machine learning algorithms and with performance criteria [21]

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Naresh Mehta's Prabandhakavya: 'Pragya Prateek'

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नरेश मेहता के प्रबन्धकाव्य : 'प्रज्ञा प्रतीक' राम और आधुनिक बोध
नूतन सोनी
सहायक आचार्या,
ऐश्वर्या कॉलेज, जोधपुर

श्री नरेश मेहता सप्तक-परम्परा तथा नई कविता के श्रेष्ठ कवि हैं। राजनीति शास्त्र, प्राचीन इतिहास एवं साहित्य इन तीनों विषयों के साथ सहृदयता, संवेदना एवं अंतर्दृष्टि का मणिकांचन योग उन्हें हिन्दी साहित्य का श्रेष्ठ कवि बनाता है। समयानुरूप नवीनता तथा प्रयोगशीलता के प्रति आस्था उनके साहित्य को चिरनूतनता के साथ-साथ गत्यात्मकता, गहनता एवं ऊर्ध्वता भी प्रदान करती है। नरेश मेहता मूलतः प्रकृति प्रेमी कवि हैं, लेकिन उनकी वैष्णवी प्रकृति, मानवतावादी दृष्टि, उपनिषदों के प्रति अदम्य आसक्ति उन्हें विराट का साक्षात्कार करने को प्रेरित करती रही है। उदात्त की आराधना और प्रतिष्ठा में रत नरेश मेहता के लिए यथार्थ महत्वपूर्ण है, लेकिन उससे भी अधिक अनिवार्य है, यथार्थ का परिशोधन करना। ये परिशोधन उनकी रचनाओं मुख्यतः प्रबन्धकाव्यों में 'राम' के माध्यम से मुखरित हुआ।

मेहता की प्रबन्धकाव्यात्मक रचनाएं : (1) संशय की एक रात (2) महाप्रस्थान (3) प्रवाद पर्व (4) शबरी प्रमुख हैं।

इस प्रबन्धकाव्यों में 'संशय की एक रात' तथा 'प्रवाद पर्व' में राम को नायकत्व प्रदान कर आधुनिक जीवन मूल्यों की खोज अतीत में की गई है और सर्जना के स्तर पर अतीत को अर्थवत्ता प्रदान करने के लिए वर्तमान का प्रक्षेपण उसमें किया गया है।

'संशय की एक रात' प्रबन्धकाव्य में 'प्रज्ञा प्रतीक' राम को आधुनिक मानव का प्रतिनिधि बनाकर युगीन संशयों, वैषम्यों और विसंगतियों से गुजरते हुए युगानुरूप नए मूल्यों को खोजने का प्रयास किया गया है। युगीन चेतना को उकेरना नरेश मेहता के काव्य की प्राथमिकता रही है, उस चेतना का माध्यम जब राम हो तो अवश्य ही हर कालखण्ड में वे प्रासंगिक होंगे।

युद्ध कभी अन्तिम सत्य नहीं होता, मानव नियति के समस्त शुभाशुभ युद्धों से प्रतिपादित किए जाएंगे तो वह मात्र बलसिद्धि है। ऐसी बलसिद्धता का कोई अन्त नहीं होगा, कोई भी दर्शन या शास्त्र उन्हें सत्य के रूप में प्रस्थापित नहीं कर पाएगा।

युद्ध आज की प्रमुख समस्या है। सम्भवतः सभी युग की। इस विभीषिका को सामाजिक एवं वैयक्तिक धरातल पर सभी युगों में भोगा जाता रहा है, इसीलिए राम 'सीता प्राप्ति' जैसे नितांत व्यक्तिगत मामले को युद्ध का रूप नहीं देना चाहते :-

“धनुष, बाण, खड्ग और शिरस्त्राण।

मुझे ऐसी जय नहीं चाहिए,
मानव के रक्त पर पग धरती आती
सीता भी नहीं चाहिए।
सीता भी नहीं।”

मानवीय मूल्यों के रक्षक राम युद्ध और तलवार से मानवीय समस्याओं का समाधान नहीं चाहते।

मैं केवल युद्ध को बचाना चाहता रहा हूँ बन्धु।
मानव में श्रेष्ठ जो विराजा है
उसको ही
हाँ,
उसको ही
जगाना चाहता रहा हूँ बन्धु !

मानव का मानव से सत्य जानने की जुगत में राम युद्ध परिषद के सदस्यों जामवन्त, विभीषण, लक्ष्मण, हनुमान आदि के निर्णय के आगे अर्द्धस्वीकृति में हामी भरते हैं। क्योंकि वे इसे 'सामूहिक अंधता' ही मान रहे हैं। राम के विचारों से युद्ध आवेश नहीं, दायित्व है। युद्ध का कोई अन्त नहीं एक युद्ध अनागत युद्ध के कारण बनता है, प्रतिकारस्वरूप पुनः युद्ध को आतुर उपनिवेशी योजनाएं बनने लगती है। वे युद्ध परिषद के निर्णय पर कहते हैं :-

इस युद्ध में
हम सभी अपने स्वत्व को पा जाएँ
किन्तु
उसकी
चिर सुरक्षा,
शान्ति, क्या हो ? और कैसे हो ?

राम युद्ध के लिए सन्नद्ध हैं, किन्तु प्रश्न फिर भी मुँह खोले खड़ा है कि युद्ध ही युद्ध का उत्तर है या शांति युद्ध के सत्य की एक चेष्टा ?

'प्रवाद पर्व' प्रबन्धकाव्य में फिर प्रश्नों में उलझे राम अब शासक के रूप में संशयग्रस्त है :-

“दिशाएँ
उत्तर की प्रतीक्षा में
स्वयं प्रश्न बनीं
आकाश और ब्रह्माण्ड थामे खड़ी-खड़ी
वृद्ध हो रही है :”

पूर्व में प्रश्न युद्ध की सार्थकता का था, अब राजा राम के समक्ष प्रश्न है 'सीता निर्वासन' का :-

“आज फिर
एक साधारणजन ने
तुम्हारी राजसी-गरिमा
और चरित्र मर्यादा की ओर
अपनी अनाम तर्जनी उठायी है।”

राम अपने राज्य के अधिपति के रूप में अनाम साधारणजन की तर्जनी मात्र पर गांभीर्य है उन्हें वह तर्जनी मात्र तर्जनी नहीं, अभिव्यक्ति प्रतीत होती है। उनका मानना है कि साधारणजन के पास कब भाषा रही है वह तो सदैव देह से ही बोलते आये है। राज्य और शासक का प्रथम कर्तव्य है कि इस अनाम साधारणता, अभिव्यक्ति की स्वतंत्रता को इतिहासहीन करने के बजाय उसे प्रतिइतिहास बनाए। क्योंकि गरिमा, चरित्र, अधिकार केवल राजपुरुषों, शासकों या इतिहास पुरुषों के ही नहीं होते है, यह कोई आवश्यक नहीं कि सत्य अपनी ऐतिहासिक अभिव्यक्ति के लिए केवल राजपुरुषों या पण्डितों को ही चुनें। इतिहास को दास बनाकर वह राजभित्तियों पर चित्रित करना तथा शिलालेखों पर उत्कीर्णित करना जीवन्तता के अभाव में मात्र चलाना गाथा सा प्रतीत होगा।

सत्ता के गोमुख पर बैठकर उसके सारे शक्ति जलों को अपने ही अभिषेक के लिए सुरक्षित रखना उचित नहीं है। न्याय को मात्र समदर्शी ही नहीं तत्वदर्शी भी होना आवश्यक है। न्याय तत्वदर्शी नहीं होगा तो भय का प्रतीक बन जाएगा। भय से किसी राज्य को चुराना उचित नहीं :-

“गूंगोपन से कहीं श्रेयस है;

वाचालता

जिस दिन

मनुष्य अभिव्यक्तिहीन हो जाएगा

वह सबसे अधिक

दुर्भाग्यपूर्ण दिन होगा।”

रावण से बड़ा इतिहास पुरुष कोई नहीं था, परन्तु उस चक्रवर्ती सम्राट के विरुद्ध साधारणता ने युद्ध का आह्वान किया क्योंकि भयातुर, प्रताड़िता प्रजा अपने स्वत्व, स्वाधीनता व अभिव्यक्ति को जीवित रखना चाहती थी।

“एक अनाम साधारणजन की तर्जनी सा

असहमति में

अपने ही एक बन्धु का हाथ उठता है।”

राम के अनुसार 'इतिहास खड्ग से नहीं मानवीय उदात्तता से लिखा जाना चाहिए। मानवीय भाषा, मानवीय स्वातन्त्र्यता और मानवीय अभिव्यक्ति के प्रतिइतिहास का सामना वैसी ही मानवीय प्रतिगरिमा व विनय के साथ करना' राष्ट्र का कर्तव्य है। एकमात्र मनुष्य ही सृष्टि की जिह्वा है। शेष सबके पास केवल आभास है, ध्वनियाँ हैं संकेत है परन्तु व्याकरण और अर्थगन्ध से युक्त गायत्री स्वरूप महाशक्ति भाषा केवल मनुष्य के ही पास है। मनुष्य का भाषाहीन हो जाना सृष्टि का ईश्वरहीन हो जाना होगा।

स्वाधीनता और अभिव्यक्ति की स्वतन्त्रता का अर्थ यह नहीं होता कि शासक अपने व्यक्तिगत राग-द्वेषों, आधारहीन अभिमतों, वक्तव्यों और शंकाओं को सार्वजनिक रूप से आक्षेपात्मक वाणी दें जिससे सामान्य जन-जीवन, राज्य और राष्ट्रीय गरिमा तथा शीर्षतम व्यक्तियों की चरित्र मर्यादा पर आँच आये।

काव्य के समापन से पूर्व 'प्रवाद पर्व' में भी राम की मंत्री परिषद विचार व्यक्त करती है कि सीता के चरित्र पर दोषारोपण करता वह अनाम साधारणजन अनधिकार चेष्टा कर रहा है, उसकी उठायी तर्जनी विद्वेषपूर्ण शंका हैं, राष्ट्र के प्रति विरोधी संकल्प है। राम मंत्रीपरिषद के विचारों का प्रतिउत्तर देते हैं -

‘निर्वेद की इस पीठिका पर खड़े होकर
 “राज्य, न्याय
 राष्ट्र, इतिहास और
 मानवीय आचरण को देखने पर
 मन्त्री-परिषद के अभिमत से सहमत होना
 मेरे लिए ही नहीं
 किसी के लिए भी कठिन होगा।”

राम का मत है कि साधारणजन के इस आचरण पर न्यायिक आपत्ति उठायी जाए तो वह अपराध हो सकता था परन्तु राजद्रोह कैसे होगा ? राजद्रोह व्यक्ति के विरुद्ध होता है या राष्ट्र के ? मैं (राम) और सीता राष्ट्र नहीं हैं, अधिपति होने का अर्थ राजा तो है पर राष्ट्र नहीं। जिस दिन व्यक्ति विशेष को ऐसा मान लिया जाएगा वह इतिहास की सबसे गलत परम्परा होगी। रावण राष्ट्र का प्रतीक बन चुका था इसीलिए लोगों के वर्चस्व ने राष्ट्रीय मुक्ति के लिए युद्ध किया।

स्वाधीनता
 अभिव्यक्ति स्वतंत्रता का दुरुपयोग
 यदि अनुत्तर दायित्वपूर्ण वाचालता है
 तो महानुभावों!
 कायरतापूर्ण सहमतियाँ
 उससे भी बड़ा दुरुपयोग हैं।

स्पष्टतः नरेश मेहता दोनों प्रबन्धकाव्यों में ‘प्रजा-पुरुष’ ‘राम’ के माध्यम से मानवीय मूल्यों को ध्वस्त करने वाले व्यक्तियों, स्थितियों और व्यवस्थाओं की क्रूरता को उजागर करते हैं। राजव्यवस्था का अधिक शक्ति सम्पन्न होना मनुष्य को निरीह बनाता है। इसीलिए व्यवस्था द्वारा लिये जाने वाले निर्णयों पर आत्मशोधन, होना आवश्यक है। नरेश मेहता द्वारा आधुनिक समस्याओं को पकड़ने और व्यक्त करने के लिए इन प्रबन्धकाव्यों में राम को माध्यम बनाया क्योंकि भारतीय इतिहास में राम ही एकमात्र सहारा है जहां समस्याओं की शाश्वत उपस्थिति हैं और समकालीनता को व्यक्त करने का अचूक साधन भी है। नरेश मेहता अपने नैसर्गिक वैष्णव स्वभाव के कारण वर्तमान से भविष्य की यात्रा करते हैं और प्रत्येक कालखण्ड में उनकी रचना उनके राम प्रासंगिक दृष्टिगोचर होते हैं।

संदर्भ

1. संशय की एक रात – नरेश मेहता
2. प्रवाद पर्व – नरेश मेहता
3. महाप्रस्थान– नरेश मेहता
4. नयी कविता के प्रतिमान : लक्ष्मीकांत वर्मा
5. उत्तरसदी के श्रेष्ठ हिन्दी कवि
6. नव्य प्रबंध काव्यों में आधुनिक बोध : डॉ. उर्वशी शर्मा

Impact of early intervention on the development of children with autism: A review

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Abstract

Autism spectrum disorder is a complex neurodevelopmental disorder that is often characterized by difficulties in communication, social interaction, and repetitive or restricted patterns of behaviour. It can be a lifelong disability that affects individuals in various ways, and while there is no known cure for autism spectrum disorder, early diagnosis and intervention can help children and their families effectively manage symptoms. As children with autism spectrum disorder grow and develop, they may face various challenges in their daily lives. However, with appropriate intervention and support, it is easier for them to overcome these challenges and develop new skills. This is why early intervention is crucial for children with autism spectrum disorder. The earlier a child receives intervention, the better their chances of developing new skills and reducing symptoms.

Research has shown that children who receive early intervention services for autism spectrum disorder have better learning outcomes, better development of social skills, and are more likely to gain independence than those who do not receive the same services. Early intervention can help children with autism spectrum disorder improve their communication skills, enhance their ability to interact socially with others, and develop appropriate behaviours. The main objective of early detection and screening is to make certain that children who have autism spectrum disorder (ASD) can receive evidence-based interventions, which will give them the best chance for optimal development and outcomes.

Keywords: autism, early intervention, development etc.

Introduction

In 1943, Leo Kanner was the first to describe autism as a developmental disorder in a classic article containing case studies of 11 children. Presently, autistic disorder is defined as having qualitative impairments in social interaction and communication, as well as restricted, repetitive, and stereotyped patterns of behaviours, interests, and activities that affect one of these areas before the age of 3 years. While the symptoms of ASD can vary from child to child, there are some core symptoms that are common. These include delayed speech, repetitive behaviours, and difficulty learning social cues.

- Delayed speech is a common indicator of autism in early childhood. Children with autism may not start babbling until they're around 12 months old, while most children babble at around six months old.
- Repetitive behaviours are actions that a child repeat over and over again. These behaviours are common in children with ASD and can include hand movements like flapping, rocking, or spinning, repeating words or phrases, arranging objects in a certain way, and excessive smelling of objects or people.
- Social interaction is another area that is impacted by autism. Children with autism may not respond when someone calls their name, may not make eye contact when speaking to others, and may avoid physical contact. They may also have trouble understanding how to use nonverbal cues appropriately in social contexts. For example, they might laugh at something that is not funny because they don't understand how to use laughter appropriately in a social context.

Early interventions can greatly benefit the development, health, and overall well-being of autistic individuals. Routine monitoring of child development is necessary. Tailored information, services, referrals, and practical support are crucial for individuals with autism and their caregivers. Community and societal efforts are necessary for increased accessibility, inclusivity, and support. Early interventions can greatly benefit the development, health, and overall well-being of autistic individuals. Autism Spectrum Disorder (ASD) is a spectrum disorder, meaning symptoms can range from mild to severe; although there is no known cure, early intervention can help children with autism learn practical skills and improve their quality of life. Early

intervention is a service provided to toddlers and children with developmental or intellectual delays due to disabilities. It helps them learn new skills and overcome challenges. It is recommended that children with ASD engage in early intervention around preschool age, starting as early as two or three years old. At this age, a child's brain is still forming and malleable, making it easier for them to adapt to new things. This adaptability increases the likelihood of effective treatments in the long run; children who receive help early can make tremendous progress during these critical years of development. Early intervention support services begin within the first years of a child's life, these can include:

- Speech/language therapy
- Occupational therapy
- Physical therapy
- Social skills training
- And other types of therapy, depending on your child's diagnosis.

Benefits of Early Intervention Programs

Early intervention programs have been shown to positively impact children with disabilities and there are many benefits of enrolling your child in an early intervention program. The benefits include:

- I. Diagnosing Autism Early in Life:
Recognizing the signs early on not only provides your child with the treatment they need early in their life but helps families determine the next best steps. This helps parents better consider programs, plans, and additional changes for their child.
- II. Younger Children Have More Brain Plasticity:
The younger children are, the more plasticity they have. This means that the brain is more malleable, which is a fancy way of saying that it can be shaped and melded to make life changes easier to adapt to. Providing treatment to children who have autism when they're younger will make it easier to implement new behaviours, help mitigate harmful behaviours, and adapt to lifestyle changes.
- III. Children Learn to Overcome Challenges:
As children develop, it's easier for them to overcome challenges they may face. The earlier a child receives intervention for an autism spectrum disorder, the better their chances of developing new skills and reducing symptoms. Access to early intervention can help them overcome challenges by providing them with tools to overcome their deficits. Without these tools, they may struggle more as they grow older.

Recent epidemiological studies have reported rates of ASDs as high as 66 per 10,000 (Fombonne, 2002), which is a surprising increase over rates reported in the past. Early identification has increased in importance, as many studies have found that children with ASDs who receive services before 48 months of age make greater improvements than those who enter programs after 48 months of age (Harris & Weiss, 1998; Sheinkopf & Siegel, 1998). Over the past 10 to 15 years, there has been evidence that children with ASDs can be reliably diagnosed as young as 2 years of age (Lord, 1995).

INTERVENTIONS

Over the years, there have been many treatments developed for children with autism, evolving from different philosophies. These include behavioural interventions, developmental interventions, and cognitive-behavioural interventions. While each program is based on a different philosophy and uses unique intervention strategies, there is also considerable overlap in components of the programs. Most early intervention programs are designed for preschool-aged children, although they may include younger children in their programs as well. It is only more recently that we have been able to identify children with autism as young as 2 years of age. There are a few programs that are specifically designed for children between birth and 3 years of age. We will first cover the programs designed specifically for the birth to 3 age group, followed by widely available preschool programs, and finally preschool programs that are less widely available.

EARLY INTERVENTION PROGRAMS DESIGNED FOR TODDLERS

- Walden Toddler program

The Walden Toddler Program is a program that has been designed specifically to cater to toddlers with autism, as per the research done by McGee, Morrier, and Daly in 2001. This program is modelled after a typical daycare program, with a particular focus on using incidental teaching and social inclusion to help children learn. Incidental teaching is a method of applied behaviour analysis that employs behavioural principles within natural learning contexts. The program's environment is filled with toys and activities that appeal to young children, and adults are trained to expand on requests and activities that the child initiates.

➤ COMPREHENSIVE PROGRAMS

- Applied behavioural analysis programs:
TEACCH is a community-based intervention program that emphasizes visual supports, individualization of goals, and teaching developmental skills to children with autism within their natural environment. It focuses on important skills for future independence and considers autism as a lifelong condition. The program is implemented in settings that align with each child's needs and abilities.
- The TEACCH program:
TEACCH is a community-based intervention program that emphasizes visual supports, individualization of goals, and teaching developmental skills to children with autism within their natural environment. It focuses on important skills for future independence and considers autism as a lifelong condition. The program is implemented in settings that align with each child's needs and abilities.
- The LEAP Program:
The LEAP program is comprised of both typical peers and children with autism, with each classroom consisting of 10 typical children and 6 children with autism, aged between 3 and 5 years. The classroom is structured, and intervention methods include incidental teaching and other ABA techniques, with interventions being directed towards both adults and children. Peers are considered an indispensable part of the program, as per Harris & Handleman (1994). Strategies that involve teaching peers to be "play organizers" have been shown to be successful in increasing social interactions, which have been maintained over time, as per studies conducted by Goldstein, Kaczmarek, Pennington, & Shafer (1992), Hoyson, Jamieson, & Strain (1984), Strain, Kerr, & Ragland (1979), and Strain, Shores, & Timm (1977).

➤ DEVELOPMENTAL INTERVENTIONS

Developmental intervention is a specific term used to describe a philosophy and specific strategies for working with children with autism. One common feature of developmental interventions is that they are child-directed. In developmental interventions, the environment is organized to encourage or facilitate communicative and social interactions. The child initiates and the adult responds. Rogers and Lewis (1989) have documented improvements in symbolic play as a result of structured, development-based programs, and Lewy and Dawson (1992) also demonstrated improvements in gaze, turn taking, object use, and joint attention with a child-directed imitation strategy.

- The Greenspan Model:
The Greenspan approach, also known as the Developmental Individual Difference (DIR) Model (Greenspan & Wieder, 1997), is one of the most well-known developmental approaches. This model is a "relationship-based model" that aims at helping the child develop interpersonal connections that will lead to the mastery of cognitive and developmental skills, including attention and focus, engaging and relating, nonverbal gesturing, affect cuing, complex problem solving, symbolic communication, and abstract and logical thinking. The program follows the child's lead and looks for opportunities to "close the circle of communication" or respond in a way that leads to expanding a skill or interaction. The Greenspan model recommends that a child spend at least 4 hours a day in spontaneous play interactions with an adult, at least 2 hours a day in semi-structured skill building activities with an adult, and at least

1 hour a day in sensory-motor play activities. It is supplemented by time in an inclusive preschool program, speech and occupational therapy.

- The Denver Model:

The intervention program known as the Denver model (Rogers & Lewis, 1989) is based on a developmental model. It is delivered in a classroom setting that follows a 12-month calendar and meets 5 days a week for 4 to 5 hours each day. The program focuses on creating positive affect, pragmatic communication, and interpersonal interactions within a structured and predictable environment. Nearly all activities and therapies take place within a play situation. The program's goals include using positive affect to increase a child's motivation and interest in a person or activity, using reactive language strategies to facilitate communication, and teaching mental representation.

CONCLUSION

In conclusion, children with autism require comprehensive healthcare services that encompass health promotion, care, and rehabilitation. Early intervention for individuals with autism is considered a crucial component that can significantly impact their overall development, coping skills, and long-term benefits that extend into adulthood. The healthcare requirements for individuals with autism are multifaceted and require a range of integrated services, including collaboration with other sectors like education, employment, and social care. It's important to involve individuals with autism and other developmental disabilities when designing and implementing interventions. Care providers must work alongside the community to promote accessibility, inclusivity, and support for individuals with autism. Overall, early intervention is widely recognized as a critical component of comprehensive care for children with autism, as it can significantly impact their long-term development and quality of life.

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SOLAR VEHICLE: TECHNICAL BOON

POONAM CHAND SHARMA & LEENA SONI C

Introduction:

In the modern age, it is clear that non-renewable energy will be exhausted very soon. In future, we have lost maximum non renewable energy resources that will be very drastic for us today we are completely dependent on non- renewable resources and we will definitely suffer making of non- renewable energy. There is another option which is still not pointed seriously in the solar panel system. It is one of the most powerful techniques which can solve all the problems. Solar panel is more power bank of energy if we utilise it properly and technically along with the proper system. The proceeding of solar panel is based on technical manner.it consists of batteries that should be charged. The engine charge by batteries that generates energy and battery is charged by solar panel which is fixed on the vehicle in the suitable format so that we should not panic for expenses. It can capture maximum energy of sun .It is also the greatest idea to use Sun energy and pollution free India. The concept of using solar energy for vehicles provides us many facilities and it becomes a saver of the precious fossil fuel as well as non renewable resources.

The setup of the solar panel will be connected with an inverter and attached to the battery. The battery will convert DC power to AC power and this prevents more gases and other fuels because now we can generate energy through the precious renewable sources in very less expensive.

The paper provides a very positive aspect about solar energy and may change the overview technology beneficial eco- friendly technology advancement and the method of the future generation that will be proved safe - guards and it is a great advancement of technology part of life so that the research paper will prove beneficial for the future generation .

Key points:

Solar panel, renewable resources, non-renewable resourcesTechnology, fossils fuel.

Energy is our most important object for every human. We have to use energy in various works. The entire scientist chance still working on another substitution of energy. Some precious resources are coal, petroleum, fossil fuel etc but they will exhausted from our Earth very soon energy as well as fully on solar energy. They are carbon based uses fuel so they are unsustainable and hazardous to our environment. Only solar energy and wind energy are sustainable and non carbonic and non hazardous to our environment. Among these elements one of the differ energy is sun energy its means solar energy. We cannot come the biggest problem of scarcity of fuels and global warming and environment degradation. We can follow solar energy. We can see the future dream of solar base vehicles and make fantastic designing inside of modernised vehicles in modern world it may be pollution free and very cheap by capital it is suitable for old types of status class human being.

To improve the nature and environment ,to improve fossil fuel, zero pollution is preferred if we want pollution free India solar power vehicles should be mad. It is made of battery boat storage appliances and motors. The system is based on PV cells that convert the solar system into electricity to generate energy and heat.

The solar panel collects energy from the sun after it converts into usable electric energy it is electric energy that will store lead acid batteries to the supply to the motor when it is needed. These batteries control my charge controller so that it will ensure the healthy life of the batteries by preventing our charging and overcharging.

The most important reason to write the research paper is to make aware the future generation about solar power and to reduce the global warming hope for the pollution free India and hope for the cheap by the economic vehicle so that everyone can buy the vehicle.



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Automatic Facial Expression Recognition

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Abstract

Human Face expression Recognition is one of the most powerful and challenging tasks in social communication. Generally, face expressions are natural and direct means for human beings to communicate their emotions and intentions. Face expressions are the key characteristics of non-verbal communication. This paper describes the survey of Face Expression Recognition (FER) techniques which include the three major stages such as preprocessing, feature extraction and classification. This survey explains the various types of FER techniques with its major contributions. The performance of various FER techniques is compared based on the number of expressions recognized and complexity of algorithms. Automatic emotion recognition through facial expression analysis is an emerging topic on affective computing and social signal processing. Existing paper presentation on emotion recognition focuses on recognizing basic emotions (happy, sad, fear, surprise), but less efforts has been done for mixed emotion recognition due to its complexity. We will identify the simple emotion and compound emotion in the face and will compare the emotion of the model.

Keywords: Classification; Face Expression Recognition (FER); Feature extraction; Preprocessing.

1. Introduction

Human facial expressions are extremely essential in social communication. Normally communication involves both verbal and nonverbal. Non-verbal communications are expressed through facial expressions. Face expressions are the delicate signals of the larger communication. Non-verbal communication means communication between human and animals through eye contact, gesture, facial expressions, body language, and paralanguage.

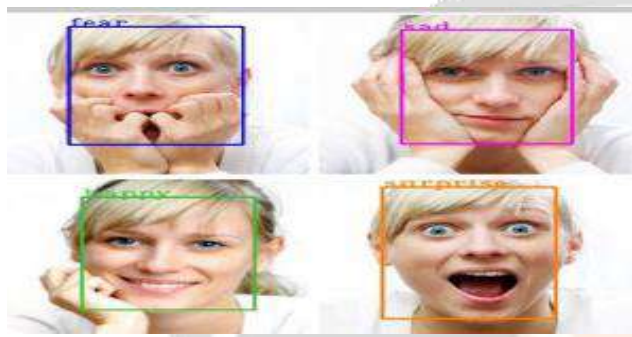
Eye contact is the important phase of communication which provides the mixture of ideas. Eye contact controls the contribution, discussions and creates a link with others. Face expressions include the smile, sad, anger, disgust, surprise, and fear. A smile on human face shows their happiness and it expresses eye with a curved shape. The sad expression is the feeling of looseness which is normally expressed as rising skewed eyebrows and frown. The anger on human face is related to unpleasant and irritating conditions. The expression of anger is expressed with squeezed eyebrows, slender and stretched eyelids. The disgust expressions are expressed with pull down eyebrows and creased nose. The surprise or shock expression is expressed when some unpredicted happens. This is expressed with eye-widening and mouth gaping and this expression is an easily identified one. The expression of fear is related with surprise expression which is expressed as growing skewed eyebrows.

FER has the important stage is feature extraction and classification. Feature extraction includes two types and they are geometric based and appearance based. The classification is also one of the important processes in which the

above-mentioned expressions such as smile, sad, anger, disgust, surprise, and fear are categorized. The geometrically based feature extraction comprises eye, mouth, nose, eyebrow, other facial components and the appearance-based feature extraction comprises the exact section of the face.

This paper mainly focuses on various FER techniques with three major steps respectively preprocessing, feature extraction and classification. Also, this paper shows the advantages of different FER techniques and the performance analysis of different FER techniques. In this paper, only the image-based FER techniques are chosen for the literature review and the video-based FER techniques are not chosen. Mostly FER systems meet the problems of variation in illumination, pose variation, lighting variations, skin tone variations.

2. Face expression recognition system



The overview of the FER system is illustrated in Fig. 1. The FER system includes the major stages such as face image preprocessing, feature extraction and classification.

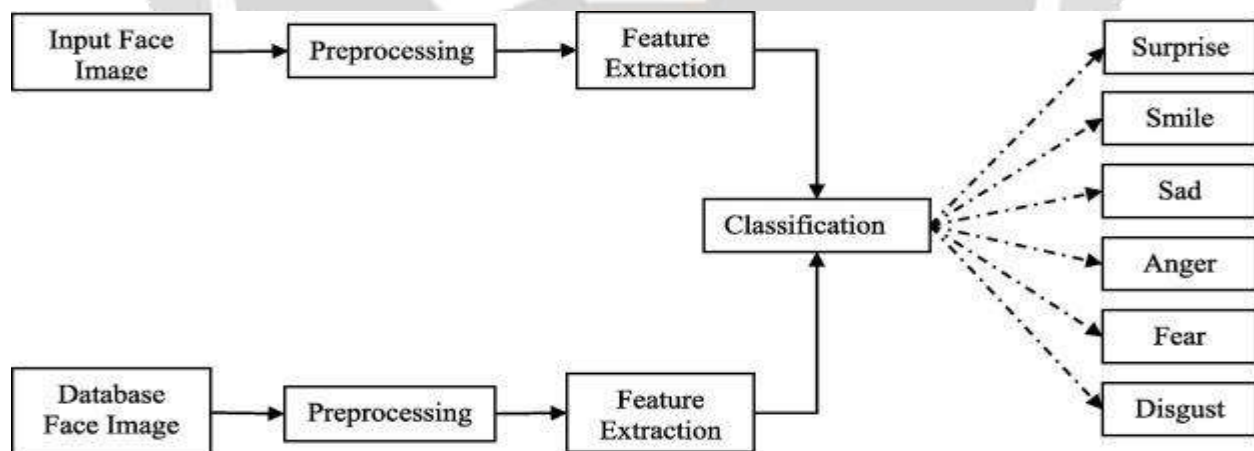


Fig. 1. Architecture of face expression recognition system.

2.1. Preprocessing

Preprocessing is a process which can be used to improve the performance of the FER system and it can be carried out before feature extraction process. Image preprocessing includes different types of processes such as image clarity and scaling, contrast adjustment, and additional enhancement processes to improve the expression frames. The cropping and scaling processes were performed on the face image in which the nose of the face is taken as midpoint and the other important facial components are included physically. In FER, more preprocessing methods

are used but the ROI segmentation process is more suitable because it detects the face organs accurately which organs are mainly used for expression recognition.

2.2. Feature extraction

Feature extraction process is the next stage of FER system. Feature extraction is finding and depicting of positive features of concern within an image for further processing. In image processing computer vision feature extraction is a significant stage, whereas it spots the move from graphic to implicit data depiction. Then these data depiction can be used as an input to the classification. The feature extraction methods are categorized into five types such as texture feature-based method, edge-based method, global and local feature-based method, geometric feature-based method and patch-based method.

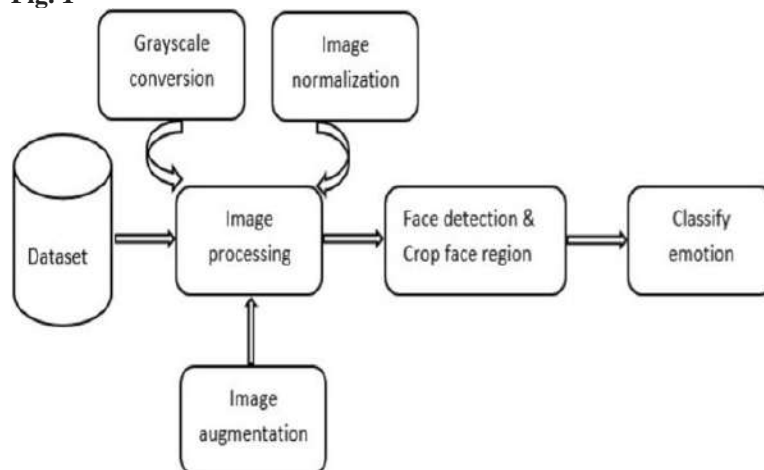
2.3. Classification

Classification is the final stage of FER system in which the classifier categorizes the expression such as smile, sad, surprise, anger, fear, disgust and neutral. The various FER techniques with their algorithm are analyzed in which includes the algorithms that are used for three important requirements such as preprocessing, feature extraction and classification. The various preprocessing methods used in the table are, face detection, image enhancement, normalization, Gabor filter, localization, face acquisition, down sampling, histogram equalization, face region detection, face alignment, ROI segmentation and resizing.

3. Methodology

This section introduces the data used for training and testing, explains how the data are preprocessed, and presents the proposed model for facial expression recognition with and without a facemask. Identifying emotions accurately when a person is wearing a mask is challenging, and the accuracy is relatively low. Emotion identification accuracy is relatively low when using a mask. In this paper, CNN is used with data augmentation. The dataset was collected from various sources, which resulted in some variations. However, our proposed model is not affected by these variations. Figure 1 illustrates the steps of our model.

Fig. 1



Overall system block diagram

3.1 Dataset preprocessing

The CK + dataset has 327 images with 7 emotions divided as follows: 45 anger, 18 contempt, 59 disgust, 25 fear, 69 happiness, 28 sadness, and 83 surprises [18, 28]. Furthermore, the M-LFW-FER dataset contains 4757 images with 3 different emotions: 2538 positive, 423 negatives, and 1796 neutral [23, 27]. This dataset considers front- and side-view orientations. The front view only contains (positive (2078), negative (338), and neutral (1268)) [27]. The ratio of the training set to the validation set is 7:3 for each dataset. Data augmentation is a method of artificially creating new training data from existing data [10]. To create new and diverse training examples, we use domain-specific techniques to transform examples from the training data. After applying these approaches, the CK + dataset contains 4250 images belonging to seven classes in the training dataset. Before training the model, we preprocess each image by applying face detection, face registration for handling pose variations, and illumination correction based on the locations of extracted facial landmarks. The ImageDataGenerator function of the Keras API was used to supplement the data. Five operations have been included as parameters for the ImageDataGenerator function: rotation at a specific angle, shearing, zooming, horizontal flip, and rescale.



Features selected by the AdaBoost learning algorithm in a face from the CK+ database.

3.2 Face detection and extraction

Face detection could be achieved with many algorithms that detect face location from an image. It employs machine learning algorithms that find, capture, store, and analyze face regions in order to match them with images of individuals in a pre-existing database. Face detection is introduced from the OpenCV method. Face detection is one approach to image processing [31]. The face detection methods we will be covering available in python are OpenCV Haar Cascade, DlibHoG, OpenCV Deep Learning-based Face Detection, Dlib Deep Learning-based Face Detection, and Mediapipe Deep Learning-based Face Detection. This paper used DlibHoG Face Detection based on HoG (histogram of oriented gradients) and SVM (support vector machine) and is significantly more accurate than the previous one. It has fast processing algorithm to determine 68 points of landmarks on faces.

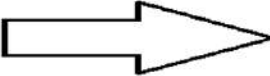


Detected face from the CK+ database using the Dlib library.

3.3 Local binary pattern

The LBP (local binary pattern) approach has been employed in several applications, including the recognition of human faces and facial expressions using the LBP algorithm. The LBP histograms are derived from a human face Gabor map. After that, the histograms are combined into a single vector. The vector is regarded as a pattern vector [18]. The LBP feature descriptor is widely employed as a reliable illumination invariant feature descriptor. The operator generates a binary number by comparing neighboring pixel values to the center pixel value. The LBP operator is defined for 3×3 neighborhoods, where each pixel is taken as the central pixel, and the 8 pixels around it are evaluated based on a given threshold. The 8 pixels around each pixel are generated by the bits associated with the local adjacent matrix.



LBP




CONCLUSION AND FUTURE WORK

In this paper, we proposed a hybrid approach for facial feature detection for emotion recognition in video. Our system is detecting seven facial feature points (eyebrows, pupils, nose, and corners of mouth) from grayscale images. Experimental results showed that our system works well on faces with no occlusions thus we get acceptable emotion recognition results. On the other hand, different occlusions on facial area slightly affect the performance of the system.

As future work, we are planning to detect finer locations for eyebrows and radius of the pupillary area in terms of feature extraction and planning to work on hard cases (hair occlusion, etc.). In case of eyebrows, the shape of the eyebrow will give useful information about different emotion.

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Environmental Education: Expertise and Importance of Scientists

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पर्यावरण शिक्षा: सामुदायिक सहभागिता की आवश्यकता एवं महत्व

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सारांश

मानव प्रकृति की उपज है। मानव का उद्भव प्रकृति की गोदी में हुआ है। प्रकृति ने मानव को जीने तथा सभ्यता के विकास के लिए समय-समय पर आवश्यक संसाधन उपलब्ध करवाये हैं। जिससे ही संभव हुआ है कि सौरमण्डल के इकलौते सजीव ग्रह पर आज जीवन तथा मानव सभ्यता विकसित रूप में उपस्थित है। मानव ने कई वर्षों तक प्रकृति को सहेज कर रखने का अथक प्रयास किया परन्तु आज वही मानव अपने नैतिक मूल्यों से परे प्रकृति/पर्यावरण के अंधाधुंध दोहन में लगा हुआ है। जिसके परिणाम स्वरूप आज हमारे गाँव, शहर, जल, वायु, मृदा, वन, वन्य जीवन आदि असंतुलन के कारण दुषित होते जा रहे हैं। यदि समय रहते इस विषय पर ध्यान नहीं दिया गया तो निकट भविष्य में मानव जाति का अस्तित्व खतरे में पड़ जाएगा। उसके लिए आवश्यक है कि हम समय रहते जागरूक हो जायें तथा हमारे आस-पास के लोगों को भी पर्यावरण के प्रति जागरूक एवं संवेदनशील बनाये। चूंकि पर्यावरण का संरक्षण एवं स्वास्थ्य किसी समूह या वर्ग विशेष का विषय न होकर समस्त मानव जाति के लिए अति आवश्यक है। अतः पर्यावरण को औपचारिक और अनौपचारिक दोनों तरीकों से समाज तथा शिक्षा के माध्यम से क्रियान्वित किया जाना अनिवार्य है। दूसरे शब्दों में पर्यावरण को सिर्फ शिक्षा के पाठ्यक्रम में सम्मिलित कर देने से प्रभाव उतना सटीक नहीं हो सकता जितनी तीव्रता से विनाश चल रहे है। उसके लिए प्रत्येक मानव मात्र की सहभागिता आवश्यक है।

मुख्य बिन्दु :- पर्यावरण शिक्षा, सहभागिता, प्रदुषण, समुदाय, समस्या इत्यादि।

प्रस्तावना

वर्तमान की भयावह स्थिति को देखते हुए राष्ट्रीय सरकारें तथा विष्व समुदाय पर्यावरण के लिए गंभीर नजर आ रहे हैं तथा समाज के सभी पक्षों को इसमें सम्मिलित करने पर जोर दिया जा रहा है। विद्यालय तथा महाविद्यालय स्तर पर पर्यावरण शिक्षा को पाठ्यक्रम का हिस्सा बनाया गया है। इसके साथ-साथ औद्योगिक विकास के नवीन मानदण्ड निर्धारित किये गये हैं। वैश्विक स्तर पर संयुक्त राष्ट्र संघ से लेकर स्थानीय स्व-शासन तक ने पर्यावरण को लेकर गंभीर नियम बनाये हैं किन्तु पर्यावरण शिक्षा के अभाव में तमाम नियम कागजों के पुलिन्दों के सिवा कुछ भी नहीं है। इसलिए मानव जीवन में पर्यावरण शिक्षा की अनिवार्यता का महत्व बहुत ही बढ़ गया है। "पर्यावरण शिक्षा मानव के चारों ओर व्याप्त जीवित तथा भौतिक वातावरण की शिक्षा है।" या दुसरे शब्दों में कहा जाये तो "पर्यावरण शिक्षा एक ऐसा अध्ययन

क्षेत्र है, जिसमें जीव-जन्तुओं, पेड़-पौधों तथा मनुष्य समुदाय के अपने वातावरण के साथ अन्तर-सम्बन्धों को व्याख्यायित किया जाता है।”

पर्यावरण शिक्षा के केन्द्र बिन्दु

पर्यावरण शिक्षा अधिगम की एक प्रक्रिया है जो पर्यावरण व इससे जुड़ी चुनौतियों के संबंध में लोगों की जानकारी और जागरूकता को बढ़ाती है। पर्यावरण शिक्षा निम्नांकित बिन्दुओं पर केंद्रित है—

- पर्यावरण और पर्यावरणीय चुनौतियों के बारे में जागरूकता एवं संवेदनशीलता
- पर्यावरण और पर्यावरणीय चुनौतियों के बारे में समझ और जानकारी
- पर्यावरण के संबंध में चिंता की प्रवृत्ति और पर्यावरण की गुणवत्ता बनाये रखने में सहायता
- पर्यावरण समस्याओं को दूर करने की कुशलता
- मौजूदा ज्ञान और पर्यावरण से संबंधित कार्यक्रमों के अभ्यास में भागीदारी।

उपरोक्त विषयों पर समग्र रूप से ध्यान देने से पर्यावरण को संगठित तथा पुनः मानव सभ्यता के साथ समावेशी बनया जा सकता है। वर्तमान में तथाकथित विकास की विनाशकारी दौड़ में ये सभी बिन्दु मानव ने भुला दिये हैं किन्तु इतिहास तथा वर्तमान में ऐसे अनेकों उदाहरण हमारे सामने हैं जिसमें पर्यावरण एवं प्रकृति को सबसे पहले रखा जाता है।

पर्यावरण शिक्षा में सामुदायिक सहभागिता का इतिहास

विष्व में मानव सभ्यता के इतिहास पर सरसरी दृष्टि डालें तो स्पष्ट रूप से नजर आयेगा कि मानव की सभी क्रियाएं पर्यावरण तथा प्रकृति को प्रथम स्थान पर रखता था। वैदिक काल में वन रक्षा, वृक्ष रक्षा को मानव कर्तव्यों में सम्मिलित किया गया है। इस काल में प्रकृति को वंदनीय मानकर आघात पहुंचाना धर्म विरोधी माना जाता था यही भावना समाज में पर्यावरण संतुलन को दृढ़ता प्रदान करती है। जो कि उस समय के मंत्रों से स्पष्ट होता है।

“दस कृपा समा वाणी दष वाणी समोहुय :

दस हुदः समः पुत्रः पुत्रो समो दुमः”

अर्थात् दस कुएं बनाना एक तालाब के समान हैं, दस तालाब बनाना एक झील के समान हैं व दस पुत्र एक पेड़ के समान हैं अतः एक पेड़ दस पुत्रों के समान लाभदायी हैं।

“माता भूमि पुत्रोहम् पृथिव्याः”

अर्थात् पृथ्वी का आदर व सुरक्षा माता के रूप में समझ कर किया जाना चाहिए। इस्लाम धर्म ग्रंथों और साहित्य में भी पर्यावरण को सर्वोपरि स्थान दिया गया है। इस्लाम की जन्मस्थली मरुस्थली है, इसलिए इस्लाम में जल को “जीवन का रहस्य” की प्रतिष्ठा दी गई है कुरान षरीफ में जल, जंगल और जमीन से लेकर समस्त प्राणी जगत के बारे में संजीदगी से लिखा गया है, वो अद्भुत है, अनुकरणीय है। इसमें वृक्षारोपण और वन संरक्षण की सीख दी गई। कुरान-षरीफ में लगभग 700 आयतों के साथ हदीस में भी प्रकृति और पर्यावरण का जिक्र करती है। तथा कुरान में धरती शब्द का प्रयोग 405 बार हुआ है। इस्लाम जीवन को प्रकृति के अनुसार जीने पर बल देता है।

इसाई साहित्य में भी पर्यावरण संरक्षण का बखान मिलता है। बाइबल बताती है कि परमेश्वर ने इंसान को धरती की देखभाल की जिम्मेदारी सौंपी थी। इसमें पृथ्वी तथा उसके तत्वों का संरक्षण करके ही

स्वयं को बचा सकने का जिज्ञासा किया गया है। बाइबल में प्रकृति का विनाशक भी मानव को ही बताया गया है जो कि हालिया वक्त में सिद्ध भी होता है। तमाम प्राकृतिक आपदाएँ इसका प्रमाण भी प्रस्तुत करती हैं। सिक्ख धार्मिक ग्रंथ श्री गुरु ग्रंथ साहिब में पर्यावरण को सर्वोच्च दर्जा दिया गया है। इसमें हवा को गुरु, पानी को पिता तथा धरती को माँ का दर्जा दिया गया है।

“पवन गुरु,पानी पिता, माता महत।”

श्री गुरु ग्रंथ साहिब के अनुसार, सभी जीव-जन्तु, वृक्ष, नदी, पर्वत, समुद्र आदि को ईश्वर को रूप माना गया है। तथा ये सभी ईश्वर की इच्छा के अनुरूप कार्य करते हैं तथा सभी धर्मावलम्बियों से इसके सम्मान की अपेक्षा करता है।

बौद्ध एवं जैन धर्म के विचारों में प्रेम,सद्भाव तथा अहिंसा पर बल दिया गया है। बौद्ध धर्म साधारण जीवन शैली से सतत पोषणीय विकास पर बल देता है। इसके समस्त धार्मिक प्रतीक भी वनस्पति एवं वन्य जीवों का प्रतिनिधित्व करते हैं। बोधिवृक्ष, बैल, हाथी, घोड़ा आदि को गौतम बुद्ध के जीवन से जोड़कर देखा जाता है। बौद्ध धर्म 'प्रतीत्यसमुत्पाद' पर आधारित है जिसे कारण-कारण का सिद्धान्त भी कहते हैं। इसे कर्म के सिद्धान्त से जोड़कर देखा जा सकता है। जिसके अन्तर्गत हर क्रिया का प्रभाव उसके पर्यावरण पर अवश्य पड़ता है। जैन धर्म समुदाय में भी किसी भी जीव-जन्तु, वनस्पति को नुकसान पहुंचाना वर्जित माना गया है। इसके अनुयायियों के लिए प्रकृति एवं जीव-जन्तुओं के संरक्षण एवं उनके प्रति सम्मान पूर्वक व्यवहार करना धर्म का मूल आधार माना गया है।

वैश्विक स्तर पर धर्म तथा सामाजिक संस्थाओं द्वारा पर्यावरण संरक्षण से इतर विभिन्न समुदायों का भी पर्यावरण शिक्षा तथा संरक्षण में विषिष्ट योगदान है। राजस्थान के विभिन्न धार्मिक समूहों तथा सम्प्रदायों का आधार ही पर्यावरण शिक्षा एवं चेतना का प्रसार करना है। सभी सम्प्रदायों के नियमों तथा शिक्षा में प्रकृति तथा इससे जुड़े तमाम पक्षों को दैवीय दर्जा दिया गया है। पश्चिमी थार मरुस्थल में पनपे विष्णोई सम्प्रदाय की मूल शिक्षा ही जीव दया तथा पेड़ बचाना रहा है। गुरु जम्भेश्वर जी ने 29 नियमों का निर्माण प्रकृति को आधार मानकर किया। जिसका अनुसरण करते हुए ही सितम्बर 1730 में अमृता देवी के नेतृत्व में पेड़ों को बचाने के लिए 363 लोगों ने अपना बलिदान मारवाड़ के खेजड़ली में दिया। जिसे विष्व में पर्यावरण संरक्षण की वकालत करने वाले अहम आन्दोलन के रूप में जाना जाता है। इसे ही अग्रगामी मानकर उत्तराखण्ड के चमौली का चिपको आंदोलन तथा दक्षिण भारत का एम्पिको आंदोलन विख्यात हुए। तथा इसी के आधार पर भारत सहित विष्व में अनेक पर्यावरण आंदोलन हुए हैं। खेजड़ली बलिदान दिवस के अवसर पर अभी प्रतिवर्ष विष्व वृक्ष मेला का आयोजन किया जाता है जो जन-जागरण में अहम भूमिका का निर्वहन करता है।

जसनाथी सम्प्रदाय में भी पर्यावरण पर विशेष बल दिया गया है। 36 नियमों में से अधिकतर पर्यावरण को बढ़ावा देने वाले हैं। गोगाजी, एवं तेजा जी के मंदिर तथा देवरे भी खेजड़ी के वृक्ष के नीचे ही मिलते हैं। कामड़िया पंथ के प्रवर्तक बाबा रामदेव जी ने भी पर्यावरण को धर्म के केन्द्र में रखा तथा विभिन्न तालाबों-कुँओं का निर्माण करवाया। अरावली तथा दक्षिण पूर्वी राजस्थान के विभिन्न सम्प्रदायों तथा जनजातियों में भी प्रकृति तथा पर्यावरण नियमों एवं उसकी शिक्षा को केन्द्र में रखा गया है। विभिन्न समुदायों में अलग-अलग जीव-जन्तुओं तथा पेड़-पौधों को पूजनीय तथा पवित्र माना गया है। विभिन्न जल स्रोतों का भी विशेष महत्त्व माना गया है। नदियों तथा झीलों को मुक्ति का माध्यम माना गया है। बेणेश्वर धाम, नक्की झील, पुष्कर, कोलायत आदि अनेक जीवित उदाहरण हमारे सामने हैं। यहां पर प्राकृतिक संसधनों को सजीव मानकर उनको उपयोग में लेने की परम्परा रही है। दैनिक जीवन में लोकोक्तियाँ एवं मुहावरों में भी पर्यावरण महत्त्व की झलक देखने को मिलती है। मानव शरीर को भी पृथ्वी के पंचतत्वों से मिलकर बना हुआ माना गया है।

“क्षिति-जल पावक गगन समीरा पंच तत्व मिली बना सरीरा”

उपरोक्त पंक्तियां स्थानीय समुदायों की भावना को उनके शब्दों में चरितार्थ करती है। राजस्थान में जल संरक्षण का विशेष ध्यान दिया गया है। यहाँ पर जल की तुलना घी से की गई है।

**“घी दुळे तो कीं नीं,
पनी दुळे तो मारो काळजो बळे।”**

इसी तरह ही विभिन्न संसाधनों को जीवन को आधार माना गया है। भारत के पेशे भागों में विशेषकर पर्वतीय एवं वनीय भागों में रहने वाले समुदायों का जीवन तथा सभी क्रियाएं प्रकृति आधारित ही हैं तथा उनका सामंजस्य भी बेहतर है। हालांकि विभिन्न भागों में औद्योगिक गतिविधियों की घुसपैठ ने असंतुलन की स्थिति उत्पन्न की है। जिसका विरोध भी स्थानीय स्तरों पर मुखर होता है।

अतः यह अत्यन्त महत्वपूर्ण है कि पर्यावरण शिक्षा के उपरोक्त सभी पहलू जो विभिन्न धर्मों तथा समुदायों के दैनिक नियमावली तथा कार्यशैली का अभिन्न हिस्सा है का विस्तार सम्पूर्ण मानव जाति में हो तथा सभी उक्त नियमों तथा आदर्शों को अपने जीवन शैली का हिस्सा बनाये क्योंकि बिना सभी की सहभागिता के संरक्षण संभव नहीं है। सामुदायिक संगठनों की सहभागिता एवं जागरूकता वर्तमान में पर्यावरण हास से मुकाबला करने की पूर्व शर्त हैं। मानव जीवन तथा उसकी सभी क्रियाएं प्राकृतिक पर्यावरण पर आश्रित है तथा पर्यावरण के आरम्भ को वैश्विक स्तर पर मानवीय तथा सामाजिक –आर्थिक क्रियाओं को दुष्प्रभाव माना जाता है। वहीं दूसरी ओर इसे सामुहिक एवं व्यक्तिगत क्रियाओं का प्रभाव माना जाता है। जिसमें आर्थिक लाभ ही सर्वोच्च वरीयता पर हो। सही अर्थ में कहा जाये तो संरचनात्मक एवं बुनियादी प्रगति की दौड़ में पर्यावरण को उचित स्थान नहीं दिया गया है बल्कि पर्यावरण को दर किनार कर दिया गया। अतः इस विनाश लीला से पृथ्वी तथा मानव जाति को बचाने के लिए जनमानस को जगाने की आवश्यकता है और यह जन-जागरण सामुदायिक स्तर पर प्रभावी तरीके से सम्पन्न किया जा सकता है। व्यक्ति अपनी परमपरा तथा संस्कृति के नियमों को अपनाने में हिचकिचाहट नहीं समझता तथा उनको कर्तव्य समझ कर पालन करता है। इसलिए पर्यावरण की शिक्षा का प्रसार सामुदायिक स्तर पर प्रभावी तरीके से किया जा सकता है क्योंकि सभी सम्प्रदायों तथा धर्मों के मूल में पर्यावरण तथा प्रकृति को केन्द्र में रखा गया है।

पर्यावरण शिक्षा का महत्व विकास की दौड़ के युग में और ज्यादा बढ़ जाता है। शिक्षा जब उचित ढंग से पर्यावरण के सम्मान, संरक्षण एवं समस्या संबंधी मुद्दों पर जागरूक करता एवं समझ पैदा करती है तो यह व्यक्ति में उसके पर्यावरण के महत्व तथा उसके मुद्दों को समझने में मदद करती है। मानव कल्याण एवं संपूर्ण वातावरण की सुरक्षा हेतु किये जाने वाले सार्थक एवं दिशात्मक प्रयास, पर्यावरण शिक्षा के बिना असंभव है। वैश्विक स्तर पर पर्यावरण संरक्षण के विभिन्न सम्मेलनों के प्रस्तावों के आधार पर पर्यावरण शिक्षा के महत्व को मोटे तौर पर निम्नानुसार समझ सकते हैं—

- आमजन में पर्यावरणीय चेतना एवं जानकारी के प्रसार हेतु
- समस्या निवारण के उपाय ज्ञात करना।
- जन मानस तैयार करना।
- प्रेरणा देना जिससे भविष्य में सुरक्षा रहे।
- सतत विकास की भावना का विस्तार।
- प्रकृति की सर्वोच्चता का विचार प्रचारित करना।
- सह-अस्तित्व के विचार का विस्तार करना।
- सामाजिक सुरक्षा निश्चित करने हेतु।

- कर्तव्यों, अधिकारों का बोध करवाने हेतु।

निष्कर्ष

पर्यावरण शिक्षा का दायरा संकुचित न होकर बहुत ही विस्तृत है। यह सिर्फ पाठ्यक्रम का ही हिस्सा नहीं बल्कि प्राचीन काल से ही मानव समुदाय के सामाजिक सांस्कृतिक जीवन के हर अंग में रमा हुआ है। मानव जीवन के हर पहलु का नियंत्रण प्रकृति से ही होता आया है जिसका प्रमाण हमें विभिन्न धर्मों के मूल में नजर आता है। उसी नियंत्रण के अनुरूप अनुकूलन करके ही मानव जीवन पैली में पर्यावरण शिक्षा को सम्मिलित किया है, लेकिन विकासवाद तथा पूँजीवाद के विस्तार से पर्यावरण शिक्षा को दायरा काफी सिमट सा गया है। जिसे अब पुनः सामुदायिक स्वरूप से विस्तार देने की सख्त आवश्यकता है। इसी से पृथ्वी पर मानव तथा जीवन की रक्षा संभव हो सकेगी ।

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'Effect of professional stress of teachers on the process and development of teaching-learning'.

Shashi Bohra

Jai Narayan Vyas University, Jodhpur

'सीखने सिखाने की (अधिगम) की प्रक्रिया और विकास पर – शिक्षकों के व्यावसायिक तनाव का प्रभाव'

शशि बोहरा

शोधकर्तृ

जय नारायण व्यास विश्व विद्यालय, जोधपुर
शिक्षा विभाग (कला – संकाय)

“Good teacher radiate knowledge everywhere they are unique divine looking personalities they inspire they young students and prepare them of face any challenges in life. they install in them courage, hope, confidence and a sense of victory valves so that they march on the path of brilliance to achieve their right of destiny” .

: सारांश ::

शिक्षक विद्यालय का एक महत्वपूर्ण अंग है | जो अपने ज्ञान तथा कौशल से छात्रों के स्वस्थ मस्तिष्क का निर्माण करता है | यानि शिक्षक सीखने सिखाने की प्रक्रिया का केन्द्र बिन्दु होता है | जिस पर सम्पूर्ण शिक्षण व्यवस्था सुचारु रूप से कार्य करती है |

शिक्षक के व्यक्तित्व व व्यवहार से जुड़े वह सभी पहलू जो उसके व्यक्तित्व कार्यशैली पर प्रभाव डालते हैं | वह सभी शिक्षार्थी के अधिगम विकास को भी प्रभावित करते हैं | ऐसे अनगिनत विषयों पर प्रतिदिन शोध कार्य किये जाते रहे हैं कि शिक्षार्थी के अधिगम को प्रभावित करने वाले करक क्या – क्या होते हैं उन्ही में से एक कारक शिक्षक और उनका व्यावसायिक तनाव का प्रभाव भी शिक्षार्थी के अधिगम पर भी देखा गया है |

शब्द कोष :- अधिगम, शिक्षक, शिक्षार्थी, व्यावसायिक तनाव

अधिगम एक सीखने सिखाने की प्रक्रिया है जो अन्वरत चलती रहती है इसी सीखने की प्रक्रिया द्वारा व्यक्ति अनुभव प्राप्त करता है | जिसके परिणाम स्वरूप व्यक्ति के व्यवहार में परिवर्तन होता रहता है | अतः अधिगम का अर्थ यह भी माना गया है कि सिखाना अथवा व्यवहार में परिवर्तन गिलफोर्ड के अनुसार " व्यवहार के कारण, व्यवहार में परिवर्तन यह परिवर्तन अनुभव के द्वारा होता है | प्रेसी के शब्दों में " अधिगम एक अनुभव है जिसके द्वारा कार्य में परिवर्तन या समायोजन होता है तथा व्यवहार की नवीन विधी प्राप्त होती है |

विभिन्न विचारों के आधार पर यह कहा जा सकता है कि अधिगम यह प्रक्रिया है, जिसके द्वारा प्राणी किसी परिस्थिति में प्रतिक्रिया के कारण नये प्रकार के व्यवहारों को ग्रहण करता है। हाँ इतना अवश्य है कि उसकी गति कभी तीव्र और कभी मन्द हो जाती है। इसके अतिरिक्त मानव के सीखने का कोई निश्चित स्थान और समय नहीं होता है वह हर घड़ी और हर जगह कुछ ना कुछ सीख सकता है। वह न केवल शिक्षा संस्था में वरन, परिवार, समाज, संस्कृति, सिनेमा, संगी साथियों सभी से थोड़ी या अधिक शिक्षा प्राप्त करता है। इस प्रकार वह आजीवन सीखता हुआ और इसके फलस्वरूप अपने व्यवहार में परिवर्तन करता हुआ जीवन में आगे बढ़ता चला जाता है इसलिए वुडवर्थ ने कहा है कि " सीखना विकास की प्रक्रिया है इस विकास की प्रक्रिया में विद्यालय के अध्यापक का विशेष महत्व होता है। शिक्षक का व्यवहार व्यक्तित्व एवं कौशलों के प्रयोग से सीखने सिखाने की प्रक्रिया को प्रत्यक्ष रूप से प्रभावित करता है। शिक्षक के व्यवहार के द्वारा ही शिक्षक शिक्षार्थी के मध्य शैक्षिक वातावरण तैयार किया जाता है तथा शिक्षण कौशलों के प्रयोग में सीखने सिखाने की प्रक्रिया को प्रभावी बनाया जाता है इसके परिणाम स्वरूप शिक्षार्थी के सीखने की प्रक्रिया प्रभावित होती है सम्पूर्ण सीखने की प्रक्रिया में विद्यालय के अध्यापक का विशेष महत्व होता है। विद्यालय का वातावरण विद्यार्थी की प्रगति, उसका अधिगम वहाँ की भौतिक मानसिक तथा नैतिक परिस्थितियाँ सभी शिक्षक के व्यक्तित्व की कहानी कहती है अर्थात् शिक्षक को शैक्षिक व्यवस्था की धुरी कह सकते हैं। शिक्षक को अपनी भूमिका पूर्ण करने हेतु पूर्ण उत्साह व ऊर्जा के साथ कार्य करना होता है शिक्षकीय व्यवसाय के प्रति आस्था, विद्यार्थियों व संस्था के प्रति जिम्मेदारी शिक्षक को उच्च स्थान पर पहुंचाती है।

शिक्षक के इस चुनौती पूर्ण कार्य के परिणाम का सम्बन्ध उसके नवाचारिता, उत्साह पर निर्भर करता है क्योंकि शिक्षण की पूरी प्रक्रिया उसके चारों ओर केन्द्रित होती है। उसका कार्य के प्रति आस्था व इच्छा अच्छे परिणाम प्रदर्शित करती है और इसके विपरित शिक्षक का नकारात्मक व्यवहार उसके कार्य को प्रभावित करता है। शिक्षा के नकारात्मक व्यवहार का सबसे बड़ा जिम्मेदार तनाव है यह तनाव वर्तमान समय में शिक्षक की कार्यक्षमताओं को खोखला करता जा रहा है तो हमारे ज़हन में यह प्रश्न उठना स्वाभाविक है कि आखिर यह कौनसा तनाव है जो शिक्षक की कार्यक्षमता को प्रभावित करता है यह तनाव शिक्षक के कार्य स्थल से होना प्रारम्भ होता है जिससे व्यवसायिक तनाव की संज्ञा दी गई है। व्यवसायिक तनाव से तात्पर्य शिक्षक की व्यवसायिक क्षमताओं और योग्यताओं का हास होता है।

व्यवसायिक तनाव व्यक्ति की प्रत्यक्ष योग्यता से अधिक कार्य की मांग करता है जब व्यक्ति कार्य को अच्छी तरह से करने के लिए तैयार न हो तब तनाव होता है। अध्यापक का कार्य देश के भविष्य (यानि शिक्षार्थी) के भविष्य को उज्ज्वल बनाता है कई बार अन्य जिम्मेदारियों का निर्वाहन करते समय शिक्षक अपनी भूमिका के निर्वाहन में असमर्थ हो जाता है। तब शिक्षक को व्यवसायिक तनाव व्यक्तिगत रूप से अनुभव होता है। व्यवसायिक तनाव व्यक्ति के प्रत्यक्ष योग्यता से अधिक कार्य की मांग करता है। जब व्यक्ति कार्य को अच्छी तरह से करने के लिए तैयार न हो तब दबाव होता है तथापि विद्यार्थी और अध्यापक दोनों के जीवन में दबाव का मुख्य स्रोत विद्यालय को समझा जाता है इसलिए बहुत से विद्यार्थी पढाई छोड़ देते हैं या फ़ैल हो जाते हैं। जो प्रत्येक के लिए सही नहीं होता है। अध्यापक दबाव को नकारात्मक संवेग जैसे - क्रोध, चिन्ता, तनाव, शून्यता, निराशा आदि के अनुभव के रूप में परिभाषित किया जा सकता है।

वर्तमान परिस्थिति को देखते हुए भारत में वर्तमान शैक्षिक व्यवस्था में अध्यापक की कल्पना चिंतन करने के बजाय चिंचित रहने वाले एक मनुष्य के रूप में की जा सकती है। समाज के एक जागरूक सदस्य के रूप में अध्यापकों से हमारी बड़ी अपेक्षाएँ होती हैं लेकिन उसके सहयोग में संकोच करने वाली सोच का दबदबा विद्यालय में दिखाई देता है।

आज शिक्षा जगत अनेक प्रकार के नव चिन्तन तथा अनुभूत प्रयोगों से प्रभावित हुआ है जिसमें संगठन वातावरण प्रमुख स्थान रखता है जिस प्रकार लोग अपने अच्छे, प्रभावशाली झगड़ालू, कर्तव्यनिष्ठ आदि व्यवहार के लिए जाने जाते हैं उसी प्रकार विद्यालय भी अपने विशेष प्रभाव या व्यवहार के लिए जाने जाते हैं यदि किसी विद्यालय में प्रधानाचार्य तथा शिक्षक प्रसन्न मुद्रा में कार्यरत हैं यदि किसी प्रकार का तनाव या असंतोष नहीं है तो प्रसन्नता विद्यार्थियों में भी देखी जा सकती है और उनके लिए विद्यालय सहानुभूति के स्थान बन जाते हैं इसके विपरीत जिन विद्यालयों में शिक्षक और प्रधानाचार्य के मध्य सौहार्दपूर्ण सम्बन्धों का अभाव है वहाँ शिक्षकों में असंतोष है एवं वे केवल नियमानुसार ही कार्य करते दिखाई देते हैं तथा निर्देशन का अभाव है तब इस सामाजिक एवं मनोवैज्ञानिक स्थिति का प्रभाव विद्यार्थियों पर भी देखा जा सकता है।

शिक्षकों को निश्चित रूप से शारीरिक और मनोवैज्ञानिक योग्यता की आवश्यकता होती है शिक्षकों को राष्ट्र निर्माण में अपनी सही भूमिका निभाने के प्रति जागरूक होना चाहिए। शिक्षक अपने नियमित शिक्षण कार्य और अनियमित शिक्षण कार्य जैसे – चुनावी झूठी, जनगणना आदि के कारण बहुत अधिक कार्य का भार सहन करना पड़ता है शिक्षकों को इसके कारण व्यवसायिक व्यक्तिगत समस्याएँ देखी जा सकती हैं।

शिक्षकों पर इस तरह के अत्यधिक कार्य भार से उत्पन्न दबाव को ही व्यवसायिक तनाव कहा जाता है, विभिन्न शोधकर्ताओं ने व्यवसायिक तनाव को मापने और उससे उत्पन्न परिणामों को जानने का प्रयास अपने शोधकार्यों में किया है विभिन्न शोधों में व्यवसायिक तनाव के स्तर को मापने के लिए " व्यवसायिक तनाव मापनी " जो की ए. के. श्रीवास्तव और डॉ ए. पी. सिंह द्वारा बनाई गई है यह एक प्रमाणीकृत उपकरण है इसका प्रयोग अध्यापकों के व्यवसायिक तनाव से सम्बंधित तथ्यों के विभिन्न आयामों के मापन हेतु किया जाता है उपकरण के कुल 12 आयामों का मापन किया जाता है यथा – कार्य अधिभार, कार्य अनिश्चितता, कार्य संघर्ष समूह एवं राजनैतिक दबाव, व्यक्तियों के प्रति उत्तरदायित्व, निम्न सहभागिता सत्ताविहिन्ता, साथियों से खराब सम्बन्ध, अंतर्निहिता, निर्धनता, निम्न परिस्थिति, कठोर कार्य स्थितियाँ अलाभकारिता का मापन करता है परिक्षण के आयामों के अनुसार 46 पद हैं जिनको की पांच बिन्दुओं की उपमापनी पर मापने का प्रावधान है विभिन्न शोधों से परिणामों के आधार पर यह देखा गया है कि शिक्षकों के व्यवसायिक तनाव में सार्थक अन्तर नहीं होता है अध्ययनों के उपरांत परिणामों से ज्ञात हुआ कि सरकारी एवं गैर सरकारी विद्यालयों के शिक्षकों में व्यवसायिक तनाव अधिक पाया जाता है। क्षेत्र के आधार पर, लिंग के आधार पर देखने पर व्यवसायिक तनाव में सार्थक अन्तर पाया गया इसी तरह यह भी देखा गया कि शहरी व ग्रामीण क्षेत्र के अध्यापकों में कार्य तनाव में सार्थक सहसम्बन्ध पाया जाता है विभिन्न संस्थागत वातावरण के सम्बन्ध में उसमें कार्यरत अध्यापकों की समस्याओं पर कार्य तनाव में सार्थक सहसम्बन्ध पाया जाता है।

उपरोक्त शोध परिणामों में आधार पर यह कहा जा सकता है कि विद्यालय वातावरण व उससे उत्पन्न शिक्षकों में व्यवसायिक तनाव का प्रभाव शिक्षार्थियों के सीखने सिखाने की प्रक्रिया पर अत्यधिक दिखाई देता है इससे बालकों के अधिगम की गति और विकास की गति धीमी हो जाती है शिक्षक के सकारात्मक व्यवहार शिक्षार्थी के सीखने की प्रक्रिया की गति में तीव्रता लता है क्योंकि यह व्यवहार छात्रों को लोकतंत्रात्मक माहौल देता है जिससे वह अपनी व्यक्तिगत एवं शैक्षिक समस्याओं को निःसंकोच होकर प्रकट कर देता है तथा शिक्षक द्वारा उसकी समस्याओं का समाधान किया जाता है इस प्रकार शिक्षार्थी की सभी समस्याओं का समाधान हो जाने पर शिक्षार्थी पूर्ण मनोयोग से सीखने की प्रक्रिया पूर्णतः सफल एवं प्रभावीरूप से सम्पन्न होती है वहीं शिक्षक यदि नकारात्मक व्यवहार व तनाव ग्रस्त रहता है तो शिक्षक का व्यवहार

शिक्षार्थी के साथ असामान्य रहता है वह शिक्षार्थी के व्यक्तिगत या शैक्षिक समस्याओं से कोई सरोकार नहीं रखता है ना ही विद्यालय विकास पर कोई ध्यान देता है |

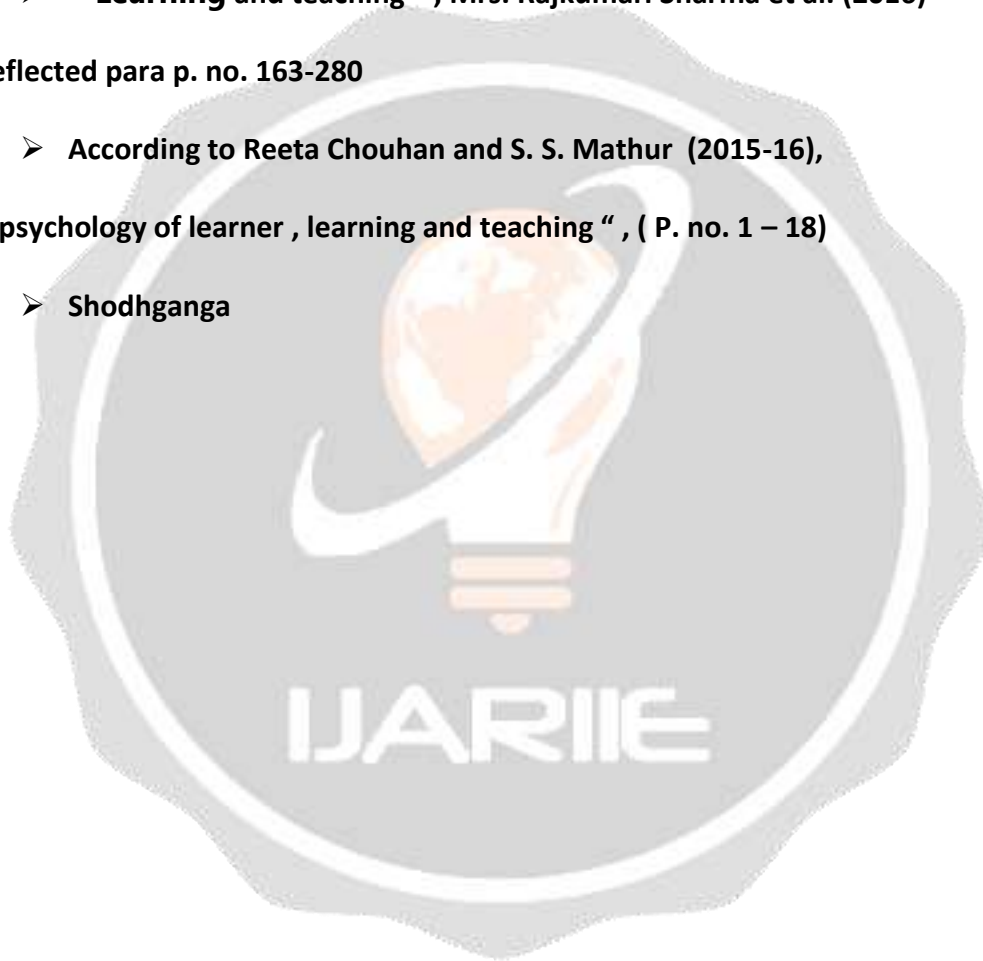
उपसंहार – शिक्षार्थी के जीवन में शिक्षकों की महत्वपूर्ण भूमिका होती है उन्ही के मार्ग दर्शन व क्यक्तिगत का प्रभाव शिक्षार्थी व्यवहार, सीखने में दिखाई देता है अतः विद्यालय वातावरण और शिक्षकों का व्यवहार सकारात्मक और वैयक्तिक न होकर शिक्षार्थी हित में होना चाहिए |

:: सन्दर्भ साहित्य ::

- **“ Learning and teaching “ , Mrs. Rajkumari Sharma et al. (2016)**

Reflected para p. no. 163-280

- **According to Reeta Chouhan and S. S. Mathur (2015-16),**
“ psychology of learner , learning and teaching “ , (P. no. 1 – 18)
- **Shodhganga**



An In-depth Examination of Non-Fungible Tokens (NFT): Technological, Economic, and Sociocultural Perspectives

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Abstract

Non-Fungible Tokens (NFT):

NFT, or Non-Fungible Token, has emerged as a revolutionary concept in the realm of digital ownership and blockchain technology. At its core, an NFT represents a unique digital asset that is distinguishable from any other asset in the digital space, as opposed to cryptocurrencies like Bitcoin or Ethereum, which are fungible and interchangeable. Each NFT contains metadata that certifies its authenticity and uniqueness, often stored on a blockchain, making it tamper-proof and easily verifiable. This characteristic has significantly transformed the landscape of digital art, music, collectibles, and even real estate, enabling creators to monetize their work directly, establish provenance, and ensure secure and transparent transactions. In contrast to stocks, bonds and other traditional investments, NFTs are considered an alternative investment that isn't fungible, or replaceable, with a similar item. NFTs are similar to rare collectibles. The rise of NFTs has not only provided a new medium for artists and creators to showcase and sell their work but has also raised critical questions about the environmental impact of blockchain technology, the longevity of digital assets, and the implications for traditional notions of ownership. Despite the controversies and debates surrounding NFTs, their ability to empower creators, provide a new source of revenue, and foster a direct relationship between artists and their audiences signals a paradigm shift in the way we perceive and value digital assets in the modern era. As the technology continues to evolve, the full potential and long-term implications of NFTs on the digital economy and the creative industry are yet to be fully realized.

1. Introduction

Definition of NFT

Motivation and contribution

Historical context and emergence of NFTs

Purpose and relevance of the study

Research objectives and scope

2. Technological Underpinnings of NFTs

Blockchain technology and its role in NFTs

Smart contracts and their significance in NFT transactions

Interoperability and scalability challenges in NFT ecosystems

3. Economic Implications of NFTs

- Market dynamics and trends in the NFT space
- Pricing mechanisms and valuation models for NFTs
- Financial implications for creators, collectors, and platforms
- Risks and vulnerabilities associated with NFT investments

4. Sociocultural Impact of NFTs

- Transformation of digital ownership and property rights
- Influence on art, gaming, and entertainment industries
- Social and ethical considerations of NFT proliferation
- Environmental concerns related to NFTs and blockchain energy consumption

5. Legal and Regulatory Framework for NFTs

- Intellectual property rights and copyright issues
- Regulatory challenges and the need for legal clarity
- International perspectives and the need for standardization

6. Case Studies and Analysis

- NCL's NFT Art
- Anheuser-Busch's NFT Beer Fest
- Pizza Hut's NFP
- Nike's CryptoKicks

7. Future Prospects and Challenges

- Predictions for the future of NFTs and their applications
- Potential innovations and developments in NFT technology
- Challenges and potential solutions for mainstream adoption

8. Conclusion

- Summary of key findings and insights
 - Recommendations for policymakers, industry stakeholders, and researchers
 - Areas for further research and exploration in the field of NFTs
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1. Introduction

Definition of NFT:

NFT is a unit of data stored on a digital ledger, called a blockchain, that certifies a digital asset to be unique, indivisible, and therefore not interchangeable. This uniqueness and scarcity make these tokens ideal for certifying ownership and provenance of digital assets, such as digital art, collectibles, music, and other forms of creative work. Unlike cryptocurrencies such as Bitcoin or Ethereum, which are fungible and can be exchanged on a one-to-one basis, each NFT has a unique value and cannot be exchanged on a like-for-like basis. This uniqueness and verifiable scarcity have contributed to the use of NFTs as a way to provide proof of ownership and authenticity for digital assets. NFTs have gained significant popularity in the art world, music industry, and various other creative sectors as a new way for creators to monetize their work and for collectors to invest in digital assets.

Motivation and contribution:

With the increasing popularity, NFTs have been used in various fields of technology so that several IT leading companies and numerous newly-emerged companies invested in this field or provided NFT services. This study addresses NFTs' applications in the two following aspects:

Real-world-based NFTs:

These NFTs are connected to real-world (physical) things and accumulate information from real-world oracles (e.g., NFTs as tickets, artworks, or car ownership rights). These NFTs applications are directly dependent on material things. Moreover, they will have no value if the mentioned things are destroyed. Most reviewed applications in this aspect have been offered based on the uniqueness of NFTs.

1.2.2. Metaverse-based NFTs:

In this aspect of NFT applications, it is assumed that NFTs are purely digital (only in the Metaverse) and link to no real-world object or individual (e.g., virtual airplane ownership rights, issued certificates by a virtual academy, or Metaverse-based houses). These NFTs do not lose their value and are always applicable since their basic objects are never disappeared/destroyed. The presented applications in this aspect are suitable for Metaverse-based people's daily lives.

Historical context and emergence of NFTs:

The concept of NFTs (Non-Fungible Tokens) emerged from the broader development of blockchain technology, which gained attention with the creation of Bitcoin in 2009. Bitcoin's success in creating a decentralized digital currency using blockchain technology sparked interest in exploring the potential applications of blockchain beyond traditional currency.

The concept of NFTs started to take shape around 2012-2014, with the introduction of projects like Colored Coins and Mastercoin, which allowed users to create and trade custom tokens on the blockchain. However, the real breakthrough for NFTs came with the development of the Ethereum blockchain, which introduced smart contracts. These smart contracts enabled the creation of unique, indivisible tokens, paving the way for the development of the modern NFT ecosystem.

The emergence of NFTs gained momentum around 2017-2018 when platforms like CryptoKitties gained popularity. CryptoKitties allowed users to buy, sell, and breed unique digital cats, each represented by an NFT. This game demonstrated the potential of NFTs for creating digital collectibles and sparked a wave of interest in the potential applications of NFTs in various industries.

The art world played a significant role in the popularization of NFTs. In 2017, the artist Kevin McCoy created the first NFT-based artwork, "Quantum," on the Ethereum blockchain. However, it wasn't until 2020-2021 that NFTs gained widespread attention in the art world, with several high-profile NFT art sales attracting significant media coverage. This included digital artist Beeple's NFT artwork sold for a record-breaking \$69 million at a Christie's auction in March 2021.

Since then, NFTs have continued to expand into various sectors, including music, gaming, sports, and real estate, among others. They have provided creators with new avenues for monetizing their work and establishing direct relationships with their audiences. The NFT market has seen rapid growth, accompanied by ongoing discussions and debates around its environmental impact, market volatility, and long-term sustainability.

Purpose and relevance of the study:

NFTs represent a unique application of blockchain technology beyond cryptocurrencies, offering insights into the potential of decentralized ledgers for creating and managing digital assets. NFTs have revolutionized the concept of digital ownership by providing a means to verify the authenticity and ownership of digital assets. NFTs have introduced new monetization models for digital artists, musicians, and content creators, allowing them to directly sell their work to audiences without relying on traditional intermediaries.

Research objectives and scope:

- A. **Understanding Technology and Infrastructure:** Investigate the underlying blockchain technology and smart contracts powering NFTs, exploring their technical aspects, protocols, and development frameworks.
- B. **Economic Impact and Market Dynamics:** Analyze the economic implications of NFTs, including market trends, valuation models, trading platforms, and the influence of NFTs on traditional markets and industries.
- C. **Digital Ownership and Intellectual Property:** Examine the implications of NFTs on digital ownership, provenance, copyright, and intellectual property rights in the context of digital assets and creative works.
- D. **Environmental Sustainability:** Assess the environmental impact of NFTs, including energy consumption, carbon footprint, and potential strategies for improving sustainability in blockchain technologies.
- E. **Cultural and Societal Implications:** Investigate the cultural and societal impacts of NFTs, including their role in reshaping digital art, collectibles, online communities, and the relationship between creators and consumers.
- F. **Legal and Regulatory Framework:** Examine the legal and regulatory challenges surrounding NFTs, including issues of jurisdiction, taxation, consumer protection, and compliance with existing laws.

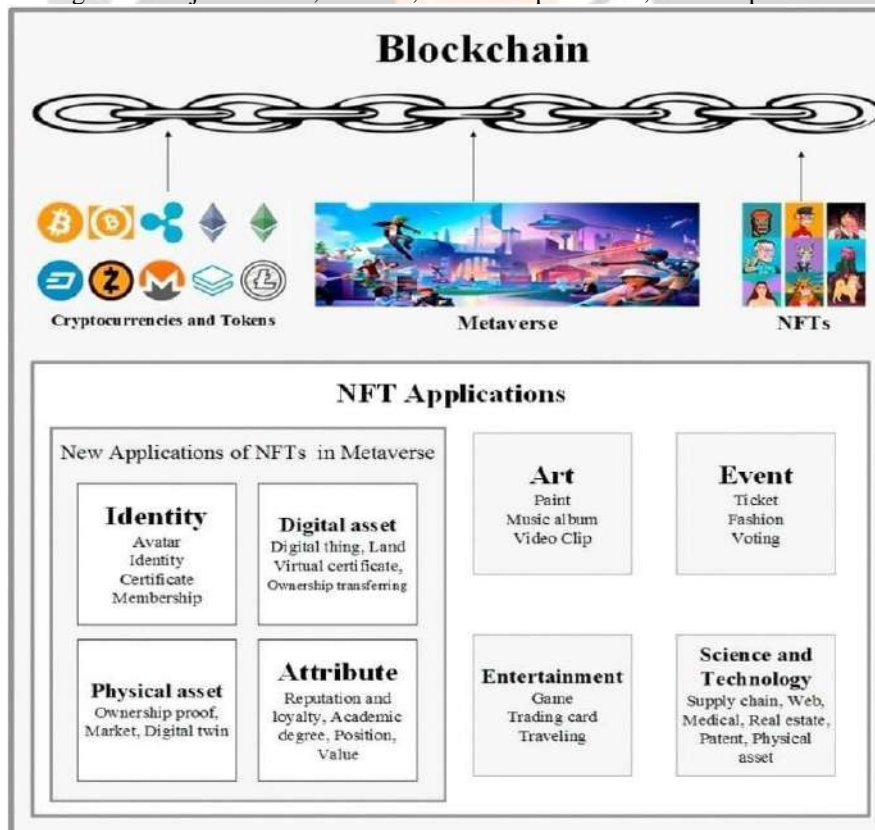


Fig. 1. General Applications of NFTs and New Applications in Metaverse

2. Technological Underpinnings of NFTs

Blockchain technology forms the foundation of NFTs, enabling decentralized ownership and immutable records. The use of blockchain ensures that NFTs cannot be duplicated or tampered with, providing a robust system for provenance and ownership verification. Additionally, NFTs can facilitate smart contracts, automating functions such as royalties and secondary sales for creators. This technological innovation has the potential to disrupt traditional art market intermediaries and provide artists with direct control over their work.

However, the reliance on blockchain technology for NFTs also raises concerns. The high energy consumption associated with Proof of Work blockchains, such as Ethereum, has drawn criticism for its environmental impact. Moreover, the scalability limitations and transaction fees on existing blockchain networks pose challenges for the widespread adoption and use of NFTs. Technological advancements and the exploration of alternative blockchains, like Proof of Stake, are necessary to address these issues and enhance the overall usability of NFTs.

Blockchain technology and its role in NFTs:

Blockchain technology underpins the entire ecosystem of NFTs, providing the infrastructure necessary for the creation, verification, and exchange of unique digital assets in a secure and transparent manner.

Smart contracts and their significance in NFT transactions:

Smart contracts are a foundational technology that enables secure, transparent, and automated transactions in the NFT ecosystem. They provide the infrastructure necessary for the creation, exchange, and management of digital assets, while offering greater efficiency, transparency, and security compared to traditional methods of transaction execution.

Interoperability and scalability challenges in NFT ecosystems:

The surge in NFT transactions has indeed exposed scalability issues on blockchain networks like Ethereum. This has resulted in slow confirmation times and high gas fees due to the increased competition for block space. Additionally, the energy consumption associated with Proof-of-Work (PoW) consensus mechanisms, notably on Ethereum, raises environmental concerns due to the computational resources required for transaction validation. Executing transactions on the main blockchain can become prohibitively expensive, particularly for smaller-scale NFT creators and buyers. The high gas fees associated with Ethereum transactions may deter participation and limit access to the NFT market for some users.

3. Economic Implications of NFTs

The advent of NFTs has created new avenues for monetizing digital assets, benefiting artists, creators, and collectors. Artists can tokenize their work and directly sell it to a global audience, eliminating the need for traditional galleries or intermediaries. Furthermore, NFTs enable creators to receive royalties in perpetuity, as smart contracts can be programmed to automatically distribute payments with each sale or transfer.

For collectors, NFTs provide a unique opportunity to own digital assets that were previously subject to unauthorized copying or distribution. The scarcity and authenticity conferred by NFTs enhance the value of these assets, attracting investment and speculation. However, the recent surge in NFT prices and the hype surrounding the market have raised concerns about potential financial risks and speculative bubbles. Regulations and guidelines are required to protect investors and ensure transparency in NFT transactions.

Market dynamics and trends in the NFT space:

NFTs revolutionize digital asset ownership and monetization, offering creators new revenue streams and investors diverse investment opportunities. Their authenticity and ownership verification enhance market liquidity and economic inclusion. The NFT market's speculative nature and environmental concerns prompt regulatory scrutiny and technological innovations. Despite challenges, the NFT space diversifies into gaming, collectibles, and intellectual property, fueled by celebrity endorsements and community growth, shaping a dynamic and evolving digital economy.

Pricing mechanisms and valuation models for NFTs:

Pricing mechanisms and valuation models for NFTs are complex and multifaceted, influenced by a combination of factors including scarcity, creator reputation, utility, market demand, and community engagement. As the NFT market matures and standardizes, more sophisticated pricing mechanisms and valuation models may emerge to better reflect the intrinsic value of digital assets in the NFT ecosystem.

Financial implications for creators, collectors, and platforms:

The financial implications for creators, collectors, and platforms in the NFT ecosystem encompass revenue generation, investment opportunities, brand building, social capital, and regulatory compliance. The NFT market continues to evolve and mature, stakeholders will need to adapt to changing market dynamics, regulatory frameworks, and technological innovations to capitalize on emerging opportunities and navigate potential challenges.

Risks and vulnerabilities associated with NFT investments:

Investing in NFTs entails inherent risks and vulnerabilities associated with market volatility, lack of regulation, illiquidity, technical vulnerabilities, legal and regulatory uncertainties, counterparty risk, environmental concerns, and valuation risks. Investors should conduct

thorough due diligence, exercise caution, and seek professional advice before engaging in NFT investments to mitigate potential risks and make informed investment decisions.

4. Sociocultural Impact of NFTs

The emergence of NFTs has sparked debates surrounding the concept of ownership and the definition of value in the digital realm. NFTs challenge traditional notions of exclusivity and authenticity by enabling the ownership of digital assets that can be easily replicated. This has implications for the future of digital art, as the distinction between originals and copies becomes blurred. Additionally, the commodification of social media content and memes through NFTs raises questions about the impact on internet culture and the inclusion of marginalized voices. The accessibility and inclusivity of NFTs remain a concern. The high transaction fees and energy consumption associated with existing blockchain networks limit access for artists and collectors from lower-income backgrounds. Addressing these barriers is essential to prevent the concentration of power and wealth within the NFT ecosystem and ensure equitable participation.

Transformation of digital ownership and property rights:

The transformation of digital ownership and property rights driven by blockchain and NFTs revolutionizes how individuals perceive, monetize, and transact with digital assets in the digital age. It reshapes traditional notions of ownership, democratizes access to valuable assets, and empowers individuals to assert greater control over their digital property rights.

Influence on art, gaming, and entertainment industries:

Blockchain technology and NFTs are reshaping the art, gaming, and entertainment industries by democratizing access to digital assets, empowering creators and players, enhancing fan engagement, and unlocking new revenue opportunities and business models. As the adoption of blockchain and NFTs continues to grow, their influence on these industries will likely accelerate, driving innovation and transformation in the digital economy.

Social and ethical considerations of NFT proliferation:

The proliferation of NFTs presents a complex interplay of social, ethical, and economic considerations that require thoughtful deliberation, responsible stewardship, and inclusive governance. Addressing the social and ethical implications of NFT proliferation necessitates collaborative efforts from stakeholders across multiple sectors, including technology, policy,

academia, and civil society, to promote transparency, accountability, and ethical behavior in the evolving digital landscape.

Environmental concerns related to NFTs and blockchain energy consumption: Environmental concerns related to NFTs and blockchain energy consumption underscore the need for sustainable practices, technological innovation, and collective action to address the environmental challenges associated with blockchain-based applications. Transitioning to energy-efficient consensus mechanisms and promoting eco-friendly initiatives are crucial steps towards mitigating the environmental impact of NFTs and fostering a more sustainable digital ecosystem.

5. Legal and Regulatory Framework for NFTs

The NFT market continues to evolve and attract greater attention from regulators, legal experts, and industry stakeholders, there may be further developments in the legal and regulatory framework governing NFTs. Market participants should stay informed about relevant laws, regulations, and best practices to navigate the legal and regulatory landscape effectively and mitigate potential legal risks associated with NFT transactions.

Intellectual property rights and copyright issues:

Intellectual property rights and copyright issues are significant considerations in the NFT ecosystem. Creators, platforms, and purchasers of NFTs must be mindful of copyright laws, licensing agreements, fair use principles, and digital rights management practices to ensure compliance with intellectual property regulations and respect for creators' rights in the digital marketplace.

Regulatory challenges and the need for legal clarity:

Regulatory challenges in the NFT space underscore the need for legal clarity, regulatory guidance, and industry collaboration to address key issues such as classification, consumer protection, market integrity, securities regulation, taxation, and cross-border compliance. Clear and consistent regulatory frameworks can foster investor confidence, promote market stability, and support innovation in the rapidly evolving NFT ecosystem.

International perspectives and the need for standardization:

International perspectives on NFTs underscore the importance of standardization to address regulatory, technical, and market challenges, promote interoperability, and foster trust and confidence in the global NFT ecosystem. Collaborative efforts among stakeholders, regulators, standardization bodies, and industry participants can drive the development of common standards, protocols, and best practices for NFTs, supporting innovation, growth, and inclusivity in the digital asset space.

6. Case Studies and Analysis

NCL's NFT Art

Norwegian Cruise Line (NCL) is an innovator in global cruise travel. The brand recently launched its [NFT art collection](#) to celebrate the launch of the Norwegian Prima Class. NCL intends to leverage the buzz surrounding NFTs, which they've done effectively.

Anheuser-Busch's NFT Beer Fest:

Anheuser-Busch — the American Brewing company — recently staged an #NFTBeerFest event at its flagship brewery for Budweiser NFT holders. Budweiser Heritage Can or Royalty Collection NFT purchasers reportedly [had access](#) to free beer, tours, giveaways, and entertainment at the occasion. NFTs also allow brands to refocus on community building and better reward their fans by providing exclusive content.

Pizza Hut's NFP:

Back in March 2021, Pizza Hut Canada launched '[1 Byte Favorites](#)' — the world's first non-fungible pizza (NFP). This collection was intended to get Canadians excited for Pizza Hut's \$10 favorites concept launch. The collection featured pixelated images of pizza slices in the form of 8-bit pieces.

Nike's CryptoKicks

The American brand Nike [patented shoes](#) as NFTs to mitigate counterfeit shoes and let consumers create digital sneakers. While this serves the primary purpose, Nike also reaped benefits in the name of **CryptoKicks** — the blockchain-compatible sneakers. Whenever a Nike enthusiast buys a genuine pair of shoes, a digital representation with a cryptographic token will accommodate the ownership details.

These case studies and analyses illustrate the diverse applications and use cases of NFTs across art, collectibles, gaming, virtual reality, and digital content. NFTs have emerged as a disruptive technology with the potential to revolutionize ownership, creativity, and commerce in the digital age, opening up new opportunities for creators, collectors, and investors in the decentralized economy.

7. Future Prospects and Challenges

Predictions for the future of NFTs and their applications:

The future of NFTs is characterized by innovation, expansion, and integration across diverse industries and applications. As technology evolves and the NFT ecosystem matures, NFTs will revolutionize ownership, creativity, and commerce in the digital economy, empowering individuals and communities to participate in the decentralized future of value exchange and ownership.

Potential innovations and developments in NFT technology:

The future of NFT technology is characterized by innovation, interoperability, scalability, programmability, governance, and sustainability. As the NFT ecosystem evolves and matures, new technologies, standards, and applications will emerge, driving the continued growth and adoption of NFTs in the digital economy.

Challenges and potential solutions for mainstream adoption:

Addressing challenges related to complexity, scalability, environmental sustainability, regulation, security, and awareness is essential for mainstream adoption of NFTs. By implementing user-friendly solutions, scalability improvements, sustainability initiatives, regulatory clarity, security measures, and educational efforts, the NFT ecosystem can overcome barriers to adoption and realize its full potential in the digital economy.

What are uses and examples of NFTs?

An early use of NFTs was a game launched in 2017 called CryptoKitties, in which users could trade and sell virtual kittens. In 2021, NFTs that sparked attention included Twitter CEO Jack Dorsey's first-ever tweet and work by Beeple, the professional name used by artist Mike Winkelmann, who sold his piece "Everydays: the First 5000 Days" for \$69 million.

NFTs are being used to sell a range of virtual collectibles and assets, including the following:

- National Basketball Association virtual trading cards.
- Digital sneakers from Nike.
- Trading cards featuring personal memorabilia from actor William Shatner.
- A full studio album by rock band Kings of Leon.
- The original Nyan Cat meme.
- Collectible virtual characters called CryptoPunks.
- A variety of GIFs and images commissioned by Taco Bell, with proceeds going toward the restaurant chain's charity organization.
- Virtual real estate in Decentraland, a 3D virtual reality (VR) platform.
- Tokenized real-world assets, such as real estate.

Today, the primary owners and collectors of NFTs are enthusiasts with a strong interest in a domain or project. However, NFTs are expected to become mainstream and attract retail investors eventually as the products and technology improve.

8. Conclusion

In conclusion, NFTs present significant technological, economic, and sociocultural implications. While their potential for revolutionizing ownership and monetization of digital assets is promising, challenges such as environmental impact, scalability, financial risks, and inclusivity must be addressed. A balanced approach that considers the benefits and consequences of NFT adoption is essential to navigate this rapidly evolving landscape and unlock its full potential while mitigating potential risks.

Summary of key findings and insights:

NFTs and blockchain technology can be complex for mainstream users, necessitating user-friendly interfaces and educational resources to improve accessibility. Scalability limitations and high transaction costs on blockchain networks hinder mainstream adoption, requiring scalability solutions and optimization of gas fees to enhance efficiency.

Recommendations for policymakers, industry stakeholders, and researchers:

Policymakers, industry stakeholders, and researchers can contribute to the development of a vibrant, inclusive, and sustainable ecosystem for NFTs, unlocking new opportunities for creativity, commerce, and innovation in the digital economy. Educational initiatives, community outreach programs, and awareness campaigns are needed to raise awareness about NFTs and promote broader adoption among diverse audiences.

Areas for further research and exploration in the field of NFTs:

Further research in NFTs spans economic impacts, exploring market trends and valuation models, while also delving into social and cultural implications, including digital ownership and identity. Technological innovations in blockchain scalability and sustainability initiatives are vital, alongside investigations into regulatory frameworks and legal challenges. Understanding user experience and adoption patterns, along with interdisciplinary collaboration, will illuminate the multifaceted nature of NFTs, guiding the future of digital ownership and commerce.

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A Perspective on Silicosis in Industry in Context of Clean Environment

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Abstract

Living in a healthy environment is a basic human need and is preferred by all. A healthy atmosphere is a gift from nature. For all living things to exist, air, water, and land are necessary. This is a very sensitive matter that calls for a more thoughtful approach and a selfless mindset. This essay emphasises the value of a healthy environment within the framework of the right to life, which is a fundamental assurance for the advancement of the individual, the community, and the country.

For many years, silicosis has been one of the most significant occupational public health issues in the world. Employees who experience symptoms often choose to ignore their conditions and carry on working in dusty environments because they are unaware of the significant health risks and have low incomes. The employees must be transferred to a different position in the same factory where they won't be exposed to silica dust in order to prevent any more dust exposure. Exposure to silica dust and its associated health effects are entirely avoidable, and the advantages of prevention far exceed those of treating silicosis patients.

Key Words : Environment, Clean Environment, Silicosis, Silica, Mines

Introduction

Environmental issues are no longer only perceived as pollution affecting developed nations; rather, they are perceived as a global threat that endangers not just the planet but also all of humanity, including future generations. The advancement in our understanding of the phenomena that endanger the planet, jeopardise human well-being, and violate fundamental rights is evidence of the global nature of environmental problems. These phenomena affect not only the natural resources (desertification, deforestation, soil erosion, disappearance of certain species, deterioration of flora and fauna, exhaustion of non-renewable resources, etc.) and the natural environment (pollution of water, air, and atmosphere, seas, oceans, and rivers; depletion of the ozone layer; climatic changes) but also the population and human settlements (housing, town planning, demography, etc.) and human rights (the human environment, living, working, and health conditions; conditions for their exercise and the enjoyment of fundamental rights). It is now feasible to transition from environmental law to environmental rights, as stated by the Stockholm Declaration of 1972, by using a global approach to these phenomena that considers their multifaceted aspects, including their human aspects. People were not as aware of the negative effects of environmental damage when the UDHR was formed in 1948. The countries' main concerns were economic growth and industrialization.

The growing support for the right to a healthy environment is indicative of the recognition of the environmental dimension of human rights. Since 1968, an increasing number of international declarations and statements have specifically acknowledged the fundamental link between environmental protection and respect for human rights.

There are several studies that list these constitutional clauses. In general, they show that environmental human rights are included in legal traditions beyond national constitutions.

Hurdle of Silicosis in Clean Environment

The construction sector is essential to a country's economic expansion and is a key component of its development strategies. About 32 million people are employed in India's construction sector, which has a market capitalization of approximately Rs. 248,000 crores. After the agricultural sector, it is the second largest contributor to the GDP. Significant employment is produced by it, and other manufacturing sectors such as cement, bitumen, iron and steel, chemicals, bricks, paints, tiles, etc., with a combined yearly value of Rs. 192,000 crores, benefit from its growth impetus. Today's construction industry is a vortex of opportunities and technological advancements that move very quickly. The urgent need for infrastructure development makes it essential. An infrastructure's state of development is indicative of a nation. One could argue that the building sector serves as the infrastructure sector's infrastructure.

This article addresses the prevalence of silicosis among construction industry workers in this nation and provides strategies for mitigating its effects. Inhaling airborne crystalline silica and being exposed to dust at work can lead to silicosis, a debilitating lung disease. If materials with even trace amounts of crystalline silica are used in ways that result in high dust concentrations, they could be dangerous. Depending on how long an individual is exposed to the disease, silicosis can progress and frequently be fatal. There is a lack of precise documentation regarding the extent of this issue in terms of illnesses and deaths. However, among those employed in the construction industry, it is a leading cause of illness, death, and missed work.

Silica

Minerals classified as silica have the general formula SiO_2 , which is a combination of silicon and oxygen. It can be combined, meaning that SiO_2 is chemically combined with another atom or molecule, or free, meaning that only SiO_2 is present. It is crucial to understand the distinction because free silica is the only source of the silica issue. The main ingredients of crystalline silica are quartz, granite, and sand.

There are two types of free silica: crystalline-free silica, which has five main forms, and amorphous-free silica, which has numerous forms. Both crystalline-free and amorphous silica are present in some materials. Only crystalline-free silica is linked to diseases related to silica. Sands from beaches and banks are the most prevalent sources of silica that lacks crystals. Fused silica, which can be made by heating either the amorphous or crystalline forms, is a third type of free silica. Tridymite and cristobalite are two more forms.

In terms of geology, quartz—a major form of silica—is the second most prevalent mineral in the crust of the earth. It is easy to find quartz in igneous and sedimentary rocks. The percentage of quartz in various types of rock can vary; for instance, the percentage of quartz in granite can range from 10 to 40 percent; the average quartz content of shales has been reported to be 22 percent; and the average quartz content of sandstones is 70 percent.

Silicosis

One of the earliest occupational diseases in history, silicosis dates back to ancient Greece. ever since the 1800s. The terms consumption, ganister disease, grinders' asthma, grinders' dust consumption, grinders' rot, masons' disease, miner's asthma, miner's phthisis, potters' rot, sewer disease, stonemason's disease, chalicosis, and shistosis are used to refer to various health issues linked to exposure to crystalline silica dust.

When silica dust is inhaled, the body reacts by producing silica toxicity (silicosis). The innermost layers, or alveoli, or air sacs, are where the exchange of carbon dioxide and oxygen takes place. The respirable fraction of the dust, which is generally defined as particles smaller than five millionth of a metre, can reach these depths. Crystalline silica is inhaled by workers and settles on the alveoli, where macrophages, which are white blood cells, attempt to remove it. Nevertheless, the macrophages rupture due to the free crystalline silica particles. In response, the lung tissues scar and form fibrotic nodules around the silica particles that have become trapped.

The formation of numerous "scars" after extended exposure results in a decrease in the elasticity of the alveolar surface. This manifests as dyspnea after physical activity. It is rare for symptoms to appear in less than five years, and in many situations, it may take longer than two years for them to become incapacitating or fatal.

Freshly fractured silica sand (sawed, hammered, or treated in a way that produces airborne dust) may cause a worker's lungs to react more severely. This element could play a role in the emergence of

accelerated and acute silicosis.

Factors Influencing the Development of Silicosis

A number of factors influence the development of silicosis, including:

- Form of the silica
- Content of crystalline-free silica in the dust
- Amount and kind of dust inhaled
- Relative size of the inhaled particles
- Length of exposure
- Individual resistance
- Smoking habits
- Disease status
- Age

Types of Silicosis

Depending on the amount of airborne silica, workers may contract any one of three forms of silicosis:

- Chronic silicosis usually develops after ten or more years of exposure to relatively low concentrations of crystalline silica.
- Fast-tracked silicosis, arising from prolonged exposure to elevated levels of crystalline silica, manifests five to ten years following the primary exposure.

Acute silicosis can manifest symptoms anywhere from a few weeks to four or five years after the initial exposure and happens where exposure concentrations are highest.

Symptoms and Effects of Silicosis

The disease may not be noticed in its early stages. Prolonged exposure can lead to dyspnea during physical exertion, potential fever, and infrequently, blueish patches on the lips or earlobes. A person with silicosis is more vulnerable to infectious lung diseases like tuberculosis. As silicosis progresses, symptoms include exhaustion, severe dyspnea, appetite loss, chest pains, and respiratory failure, which can be fatal.

According to medical examinations, silica crystals and a protein substance are typically found in the lungs of silicosis patients. Depending on how long it takes between exposure and the onset of symptoms, pulmonary fibrosis—fibrous tissue in the lung may or may not develop in acute cases of silicosis. Moreover, there is evidence suggesting that crystalline silica may be carcinogenic at work.

Diagnosis of Silicosis

Silica dust exposure at work is disclosed in the patient's medical history. In cases of simple silicosis, the physical examination is normal. However, in cases of chronic silicosis with conglomerate lesions, it may show signs of tachypnea, fine to medium crackles, areas of hyporesonance and hyperresonance, and decreased chest expansion.

The hilar lung nodes may be enlarged and show "eggshell" calcification; chest X-rays in simple silicosis typically show small, discrete, nodular lesions distributed throughout both lung fields but usually concentrated in the upper lung zones. X-rays reveal one or more conglomerate masses of dense tissue in cases of complicated silicosis.

The majority of silicosis diagnoses are made using subjective testing and imaging. These are frequently misdiagnosed since several other illnesses, such as military tuberculosis, can also resemble such an x-ray image. Moreover, alterations in lung function are not particularly diagnostic.

Research on particular biochemical markers for early illness detection is still ongoing. The industry and occupational health specialists in our nation have not yet fully surmounted this challenge, which is compounded by the logistics of radiological examination and interpretation.

Prevalence of Silicosis in India

There have been reports of cases of silicosis among construction and mining workers in Gujarat, Rajasthan, Pondicherry, Haryana, Uttar Pradesh, and Bihar, India. The prevalence of silicosis varies from 5.2% to 35.0% depending on the sector of the construction industry, according to data from published studies.

In the Indian context, information about the number of diagnosed cases, subjects who received compensation in accordance with the Factories Act, those at risk, and industry-specific details of cases and those at high risk is simply unavailable. Therefore, it is a serious issue that requires immediate attention.

NGOs and labour activists have brought attention to the issue on numerous occasions. Stone quarrying in Lal Quana, close to Delhi, glass factories in Pondicherry, stone cutting in Madhya Pradesh, stone and limestone mines in Rajasthan, etc., are a few of the significant areas highlighted in relation to the construction industries. The National Human Rights Commission has also taken action to guarantee that victims receive justice, that the industry takes steps to stop the disease from spreading, and that it offers appropriate relief and compensation to its employees.

The Constitution of India and Clean Environment

Regarding the category of fundamental rights, the most important one is the "right of life," which is protected by Article 21 of the Indian Constitution and which the document states cannot be taken away unless a court order is followed. We do have a very special feature in the Indian Constitution called the right to constitutional remedies to protect this right and other fundamental rights. The supreme court may issue writs of mandamus, certiorari, prohibition, or quo warranto in a proper proceeding, as well as any other directive, order, or writ for the enforcement of fundamental rights, according to Article 32 of the constitution. Article 226 of the Constitution gives the High Courts the same authority. By using this judicial review power, the courts are able to determine whether any state agency, instrumentality, or organ has overreached its authority and to make sure that the government and public officials uphold the laws that govern their existence and operations as well as the obligations outlined in the Constitution.

The Indian Constitution includes a Chapter on Directive Principles of State Policy in addition to the Chapter on Fundamental Rights. This chapter emphasises, in a more simplified version of the preamble, that the objective of Indian politics is not laissez-faire but rather a welfare state, in which the state has a proactive duty to guarantee social and economic justice as well as individual dignity.

"The State should strive to protect and improve the environment as well as to safeguard forests and wildlife," states Article 48A of the Directive Principles. Furthermore, every Indian citizen has an obligation to preserve and enhance the natural environment, according to Article 51A(g) of Part IV-A of the Fundamental Duties. Living entails having human dignity, but all civil, political, social, and economic rights are meaningless if one cannot breathe clean air, drink safe water, or eat healthfully. Owing to the horrifying state of environmental pollution in our nation, the Supreme Court honed its tactics in the middle of the 1980s and early 1990s by toying with the notion of 'locus standi' and discarding all formal procedural rules in an effort to ease the suffering of those affected by pollution through Public Interest Litigation (PIL). The courts have interpreted Article 21 of the Constitution, which guarantees the right to life, to include all fundamental rights that are necessary to enjoy a high standard of living free from environmental contamination and other risks to one's health and safety.

Conclusion

Man is not meant to live in solitude. His basic psychology is one of dependency; people rely on the State overall as well as on each other. According to Ernest Barker, a state has an organism-like collective

existence. Therefore, the achievement of the shared goal depends on each person carrying out his or her responsibilities and functions correctly. Each and every citizen owes social duties to the society that comprises him, his family, his neighbours, and himself. Therefore, based on the discussion above, we can state that "if the sacredness of this claim is not accepted, human life would be nowhere. Since life is the essence of humanity, it is therefore the most fundamental of all rights. It denotes a declaration that one's life does not endanger the lives of others. Individuals bear responsibility alone; the state plays a larger role as a partner in protecting the environment and upholding the right to life with dignity. In order for each nation to contribute to the achievement of these shared long-term objectives, it is imperative that an international framework be established. Economic development and environmental conservation should coexist. Only when consumption standards worldwide take long-term sustainability into consideration can living standards above the basic minimum be considered sustainable. By adopting sustainable development paths that would result in a large reduction in greenhouse gas emissions, promoting aggressive research on environmentally sustainable technologies, transferring such technologies to developing countries, and making significant investments in climate-friendly technologies in developing countries, industrialised countries have an obligation to lead developing countries. A mechanism for reporting and monitoring should be in place to offer a repository for data regarding adherence to generally recognised norms, along with an ongoing, open endeavour.

For the nation's construction workers, respirable crystalline silica exposure at work poses a major but avoidable health risk. Each year, an undetermined number of worker fatalities from silicosis and other silica-related illnesses like scleroderma, lung cancer, and pulmonary tuberculosis (TB) go unreported or undiagnosed.

The Planning Commission, the Government of India, and the Indian construction industry came together to form the Construction Industry Development Council (CIDC) (14). For the first time in the nation, the Council offers the organisational framework and the motivation to improve industry-wide standards of quality. This would contribute to the government, industry, and social groups' broader understanding of the interests of the construction industry. In order to help the Indian construction industry meet the challenges of the future, CIDC aims to be a change agent by starting and accelerating a process of self-reform. In addition to handling the technical, social, and economic concerns, CIDC may serve as a focal point for the prevention and management of illnesses linked to silica exposure among its employees.

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Beyond Traditional (Social Media) Education and Learning

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पराम्परागत से परे (सोशल मीडिया) शिक्षा और अधिगम

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शिक्षा से हमारा अभिप्राय केवल संख्याओं, आंकड़ों, इतिहास, भूगोल, विज्ञान आदि के ज्ञान से संबंधित नहीं है। बल्कि सच्ची शिक्षा वो है, जो हमारे मस्तिष्क के अन्दर एक स्वस्थ मानसिकता को जन्म दे। शिक्षा वही सफल है जो हमें जीवन जीने की कला सीखाए और हमें सत्य और असत्य के मध्य अन्तर करना सीखाए। जिससे हम जीवन में आने वाली जटिल से जटिल समस्याओं का समाधान स्वयं खोज पायें।

अधिगम प्रक्रिया का संबंध सीखने की प्रक्रिया से माना जाता है। मनुष्य में सीखने की प्रवृत्ति स्वाभाविक रूप से विद्यमान होती है। बालक के सीखने में महत्वपूर्ण सहायक तत्व उसका परिवार, सहपाठी, शिक्षक, पाठ्यक्रम, वातावरण, बौद्धिक स्तर, मानसिक स्तर आदि होते हैं। जैसा शिक्षक शिक्षण कराएगा, जिस विधि से पढ़ाएगा, जैसा वातावरण बच्चों को मिलेगा, जैसा उसका परिवार व सहपाठी होंगे वैसा ही वह सीखेगा। अर्थात् वातावरण व संगति के द्वारा बालक बहुत कुछ सीखता है। इसका एक उदाहरण अभी कुछ दिनों पहले ही समाचार पत्र द्वारा ज्ञात हुआ की 4 साल के बच्चे ने मोबाइल के माध्यम से जापानी एवं चीनी भाषा बोलना स्वतः सीख लिया अधिगम को शिक्षा मनोविज्ञान का दिल कहा गया है। क्योंकि सामान्य तौर पर मनोवैज्ञानिक प्रक्रियाएं मनुष्य के प्रारंभिक जीवन से उसके साथ रहती है और समय की अनुकूल और प्रतिकूल परिस्थितियों के अनुसार बदलती रहती है। अधिगम एक बहुत ही महत्वपूर्ण मनोवैज्ञानिक प्रक्रिया है जो एक व्यक्ति को जीवन की शुरुआत से लेकर मृत्यु तक प्रभावित करती है जिससे वह सामाजिक व्यवहार, कौशल, ज्ञान और परिस्थिति का विकास करता है।

ऐसी कोई करें पढ़ाई, जिससे कोई ना जी चुराए।

नई-नई हो बातें उसमें, सारी बातें मन को भाए।

बोझ हमें क्यों लगे पढ़ाई, मन कभी भी टिक ना पाए।

कितना कुछ भी याद करें हम, फुर्र से गायब हो जाए।

दे कोई ऐसा ज्ञान हमें भी, मन की गांठे खुलती जाए।

जिज्ञासा हो शांत सभी की, भीतर का तम मिटता जाए।

मिलकर ऐसी करें पढ़ाई, सबका मन ललचाता जाए।

फिर कुछ करेंगे जग की खातिर, सबका घर रोशन हो जाए।

शिक्षा में सोशल मीडिया को शामिल करने का सबसे महत्वपूर्ण लाभ इसकी छात्र सहभागिता बढ़ाने की क्षमता है। पारंपरिक शिक्षण पद्धतियाँ अक्सर छात्रों का ध्यान आकर्षित करने और बनाए रखने में संघर्ष करती हैं, जिससे छात्रों का जुड़ाव और प्रेरणा की कमी होती है। हालाँकि, सोशल मीडिया प्लेटफॉर्म अधिक इंटरैक्टिव और गतिशील शिक्षण वातावरण प्रदान करते हैं जो आज के डिजिटल-देशी छात्रों के साथ मेल खाता है। उदाहरण के लिए, शिक्षक सोशल मीडिया का उपयोग पोल, क्विज और इंटरैक्टिव चर्चाएँ बनाने के लिए कर सकते हैं जो सक्रिय भागीदारी को प्रोत्साहित करते हैं। यह न

केवल सीखने को अधिक मनोरंजक और आकर्षक बनाता है बल्कि शिक्षकों और छात्रों दोनों को मूल्यवान प्रतिक्रिया भी प्रदान करता है। इसके अलावा, सोशल मीडिया प्लेटफॉर्म तत्काल और निरंतर संचार की अनुमति देते हैं, जिससे शिक्षक अपने छात्रों को समय पर सहायता और मार्गदर्शन प्रदान कर पाते हैं। यह वास्तविक समय की प्रतिक्रिया न केवल सीखने के अनुभव को बढ़ाती है बल्कि कक्षा में जुड़ाव और अपनेपन की भावना को भी बढ़ावा देती है।

सोशल मीडिया प्लेटफॉर्म शिक्षकों, छात्रों और अभिभावकों के बीच संचार का एक सुविधाजनक और कुशल साधन प्रदान करते हैं। केवल ईमेल या फिजिकल मीटिंग पर निर्भर रहने के बजाय, शिक्षक अपने छात्रों को अपडेट, रिमाइंडर और असाइनमेंट भेजने के लिए व्हाट्सएप या गूगल क्लासरूम जैसे प्लेटफॉर्म का उपयोग कर सकते हैं। इसके अतिरिक्त, माता-पिता स्कूल से संबंधित सोशल मीडिया खातों का अनुसरण करके या ऑनलाइन अभिभावक-शिक्षक समूहों में भाग लेकर अपने बच्चे की प्रगति के बारे में सूचित रह सकते हैं और उनकी शिक्षा में संलग्न हो सकते हैं। सहयोग और संचार के लिए सोशल मीडिया की शक्ति का लाभ उठाकर, शिक्षक एक अधिक समावेशी और कनेक्टेड शिक्षण वातावरण बना सकते हैं जो छात्रों को डिजिटल युग के लिए तैयार करता है।

इसके अलावा, सोशल मीडिया का उपयोग छात्रों की रचनात्मकता और आत्म-अभिव्यक्ति को बढ़ावा देने के लिए किया जा सकता है। इंस्टाग्राम और टिकटॉक जैसे प्लेटफॉर्म छात्रों को अपनी प्रतिभा दिखाने, अपनी कलाकृति साझा करने या अपने विचारों को आकर्षक तरीके से प्रस्तुत करने का माध्यम प्रदान करते हैं। इससे न केवल उनका आत्मविश्वास बढ़ता है बल्कि उन्हें आलोचनात्मक और रचनात्मक ढंग से सोचने के लिए भी प्रोत्साहन मिलता है। सोशल मीडिया को पाठ्यक्रम में शामिल करके, शिक्षक डिजिटल मीडिया के प्रति छात्रों के स्वाभाविक झुकाव का लाभ उठा सकते हैं और उनके शैक्षणिक विकास को बढ़ावा देने के लिए इसका लाभ उठा सकते हैं।

कई केस अध्ययनों ने विभिन्न ग्रेड स्तरों और विषयों में शिक्षा में सोशल मीडिया के सफल एकीकरण का प्रदर्शन किया है। उदाहरण के लिए, कैलिफोर्निया विश्वविद्यालय, बर्कले के शोधकर्ताओं द्वारा किए गए एक अध्ययन में पाया गया कि ट्विटर और ब्लॉग जैसे सोशल मीडिया प्लेटफॉर्मों को कॉलेज स्तर की अंग्रेजी कक्षा में शामिल करने से छात्रों की आलोचनात्मक सोच और लेखन कौशल में सुधार हुआ। इन प्लेटफॉर्मों की संवादात्मक प्रकृति ने छात्रों को सार्थक चर्चाओं में शामिल होने और साथियों और प्रशिक्षक दोनों से प्रतिक्रिया प्राप्त करने की अनुमति दी। हाई स्कूल विज्ञान कक्षा में आयोजित एक अन्य मामले के अध्ययन में, शिक्षकों ने विज्ञान से संबंधित लेख, वीडियो और समाचार अपडेट साझा करने के लिए सोशल मीडिया प्लेटफॉर्मों का उपयोग किया। इससे न केवल छात्रों की रुचि बढ़ी बल्कि उन्हें वैज्ञानिक धारणाओं की समझ मिली, सहपाठियों के साथ सहयोग, उपलब्धि स्तर में बढ़ोतरी तथा विचारों व दृष्टिकोणों को वैश्विक आदान-प्रदान की अनुमति मिली।

हालाँकि, यह ध्यान रखना महत्वपूर्ण है कि सफल कार्यान्वयन के लिए सावधानीपूर्वक योजना, प्रशिक्षण और निगरानी की आवश्यकता होती है ताकि यह सुनिश्चित किया जा सके कि सोशल मीडिया का उपयोग प्रभावी ढंग से और जिम्मेदारी से किया जाए।

सोशल मीडिया को कक्षा में एकीकृत करने के लिए युक्तियाँ

सोशल मीडिया को कक्षा में एकीकृत करने के लिए विचारशील योजना और विचार की आवश्यकता है। शिक्षकों को अपनी शिक्षण पद्धतियों में सोशल मीडिया को सफलतापूर्वक शामिल करने में मदद करने के लिए यहां कुछ सुझाव दिए गए हैं:-

1 स्पष्ट उद्देश्य निर्धारित करें – विशिष्ट शिक्षण लक्ष्य और परिणाम निर्धारित करें जिन्हें हम सोशल मीडिया के उपयोग के माध्यम से प्राप्त करना चाहते हैं। यह हमारे प्लेटफॉर्म और गतिविधियों के चयन में मार्गदर्शन करेगा।

2 उपयुक्त प्लेटफॉर्म चुनें – ऐसे सोशल मीडिया प्लेटफॉर्म चुनें जो हमारे उद्देश्यों के अनुरूप हों और भी छात्रों की उम्र और जरूरतों के लिए उपयुक्त हों। गोपनीयता नियंत्रण, उपयोग में आसानी और पहुंच जैसे कारकों पर विचार करना चाहिए।

3 दिशानिर्देश और अपेक्षाएं स्थापित करें – कक्षा में सोशल मीडिया के जिम्मेदार और उचित उपयोग के लिए स्पष्ट दिशानिर्देश बनाएं। सुरक्षित और सम्मानजनक शिक्षण वातावरण सुनिश्चित करने के लिए छात्रों, अभिभावकों और अन्य हितधारकों को इन दिशानिर्देशों के बारे में बताना चाहिए।

4 प्रशिक्षण और सहायता प्रदान करें – छात्रों और शिक्षकों को शैक्षिक उद्देश्यों के लिए सोशल मीडिया प्लेटफॉर्म का उपयोग करने में कुशल बनने में मदद करने के लिए प्रशिक्षण सत्र या संसाधन प्रदान करें। इससे यह सुनिश्चित होगा कि हर कोई इन उपकरणों का प्रभावी ढंग से उपयोग करने में आश्वस्त और सक्षम महसूस करे।

5 माता-पिता की भागीदारी को प्रोत्साहित करें – माता-पिता को शिक्षा में सोशल मीडिया के उपयोग के लाभों और संभावित जोखिमों के बारे में शिक्षित करें। संसाधन प्रदान करके, सूचनात्मक सत्र आयोजित करके, या ऑनलाइन अभिभावक समुदाय बनाकर उन्हें इस प्रक्रिया में शामिल करना चाहिए।

इन युक्तियों का पालन करके, शिक्षक अपने छात्रों के लिए आकर्षक और सार्थक सीखने के अनुभव बनाने के लिए सोशल मीडिया की शक्ति का उपयोग कर सकते हैं।

शिक्षा में सोशल मीडिया का उपयोग करने की सर्वोत्तम प्रथाएँ

शिक्षा में सोशल मीडिया के लाभों को अधिकतम करने के लिए, शिक्षकों को निम्नलिखित सर्वोत्तम प्रथाओं का पालन करना चाहिए –

- 1 ऑनलाइन शिक्षण वातावरण बनाए, जो सम्मान, सहानुभूति और सकारात्मक डिजिटल संस्कृति को बढ़ावा दें।
- 2 ऐसी गतिविधियों का आयोजन करें जिसमें ऑनलाइन चर्चा में सक्रिय सहयोग ले, प्रश्न पूछें और समूह में कार्य करें।
- 3 छात्रों को सोशल मीडिया पर फीडबैक प्रदान करें। त्वरित प्रतिक्रिया सीखने में सहायता के साथ-साथ शिक्षक छात्र संबंधों में मजबूती भी लाती है।
- 4 सीखने के अनुभवों को बढ़ाने हेतु छात्रों को विडियो, इन्फोग्राफिक्स आदि बनाने व साझा करने हेतु प्रेरित करें जिससे विषय वस्तु की समझ प्रदर्शित हो सके।
- 5 छात्र सहभागिता की प्रगति की नियमित रूप से निगरानी भी की जानी चाहिए।

शैक्षिक उद्देश्यों के लिए सोशल मीडिया प्लेटफॉर्म

ऐसे कई सोशल मीडिया प्लेटफॉर्म हैं जिनका उपयोग शैक्षिक उद्देश्यों के लिए किया जा सकता है, प्रत्येक की अपनी अनूठी विशेषताएँ और लाभ हैं। जिसमें –

- 1 **फेसबुक** – ऑनलाइन समुदाय, चर्चा, लाइव विडियो आदि की सुविधा।
- 2 **ट्विटर** – समाचार लेख, लघु संदेश, शैक्षिक चैन आदि हेतु।
- 3 **इंस्टाग्राम** – अपने काम को प्रदर्शित करने एवं रचनात्मकता को बढ़ावा देने हेतु।
- 4 **यूट्यूब** – वृत्तचित्र, ट्यूटोरियल, शैक्षिक विडियो, लाइव कक्षा हेतु।
- 5 **लिंकडइन** – करियर से संबंधित संसाधनों को साझा करने हेतु।

ये सोशल मीडिया प्लेटफॉर्म के कुछ उदाहरण हैं जिनका उपयोग शैक्षिक उद्देश्यों के लिए किया जा सकता है। शिक्षकों को अपने उद्देश्यों, लक्षित दर्शकों और वांछित कार्यक्षमताओं के आधार पर प्लेटफॉर्मों का चयन करना चाहिए।

अधिगम इस मान्यता पर आधारित है कि बच्चे सीखते कैसे हैं ? बच्चा घर पर चीजों, वस्तुओं के साथ खेलता है, प्रयोग करता है, जोड़-तोड़ करता है, अवलोकन करता है, अनुभवों को अपनी कसौटी पर कसकर देखता है और आगे चलकर इन्हीं क्रियाकलापों के साथ वह कक्षा में प्रवेश करता है। इसीलिए रचनात्मकता को बढ़ाने के लिए बच्चे के घरेलू (बाहरी) परिवेश को कक्षा में जोड़कर पढ़ाना नितान्त आवश्यक है। राष्ट्रीय पाठ्यचर्या की रूपरेखा-2005 में भी बच्चे की कक्षा को बाहरी परिवेश से जोड़ने की मंशा व्यक्त की गई है। सही मायने में बच्चा ही ज्ञान का वास्तविक सृजक होता है, वह पूर्व में प्राप्त प्रत्यक्ष अनुभवों या घटनाओं को नई परिस्थितियों में कसकर देखता है, परीक्षण करता है तथा बाहरी परिवेश से जोड़कर एक नए ज्ञान का सृजन करता है। वैसे भी सीखना हमेशा स्थानीय से वैश्विक होता है कोई भी बच्चा चाहे वह कम बुद्धि वाला ही क्यों न प्रतीत होता हो उसके पास भी कक्षा में बांटने के लिए कुछ न कुछ अनुभव जरूर होते हैं। बच्चे बहुत सारे खेल, गतिविधियाँ, अनुभव, कहानी, कविता, फिल्म, ऑनलाइन गेम्स, एनिमेशन, गाने एवं कार्टून आदि को घर पर तथा विभिन्न ऑनलाइन प्लेटफॉर्म के माध्यम से सीखते एवं खेलते ही रहते हैं, एक तरह से यह उनके जीवन का नियमित हिस्सा हैं। यही गतिविधियाँ या क्रियाकलाप भविष्य में रचनात्मकता के स्तम्भ सिद्ध होते हैं। इसलिए आज आवश्यकता इस बात की है कि वास्तविक एवं डिजिटल माध्यम से प्राप्त अनुभवों को कक्षा में जोड़कर पढ़ाया जाए ताकि अधिगम को सरल, सुगम, बोधगम्य एवं रचनात्मक बनाया जा सके।

शिक्षा में सोशल मीडिया का एक प्रमुख लाभ संचार और सहयोग को सुविधाजनक बनाने की इसकी क्षमता है। पारंपरिक कक्षा व्यवस्था अक्सर छात्रों को विद्यालय के समय के बाद अपने साथियों के साथ जुड़ने व संलग्न होने की क्षमता को सीमित कर देती है। सोशल मीडिया के द्वारा बालक फेसबुक, ट्विटर और इंस्टाग्राम जैसे प्लेटफार्म पर आसानी से अपना समूह बना सकते हैं, विचार साझा कर सकते हैं और एक दूसरे का सहयोग कर सकते हैं। यह न केवल उनके सीखने के अनुभव को बढ़ाता है बल्कि उनके आधुनिक कार्य बल की सहयोगी प्रवृत्ति के लिए भी तैयार करता है। सक्रिय सीखने के लिए सोशल मीडिया एक मंच प्रदान करता है निष्क्रिय रूप से जानकारी का उपयोग करने के बजाय छात्र चर्चा बहस और अंतः क्रिया आदि में संलग्न हो सकते हैं, जो महत्वपूर्ण सोच और समस्या समाधान कौशल को बढ़ावा देते हैं। शिक्षक केंद्रित दृष्टिकोण से छात्र के केंद्रित दृष्टिकोण में यह बदलाव सक्रिय भागीदारी को प्रोत्साहित करता है और छात्रों को अपने सीखने का स्वामित्व लेने के लिए सशक्त बनाता है। शिक्षा में सोशल मीडिया वैश्विक जुड़ाव को बढ़ावा देता है। बस कुछ ही क्लिक के साथ छात्र दुनिया भर के साथियों, विशेषज्ञ और शिक्षकों से जुड़ सकते हैं। यह न केवल उन्हें विविध दृष्टिकोणों और संस्कृतियों से अवगत कराता है बल्कि सहानुभूति, सहिष्णुता और समझ को भी बढ़ावा देता है। आभासी आदान-प्रदान और सहयोगी परियोजनाओं के माध्यम से छात्र उस वैश्वीकृत दुनिया के लिए मूल्यवान कौशल प्राप्त करते हैं जिसमें वे स्नातक स्तर पर प्रवेश करेंगे

जब समाज कोविड-19 महामारी से जूझ रहा था तब शिक्षण अधिगम का दारोमदार मीडिया के ऊपर ही आ गया था। कोरोना कल में शिक्षक गतिविधियों पर एक तरह से विराम लग गया था। ऑनलाइन शिक्षण ने नए रास्ते खोले थे। इस विपरीत समय में यदि यह सहारा ना मिला होता तो निश्चित रूप से करोड़ों विद्यार्थी शिक्षा से वंचित हो जाते, उनकी पढ़ाई बीच में ही छूट जाती तथा उनका उपलब्धि स्तर भी प्रभावित होता।

सोशल मीडिया छात्रों के लिए उपयोगी है इसके द्वारा –

1. जल्दी सीखते हैं।
2. विभिन्न विषयों पर व्यापक दृष्टिकोण बनता है।
3. विषय विशेषज्ञों से जानकारी प्राप्त होती है।
4. शोध हेतु सामग्री भी उपलब्ध होती है।
5. सार्वभौमिक पहुंच।
6. जानकारी का भंडारण।
7. कोई भौतिक बाधा नहीं।
8. परिणाम फलदायी होते हैं।
9. अपनी प्रतिभा को उजागर करने का जरिया है।
10. सामाजिक जागरूकता आती है।
11. सांस्कृतिक मुद्दों को प्रति सजगकता।

ASER की रिपोर्ट 2023 के अनुसार डिजिटल जागरूकता –

- युवाओं में में लगभग 90% के पास स्मार्टफोन है।
- 19.8% महिलाओं की तुलना में 47.7% पुरुषों के पास अपना स्मार्टफोन है।
- परन्तु परीक्षा परिणामों की दृष्टि से बिना स्मार्टफोन के भी महिलाएं पुरुषों से आगे हैं। यदि यह डिजिटल अनुपात समान रखा जाए तो वह दिन दूर नहीं जब महिलाएं पुरुषों से आगे होंगी।

निष्कर्ष— शिक्षा में सोशल मीडिया का भविष्य

जैसे-जैसे प्रौद्योगिकी का विकास जारी है, शिक्षा में सोशल मीडिया की भूमिका बढ़ने की उम्मीद है। सोशल मीडिया द्वारा लाए गए प्रतिमान बदलाव ने पारंपरिक शिक्षण विधियों को बदल दिया है और सहयोग, संचार और जुड़ाव की नई संभावनाओं को खोल दिया है। सोशल मीडिया की शक्ति का उपयोग करके, शिक्षक आकर्षक और व्यक्तिगत शिक्षण अनुभव बना सकते हैं जो छात्रों को डिजिटल युग की चुनौतियों और अवसरों के लिए तैयार करते हैं।

हालाँकि, शिक्षा में सोशल मीडिया के एकीकरण को सोच-समझकर और जिम्मेदारी से करना महत्वपूर्ण है। हमें ऑनलाइन सुरक्षा और गोपनीयता जैसी सोशल मीडिया से जुड़ी चुनौतियों और चिंताओं का समाधान करना चाहिए और प्रौद्योगिकी तक समान पहुंच सुनिश्चित करनी चाहिए। सर्वोत्तम प्रथाओं का पालन करके और उचित प्लेटफार्मों का उपयोग करके, शिक्षक शिक्षा में सोशल मीडिया की पूरी क्षमता का उपयोग कर सकते हैं और छात्रों को सक्रिय और आजीवन सीखने वाले बनने के लिए सशक्त बना सकते हैं।

शिक्षा का भविष्य वास्तव में सोशल मीडिया के साथ जुड़ा हुआ है और यह हम सभी शिक्षकों पर निर्भर है कि हम इस बदलाव को अपनाएं और सभी छात्रों के लिए एक परिवर्तनकारी सीखने का अनुभव बनाने के लिए इसके लाभों का लाभ उठाएं। सोशल मीडिया हमारी कक्षा में क्रांति ला सकता है। हम अपनी शिक्षण पद्धतियों में सोशल मीडिया को लागू कर शिक्षा में इसकी परिवर्तनकारी शक्ति को शिक्षा के भविष्य हेतु अपनाएं और अपने छात्रों को डिजिटल युग में आगे बढ़ने के लिए आवश्यक कौशल से लैस करें।

कहा भी है—

बदलते हुए इस संसार में, परिवर्तन का अर्थ अब समझ जाओ।।

जीवन में बढ़ने की चाह है अगर, कहीं किसी मोड़ पर परिवर्तन को अपनाओ।।

एक कदम साथ में अब भी ढल जाओ, ठहरे हुए रहोगे तो विकास में हास पाओगे।।



A Study of The Effectiveness of '5Es Constructivist Instructional Model' in Enhancing Communication Skills

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Abstract

In view of the failure of traditional education, the constructivist concept was born, in which the student is the centre point of teaching activities instead of the teacher. Constructivism transforms the passive student into an active one in the learning process, the teacher plays the role of a guide and gives instructions as per the need, the student creates his own knowledge by being active instead of taking knowledge from the teacher or textbook. In the '5Es Instructional Model' based on constructivism, students are taught by following Engage, Explore, Explain, Elaborate and Evaluate. Through the presented research, the effectiveness of '5Es constructivist instructional model' has been studied in improving communication skills. Experimental research method was selected for the research. In the form of pre-test and post-test experimental and controlled group design, 40 students each of class 9 were selected and the package was administered to the students of the experimental group. A 'Communication Skills Package' based on '5Es Constructivist Instruction Model' has been created as a research tool. Research findings show that the 5Es Constructivist Instruction Model is effective in enhancing students' communication skills.

Keyword : Constructivist, Communication Skills, 5Es Constructivist Instruction Model

Introduction

Education is a process of acquiring knowledge and information. Two major issues of the present education system are understanding of knowledge and second is the process of knowledge creation. In the present time, it is being emphasized that the learner can create knowledge by being active himself and emphasis should be given on learning by giving freedom to the learners to express their ideas.

Traditional teacher-centred and textbook-guided classes have failed to bring the desired results to the students. In view of its failure, the constructivist concept was born, in which the centre point of teaching activities is the student instead of the teacher, where emphasis is given on learning by encouraging the creative activities of the child.

Constructivism

Constructivism is a theory based on observation and scientific study. Which states that the individual is an active creator of his own knowledge. For this, he creates knowledge by experiencing, reflecting on his own experiences and through his own understanding. In this process he performs activities like searching, asking questions, synthesizing and analysing, evaluating etc. According to constructivism, a person creates knowledge on the basis of his experience. When a person sees something new in his life, he connects it with his previous thoughts and experiences, then if the previous knowledge is not relevant, he discards it and accepts the new knowledge.

Constructivism is a theory about the nature of knowledge. This theory believes that knowledge is created by the individual and is influenced by their values and culture (Phillips, Dennis C. 1995, p. 5).

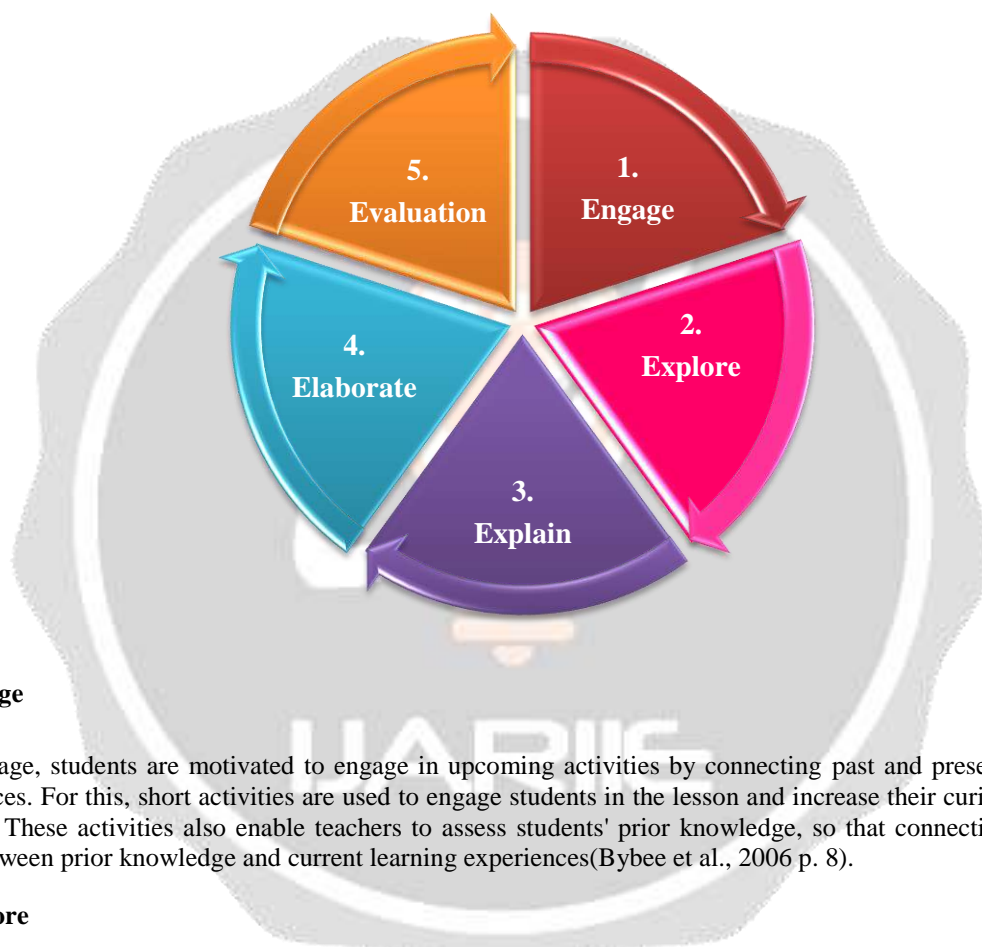
Constructivist learning provides autonomy and freedom in learning along with the development of logical thinking, critical thinking, self-motivation, independent thinking, original thinking in the learner (Saruparia, Shima 2013, p. 210). Constructivism uses many teaching methods for learning in the classroom. It encourages students to use active techniques (exploration, experimentation, group work, discussion, learning by doing, solving real-world situations) to construct knowledge and to reflect on what students are doing. How is their understanding changing? In a constructivist learning environment, students learn by actively connecting prior knowledge to new concepts, rather than passively receiving knowledge from the teacher, making them more

likely to understand and remember new concepts. The teacher, playing the role of a guide in this entire process, sees how the student creates new knowledge by understanding his previous concept (Honbein, P.C. 1996, p. 78).

Constructivist 5Es Instructional Model

According to Ergin, Kanli, and Unsal (2008, p. 51), the 5Es instructional model is considered one of the best methods recommended for constructivist learning. In the constructivist 5Es instructional model, students build knowledge from prior experiences. In which students work in small groups, ask questions, communicate, discuss and learn by connecting previous knowledge with new knowledge. BSCS (Biological Sciences Curriculum Studies) developed the 5Es instructional model for the science and health curriculum for elementary schools in the United States in the late 1980s (Bybee et al., 2006 p. 1).

Following are the steps of '5Es Constructivist Instructional Model' for learning:



(1) Engage

In this stage, students are motivated to engage in upcoming activities by connecting past and present learning experiences. For this, short activities are used to engage students in the lesson and increase their curiosity about learning. These activities also enable teachers to assess students' prior knowledge, so that connections can be made between prior knowledge and current learning experiences (Bybee et al., 2006 p. 8).

(2) Explore

In this stage, students explore the subject matter in depth with the help of various techniques, materials and activities in groups. Students are provided opportunities to engage with themes, events and materials. Students work in groups to explore each other's ideas through practical activities. Under the guidance of the teacher, students clarify their understanding of key concepts and skills. The role of the teacher at this stage is that of a guide who guides students' attention and concentration and prepares students to use their prior knowledge to generate new ideas, ask questions, and explore new possibilities and discoveries (Bybee et al., 2006 p. 9).

(3) Explain

In this stage, dialogue begins between students and the learner himself. Students in the group try to explain the subject matter by supporting each other's understanding through their observations, thoughts, questions and hypotheses. This stage focus students on particular aspects of their inquiry experiences, providing them with opportunities to demonstrate their conceptual understanding and process skills. Students express their understanding of the concept and the teacher guides the students to correct their misconceptions (Bybee et al., 2006 p. 9).

(4) Elaborate

In this stage, students try to strengthen their learned knowledge, conceptual understanding, skills and experiences through new environment/situation. Students are provided opportunities to extend their concepts to an elaborate level and make connections between related concepts. In this, students start learning new concepts through inquiry based learning. Teachers provide students with new experiences that deepen and broaden their understanding while challenging their conceptual understanding and skills. Students expand their understanding by engaging in extracurricular activities (Bybee et al., 2006 p. 10).

(5) Evaluation

The final stage allows teachers to assess whether students have acquired relevant concepts and knowledge. Pupils are encouraged to assess their understanding and abilities in the assessment phase and teachers assess pupils' progress. However, assessment processes can be used at any level of the 5Es instructional model (Bybee, et al., 2006 p. 10).

Statement of the Problem**“A Study of the Efficacy of 5Es Constructivist Instructional Model in Enhancing Communication Skills”****Research Objectives**

The following objectives of the presented research have been set:-

1. To study the level of communication skills of secondary level students.
2. To create a package based on 5Es constructivist instructional model for enhancing communication skills.
3. To study the effectiveness of 5Es constructivist instructional model in enhancing communication skills.

Null Hypotheses

For the presented research work, the following null hypotheses were formulated and tested systematically:-

1. There is no significant difference in the mean scores of pre-test of communication skills of students of experimental and control group.
2. There is no significant difference in the mean scores of post-test of communication skills of students of experimental and control group.
3. There is no significant difference between the mean scores of pre-test and post-test of communication skills of the students of the experimental group.
4. There is no significant difference between the mean scores of pre-test and post-test of communication skills of the students of the control group.

Sample

To complete the presented experimental research work, 80 students of class 9 of a private school of Jodhpur city were selected through random method. These 80 selected students were identified as two groups of 40 students each, experimental group and control group.

Research Method

In the presented research the researcher used experimental research method.

Tools

Keeping in mind the objectives of the presented research, the following self-made equipment was used in this research work :-

1. Communication Skills Package based on 'Constructivist 5Es Instructional Model'
2. Communication Skills Pre-Test
3. Communication Skills Post-Test

Statistical Techniques

Keeping in mind the objectives of the presented research, the following self-made equipment was used in this research work :-

1. Communication Skills Package based on 'Constructivist 5EsInstructional Model'
2. Communication Skills Pre-Test
3. Communication Skills Post-Test

Analysis and Interpretation of Data

1. Significance of difference in the mean scores of pre-test of communication skills of students of experimental and control group.

Under this analysis, the significance of the difference in the mean scores of the pre-test regarding communication skills of the students of experimental group and control group was determined by 't' test, which is mentioned in Table No. 1. The purpose of finding the difference between the pre-tests of communication skills was to find out whether the level of communication skills of both the experimental and control groups was the same before the experimental teaching.

Table No. 1
Mean, standard deviation and 't' value of pre-test of communication skills of experimental and control group

Test	Group (N)	Mean	Standard Deviation(SD)	't' Value	Significant/No significant difference
Pre-Test	Control Group(N1=40)	16.78	3.68	0.17	No significant Difference
	Experimental Group(N2=40)	16.63	4.38		

Degree of freedom (df) = 78

Table value
Level of significance – at .05 level = 1.99
at .01 level =2.64

Explanation

According to the above Table No. 1, the calculated 't' value between the pre-test scores of the control group and the pre-test of communication skills of the experimental group has been found to be 0.17, which is the table value (1.99 at .05 level and 2.64 at .01 level).) is less than. Therefore, it becomes clear that there is no significant difference in the mean scores of pre-tests based on communication skills of the students of control and experimental group. On this basis, Null Hypothesis No. 1: There is no significant difference in the mean scores of pre-test of communication skills of experimental and control group students, is accepted. It is clear from the above data analysis that before the experimental teaching, the students of both the groups, experimental group and control group, were similar at the level of communication skills.

2. Significance of difference in the mean scores of post-test of communication skills of students of experimental and control group.

Under this analysis, the significance of the difference in the mean scores of post-test related to communication skills of the students of experimental group and control group was determined by 't' test, which is described in Table No. 2

Table No. 2

Mean, standard deviation and 't' value of pre-test of communication skills of experimental and control group

Test	Group (N)	Mean	Standard Deviation(SD)	't' Value	Significant/No significant difference
Post-Test	Control Group(N1=40)	17.73	3.60	39.53	Significant difference at the .01 level
	Experimental Group(N2=40)	47.30	3.07		

Degree of freedom (df) = 78

Table value
Level of significance – at .05 level = 1.99
at .01 level =2.64

Explanation

According to the above table number 4.5, the calculated 't' value between the post-test scores related to communication skills of the control group and the experimental group has been found to be 39.53, which is more than the table value (1.99 at .05 level and 2.64 at .01 level). . Therefore, it becomes clear that there is a significant difference in the mean values of post-test based on communication skills of the students of control and experimental group. On this basis, Null Hypothesis No. 2: There is no significant difference in the mean scores of post-test of communication skills of experimental and control group students is rejected.

3. Significance of the difference in the mean scores of pre-test and post-test of communication skills of the students of the experimental group.

Under this analysis, the significance of the difference between the mean scores of pre-test and post-test regarding communication skills of the students of the experimental group was determined by 't' test, which is described in Table No. 3

Table No. 3

Mean, standard deviation and 't' value of Pre-test and post-test of communication skills of the experimental group

Group	Test	Mean	Standard Deviation(SD)	't' Value	Significant/No significant difference
Experimental Group	Pre-Test (N1=40)	16.63	4.38	36.27	Significant difference at the .01 level
	Post-Test (N2=40)	47.30	3.07		

Degree of freedom (df) = 78

Table value
Level of significance – at .05 level = 1.99
at .01 level =2.64

Explanation

According to the above Table No. 3, the calculated 't' value between pre-test and post-test regarding communication skills of the experimental group has been found to be 36.27, which is more than the table value (1.99 at .05 level and 2.64 at .01 level). Therefore, it becomes clear that there is a significant difference between the mean values of pre-test and post-test regarding communication skills of the students of the experimental group. On this basis, Null Hypothesis No. 3: There is no significant difference between the mean scores of pre-test and post-test of communication skills of the students of the experimental group, is rejected.

4. Significance of difference in the mean scores of pre-test and post-test of communication skills of students of control group.

Under this analysis, the significance of the difference between the mean scores of pre-test and post-test regarding communication skills of the students of the control group was determined by 't' test, which is described in Table No. 4.13

Table No. 4

Mean, standard deviation and 't' value of pre-test and post-test of communication skills of the control group

Group	Test	Mean	Standard Deviation(SD)	't' Value	Significant/No significant difference
Experimental Group	Pre-Test (N1=40)	1678	3.68	1.17	No significant Difference
	Post-Test (N2=40)	17.73	3.60		

Degree of freedom (df) = 78

Table value
Level of significance – at .05 level = 1.99
at .01 level = 2.64

Explanation

According to the above Table 4, the calculated 't' value between pre-test and post-test regarding communication skills of the control group has been found to be 1.17, which is less than the table value (1.99 at .05 level and 2.64 at .01 level). Hence, it becomes clear that there is no significant difference between the pre and post test regarding communication skills of the students of the control group. On this basis, Null Hypothesis No. 4: There is no significant difference between the mean scores of pre-test and post-test of communication skills of the students of the control group, is accepted.

Conclusion

After analysing the scores of pre-test and post-test of communication skills of the experimental group and the control group, it can be said that no significant difference was found in the mean scores of communication skills in the controlled group, whereas in the experimental group there was a significant difference at .01 level.

Difference was found. In conclusion, it can be said that 5Es Constructivist Instructional Model based teaching is helpful in developing communication skills in students.

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INFORMATION REQUIREMENTS AND MANAGEMENT IN THE CURRENT CONTEXT

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Abstract: *Need for information arises when a person sees irregularities, lack of awareness, and failure in work and then is eager to solve them. The person always thinks of moving forward and gets information about new things every day. He needs information to move forward. He was published in various newspapers, whatsapp and social sites likes facebook, twitter and intagram. Also receives information from etc. Apart from this, they also disseminate information through email and want to make a difference in the condition of the knowledge they have prepared and a person can use it for his research, his spiritual progress, quenching his curiosity, his entertainment etc. What do you want to achieve? The needs that are desired to be satisfied by library services or materials.*

An information need is more than a question asked to an information provider. These occur when people find themselves in a situation that requires some form of knowledge to solve it. Therefore, there is need for information to quench the thirst for knowledge.

Keyword: The need for information and its management as essential information for the masses. Librarians are information workers in information management

Introduction:

Different types of consumers and their information needs – Three types of information demands have been identified. There are the details: Current Access, Day by day access, detailed access, Recall access/revision. The models developed earlier were originally related to the study of information seeking behavior of the general population. There are four steps in this model, which are as follows: 1. Feeling the need. 2. Searching on your own 3. Getting information. 4. Using information.

Ultimately the user will be satisfied or unsatisfied. This model was developed on the basis of study of information seeking behavior of students. Steps of this model 1. Orientation – Identifying the information need. 2. Selection – Identifying common topics. 3. Investigation – Searching for information on a general topic. 4. Representation/Transformation – Representing the central scenario. 5. Collection- Collecting information related to the focal point. 6. Presentation – Completing the information search.

A further model: This model is based on six important skills. These are: task definition, information seeking, implementation, use, synthesis and evaluation. Information seeking behavior: This model describes the process of information seeking behavior. According to this, it is the effect of the need felt by an information user. Users want to satisfy that need. He makes demands regarding formal and informal sources of information. It can be successful or unsuccessful, if the user is successful then he uses the information to satisfy his need and if he fails to satisfy his need then he starts searching again. Information user satisfaction or dissatisfaction, need, information behavior model, keeping in mind many other areas besides information science, a new model was presented by modifying the above mentioned model. This model was basically based on the previous model but described its previous model in terms of intermediate variables. Which represent barriers to information seeking behavior? A person searching for information always keeps moving forward. In fact, this model is more effective and useful than its previous model in the field of information seeking behavior.

Information user satisfaction or dissatisfaction need Context of information need – active device, design intermediate, variable active, device design, information seeking behavior Individual in context Stress/coping theory Psychological risk/reward theory Passive attention Self-efficacy Passive search Demographics social learning theory continuous search, role-related or interpersonal, environmental resources, characteristics, information processing and use etc.

Process of searching information: 1. Identification of objectives 2. Definition of need 3. Determining the information system 4. Establishment of information sources 5. Information acquisition 6. Information use 7. Satisfaction/dissatisfaction,

All these are such needs which are felt by the masses. We do Individuals and groups who expect information confirmation to perform their specific work.

Information Management:

Information Management Key activities include planning, analyzing, taking action and above all learning and development on how to make information useful so that organizations need to manage information well and consistently to be responsive to the needs of their customers. Information management focuses on organized and formalized information and knowledge. Which is proof of being close to the truth? Information is primarily in text. Which are authentic? Information management takes place in a systematic manner. Important aspects of information management are the information systems that are embedded in them that have the flexibility to respond creatively and to changing circumstances. This flexibility, ability to change and learn is essential for organizations and sharing information is a key aspect of information management. Organization of information from knowledge management.

Relation between information and knowledge, Information, Facilitates the development of creation new knowledge. Decision making ability increases in the information management process. Organizational performances improve. All these depend on the sources of information. Source management also fulfills the need for providing information and information and audit to organizations. To find good information sources and to find information to meet one's needs. The right way to reduce the authority of incoming information is through information management. Information management: Information saves the time of the information. Procedures increase. Information management benefits everyone. Organizations also develop through exchange of information. If the information system is organized then it also enhances the working style of all sections and organizations. Information management aims to increase the thinking abilities of businessmen by filtering information sources and managing them in reports.

Information management creates information by organizing information sources and primary sources of knowledge. The information has also been technically checked. Information management is also exchanged. Librarians are providers of information and knowledge workers. Information management is the management of data and is based on standards. Since knowledge is based on information, information can be said to be more organized than knowledge. The situation is like a flood of information. The process of organizing this pile of information is called management. Librarians are information workers in information management. Information management: Well organized knowledge in the form of proper facts. Numbers, symbols comes before us in the form information. There are also obstacles in information sharing like social, human, psychological, business and commerce, physical and technological, channel or medium, organizational linguistic, fear of distortion of information, fear of confidentiality, penalty, feedback, time limits, feasibility of knowledge, geographical distance etc. are elements.

Information management in library sector. Newspapers, e-mail, DELNET, Journals, magazines, CD's, DVD's Indexing, Translation, Encyclopedia, Television, eBooks, Current Awareness Service, Data ware housing etc. contribute. Responsibility of information, increasing the quality of electronic documents, updated information to the people, which comes from the acquisition of new knowledge should move towards management of information. Information management the communication of sound, accurate knowledge that is based on absolute truth, including logic and data. Only strong knowledge makes information sustainable. Information management has an important contribution on the information revolution.

The search tendency of man (an experimental method) shows the exact form. Where action, reaction, electronic devices of the information world, machines, further reflect the development of external power/external forces in written form in electronics form. Information management has commercial, economic and social importance. This removes privacy. Stays together with everyone. Everyone has the same information. This also increases business. Good technology makes information management good and effective. Information management becomes better only if only if adequate resources, partnership and facilities are available. The overabundance of information can be controlled only by stopping all external and internal opposition. For information mangers, emphasis is placed on content.


Conclusion:

Information and its need are terms that are intertwined with each other. A person is curious to get information about the country and abroad, government information, information about the business world to move ahead. In fact, information and needs are so linked that they cannot be seen separately because where there is need or interest, knowledge and science take birth automatically. Necessity is the mother of information. Today it is being realized that information need is a composite idea of different types of demands and access to information. Some people may interact with information system in different ways depending on their objectives in relation to different problems. The level of their work, general interests, the amount of information already available to them, etc. The seeker of information is also called the information consumer.

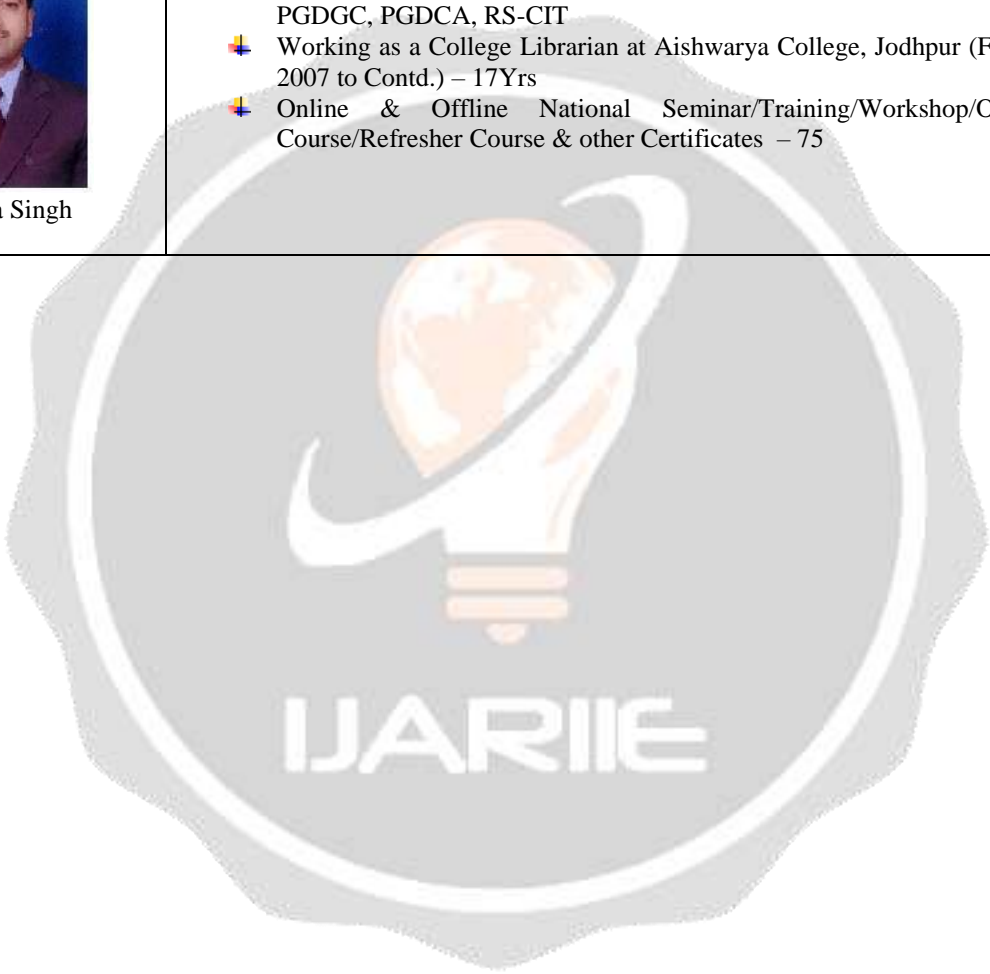
Reference:

<http://en.wikipedia.org>

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Surendra Singh



Impact of Modern Technologies on Legal Rights of Women: Indian Perspective

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Abstract

We live in a Global Village where Information Technology and Social Media has influence on all aspects of human life. IT has enabled our life with comfort and virtually connected to entire world as family but at the same time IT has its own disadvantages to vulnerable groups of society. In Indian history, women is always a soft target for crime and discrimination, it always takes on new forms from time to time. Many feminists have battled for women's empowerment in society and against violence against them over time, yet the victim's exploitative existence will always exist. We are grateful that information technology has brought about a significant change in communication, enabling women to exercise their rights equally and transforming the globe into a "Global Village." The development of the Internet, cell phones, tablets, and other devices altered the level of living for women. Even while we have benefited much from these technologies, they have also had some detrimental consequences on our lives and increased the possibility of cybercrime. It is incredibly difficult to identify criminals because of a lack of proof and a fear of being defamed. Women have been subjected to pornography, email deception, sexual harassment and abuse, and other forms of cyber bullying. Unknown emails and phone numbers may harass women by sending them sexually suggestive and unsettling messages. These messages can even cause a woman to strip in front of others, which might drive her to the verge of suicide. This paper assumes that women are soft target of cyber violence and examines how this affects their social lives in India. It outlines the causes and manifestations of cybercrime against women and examines various recommendations for reducing same.

Keywords: Information technology, women, cybercrime, cyberspace, Women Empowerment.

Introduction

We live in an age of fusion between the physical, digital, and biological worlds. In today's digital world, surfing the Internet has become a common practice for social, recreational, or professional purposes. Technology is an enabler of globalization. Digital devices, originally designed to serve us diligently, have revealed their destructive effects on our lives. Modern technology has conquered human life. Today, what we work, love, shop, play, and talk with each other want to share with the world online. We have seized cutting-edge technology, seeking only profit and completely ignoring destruction. The social impact of innovation and technology is huge, due to the fact that today we invest more energy in the web than ever before, and the internet plays an important role in various aspects of our lives. There is no doubt that advanced innovation has enlivened our lives and correspondence with the world, but it has also had many dire effects on vulnerable social groups.

While technology is a tool that can change lives and create a world of endless possibilities, it can also be used to promote violence against women. Women worked or studied using online platforms and often used social media platforms. This manifests itself in many ways, such as stalking, harassment, threats of sexual violence, hacking, misinformation, and defamation. This is a serious threat to freedom of expression and the well-being of girls worldwide and their participation in public life. Technology is not the enemy, but the key to promoting gender equality. It creates a world with opportunities for sustainable development, economic growth, and access to education and information. All women and girls have the right to be online and use technology without fear or intimidation.

The advent of digital cameras and wireless or mobile phones with built-in cameras has made it reasonably simple and affordable for individuals who can afford these equipment to create short films or clips. Digital

information may be rapidly and readily replicated thanks to the devices' integration of several multi-media formats with the internet and home computer platforms. The cost of buying this equipment will go down as technology advances, making it more accessible to a larger group of customers. The privacy of women is yet another significant concern. Teenagers frequently share a lot of intimate images and information on social media, sometimes leaving it up for a long period of time. Since it is often accessible to anyone, anybody may see, alter, and misuse this information, it could have an impact on their life. Regarding data protection, no one is sufficiently aware of the concerns raised by profiling and keeping information on women's online behaviors for profit.

Women become soft targets because they often trust other people and are unaware of the consequences. Cybercrime is far from traditional surveillance, investigation or audit and requires experts to understand the nature of crimes. Such crimes have increased because they are rarely reported and difficult to detect and prove. Crimes committed with the help of modern technology affect women the most because they are subjected to mental and emotional harassment. Most of the women are distressed, humiliated, and depressed because of this type of crime which is difficult to deal with and solve. Various international and national laws promote gender equality, and women have every legal right to be protected from abuse, including sexual abuse. Instead of preventing women from using the Internet, government officials have a legal duty to prevent abusers from improperly contacting them by making the Internet safer.

Women should be strongly encouraged to speak up when their rights are being violated online. The government must also ensure the effective functioning of the cyber crime prevention program against women and children. In addition, the privacy of the complainant must be protected. Implementation of the provisions of IT legislation to meet the demand is ineffective. In order for women to be able to report violence to the authorities without fear of judgment, insecurity, job loss, or other negative consequences, society as a whole must create a safe environment for them.

Various Technology-Based Crimes Against Women

Women have been the victims of a various crimes online. Major of them are:-

1. Cyber Stalking

Cyberstalking is one of the most common cybercrimes against women nowadays. It is surreptitiously following someone or keeping an eye on their offline or online activities to gather information or personal data about them without their consent. The act of violating someone's privacy with the goal of frightening, bothering, tormenting, or threatening the target is known as stalking. The offender contacts and tries to build a connection without the victim's knowledge or consent.

Cyberstalking, which involves secretly following someone or observing their online or offline behavior in order to learn more about them or gather personal information about them without their knowledge, is one of the most prevalent cybercrimes

targeting women today. Stalking is the invasion of someone's privacy with the intention of frightening, torturing, intimidating, or tormenting the victim. Without the victim's knowledge or agreement, the perpetrator makes contact and attempts to establish a connection.

Cybercrime occurs when these activities are purposefully carried out via email, the internet, or any other kind of electronic communication. This includes password cracking or hacking for the same purpose, as well as when someone uses the woman's identity for the same purpose. Often, the victims' devices are compromised to get personal information from any electronic device, which is then used to either monitor or coerce the victims. By breaking into mobile devices, hackers have been known to remove evidence that may be used against a criminal. Penalties and jail terms of up to three years are possible when it is committed for the first time. Furthermore, the punishment might be enhanced to five years in jail and a fine if it is repeated.

2. Cyber Pornography

The creation, dissemination, and exchange of pornographic material online is a practice. Section 292 of the Indian Penal Code, which addressed the offense of obscenity and encompassed anything that was obscene, appealing to voyeuristic desires, or intended to degrade and corrupt people, was the

previous section that dealt with this legislation.

Consequently, this clause now designates the sale, distribution, communication, public exhibition, or receipt of any profits from such a business as a crime that is susceptible to legal penalties. There is a 5000 rupee fine along with a five-year prison term for it. In addition, Section 354A of the IPC forbids sexual harassment and states that it is illegal for a male to intentionally send pornographic material to a woman by email, WhatsApp, or any other means without her consent. Acts such as these are also forbidden by Section 67A of the IT Act when sexually explicit items are published, circulated, or treated as such in any electronic format.

The maximum penalty imposed under the IT Act is five years in jail and a fine that can reach ten lakhs for a first conviction, and seven years in prison and a fine that can exceed ten lakhs for a second conviction.

3. Morphing

This includes modifying the victim's original photo in a way that compromises their identity, downloading the photo from the internet, editing it in a way that makes it appear less authentic, uploading it to social media platforms, or using any other technique that could harm the victim's reputation. The practice has become so commonplace that anybody may use it to get revenge or for fun, putting the woman's modesty in jeopardy.

To quickly harm the victim's reputation in front of a larger audience, it requires joining the victim's photo to a picture of another lady wearing scant or naked attire using easily accessible automated software. A celebrity is the most often target for entertainment reasons.

Sections 43 and 66 of the IT Act pertain to computer-related offenses, which include downloading, copying, extracting, deleting, and altering data without authorization. In addition, the accused might be charged under other IPC provisions, such as S. 290 for public annoyance, S. 292A for obscenity, S. 501 for defamation, and S. 354A for sexual harassment.

4. Sending Obscene/ Defamatory/ Annoying Messages

Cybercrime against women encompasses acts like as sharing a woman's personal images online or posting her images and contact details on websites that provide pornographic material. As it tramples on the fundamental right to privacy enjoyed by women, this also qualifies as defamation. Sending nasty or insulting messages using mail, WhatsApp, or any other social media platform is feasible.

Women typically resort to Indian Penal Code sections 354A for sexual harassment,

354 for outraging women's modesty, 499 for defamation, and 509 for insulting women's modesty when an offense does not meet the criteria for being classified as a crime under the Information Technology Act.

5. Virtual Reality (VR)

Virtual Reality is a computer generated 3-D image or environment that can be interacted with in real or physical way by a person using special electronic equipment (Headset) fitted with sensors and interactivity. VR make the user feel as they were immersed in their surroundings using device though not physically. There are surveys

revealing that nearly half of the female VR users reported instances of sexual harassments within virtual spaces. Under VR the 'Avatar' of user / her can be subjected to verbal and sexual abuse by multiple male avatars, akin to real life experiences, creating deep psychological impact on women. There should be proactive measures to be taken to eliminate any sexual assault occurring in VR. Also it is essential to delve into existing legislations for enhancing safety and addressing challenges within virtual spaces.

6. Online threats/intimidation/ blackmail/ trolling and pulling

Cyberbullying, blackmail, threats, intimidation, and online harassment are among the offenses done against women via the internet. Lately, this has happened more frequently. Bullying is characterized as a pattern of recurrent behavior by one person toward another with the intention of dehumanizing or harming that person because of their position of dominance or superior authority. It is done using

computers or mobile devices connected to the internet. In these situations, the internet acts more like a curse than a benefit.

In addition to this scenario, there are numerous more that occur on a daily basis. But in India, the general attitude is to ignore such behavior and to keep getting in the way of the offender until things go out of control. The absence of morals among our folks is an issue in addition to the legislation. The frequency of these events is increasing faster than light. It is a common occurrence in concerns of politics.

Similar crimes involving the following:

- Sextortion: the act of extorting money by threatening to release explicit images, videos, or other content.
- Abuse based on images: disclosing private images without permission, changing
- Doxing is the publication of private, personal data.
- Sexual harassment, gender harassment, and cyberbullying
- Internet stalking and preparation for sexual assault
- Hate speech, hacking, Rape Threats and online impersonation
- Using technology to track down abuse victims so that they can commit new acts of violence

When compared to other physical crimes, cybercrimes are less difficult to perpetrate. In general, when we discuss crimes, we consider violent crimes including bodily harm or physical crimes. In order to carry out such an act, we usually have to plan it out, use a weapon, and put in some physical labor. On the other hand, a basic and widely used item that is accessible to everyone in the modern world—a mobile phone—can be used to perpetrate cybercrimes. Therefore, in practice, it is far simpler to execute a cybercrime against women because of factors like location, anonymity, and the lack of physical involvement. On the other hand, we may steer clear of a lot of serious mistakes if we use common sense care when utilizing the internet and social media. We sometimes carelessly accept all terms and conditions in order to utilize a fee-based software or mobile application, which is something that should be avoided right away. We frequently use the same or similar passwords across one or more websites, making it easy for someone to attack all the other applications if they manage to crack the code of just one of them. Whether we realize it or not, we save private and confidential images and videos on our gadgets. Even the smallest act of carelessness can cause serious issues in the road, such as sharing passwords with close friends or recording intimate events. The Erasure of Data Once shared on Social Media or the Internet Is difficult: In today's digital age, it is nearly difficult to fully erase anything that has been shared online. In order to protect ourselves, we should exercise extreme caution when recording, storing, or sharing any video online.

Awareness of Cyber Crimes

The Ministry of Home Affairs, Government of India, established Cyber Crime Prevention Against Women and Children (CCPWC) to develop a practical road map for protecting women and children from cybercrimes. However, because more and more crimes against women are committed in every community, cybercrimes make it harder because criminals profit from fabricating false identities in order to commit crimes. The Internet Service Providers (ISP) should be subject to stricter regulation in order to circumvent the legislation, as they maintain a complete record of all data downloaded by all Internet users. In this situation, ISPs ought to make public any dubious actions that a person commits, since this will aid in the slow-moving prevention of crimes. People ought to know what parts of their daily lives are being filmed, and they ought to act modestly when those moments arise. It is also necessary to raise citizens' awareness of cyber society and its past. Research indicates that a significant portion of India's Internet population is unaware of their rights on these matters. People must be made aware of their legal rights. It's critical that someone using a gadget understands it completely before using it. It is crucial for women and girls to be informed of the many forms of cybercrimes, given this understanding. Since even young children took online classes following the COVID-19 pandemic and are highly conversant with these technologies, it is important to educate even female students about cybercrimes. It is very simple to trick female students into giving out passwords or encouraging suicide through games, child pornography, or other means. ii. Using Reason & Alertness on the Web: "**Prevention is better than cure**" Therefore, it is imperative that all women take the necessary precautions to protect themselves from cybercrimes.

Essentially the fundamental actions are:

- A. Enforcing password protection on all devices.
- B. Not disclosing one-time passwords to third parties.
- C. Keeping separate password
- D. Not sharing your bank and other account details on random platforms.
- E. Not believing strangers on social media or being easily tricked by them.
- F. Not showing strangers personal or intimate photos
- G. Putting firewalls to use as a precaution.
- H. Not meeting online acquaintances all alone.
- I. Keep your webcam disconnected.
- J. Using antivirus software to secure devices.

Recommendations:-

Various measures at the local, regional, national, and international levels must take action to foster an environment that is supportive of women's social and economic empowerment using information and communication technology. The advice and suggestions that follow are meant to help elevate the cyber threats for women :-

- Technological advancements cannot supersede or infringe upon the basic liberties guaranteed by the Indian Constitution. The PCPNDT Act prohibit female foeticide and safeguard a girls life. However, the technology that may be used to encode or decode human embryos is deadly to mankind , where it can be easily abused against embryo of girl child. The State should constitute such Boards which should check the need and necessity of such advancements which are against ethical, social, and moral responsibilities of science and if required such studies should be banned.
- The courts may waive the traditional procedural requirements outlined in the Evidence Act for the production of digital evidence in court, acting in the best interests of justice. In such Cyber sexual assault cases , the reputation and privacy of women victim can be compromised easily and due to such fear if she don't want to pursue trial , amendments should be made in procedural laws so that the state at its own with the evidence of digital devices and online content can pursue trial acting as complainant in such cases.
- The major social networking platforms should be subject to legal compliance to check and verify users to avoid fake ids and users. The same kind of procedure to be adopted as of how KYC is being done for bank accounts.
- Internet Service Providers (ISP) should Monitor internet user behavior to determine whether or not it is fraudulent depending on the area of crime or type of complaints. Such reports should be shared with Local Police Administration to take appropriate action on time. Also while reporting such crime a column in the NCRB data should indicate if an IT component is involved in the crime.
- Similar to forensic laboratories, special IT labs should be established to trace , track and prove the originality of content. Although it just takes a few days to create a morphed video, it takes years for the state and courts to prove that the video is admissible as evidence in court.

Conclusion :-

The Internet is essential to our daily lives because of social media, technological breakthroughs, protection of our personal information, mobile apps that trick users into sharing private information, and crimes including harassment, impersonation, hacking, and video editing. To combat cybercrime against women in India in this era of globalization, there needs to be both technical and ethical anti-tech-misuse solutions. Smartwatches, location tracking apps, the creation of distinct threat regions based on crime data, stricter legal changes, and improvements to the educational system are all necessary. Although these advancements cannot come from a single cultural block, people, states, non-governmental organizations, etc.

will work together to achieve them. As society grows more reliant on technology, cyber violence tends to rise and affects women more frequently. The law has to go above and beyond to punish these offenders severely. Increased awareness and understanding of cyber behaviors, privacy protection, and legal security are necessary to stop cybercrime against women.

Also a feasibility report should be prepared on Technologies like as virtual realities, deep fake artificial intelligence, and Neuralink— technologies which can control human behaviour including emotions and thoughts—do they really help humanity and resolve current issues in society , if not development of such technologies should not be encouraged.

At last we want to quote warning about AI from two persons who are pioneer and subject matter expertise of AI , **Mr. Geoffery Hinton**, popularly referred to as the "**Father of AI**," was an official at Google's AI project Gemini resigned in May 2023 to warn the public about the harm that artificial intelligence can cause. Even **Mr. Elon Musk** , CEO of Space-X and Tesla said in an interview that "**AI is going to be more dangerous than nukes**". Even after such warnings the policy makers are still awaiting for damage to be doneby AI to bring Legal Regulating Structure to govern and regulate AI.



Education and Learning: Unlocking Opportunities to Create Pathways for Advancement

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Abstract: Education is a foundational element of societal advancement, playing a dual role as both an engine for personal growth and a catalyst for collective progress. This research paper offers a comprehensive examination of the intricate role that education and learning assume in paving the way for individual development, societal mobility, and economic prosperity. Through meticulous scrutiny of various educational dimensions – ranging from formal educational systems to informal learning settings and lifelong learning endeavors – the paper elucidates how education equips individuals with the knowledge, skills, and competencies necessary to navigate today's intricate landscape. Additionally, it thoroughly analyzes the persistent challenges impeding equitable access to quality education, proposing innovative strategies to surmount these obstacles and foster inclusive and sustainable development. Through a synthesis of existing literature and impactful case studies, this paper seeks to enrich the discourse surrounding education and learning, highlighting their transformative potential in shaping individual trajectories and propelling societal advancement on a global scale. This comprehensive research paper explores the multifaceted role of education and learning in unlocking opportunities for personal growth, social mobility, and economic development.

Keywords: Education, Learning, Opportunities, Pathways for advancement, Individual empowerment, Societal progress/Mobility., Access to education, Quality education, Socio-economic Mobility/Development., Skill & Sustainable development, Critical thinking, Creativity, Inclusivity, Equity, Lifelong learning,

Introduction: Education plays a pivotal role in fostering personal development and societal progress. It is the cornerstone upon which individuals build their futures, providing them with the tools necessary to navigate the complexities of the modern world. Beyond the acquisition of knowledge, education nurtures critical thinking, problem-solving abilities, and social-emotional intelligence, empowering individuals to lead fulfilling and meaningful lives. Moreover, education serves as a catalyst for social mobility, enabling individuals to transcend socioeconomic barriers and achieve upward mobility. By promoting inclusivity and equity, education fosters a more just and equitable society, where opportunities for growth and advancement are accessible to all.

Statement of the Research Problem and Objectives: Despite the recognized importance of education, disparities in access and quality persist, hindering efforts to harness its full potential as a driver of personal and societal advancement. This research aims to address these disparities by examining the multifaceted role of education in unlocking opportunities for individuals and communities. The primary objective is to explore the various dimensions of education, including formal schooling, informal learning, and lifelong learning initiatives, and their impact on personal development, social mobility, and economic prosperity. Through a comprehensive analysis of existing literature and case studies, the research seeks to identify strategies for promoting inclusive education and creating pathways for advancement in diverse contexts.

The Role of Education in Personal Development: Education plays a pivotal role in shaping individuals holistically, fostering cognitive, emotional, and social development. It equips individuals with critical cognitive skills such as analytical thinking, creativity, and problem-solving abilities. Through structured learning experiences, individuals develop cognitive processes that enable them to navigate complex challenges and adapt to evolving circumstances. Moreover, education contributes to emotional development by fostering self-awareness, empathy, and resilience. By engaging with diverse perspectives and experiences, learners develop emotional intelligence and interpersonal skills essential for personal growth and social cohesion. Additionally, education facilitates social development by providing opportunities for collaboration, teamwork, and community engagement. By interacting with peers and mentors, individuals learn to navigate social dynamics, build relationships, and contribute positively to their communities, thus fostering social cohesion and collective progress.

Education as a Driver of Social Mobility: Education serves as a pathway for upward social mobility, enabling individuals to transcend socioeconomic barriers and achieve greater opportunities for advancement. By providing access to quality education, individuals from disadvantaged backgrounds can acquire the knowledge, skills, and credentials necessary to improve their socioeconomic status and break free from the constraints of poverty. Education equips individuals with the tools needed to compete in the job market, access higher-paying employment opportunities, and pursue further education or training. Moreover, education fosters social capital by expanding social networks and connections, creating opportunities for mentorship, collaboration, and career advancement. As a result, investing in education not only empowers individuals to improve their own lives but also contributes to broader societal progress by reducing inequality, fostering economic growth, and promoting social cohesion.

Education and Economic Development: Education contributes significantly to human capital development, which encompasses the knowledge, skills, and competencies acquired through formal education, training, and lifelong learning. As individuals accumulate human capital through education, they become more productive, innovative, and adaptable in the workforce, driving economic growth and development. Moreover, investments in education have broader societal benefits, including improved health outcomes, reduced poverty rates, and enhanced social cohesion. By fostering a skilled and knowledgeable workforce, education not only fuels economic productivity but also stimulates innovation and entrepreneurship, leading to sustainable economic growth and prosperity. Recognizing the interconnectedness between education, human capital development, and economic growth is crucial for policymakers and stakeholders in formulating policies and strategies that promote inclusive education systems and unlock opportunities for individuals and communities to thrive in the ever-changing global economy.

Challenges to Equitable Access to Education: Despite the transformative potential of education, disparities in access and quality persist, perpetuated by various challenges. Poverty remains a significant barrier, limiting access to educational resources such as tuition fees, school supplies, and transportation. Gender inequality also contributes to disparities in access to education, with cultural norms often favoring boys' education over girls', leading to lower enrollment rates and higher dropout rates among girls. Additionally, inadequate infrastructure, including the lack of schools, classrooms, and basic facilities like sanitation and clean water, further restricts access to quality education, particularly in rural and remote areas. Addressing these barriers requires comprehensive strategies that target poverty alleviation, promote gender equality, and invest in improving educational infrastructure to ensure equitable access to education for all, thereby unlocking opportunities for personal and societal advancement.

Strategies for Promoting Inclusive Education: Policy interventions are crucial for promoting inclusive education and addressing the needs of marginalized populations. These interventions may include legislative measures to ensure universal access to education, targeted funding initiatives to improve educational infrastructure in underserved areas, and efforts to reduce socioeconomic barriers through scholarships or financial assistance programs. Additionally, policies may focus on enhancing teacher training and professional development to improve instructional quality and promote inclusive teaching practices. Furthermore, technology-driven interventions, such as e-learning platforms and digital literacy programs, can help bridge geographical and socioeconomic divides, ensuring that all learners have access to educational resources regardless of their background. By implementing comprehensive policy interventions, governments and stakeholders can promote inclusive education systems that foster equal opportunities for personal development and societal progress.

Innovative Approaches to Inclusive Education: Innovative approaches are essential for addressing the needs of marginalized and vulnerable populations and ensuring equitable access to education. Community-centered educational initiatives that actively involve marginalized groups in the design and implementation of programs tailored to their specific needs can be particularly effective. Collaborative partnerships between educational institutions, NGOs, and local communities can facilitate the development of culturally sensitive curricula and outreach efforts. Furthermore, leveraging technology and digital platforms can extend the reach of education to remote or underserved areas, offering flexible learning opportunities that accommodate diverse learning styles and preferences. By examining and implementing innovative approaches, education systems can strive towards inclusivity, empowering marginalized populations with the knowledge and skills necessary to thrive and contribute meaningfully to society's advancement.

Lifelong Learning and Continuous Skills Development: In the dynamic landscape of the global economy, the importance of lifelong learning and continuous skills development cannot be overstated. Lifelong learning offers a proactive approach to staying relevant and competitive in the workforce, enabling individuals to acquire new knowledge, upgrade existing skills, and embrace emerging technologies. Moreover, lifelong learning fosters

adaptability, critical thinking, and problem-solving abilities, essential attributes for navigating complex challenges and seizing opportunities in diverse professional environments. Additionally, lifelong learning promotes personal growth, enriching individuals' lives beyond their careers by fostering creativity, curiosity, and a sense of fulfillment. By emphasizing the importance of lifelong learning, education systems and policymakers can empower individuals to thrive in the ever-evolving global economy, unlocking pathways for continuous personal and professional advancement.

Digital Technologies and Lifelong Learning: Digital technologies play a crucial role in facilitating lifelong learning and continuous skills development, offering diverse opportunities for individuals to access educational resources, courses, and training programs from anywhere at any time. Through interactive multimedia content, gamified learning experiences, and personalized learning pathways, digital platforms cater to diverse learning styles and preferences, making education more accessible and engaging. Additionally, online platforms facilitate collaboration, networking, and knowledge-sharing among learners worldwide, fostering a global community of lifelong learners. Moreover, digital technologies enable real-time tracking of learning progress and feedback mechanisms, allowing for personalized learning experiences tailored to individual needs and goals. By leveraging digital technologies for lifelong learning, individuals can acquire relevant skills, stay abreast of industry trends, and adapt to the evolving demands of the digital age, thereby unlocking pathways for continuous personal and professional advancement.

Conclusion: The exploration of education and learning as pathways for advancement reveals key findings and insights that underscore their profound significance in personal development and societal progress. Education emerges as a powerful tool for fostering cognitive, emotional, and social development, equipping individuals with critical thinking, problem-solving, and communication skills essential for success in the modern world. Moreover, education serves as a catalyst for social mobility, bridging socioeconomic divides and offering pathways for upward mobility. However, disparities in access and quality persist, perpetuated by challenges such as poverty, gender inequality, and inadequate infrastructure. Policy interventions and innovative approaches are identified as essential strategies for promoting inclusive education and unlocking opportunities for all individuals. Furthermore, lifelong learning and the utilization of digital technologies are recognized as imperative in navigating the rapidly changing global economy, ensuring continuous skills development and adaptability. Overall, education stands as a cornerstone for unlocking opportunities and creating pathways for advancement, shaping a brighter future for individuals and societies alike.

References

Academic Journals: Look for articles in reputable education journals such as the "Journal of Educational Psychology," "Educational Research Review," or "Educational Evaluation and Policy Analysis."

Books: Explore books written by experts in the field of education, such as "How People Learn: Brain, Mind, Experience, and School" by the National Research Council or "The Learning Brain: Lessons for Education" by Sarah-Jayne Blakemore.

Government Publications: Consider reports and studies published by government agencies such as the U.S. Department of Education or UNESCO.

Academic Conferences: Review proceedings from conferences such as the American Educational Research Association (AERA) Annual Meeting or the International Society for Technology in Education (ISTE) Conference.

UNESCO Education Sector - UNESCO publishes a wide range of reports and studies on global education trends, policies, and initiatives. These publications can provide valuable insights into international perspectives on education and learning.

The Journal of Educational Research - A broad range of topics in education, including educational psychology, curriculum development, and teaching methods. It publishes empirical research articles, literature reviews, and theoretical papers.

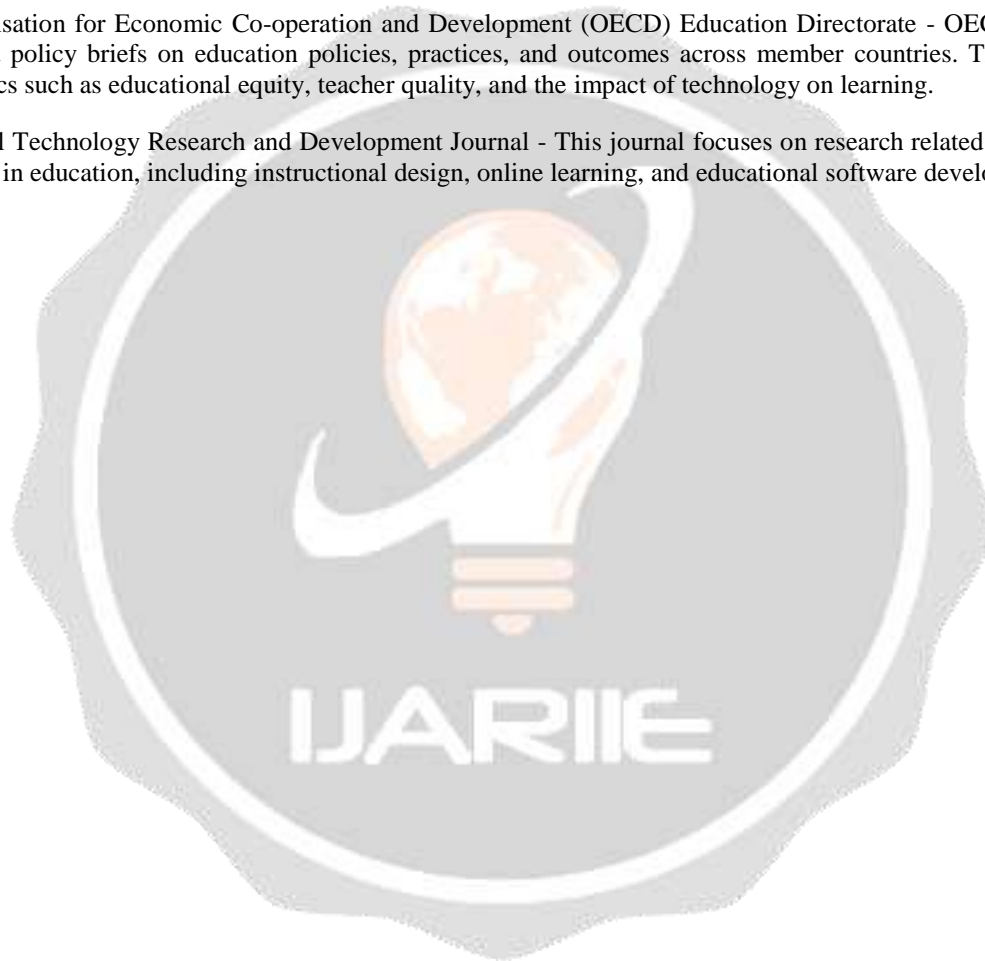
The World Bank Education Reports - The World Bank produces annual reports and research papers on global education issues, with a focus on access to education, quality of education, and education financing in developing countries.

The National Center for Education Statistics (NCES) - NCES is the primary federal entity responsible for collecting and analyzing data related to education in the United States. Their reports and publications cover a wide range of topics, including student achievement, educational attainment, and school demographics.

The International Association for the Evaluation of Educational Achievement (IEA) - IEA conducts large-scale international assessments of student achievement, such as the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS). Their reports provide valuable comparative data on educational outcomes across countries.

The Organisation for Economic Co-operation and Development (OECD) Education Directorate - OECD publishes reports and policy briefs on education policies, practices, and outcomes across member countries. Their research covers topics such as educational equity, teacher quality, and the impact of technology on learning.

Educational Technology Research and Development Journal - This journal focuses on research related to the use of technology in education, including instructional design, online learning, and educational software development.



TREATMENT OF NITRATE CONTAMINATED WATER USING COCONUT WASTE AS NATURAL ADSORBENT

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ABSTRACT

The removal of nitrate from groundwater has been researched using a variety of treatment approaches. The adsorption process for Denitrification is widely used in poor nations since it is a technologically and economically viable method that is both environmentally beneficial and simple to implement. As a result, it is necessary to monitor Denitrification using a low-cost and simple technology. This research examines Denitrification using a natural adsorbent, coconut husk, which is both inexpensive and effective. The appropriate dose of adsorbent was also determined for improved nitrate removal percentage efficiency, determined. Based on the findings, it can be inferred that coconut husk can be a low-cost replacement for Denitrification is the process of removing nitrate from water.

INTRODUCTION

Nitrate is a chemical molecule that lacks taste, smell and visible colour. NO_3^- (nitrate) and $\text{NO}_3\text{-N}$ (nitrate-nitrogen) are both notations for nitrate. Infants may develop methemoglobinemia if exposed to nitrate levels higher than the EPA's maximum contaminant threshold of 10 mg/L $\text{NO}_3\text{-N}$ or 45 mg/L NO_3^- . Methemoglobinemia may develop at very high amounts and it has been linked to an increased risk of stomach and intestinal cancer. Nitrate poisoning of ground water may result from a variety of natural and artificial nitrogen sources; however, it is the latter that often leads to an unsafe increase in nitrate concentrations. Nitrate poisoning of ground water is a global problem and one human cause is waste products. Water pollution may be kept to a minimum if fertilisers, manures and other nitrogen sources are managed properly. Due to its negative biological impacts, nitrate is a concerning pollutant in drinking water (especially ground water and wells).

Due to the scarce resources of drinking water, there is a need of treatment of contaminated water so it can be further used. At present, various techniques are used for the treatment of waste water such as ion exchange, coagulation, electro dialysis, dialysis, Nano filtration and reverse osmosis, etc. All these processes have high operating cost due to which bio-sorbents are getting more attention now a days due to their abundant availability and low cost. [1], [2] Different kinds of literature are available on the removal of nitrate from water using bio-sorbents. [3]

In the present study, removal of nitrate by adsorption on to low cost material like coconut husk and water chestnut peel was investigated.

PREPARATION OF ADSORBENT

Adsorbent from coconut husks being made as follows

Coconuts, which come from a kind of palm tree, have many practical uses. The coconut husk is rich in a wide variety of compounds. Dust is removed from the coconut shell by collecting it, cutting it into little pieces and then washing them with plain tap water. Drying the raw material in a hot air oven at 110°C for 6 hours removes any remaining moisture.

For four hours, dried coconut shell is heated to 900 degrees Celsius within a muffle furnace. Ball mills are used to chill and powder the product. A conventional set of sieves and sieve shaker are used to sort particles based on size. After the coconut shell has been cleaned and dried, it is soaked for 12 hours in HNO_3 and HCl . In a muffle furnace, the product is heated to 4500 degrees Celsius. A ball mill is used to pulverise the resulting charcoal. A typical set of sieves and a sieve shaker are used to sieve the product for 20 minutes. The particles captured by the various sieves are saved.

ADSORBATE AND EXPERIMENTATION

Dissolving 1.63 gm of pre-dried Sodium Nitrate (NaNO_3) in 100 ml of distilled water and then diluting to 1000 ml scale in a volumetric flask yielded a nitrate stock solution with a concentration of 1000 mg/L. A nitrate standard solution was made by adding one millilitre of nitrate to one litre of distilled water. Each experiment utilised 100 ml of the standard solution as the reference. The samples were withdrawn at different time intervals to observe the time of equilibrium.

The percentage removal of the nitrate and the amount of nitrate adsorbed were calculated by the following equations [19].

$$\% \text{ removal} = \frac{C_i - C_e}{C_i} \times 100$$

$$\text{Amount adsorbed}(q_e) = \frac{C_i - C_e}{M} \times V$$

Where

C_i = initial concentration of fluoride solution in mg/L

C_e = equilibrium concentration of fluoride solution in mg/L

m = mass of the adsorbent in grams (gm)

V = Volume of test solution in liters (L)

Investigating the use of Coconut husk as an adsorbent to remove Nitrate from water

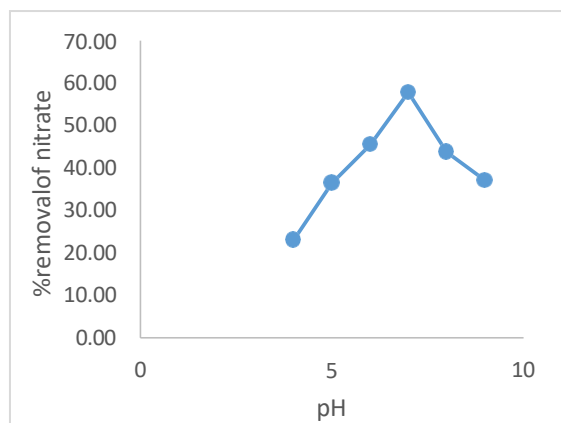
The efficiency of adsorbent was evaluated by conducting laboratory batch mode studies. Specific amount of adsorbents were shaken in 100ml nitrate standard solutions. Finally divided decolourised Coconut husk powder and Water chestnut peel powder in low amount viz 10-15g/L of water has been used at varied pH and the adsorption of nitrate ions from water was measured using conductometric method at varied time intervals. The study showed the effectiveness of Coconut husk powder to remove nitrate ions.

Effect of pH

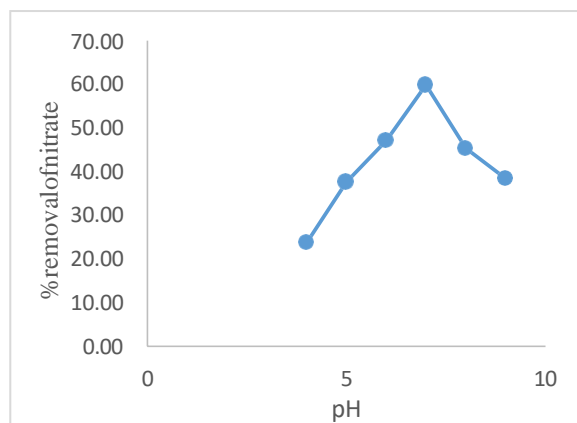
The effect of pH on adsorption of nitrate is very important factor for controlling the adsorption of fluoride onto adsorbents. The optimum pH range for adsorption is 4 to 7. The results obtained are summarized in Table 1 and Fig. (A), (B), (C).

Table 1: Effect of pH on % Removal of Nitrate

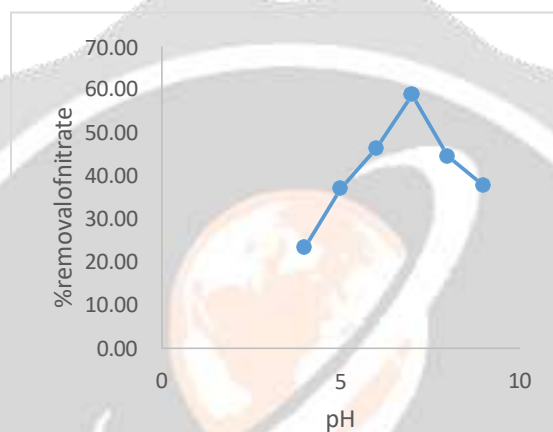
S.No.	pH	%Removal		
		[HS]	[BFC]	[GS]
1.	4	22.96	23.77	23.37
2.	5	36.36	37.65	37.01
3.	6	45.48	47.09	46.29
4.	7	57.73	59.78	58.75
5.	8	43.70	45.24	44.47
6.	9	37.02	38.33	37.67



(A): [HS]



(B): [BFC]



(C): [GS]

Effect of pH on adsorption of Nitrate

RESULT

Effect of pH

The test carried out at increasing initial pH from 4 to 9, show that the removal percentage of nitrate increase with increase in initial pH of the medium in the range studied i.e. 4 to 9 as depicted in the The maximum removal of nitrate on bio-adsorbents was observed at pH 7. Above this pH value bio-sorption significantly decreased.

It is thus clear that at higher pH, extent of removal is low. The results for nitrate removal by coconut husk, the influence of the pH on the removal of nitrate.

Conclusion

The whole idea of the present work was to establish the potential of chosen bio-adsorbent materials and study the different parameters pertaining to adsorption studies. The potential of the selected biomaterials being promising adsorbent material is being depicted with the help of elaborate batch experiments.

From the studies it can be concluded that the adsorbents have greater potential for sorption and can be used for efficient removal of pollutants from aqueous systems. The present study has led to following important conclusions:

1. The analysis of raw materials shows that agriculture waste materials like Coconut husk are suitable raw materials to prepare high surface area activated carbon by chemical activation as they had very low ash content and high carbon content.
2. Different methods of preparation are required to prepare different quality of activated carbon from different biomaterials. Physical and chemical activation procedures were applied to each biomaterial.

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WEB DEVELOPMENT

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ABSTRACT

The web-technology is going through major changes these years, both with respect to types of systems based on web-technology, organization of the development work, required approaches and competencies, etc. We must rethink the organization of the development work. This requires a deeper and coherent understanding of the nature of web-development. This paper presents findings from a field study undertaken in a web-development company. Web development is a broad term for the work involved in developing a web site for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing the simplest static single page of plain text to the most complex web-based internet applications, electronic businesses, and social network services. A more comprehensive list of tasks to which web development commonly refers, may include web design, web content development, client liaison, client-side/server-side scripting, web server and network security configuration, and e-commerce development. Among web professionals, "web development" usually refers to the main non-design aspects of building web sites: writing markup and coding. This paper focuses on web development areas of web development future scope of web development.

KEYWORDS:-

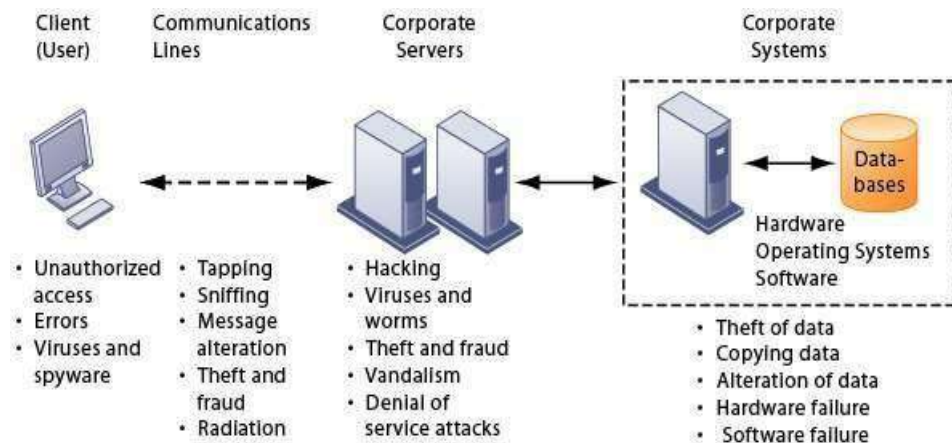
Web development, client side coding, server side coding ,web design and challenges and its future scope

INTRODUCTION

Web development is a broad term for the work involved in developing a web site for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing the simplest static single page of plain text to the most complex web-based internet applications, electronic businesses, and social network services. A more comprehensive list of tasks to which web development commonly refers, may include web design, web content development, client liaison, client-side/server-side scripting, web server and network security configuration, and e-commerce development. Among web professionals, "web development" usually refers to the main non-design aspects of building web sites: writing markup and coding. Most recently Web development has come to mean the creation of content management systems or CMS. These CMS can be made from scratch, proprietary (such as Open Text) or open source (such as Drupal). In broad terms the CMS acts as middleware between the database and the user through the browser. A principle benefit of a CMS is that it allows non-technical people to make changes to their Web site without having technical knowledge.

For larger organizations and businesses, web development teams can consist of hundreds of people (web developers) and follow standard methods like Agile methodologies while developing websites. Smaller organizations may only require a single permanent or contracting developer, or secondary assignment to related job positions such as a graphic designer and/or information systems technician. Web development may be a collaborative effort between departments rather than the domain of a designated department.

OBSERVATION



Development of web-information systems of today One of our basic assumptions was that web-applications are becoming increasingly business critical, and that this would be reflected in the organization of the development work. The Zyme project was an example of a web- application that was considered strategically important for the customer. It was a very large project and the customer required a thorough pre-analysis resulting in tender documents to ensure that different web-development companies could bet on the implementation. Furthermore, the deadline for version one was considered vital to the customer, and the site was considered the most important public relation activity. Thinking of IT as essential for public relation is new to most developers. The term 'branding' became important in the Zyme project. The designers and developers were informed that the sites should signal the attitude of the organization and high quality. These requirements must still be combined with the traditional requirements, such as informative, easy to use, quick to glance, etc. This was new to the actors, and obviously they had a very abstract and uncertain understanding of what it meant for their application. As one of the information architects phrased it: "One of the ideas is that the site should contain something with 'a kick' - you know - some energy! It is important for them [the customers] that this brand is pushed in the head of the user. One of our solutions will thus be that beside the main navigation there must be room for the system to present interesting stuff from one of the sub-sites on the portal entry and thereby push information into the face of the users"

AREAS OF WEB DEVELOPMENT

Web development as an industry

Since the commercialization of the web, web development has been a growing industry. The growth of this industry is being pushed especially by businesses wishing to sell products and services to online customers or tools and platforms, the public can use many open source systems to aid in web development. A popular example, the LAMP (Linux, Apache, MySQL, PHP) stack is available for download online free of charge. This has kept the cost of learning web development to a minimum. Another contributing factor to the growth of the industry has been the rise of easy-to-use WYSIWYG web-development software, most prominently Adobe Dreamweaver, WebDev, and Microsoft Expression Studio. Using such software, virtually anyone can relatively quickly learn to develop a very basic web page. Knowledge of Hyper Text Markup Language (HTML) or of programming languages is still required to use such software, but the basics can be learned and implemented quickly with the help of help files, technical books, internet tutorials, or face-to-face training.

Web Development can be split into many areas and a typical and basic web development hierarchy might consist of:

Client-side coding

- Ajax Asynchronous JavaScript provides new methods of using JavaScript, and other languages to improve the user experience.
- Flash Adobe Flash Player is a ubiquitous browser plugin ready for RIAs. Flex 2 is also deployed to the Flash Player (version 9+).
- JavaScript JavaScript is a ubiquitous client side platform for creating and delivering rich web

applications that can also run across a wide variety of devices. It is a dialect of the scripting language ECMAScript.

- jQuery Cross-browser JavaScript library designed to simplify and speed up the client-side scripting of HTML.
- HTML5 and CSS3 Latest HTML proposed standard combined with the latest proposed standard for CSS natively supports much of the client-side functionality provided by other frameworks such as Flash and Silverlight
- Scalable Vector Graphics (SVG), WebGL and Canvas deliver 2D and 3D capabilities, often used through JavaScript libraries; D3js (2D datavisualisations) and threeJS (3D) are popular examples.

Looking at these items from an "umbrella approach", client side coding such as XHTML is executed and stored on a local client (in a web browser) whereas server side code is not available to a client and is executed on a web server which generates the appropriate XHTML which is then sent to the client. The nature of client side coding allows one to alter the HTML on a local client and refresh the pages with updated content (locally), web designers must bear in mind the importance and relevance to security with their server side scripts. If a server side script accepts content from a locally modified client side script, the web development of that page is poorly sanitized with relation to security. In many companies, developers who are responsible for the client side coding and user interface codes are called Front-end Developer.

Server-side coding

- ASP (Microsoft proprietary)
- ASP.NET and ASP.NET MVC Frameworks (Microsoft proprietary)
- CFML (Adobe proprietary, formerly Macromedia, formerly Allaire) (Open source on Railo, Lucee or Open Blue Dragon)
- CGI
- Erlang, with Linux, Yaws, Mnesia, Erlang (LYME) solution stack
- Groovy, using the Grails framework
- Java, e.g. Java Servlets, JSP or WebObjects
- Lotus Domino
- Perl, e.g. Catalyst, Dancer or Mojolicious (all open source)
- PHP (open source)
- Python, e.g. Django (web framework) (open source)
- Ruby, e.g. Ruby on Rails (open source)
- Scala, e.g. Play Framework, Lift Framework (open source)
- SSJS Server-Side JavaScript, e.g. Aptana Jaxer, Mozilla Rhino
- V8 (JavaScript Engine) - Node.js or io.js

Client side + server side

- Google Web Toolkit provides tools to create and maintain complex JavaScript front-end applications in Java.
- Dart provides tools to create and maintain complex JavaScript front-end applications as well as supporting server-side code in Dart (programming language).
- Opal is a high-level language in which both the client and the server parts are implemented. The compiler then decides which parts run on the client (and are translated automatically to JavaScript) and which parts run on the server. The developer can tune those decisions with simple directives. (open source)

- Pyjamas is a tool and framework for developing Ajax applications and Rich Internet Applications in Python.
- Tersus is a platform for the development of rich web applications by visually defining user interface, client side behavior and server side processing. (open source)
- However languages like Ruby and Python are often paired with database servers other than MySQL (the M in LAMP).

FUTURE SCOPE OF WEB DEVELOPMENT

What we do on the Web changes every day. The web development industry is constantly evolving. While we may not be able to tell the day-to-day changes while it's happening, it's easy for us to look back to the past few months and see that a lot of things we do now are much different than what we've been doing before.

Because our work lies in one of the fastest-paced industries, it's important for us to predict and learn about what's coming up or risk being left in the web development dust.

While this may sound daunting at first, it's actually pretty easy to see where we'll be in the next several months/years to come.

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DIGITAL FORENSIC – INVESTIGATION AND CHALLENGES IN INDIA

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ABSTRACT

Internet and the Information technology lead to the economic growth in India, but have also generated new paths for malicious frauds and crimes. The criminals now range from hackers to criminals related to foreign intelligence agencies and terrorists. Cyber crimes are on the rise in India. According to Times of India 4 Jan 2024, India saw 129 cyber crimes per lakh population in 2023. Cyber crimes have different devastating impacts on the society ranging from financial loss, identity theft that can lead to reputational damage and legal effects.

Computer forensics is also called Forensic computing or Cyber Forensics, the branch of forensic science, thoroughly deals with identification, analysis and extraction of digital evidences for cybercrimes. To handle cyber crimes requires a skilled technical man force, impactful laws and requires procedure with no loop holes .With the advancement of technology now we need to discuss about Cloud forensic, Social Media Forensic and IoT forensic This research paper discuss about different types of Digital Forensic technologies their standard operating procedure for investigation and Challenges to India to cope up with these crimes.

Keywords- *Cyber threats, Cyber Forensics, Cloud Forensic*

1 Digital Forensic

With the development of internet technology we have seen the emergence of cyber-crimes at every level which obstructs the path way for development. Various malicious tools are designed to create threat at private and public networks to extract useful information. Such cyber threats obstruct the path way of any nation. To counter such threat Digital Forensic provided away to resolve cyber threats. Digital Forensic is the science to investigate about the evidences related to cyber-crimes, in which evidences are collected from electronic and digital devices while protecting the privacy of users. With such evidences victim affected by cyber-crimes can present evidences in court of Law [1].

2. Standard procedure of Digital Forensic.

With that said, security experts, academics, and law enforcement agencies use digital forensics to tackle the increasing number of cyber anomalies. Such experts deploy scientific methods such as identification, validation, interpretation, and documentation on digital devices like RAM, phones, memory cards, floppy disks, and flashdrives to collect digital evidence. [5]

For example USB Forensic, as we know USB is a widely used storage devices as they are portable and effective. Due to easy accessibility they are often used for cyber-crimes. USB generates IP address, which can be used to analyze USB usage attempts. Thus USB Forensic can provide more information in Digital Forensic. [2]

3. New emergence in the fields of DigitalForensic.

With the advent of social networking sites and cloud storage, level of cyber-crimes are also increased , therefore new areas also emerged in the field of Digital Forensic such as [3]

- Social Media Forensic
- Cloud Forensic
- Iot Forensic

3.1 Cloud Forensics

Now Cloud Forensic has gained much attention as cloud storage is a cost effective solution for data storage. Cloud forensics has recently immense much attention by forensics experts due to the fact that cloud computing offers massive resource pool, cost-effective solution, dynamicity, and wide access for storage. Cloud Forensic refers to investigation of crimes related to cloud storage.

During cloud storage as data is hosted on remote server therefore cloud forensic is more complicated than digital forensic. As cloud storage is widely accepted at multiple private companies and at government level, the rise in crimes in the cloud environment is become a major concern. As a result Cloud Forensic has attained attention to resolve the cloud computing issues

3.2. Social media forensics

With the emergence of Web 2.0 social media platforms has become large area of social connectivity. Different social media platforms such as Twitter, Instagram, Facebook and LinkedIn has been become targets of Hackers for data theft. In Social Media Forensic social media posts become part of evidence therefore chat logs, shared Pictures, Location and friend information become part of investigation.

This indicates that social media forensics is not only a powerful tool to trace digital evidence spread across social media, but it also highly efficient in analyzing, authenticating, and acquiring digital evidence. This has made social media forensics a rising trend in the digital forensic domain.

3.3 IoT Forensics

IoT forensics is the method to analyze IoT devices to collect evidences in cyber-crimes, when hackers uses devices connected to Internet to commit cyber crimes

Thus digital forensics is any forensic investigation dealing with digital evidence, while IoT forensics is a more specialized branch of digital forensics focused on devices connected to the internet. IoT forensics experts use various methods to find digital evidence such as extracting data from IoT devices which works with sensor attached with various devices like kitchen appliances, wearable devices like smart watch and fitness tracker

4 Standard operating procedure for investigation

It specifies the proper procedure to be followed for investigation such as:

- a. Evidence has to be gathered in way as specified by court.
- b. Care must be taken to avoid any damage to evidences.
- c. Forms such as Digital Evidence Collection (DEC) Form, Chain of Custody Form etc. needs to be filled.

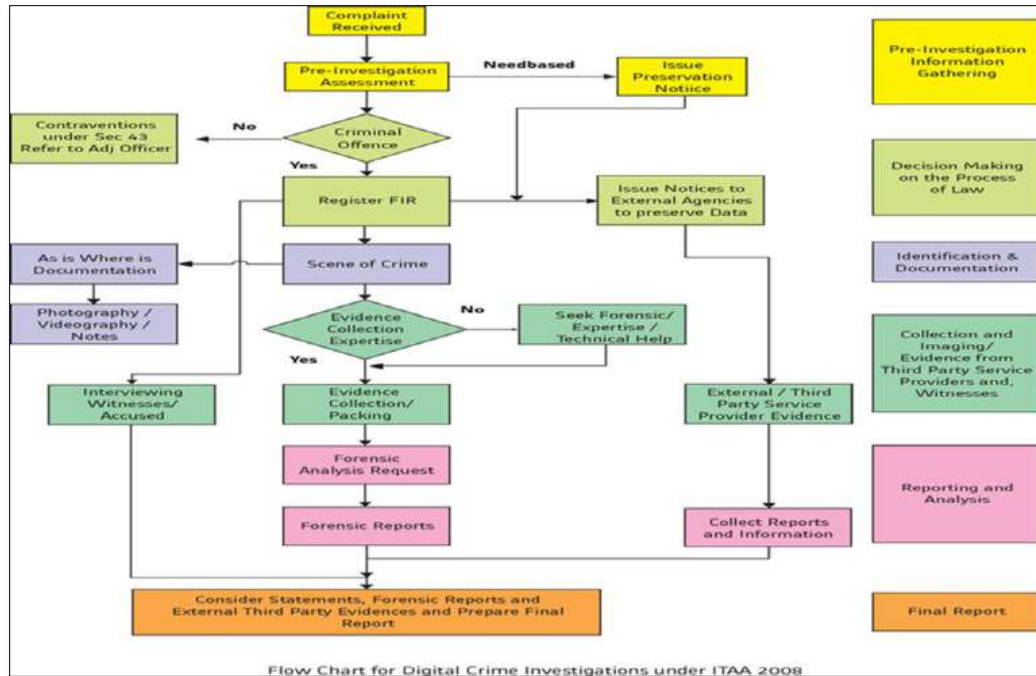


Fig-1 Flow Chart for Digital Investigation under ITAA 2008

5 Challenges in India

According to Forensic Science India report which is a criminal justice research and litigation Centre, part of the National Law University. The report is collaboration with the Ministry of Home Affairs.[4]

5.1 High vacancy rate of Technical experts.

40% seats out of 3,211 specified posts in 26 forensic labs which are considered under this report are vacant, which include posts related to administrative and technical posts. As Digital Forensic needs a well-trained team of peoples to extract evidences from digital devices in spite of heterogeneous devices and complex encryption algorithms, as they need to track unauthorized access, analysis of data loss in the system, therefore this shortcoming is obstructing India to achieve better results.

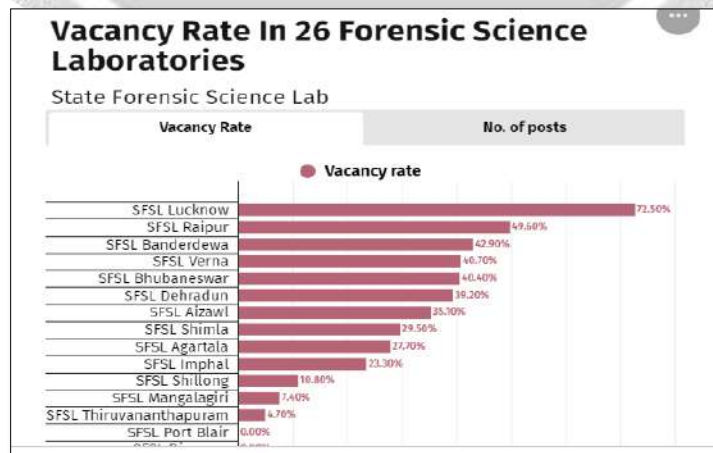


Chart-1 Vacancy rate in Forensic Labs in India

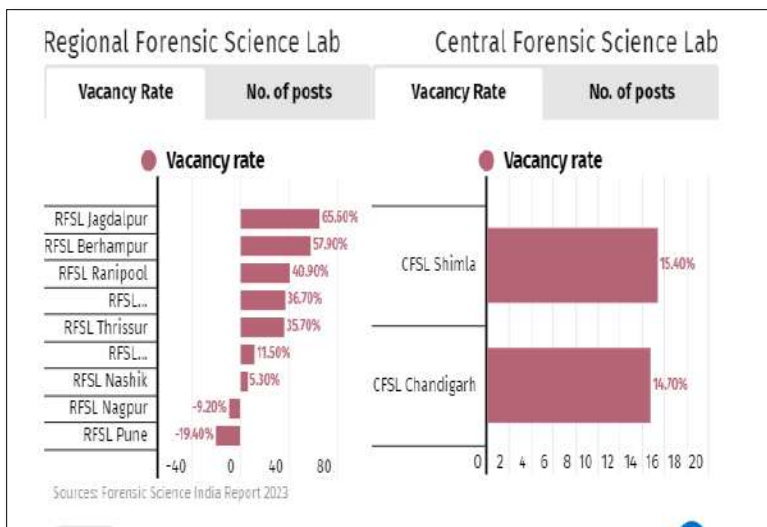


Chart-2 Vacancy rate in CFSL and RFSL

5.2 Underutilization of Budget and administrative delays

Union government provides fund to the Central Forensic Science Labs (CFSL) while State Forensic Science Labs (SFSL), R Forensic Science Labs (RFSL) and Mobile Forensic Science Units (MFSUs) are funded by respective state governments and specific grants from the Union government.

Laboratory-wise Comparison Of Forecast, Receipt & Expenditure Of Funds From 2013-14 to 2017-18			
Laboratory	Received /Forecast	Expenditure /Received	Expenditu
CBI-CFSL	45.40%	74.60%	33.90%
CFSL Chandigarh	122.50%	58.30%	71.40%
RFSL Aurangabad			107.10%
RFSL Dharamshala	95.40%	100.00%	96.40%
RFSL Nagpur	43.00%	99.30%	42.70%
RFSL Nashik	4.30%	2093.40%	90.40%
RFSL Pune			79.30%
RFSL Ranipool	268.70%	30.90%	83.10%
SFSL Agartala	84.70%	84.50%	71.60%
SFSL Aizawl	100.00%	92.00%	92.00%
SFSL Bhubaneswar	110.40%	84.50%	93.30%
SFSL Dehradun	110.70%	80.60%	89.20%
SFSL Imphal	517.80%	83.30%	431.40%
SFSL Lucknow	100.00%	102.40%	102.40%
SFSL Mangalagiri		1.40%	
SFSL Port Blair			1.70%

Chart- 3 Funds allotment to different Labs

5.4 High Pendency rate of Cyber Forensic Cases

Due to high pendency rate in Cyber Forensics cases lead to delay in legal procedure, therefore it requires expansion in this department

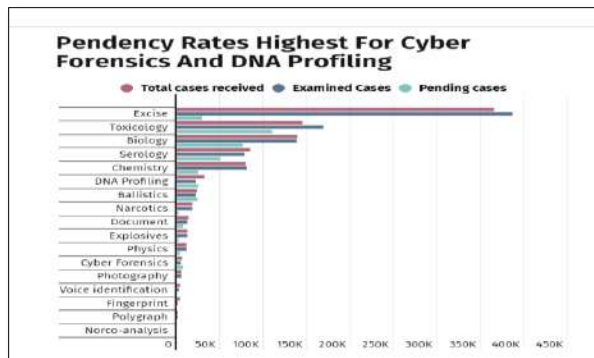


Chart-4 Pendency rates for Cyber Forensic cases

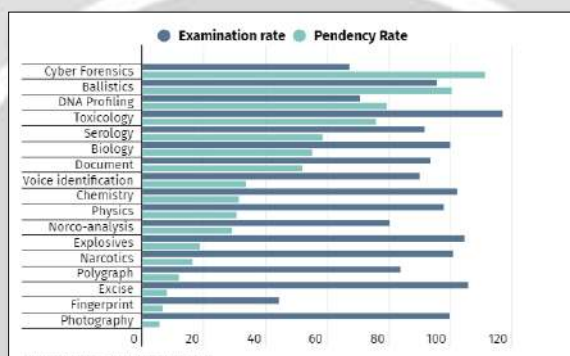


Chart-5 Comparison between Examination rate and Pendency Rate

6 Future of Digital Forensic with Artificial Intelligence

Due to increase in complexity and growth in cyber-crimes, Digital Forensic investigators faces challenges to deal with cyber-crimes with limited resources, it becomes difficult for them to generate results in effective time frame .The problem can be overcome in future if we combine Digital Forensic tools with Artificial Intelligence tools and techniques which can increase the scale and can generate outcome in effective time frame. Artificial Intelligence technique with Machine Learning can provide pace to the Digital Forensic techniques and analysis that can lead to Intelligent Forensic. With the launch of Cloud-Specific Digital Forensics solutions for platforms such as AWS, Azure, and Google Cloud, monitoring and tracking capabilities open up with them, leading to a hyper observation of data transmission via remote server.

Integration of enhanced AI and deep Machine Learning (ML), has led for the scalability and error fixation assisted with real time monitoring and report delivery, leading to a high-speed threat detection, identification and solution.

Launch of an AI driven platform for digital forensics called “ForensiAI”, allows machine learning algorithms to quickly categorize and analyze digital evidence for further investigation.

7 Conclusion

Therefore in order to handle the cases related to cybercrimes, skilled team and proper law implementation is highly needed .

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Voltammetric determination of Molybdenum in environmental sample

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Abstract:

Electrochemical behaviour of molybdenum at glassy carbon electrode has been studied employing cyclic voltammetry. Studies have resulted in a simple method for determination of molybdenum at low concentration in presence of acetate buffer (pH 5) by linear scan voltammetry. A detection limit of 5×10^{-7} M has been achieved and method has been applied to determine molybdenum in soil and plant sample.

Key word: Linear scan Voltammetry, Micro determination, soil and plant sample

Introduction

Molybdenum is one of the important metalloid elements with industrial, environmental and biological significance. Molybdenum is used in production of steel alloy and non ferrous alloy to improve thermal resistance, strength and to reduce corrosion (1). Among second and third transition series molybdenum is the only trace element for plant and animal metabolism (2). In soil water soluble molybdenum ranged from 0.3 to 3.9 ppm of dry soil and in plants its concentration range from 0.04 to 0.2 ppm. It is known to be a paradoxical element, the amount lower than 0.04 ppm shows its deficiency and more than 0.2 ppm it becomes toxic (3,4,5). Therefore it is pertinent to develop a simple yet reliable analytical method enable to determine molybdenum at micro level concentration. Voltammetry has the potentiality to meet the required aim especially for metals. Most of the electrochemical reduction studies of Mo (VI) has been at mercury electrode in various non complexing (6,9,12) and complexing media (7,8,10,11,13-15).

Experimental:

Cyclic voltammogram CV-27 in combination with an XY recorder and C-1 cell stand (Bioanalytical System Inc. USA) was used to record the cyclic voltammograms. All potential was measured against silver-silver chloride (Ag/AgCl) electrode and a platinum wire served as auxiliary electrode. A platinum electrode ($A = 1.76 \times 10^{-2} \text{ cm}^2$) glassy carbon electrode ($A = 4.91 \times 10^{-2} \text{ cm}^2$) from BAS, USA was used as working electrode. The pretreatment of GCE including polishing with 0.05 α - alumina powder on the microcloth keeping electrode at initial potential for one minute before scan. The electrode solutions were deaerated by bubbling purified nitrogen prior to voltammetric measurement. All chemicals were of AR grade. Ammonium hepta molybdate (VI), for medium acetate buffer acetic acid were used of AR grade and were used as received.

Sample preparation: Synthetic soil and plant samples were prepared by adding known concentration of molybdenum to oven dried soil and plant sample and then digested with an oxidizing mixture to remove biological material.

Result and Discussion

1. Cyclic voltammetric studies in the +0.2 to -1.0 V potential range in different supporting electrolyte at GCE in general shows that best signal is obtained in acetate buffer medium as regenerated the sharpness and height of the cathodic peak

2. Cathodic to anodic separation

The electrochemical reduction of hexavalent Molybdenum has been studied in highly acidic medium at mercury electrode by polarography where multiple peaks are reported for Mo (VI) to Mo (III). PILLAR AND ILANGO VAN (36) has studied Mo at GCE in 0.1 M H₂SO₄ in the range +0.7 to -1.0 V and have concluded that behavior of Mo (VI) reduction at GCE is similar to that of HMDE. The electrochemical reduction of Mo (VI) at GCE in the range +0.2 to -1.0 V shows general similarity. In acetate buffer as supporting electrolyte, sharp single cathodic peak with a corresponding anodic peak of much smaller height was obtained. On increasing the pH, peak potential shift towards more negative potential. However the peak current was the highest at pH 5. The reduction reaction appear to be quasireversible going towards irreversibility shown in table 1. The peak current has in contrast to HCl and H₂SO₄ medium however kinetic character is also clearly seen by highly increased cathode current as proportional to scan rate and not to the square root of scan rate. A single step is almost irreversible 3 electron reductions appear to be the mechanism at GCE in acetate buffer medium.

From above Cyclic voltammetric studies acetate buffer (pH5) was found to be the best medium with GCE as far as height and sharpness of voltammetric signal is concern. The linear sweep voltammogram is taken to find out the lower detection limit of molybdenum in acetate buffer media (pH5) at GCE. The lower detection limit was found to be 5×10^{-7} M. The technique has been successfully used for detection of molybdenum in soil and plant sample

Figure 1. Voltammetric determination of Molybdenum in environmental sample

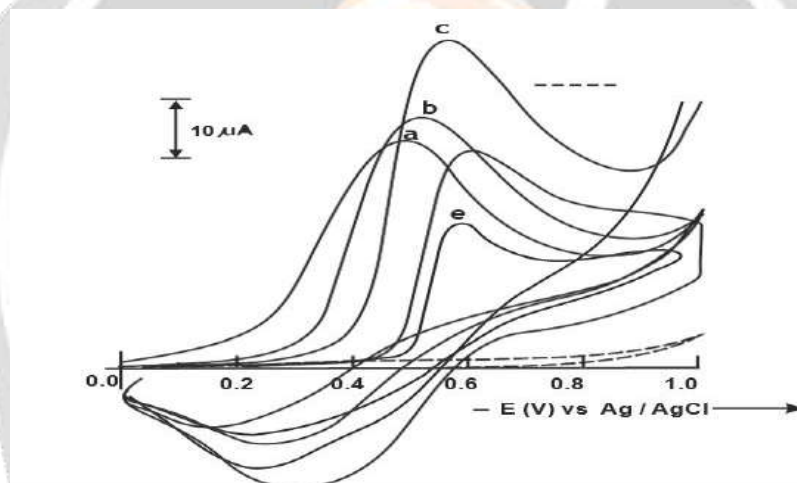


Figure 2. Voltammetric determination of Molybdenum in environmental sample

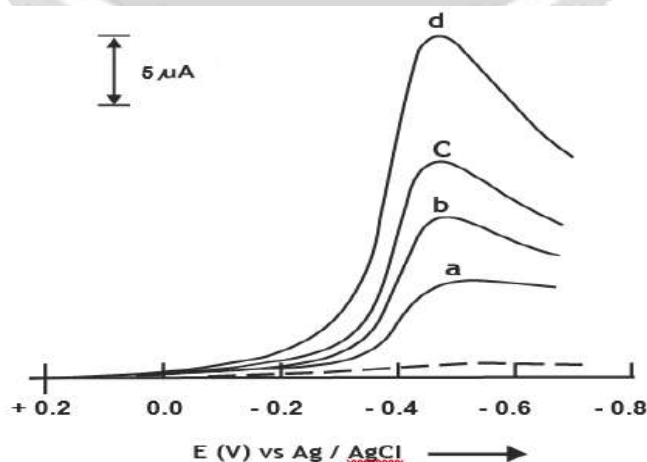
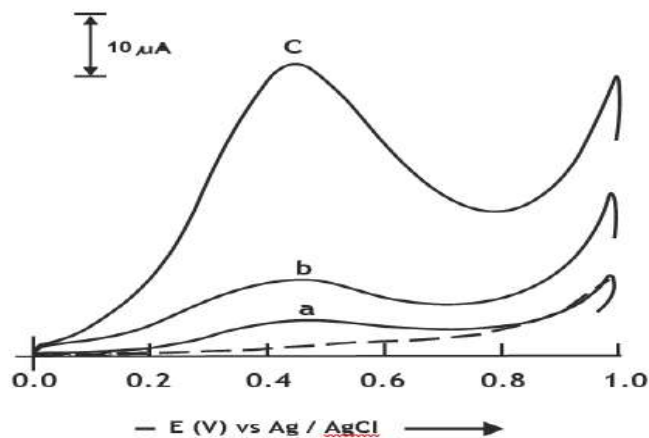


Figure 3. Voltammetric determination of Molybdenum in environmental sample

**Table 1 : Cyclic voltammetric characteristic of Molybdenum (VI) at Different pH at GCE**

Supporting electrolyte: Acetate buffer, Scan rate : $20\text{mV}\cdot\text{s}^{-1}$
 Reference electrode: Ag/AgCl, Concentration: 1 mM

PH	-E _{pc}	V	I _{pc}	μA	-E _{pa}	V	I _{pa}	μA	ΔE _p	mV	I _{pa} / I _{pc}
3	0.49		58		0.20		24		290		0.41
4	0.52		66		0.25		26		270		0.39
5	0.56		88		0.30		30		260		0.39
6	0.60		58		0.25		29		350		0.50
7	0.61		36		0.25		20		360		0.55

Table 2 : Recovery of added Mo (VI) to the soil samples by linear sweep voltammetry

Working electrode: GCE, Ref. electrode: Ag/AgCl, Scan rate: $100\text{mV}\cdot\text{s}^{-1}$ Supporting electrolyte : Acetate buffer (pH 5)

Mo added	ppm	Mo found*	ppm	% RSD	% Recovery
83		85		1.91	102.40
249		255		1.27	102.40

* Average of three determination

Table 3 : Recovery of added Mo (VI) to the plant samples by linear sweep voltammetry

Working electrode : GCE, Ref. electrode : Ag/AgCl, Scan rate : 100 mV.s⁻¹, Supporting electrolyte : Acetate buffer (pH 5)

Mo added	ppm	Mo found*	ppm	% RSD	% Recovery
60		61.8		2.64	103.0
180		185		3.26	102.8

* Average of three determination

Conclusion

The high reproducibility and sharp reduction signal at pH5 in acetate buffer at GCE make it useful for quantitative purpose in a mercury-free environment by voltammetric technique. Analytical applicability of Linear sweep voltammetry have been investigated fully which has resulted in following electroanalytical method for trace level detection and determination of molybdenum in different samples.

Acknowledgement

Authors are thankful, Jai Narain Vyas University, Faculty of Science, New Campus, Jodhpur (Rajasthan) 342001, INDIA, for laboratory facility.

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Security And Privacy In Wireless Health Care Devices

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Abstract

Cyber attacks on any latest technology is always a major concern in this new digital era and it becomes more important in case of wireless devices networks as data travels via wireless networks and is very difficult to keep data secure. Due to increase in research and easy availability of technology wireless health care devices market is also excelling in an exponential way.

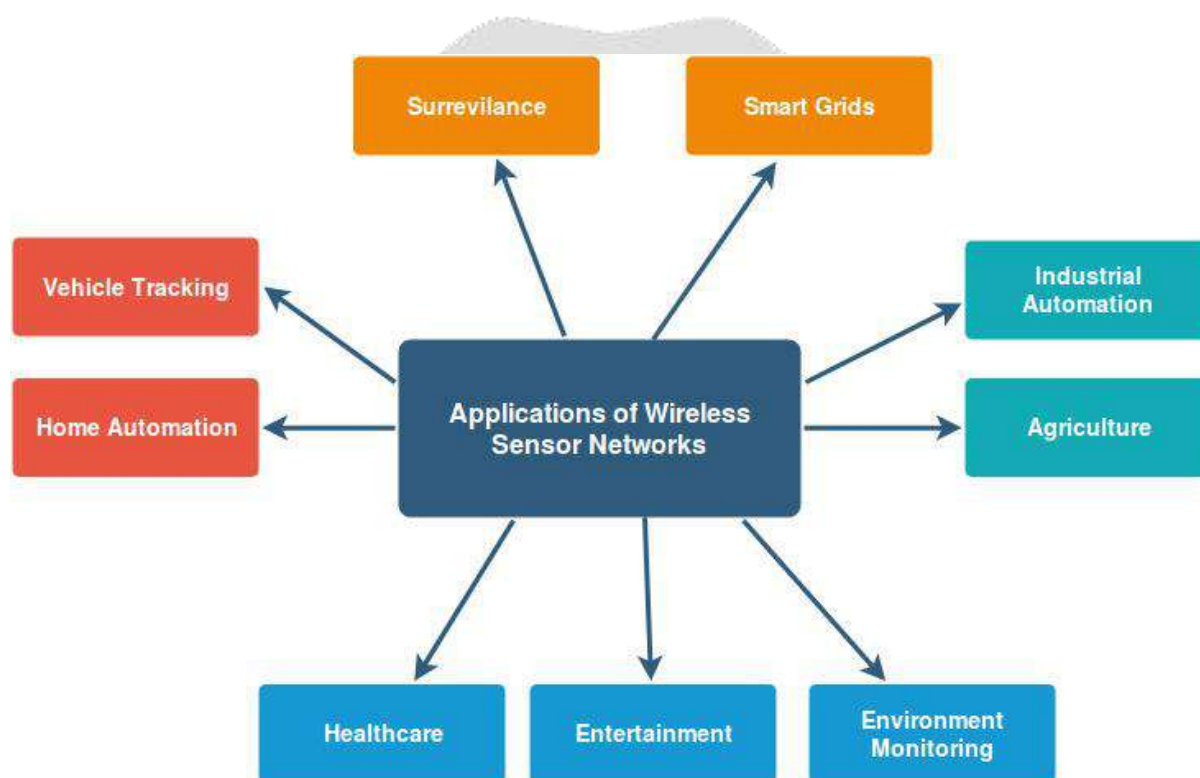


Figure 1 : Application of Wireless Sensor Networks

Health care devices are playing a significant role everywhere whether it is inside a hospital or outside wearables are every where now days. Due to numerous available devices, providing data security and privacy is a challenging task in spite of government agencies setting up rules keeping data privacy and security in concern.

Keywords

Data Security, Data Privacy, Wearable Devices, Wireless Health care Devices

1 Introduction

Wireless Health care devices these days are playing a significant role throughout the health care industry whether these devices are being used in hospitals by experts or by an individual as self monitoring units through wearable devices. Irrespective of facing multiple legal challenges and the most challenging is data security and privacy.

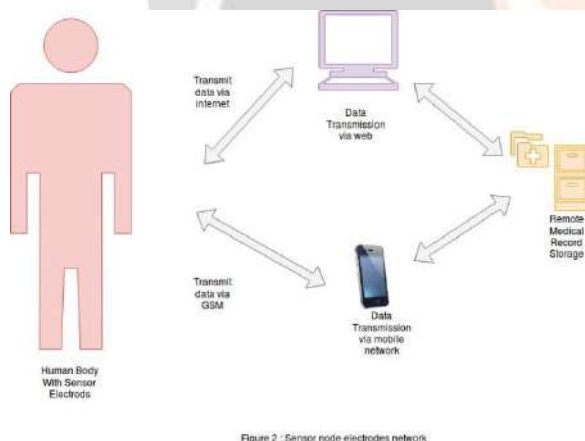
Hospitals are taking very keen interest in using wireless technologies to support re- mote patient monitoring so as to provide a personalised service to a patient and it is booming market.

The most important task of healthcare device manufacturers in this concern should be to conduct research that provides a solution for data security and privacy of an individual in both inside and outside a hospital, as wearable devices are not mature yet in data security and privacy acceptance of an individual. There exist some security loopholes that make these devices vulnerable to many attacks.

Due to low processing and computing capabilities of a wearable device does not allow a developer to implement complicated security mechanisms and thus authentication issues are very common.

2 Types of Wireless Health care devices

Medical devices that uses wireless technology, whether they are implanted or are worn, to control vital functions and to measure a huge list of physiological parameters. Implanted devices can control heart beats, monitor hypertension, provide electrical stimulation of nerves, work as glaucoma sensors, and monitor various body pressure. Devices monitor vital signs, assist the movement of artificial limbs, and act as miniature base stations for the collection and transmission of various physiological parameters.



These wireless health care devices communicate with signal receivers that are connected to phone networks, mobile phone systems or broadband to access the Internet. Patients need not be on one spot tangled with cables, creating a better workplace for medical personnel and a comfortable zone for the patient, reducing risk of infection.

Device Category	Technology Used
Short Range	Inductive Implants, Wi-Fi, Bluetooth, Zigbee, Ultra-Wideband, Medical Micropower Networks, Medical Body Area Networks
Long Range	Wireless Medical Telemetry(WMTS), Worldwide Interoperability for Internet Access (WiMAX)

Health care device manufacturers now have several options for wireless technology

in their products. A single technology can't meet all goals. For a product that includes wireless technology, appropriate decisions should be made to identify the appropriate technologies for the target application.

3 What kind of threats a wireless health care device can have?

Wireless technology helps us to make keeping track of our health easier. There are many applications that allow us to measure everything from the number of steps we are taking each day to our heart rate. Using Telehealth, doctors can monitor patients from far away. But with advances come unexpected threats and people wants to exploit the technology for their evil goals.

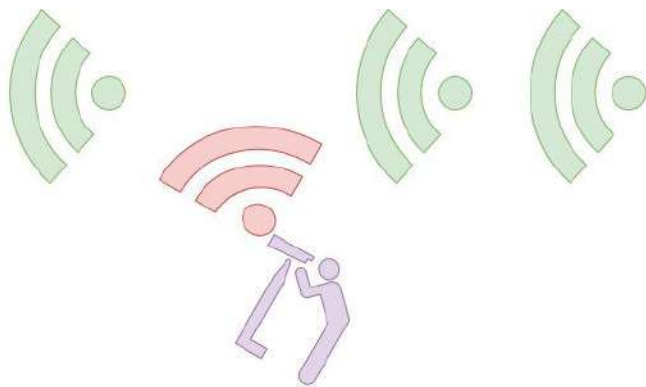


Figure 3 : Threats in wireless health care devices

Generic threats on wireless medical devices :

- Disturbance of communication network.
- Database / SQL injections to steal data.
- Spoofing to fool the hardware.
- Denial of Service (DoS).
- Destruction of device.
- Injecting malware or spyware in devices.

Any attacker can get complete access and control of the remote wireless device if he / she can gain unauthorised access rights or if the wireless driver's kernel can be hacked.

These are the various actions an attacker can do after gaining unauthorised access to the device.

- Can change medical records.
- Can install malware in the device.
- Steal an individual's sensitive information.
- Can delete all data from device causing DoS attack.
- Can use the hacked device to enter the whole network.

Security Vulnerabilities	Working
Unsecure transmission of data via Bluetooth for local device storage	Attacker can manoeuvre the error in the device to hack data stored in the local device, such as health related information using any healthcare device as an access point.
Software communication to the Cloud via cellular or Wi-Fi network	Exploits that takes place by breaching this security including MITM and redirection attacks, that could cause information to be uploaded to the wrong server.

Insecure data storage on Cloud	The most exposed area having possibility of being attacked in the wearable world due to the amount of Personally Identifiable Information(PII) that is available.
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Thus an attacker can compromise, confidentiality and integrity of patients' data and privacy via various means that could be due to any kind of failure in security implementations of the wireless network and it ensures a big pressure on the IT team of the hospital.

4 What can happen if a health care device is compromised?

The intention of any kind of attack for any exploit is to cause any unprotected system to fail. In a recent research it has been demonstrated that insulin pumps have been compromised with the result being that complete control was taken and medicine could be injected on command.

A software loop hole can result in information being changed within a device, creating new possibilities for attackers to take advantage, and denying proper access to patient treatment.

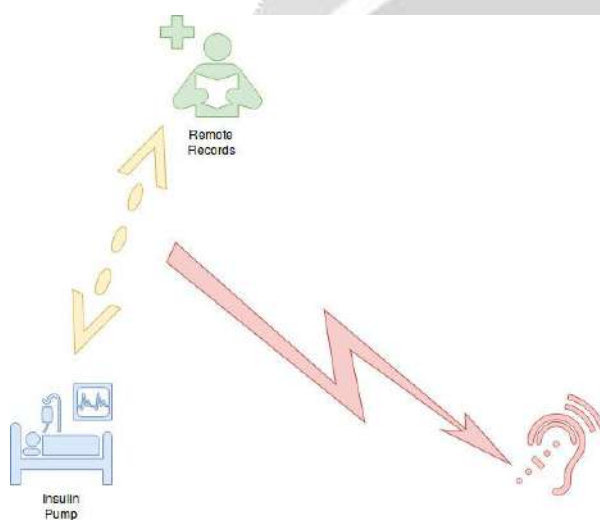


Figure 4: Eavesdropping

If an attacker implant a virus or worm in the device that may cause the device to stop functioning may be by draining its battery or setting of an electric spark hence killing the patient.

The attack can be a type of eavesdropping, as the data stored on medical devices include personal information about the patients' health status, the location along with his/her medical history. This information could be used to gain an advantage whether political or financial.

We use health care devices, which can be potentially manipulated into creating security loopholes like back doors or malware attacks to exploit at a later stage for social engineering.

5 Why security of wireless health care devices is required?

A weak security implementation of health care device could affect patient health and can leak patients' data.

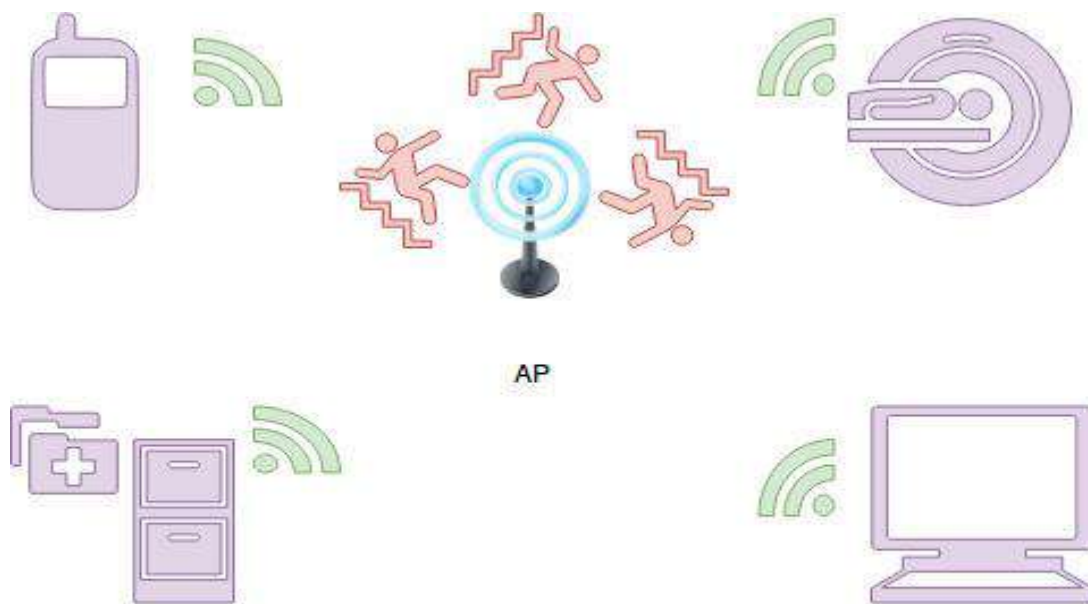


Figure 5: Why Security is required?

Recent health care technology has enabled the research of medical devices that are externally attached to or implanted inside patients's body. These devices provides a wide range of information, including insulin pumps for blood sugar problems, pacemakers for cardio devices. Health care devices have adopted wireless technology these days to facilitate communication with external data logging devices and control devices that provides commands to balance the amount of medicine and to retrieve data.

Although wireless technology has made communication with medical devices easier and safer for health care professionals, but also it has also introduced security and privacy risks. Major health care devices implement little authorization and encryption algorithms, and hence any attackers can remotely access sensitive health data from these devices, or even control the device to issue any malicious commands.

Poor security implementation of wireless medical devices could affect individual's health.

6 Who are the combatants to wireless health care device?

A variety of different sources can produce threats to wireless medical devices, it could be natural disaster or could be groups or individuals, and are threat actors, they have variety of capabilities and motives.

Following are few categories that may act as threat actors:

- Bot network operators.
- Criminal groups.
- Foreign intelligence agencies.
- Insider.
- Spamming groups.
- Phishing organization.
- Malware attackers.
- Terrorist organizations.

- Competitors or industrial rivals.

7 What can be done to ensure security of wireless health care devices?

Performing wireless audits must be the top most task of IT teams in hospitals. For example many printers are now wifi enabled and are shipped with an open or blank SSID which enables it to automatically join a wireless network. An attacker can use the wireless printer to piggyback the main wired network in case the default wireless settings are left unchanged.



Figure 6 : Wireless Healthcare device security assurance

Hospitals by nature have open access to everyone, a hacker could place his/her unauthorized access point for example at waiting room having unprotected network. It provides the hacker with a ability to continuously listen the network traffic in dis-sipated, mode and therefore remain imperceptible.

These situations forces the development of a proper solution for data security and privacy. Providing a technical fix to a problem will only resolve the issue for a short time. A more systematic and urgent type of approach needs to be achieved.

The manufacturers of medical devices, researchers, hospitals, and the government have to work together to reduce the threats.

Government has introduced the Medical Device Cyber security Act of 2017 which will :

- Create a cyber report card for medical equipments.
- Testing of device should be mandatory before going on the market.
- Require that cyber security updates and patches make available for free.
- Put cyber security of health care devices under the jurisdiction of the Industrial Control Systems Cyber Emergency Response Team (ICS-CERT).

8 Emerging Technologies for Securing Wireless Health Care Devices

Data theft is a primary concern of companies that deal with healthcare organizations. Although threats of patient health information is not completely safe, but technology developed to guard health data continues improve.

As the medical industry continues to utilize mobile healthcare devices, security becomes more essential.

The goal of new technologies must be to kill the chain of attacks on health care devices.

- Using Next Generation Firewalls (NGFW).
- Block Chain Technology integration.
- Health care cloud based security system.
- Using Direct Messaging and Health Information Exchange (HIE).
- Biometric Solutions for security healthcare devices.

9 Benefits of wireless technology in health care.

Wireless networks can help health care domain in many ways. They improve quality of care by decreasing hospital expenses, and increasing communication among patients and health care professionals. Following are benefits of wireless technology in healthcare:

- Keep track of assets and to manage inventory.
- Quality of Patient care and Clinical Communications.
- Keeping track of any patient's movement in hospital.
- Staff gets lab reports as soon as they are ready.
- Keep track of various medicine as they float throughout the hospital.

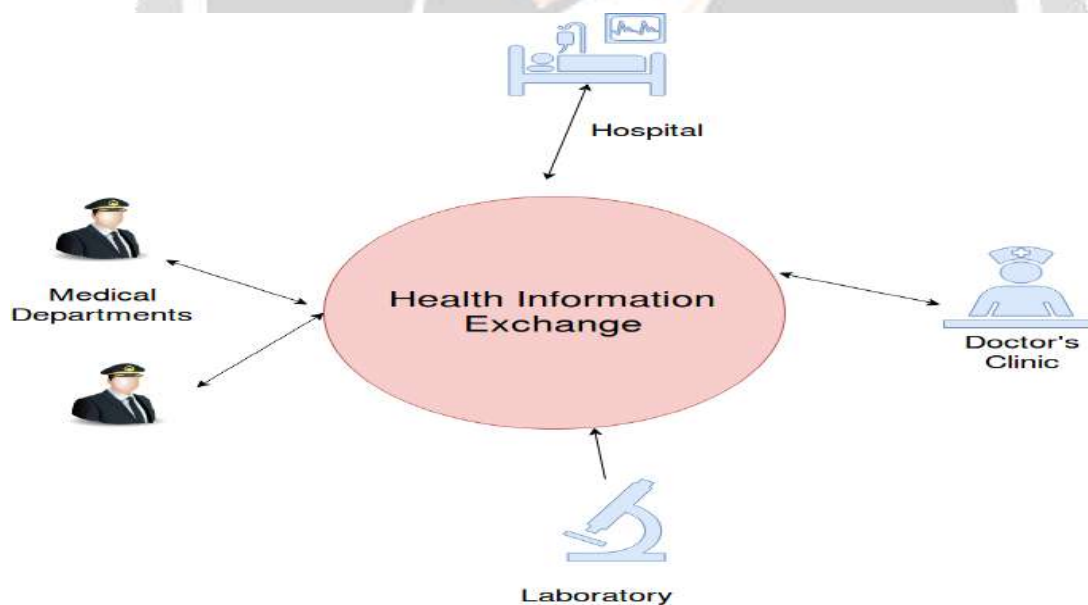


Figure 7: HIES

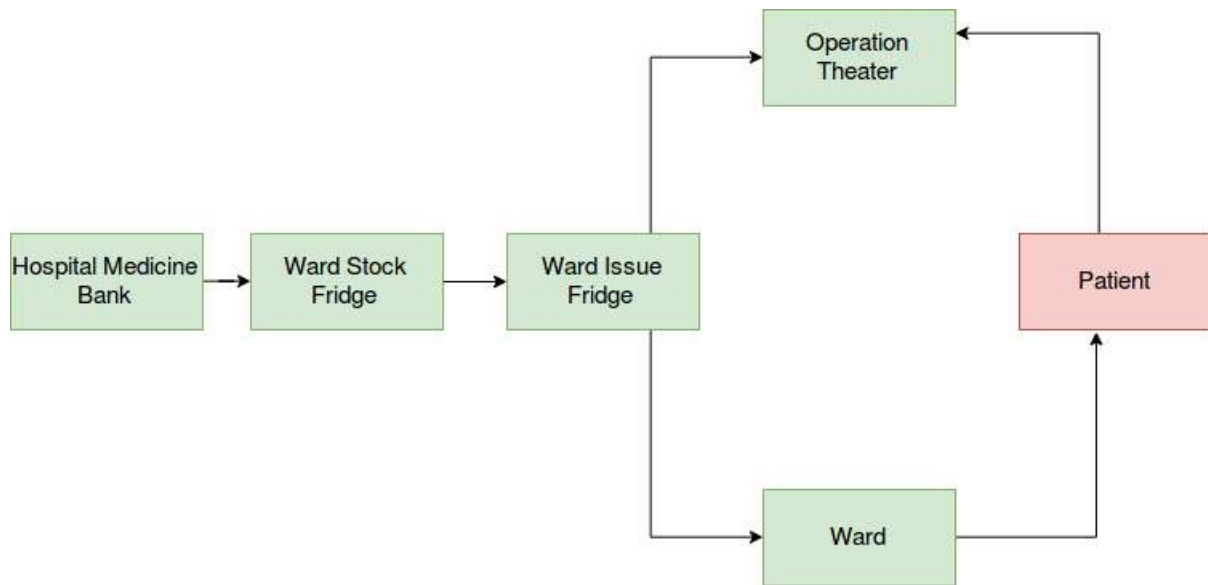


Figure 8 :Tracking medicine using wireless sensor network

10 Who Regulates Wireless Health Care Devices ?

Any wireless device shows challenges when it comes to compliance. But in case of a medical wireless device, where things get more complicated. Apart from the safety of the device, designers must also be concerned for its security from any kind and number of cyber attacks.

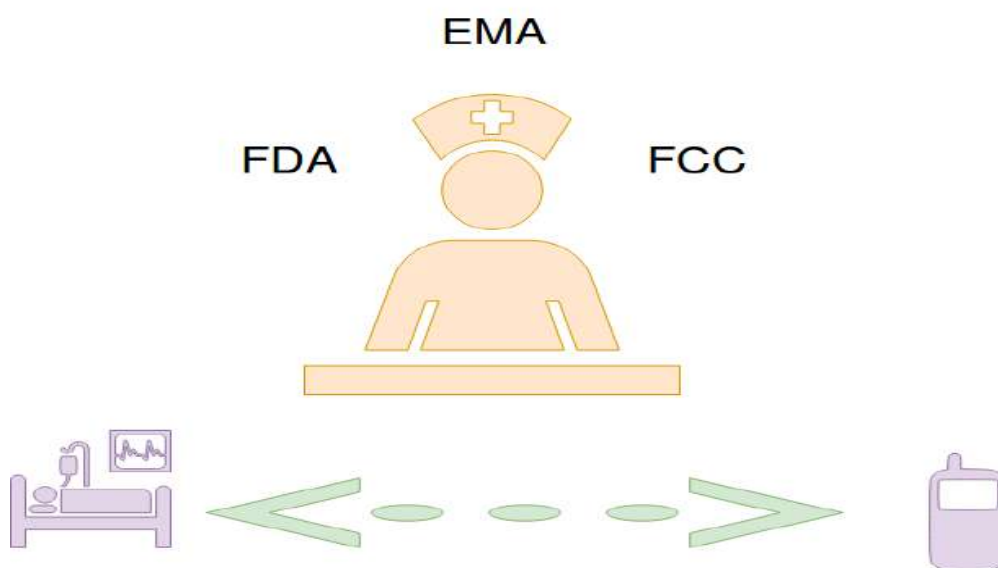


Figure 9 :Regulation Authority

A company’s main objective is to make profit and for that, companies want a market-ready device as fast as possible. Here most companies fail to realize is that

they need to consider compliance during the design and development of their product.

There are two major bodies that regulate health care devices in the US: The FCC and the FDA. The FDA is primarily responsible for clearing a device after reviewing a premarket notification. Most companies comply with the FDA and should keep up-to-date with their recommendations for healthcare devices.

The FCC addresses the use of low-power radios for wireless communications. The FCC develops and executes rules for products based on the wireless technology being used. The FDA typically expects a device to comply with the FCC before it complying with FDA regulations.

11 Regulations in India

All medical and healthcare devices can be placed into following four classes based on their use and the probable risk that can come with their use. Following are the classifications:

- Class A (Very low risk)
- Class B (Moderate risk)
- Class C (High moderate risk)
- Class D (High risk)

Each class has different regulatory processes. The higher the risk, the more strenuous the approval process.

Licences are applied online to sell and distribute.

Notified Bodies will audit manufacturing companies and products to ensure conformity to standards.

Foreign manufacturing companies may be subject to inspection by India's Central Licensing Authority.

In 2020, approved medical devices must have distinct identifiers.

Medical devices in the Indian market are subject to special regulations.

Not all medical devices will require clinical investigation.

Registration Certificates last for five years.

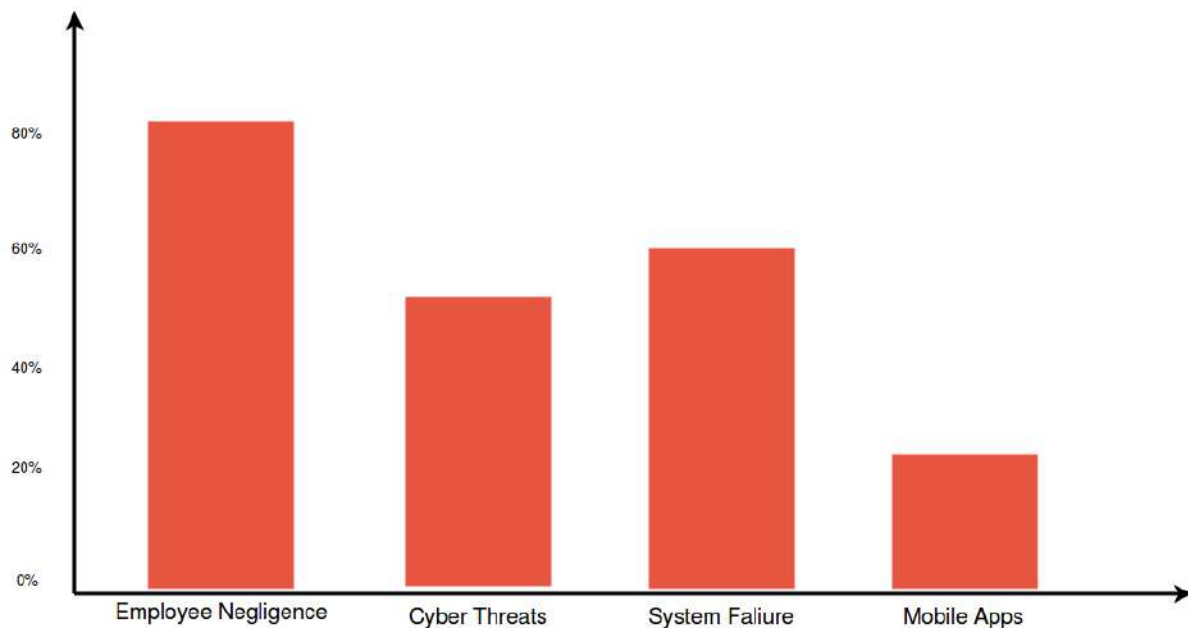
Conclusion

For better future, hospitals will need to collaborate with each other in order to develop a common operating framework to deal with data and privacy security of patients.

There should be common standards in terms of security. Hospitals need to develop a proactive strategy regarding the implementation of security as a service to the patients.

Security threats health care organization should worry

Figure 10 : Conclusion



A wireless assessment and risk-analysis is needed to find out those wireless devices that are vulnerable and could be targeted by an attacker and can be compromised. The assessment must also find out any devices with vulnerable applications and drivers as well as ensures that all factory-supplied default settings are changed and unnecessary functionality is removed.

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Role of social media in education and learning in the context of Corona

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शिक्षा और अधिगम में सोशल मीडिया की भूमिका कोरोना के संदर्भ

1.श्री नवीन कुमार पारीक (शोधार्थी)
2.श्री ब्रजेश कुमार पारीक (शोधार्थी)
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ABSTRACT

शिक्षा और अधिगम में सोशल मीडिया का विशेष महत्व कोरोना के समय में समझ में आया। क्योंकि कोरोना के समय में जब औपचारिक शिक्षण प्रतिबन्धित हो गया था। उस समय सोशल मीडिया की सहायता से अधिगम प्रारम्भ किया गया। और अधिगम में सोशल मीडिया और मोबाइल ने महत्वपूर्ण भूमिका निभाई। इसके माध्यम से अधिगम सुचारु रूप से जारी रहा। वर्तमान समय में सोशल मीडिया और मोबाइल ने महत्वपूर्ण भूमिका शिक्षा और अधिगम में बढ़ती जा रही हैं।

Keyword :- ऑनलाइन शिक्षा, टेक्नोलॉजी का महत्व: टेक्नोलॉजी का महत्व, शिक्षक-छात्र संबंध, छात्रों की मानसिक स्वास्थ्य, पाठ्यक्रम की अनुकूलन, छात्रों की समर्थन, शिक्षा और जागरूकता, आत्म-समर्थन और मनोबल, फेसबुक, इंस्टाग्राम, ट्विटर, मीडियम, टम्ब्लर, यूट्यूब, साउंडक्लाउड;

कोरोना के समय में, शिक्षा और अधिगम में सोशल मीडिया ने महत्वपूर्ण भूमिका निभाई है। शिक्षा संदर्भ में, शिक्षा जगत में ऑनलाइन शिक्षा, वेबिनार, और डिजिटल साधनों का सही से उपयोग करने के लिए सोशल मीडिया को प्राथमिकता दी गई है।

छात्रों और शिक्षकों के बीच आपसी सहयोग और जानकारी साझा करने का माध्यम भी सोशल मीडिया है। इसके माध्यम से विभिन्न शिक्षा संस्थानों ने अपडेट्स, समाचार और अन्य महत्वपूर्ण जानकारी साझा की है।

अधिगम क्षेत्र में, लोग सोशल मीडिया का उपयोग विभिन्न जानकारी, अध्ययन सामग्री, और विचारों के साथ कर रहे हैं, जो उन्हें अधिगम की नई पहचानों तक पहुंचाता है। हालांकि, यह महत्वपूर्ण है कि इस संदर्भ में सोशल मीडिया का सही और सतर्क उपयोग हो, ताकि विशेषज्ञों द्वारा सार्वजनिक की गई जानकारी का सत्यापन किया जा सके और लोगों को सही दिशा में मार्गदर्शन किया जा सके।

शिक्षा और अधिगम, समझने और सीखने की प्रक्रिया को संदर्भित करता है जो व्यक्ति को नए ज्ञान, कौशल, और अनुभव का सामर्थ्य प्रदान करता है। शिक्षा और अधिगम के क्षेत्र में कई प्रकार की विधाएँ और संस्थान हो सकते हैं, जो विभिन्न योजनाओं, पाठ्यक्रमों, और विधियों के माध्यम से शिक्षा प्रदान करते हैं।

शिक्षा में, विद्यार्थी विभिन्न विषयों में ज्ञान प्राप्त करते हैं और उन्हें समाज, नैतिकता, और विकास के साथ जोड़ा जाता है। शिक्षा का मुख्य उद्देश्य व्यक्ति को समझदार बनाना, सोचने की क्षमता को विकसित करना, और समाज में सकारात्मक योगदान करने की क्षमता प्रदान करना है।

अधिगम के माध्यम से व्यक्ति अपनी ज्ञान और कौशलों में सुधार कर सकता है। यह सामाजिक, व्यावसायिक, और व्यक्तिगत स्तर पर हो सकता है। आत्म-सीखने, पुनरावृत्ति, और नई विचारशीलता की प्रोत्साहना भी अधिगम का हिस्सा हैं। इस प्रक्रिया में, शिक्षा और अधिगम एक सकारात्मक और सुरक्षित समाज की दिशा में अहम भूमिका निभाते हैं।

कोरोना महामारी, जिसे COVID –19 भी कहा जाता है, एक वायरस से होने वाली संक्रामक बीमारी है, जिसका कारक COVID–19 वायरस है। यह वायरस पहले चीन के वुहान शहर से उत्पन्न हुआ था और फिर दुनियाभर में फैल गया। यह एक संपर्क से होने वाली बीमारी है जिसमें वायरस की छोटी बूंदों के संपर्क के माध्यम से हो सकता है। इस बीमारी के लक्षण में शामिल हैं ज्यादातर बुखार, सांस लेने में कठिनाई, खांसी, श्वास की समस्याएं, थकान, और गले में खराश। यह विभिन्न गंभीरता स्तरों पर प्रभावित हो सकता है, और बुजुर्ग व्यक्तियों और उन्हें पहले ही किसी अन्य बीमारी का संग्रहण है उनके लिए ज्यादा खतरनाक हो सकता है।

वैश्विक साझा समर्थन और तेजी से बदलती तकनीकी प्रौद्योगिकियों के साथ, वैश्विक समुदाय ने मिलकर इस महामारी का सामना कर रहा है। वैश्विक स्वास्थ्य संगठन (W.H.O.) और विभिन्न सरकारें ने लोगों को जागरूक करने, इलाज करने, और सुरक्षित रहने के लिए कई पहलुओं पर काम किया है।

कोरोना महामारी ने शिक्षा और अधिगम के क्षेत्र पर व्यापक प्रभाव डाले हैं:

ऑनलाइन शिक्षा: महामारी के कारण, बहुत से शिक्षा संस्थान और कक्षाएं ऑनलाइन पर आ गई हैं। विद्यार्थी और शिक्षक विभिन्न डिजिटल प्लेटफॉर्मस का उपयोग करके दूरस्थ शिक्षा प्राप्त कर रहे हैं।

टेक्नोलॉजी का महत्व: विभिन्न टेक्नोलॉजी उपकरणों और मोबाइल से अधिगम का प्रचलन बढ़ गया है, जो छात्रों को नए तरीके से सीखने में मदद कर रहा है।

शिक्षक-छात्र संबंध: शिक्षा के इस नए परिदृश्य में, शिक्षकों को छात्रों के साथ अधिक दूरस्थ संपर्क करने की चुनौती हो रही है, और इससे शिक्षक-छात्र संबंधों में बदलाव आ रहा है।

छात्रों की मानसिक स्वास्थ्य: लॉकडाउन और ऑनलाइन शिक्षा की प्रक्रिया में बदलाव ने छात्रों की मानसिक स्वास्थ्य पर भी प्रभाव डाला है। समाज से दूर रहने और तंग तनाव के कारण कुछ छात्रों को सामाजिक अलगाव महसूस हो रहा है।

पाठ्यक्रम की अनुकूलन: शिक्षा संस्थान और शिक्षा निर्देशकों ने पाठ्यक्रमों में ऑनलाइन मॉड्यूलस, वीडियो लेक्चर्स, और इंटरैक्टिव अभ्यास को शामिल करके शिक्षा की प्रक्रिया को समृद्ध करने का प्रयास किया है।

छात्रों की समर्थन: सामाजिक संबंधों की कमी और ऑनलाइन शिक्षा की चुनौतियों के कारण, शिक्षा संस्थान छात्रों को समर्थन और मार्गदर्शन प्रदान करने के लिए विशेष उपायों पर ध्यान केंद्रित कर रहे हैं।

इस प्रकार, कोरोना महामारी ने शिक्षा और अधिगम को नए और आधुनिक पहलुओं से सामरिक बनाया है।

कोविड-19 महामारी के दौरान सोशल मीडिया का उपयोग

यहां थामे गए लोगों की संख्या: लोगों ने अपने नेटवर्कों को बनाए रखने और सहयोग प्रदान करने के लिए सोशल मीडिया का उपयोग किया है, जिससे एक-दूसरे की मदद की गई है।

सार्वजनिक स्वास्थ्य जानकारी: सरकारें और स्वास्थ्य संगठनों ने सोशल मीडिया का उपयोग सार्वजनिक स्वास्थ्य सुझाव, टिप्स और ताजगी देने के लिए किया है।

शिक्षा और जागरूकता: सोशल मीडिया ने लोगों को अधिक जागरूक बनाया है और उन्हें खुद को सुरक्षित रखने के लिए विशेष जानकारी और शिक्षा प्रदान की है।

आत्म-समर्थन और मनोबल: सोशल मीडिया ने लोगों को एक-दूसरे के साथ जुड़ने और समर्थन प्रदान करने में मदद की है, जिससे उनका मनोबल बना रहा है।

ट्रेंड्स और विचार विनिमय: शिक्षा जगत में सोशल मीडिया का उपयोग ट्रेंड्स, और अपडेट्स को साझा करने और उनके विचार विनिमय करने के लिए किया है।

ये आंकड़े दिखाते हैं कि सोशल मीडिया ने लोगों को इस संकट के समय में जोड़ने, सहयोग करने, और जानकारी साझा करने में कैसे मदद की है।

सोशल मीडिया में उपयोग करने के लिए विभिन्न साधन हैं

जो लोग अपने नेटवर्क को बनाए रखने, जागरूकता बढ़ाने, और साझा करने के लिए उपयोग करते हैं:

प्लेटफॉर्म

फेसबुक: एक सामाजिक नेटवर्क प्लेटफॉर्म जिसे लोग अपने दोस्तों और परिवार से जुड़ने, चित्रों और वीडियो साझा करने, और विचारों को साझा करने के लिए उपयोग करते हैं।

इंस्टाग्राम: यह दृश्य एवं श्रव्य सामग्री को साझा करने के लिए एक लोकप्रिय प्लेटफॉर्म है, जिसमें तस्वीरें और क्षेत्रीय वीडियो शामिल हैं।

ट्विटर: लोग इस प्लेटफॉर्म का उपयोग तत्परता से समाचार, विचार, और लिंक साझा करने के लिए करते हैं।

ब्लॉगिंग प्लेटफॉर्म

मीडियम: इस प्लेटफॉर्म पर लोग लेख और ब्लॉग पोस्ट साझा करते हैं और अन्य लोगों के साथ बातचीत करते हैं।

टम्ब्लर: यह एक माइक्रोब्लॉगिंग प्लेटफॉर्म है जिसमें छवियाँ, लिंक्स, और छोटे पोस्ट्स साझा किए जा सकते हैं।

मल्टीमीडिया साधन:

यूट्यूब: यह वीडियो साझा करने और देखने के लिए एक पॉपुलर प्लेटफॉर्म है।

साउंडक्लाउड: लोग इस पर अपनी ऑडियो साझा करते हैं, जैसे कि संगीत और पॉडकास्ट्स।

टूल्स और एप्लीकेशन:

हूटसूट: यह सोशल मीडिया प्लेटफॉर्मों पर सभी संगीत, वीडियो, और लाइव स्ट्रीम्स को एक स्थान पर एकत्र करने के लिए एक उपयोगकर्ता-मित्र साधन है।

कैनवास: इस साधन का उपयोग लोगों ने ग्राफिक्स, चार्ट्स, और दूसरी डिजाइन उत्पन्न करने के लिए किया है।

ये साधन लोगों को सोशल मीडिया प्लेटफॉर्मों पर अच्छे से जुड़ने, बांटने, और सिर्फ इनकैंत करने में मदद करते हैं।

शिक्षा में निम्न सोशल मीडिया साधनों का उपयोग होता है

शिक्षा में सोशल मीडिया साधनों का उपयोग विद्यार्थियों के लिए समृद्धिकरण, सहयोग, और सीधा संपर्क स्थापित करने में किया जा सकता है। शिक्षक भी इन माध्यमों का उपयोग अध्यापन सामग्री साझा करने और छात्रों के साथ संवाद को बढ़ावा देने के लिए कर सकते हैं।

शिक्षा के क्षेत्र में प्रयुक्त सोशल मीडिया के साधन

शिक्षा के क्षेत्र में सोशल मीडिया का प्रयोग विभिन्न तरीकों से हो सकता है:

विद्यार्थी समृद्धि: सोशल मीडिया छात्रों को अध्ययन सामग्री साझा करने, ग्रुप डिस्कशन में शामिल होने और सहयोग करने का माध्यम प्रदान कर सकता है।

शिक्षक-छात्र संवाद: शिक्षक छात्रों के साथ संवाद के लिए सोशल मीडिया का उपयोग करके प्रेरित कर सकते हैं और छात्रों के सवालों का उत्तर देने में सहायक हो सकते हैं।

शिक्षा साझा करना: शिक्षा संबंधित सामग्री और अपडेट्स को सोशल मीडिया के माध्यम से साझा करके शिक्षा को सुधारने में मदद की जा सकती है।

नौकरी तैयारी: सोशल मीडिया विभिन्न पेशेवर समूहों और नेटवर्किंग के लिए एक माध्यम प्रदान कर सकता है जिससे छात्र नौकरी तैयारी में सहायता प्राप्त कर सकते हैं।

निष्कर्ष कोरोना महामारी में शिक्षा और अधिगम में सोशल मीडिया का महत्व बढ़ा है। विद्यार्थी और शिक्षक सोशल मीडिया के माध्यम से वीडियो कॉल्स, ऑनलाइन शिक्षा, और अन्य सामग्रियों का उपयोग करके दूरस्थ शिक्षा में सहयक्स कर रहे हैं। इसके साथ ही, छात्र सोशल मीडिया का उपयोग अत्यधिक जागरूकता और विद्या प्राप्ति के लिए कर रहे हैं।

कोरोना महामारी में सोशल मीडिया ने लोगों को जोड़ा रखने, जानकारी साझा करने, और मनोरंजन के लिए एक साथ आने का माध्यम प्रदान किया है। यह लोगों को आपसी समर्थन देने और सामूहिक संबंध बनाए रखने में मदद करता है, परंतु उसके साथ ही गलत जानकारी, भ्रांतियों, और अफवाहों का भी स्रोत बन सकता है। इसलिए, सोशल मीडिया का सकारात्मक और उत्तरदाता उपयोग करना महत्वपूर्ण है।

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The Role of Artificial Intelligence in Cyber security: Enhancing Threat Detection and Response

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Abstract:

Artificial Intelligence (AI) has emerged as a transformative technology in the field of cybersecurity, offering advanced capabilities for threat detection, analysis, and response. This paper explores the role of AI in cybersecurity, focusing on its applications, benefits, challenges, and future prospects. It discusses how AI-powered solutions can enhance the effectiveness and efficiency of cybersecurity operations, enabling organizations to better protect their systems and data against evolving threats. The paper also examines key AI techniques used in cybersecurity, such as machine learning, natural language processing, and neural networks, highlighting their strengths and limitations. Additionally, it discusses the ethical and privacy implications of AI in cybersecurity, emphasizing the importance of responsible AI development and deployment. Overall, this paper provides insights into the transformative potential of AI in enhancing cybersecurity capabilities and mitigating cyber risks.

Introduction:

The rapid evolution of cyber threats and the increasing complexity of IT environments have made traditional cybersecurity approaches inadequate for protecting against modern cyber attacks. In this context, Artificial Intelligence (AI) has emerged as a powerful tool for enhancing cybersecurity capabilities. AI technologies, such as machine learning, natural language processing, and neural networks, enable cybersecurity professionals to analyze vast amounts of data, identify patterns and anomalies, and detect and respond to threats in real-time. This paper explores the role of AI in cybersecurity, focusing on its applications, benefits, challenges, and future prospects.

Applications of AI in Cybersecurity:

AI has a wide range of applications in cybersecurity, including:

1. **Threat Detection:** AI-powered tools can analyze network traffic, endpoint data, and user behavior to detect and identify potential threats, such as malware, phishing, and insider threats.
2. **Anomaly Detection:** AI algorithms can identify anomalies in system behavior that may indicate a security breach, helping to detect and respond to attacks in real-time.
3. **Vulnerability Management:** AI can help identify and prioritize vulnerabilities in software and systems, enabling organizations to proactively address security risks.
4. **Incident Response:** AI-powered incident response tools can automate the detection, analysis, and containment of security incidents, reducing response times and minimizing damage.
5. **Fraud Detection:** AI can help identify fraudulent activities, such as unauthorized access or financial transactions, by analyzing patterns and anomalies in data.

Benefits of AI in Cybersecurity:

AI offers several benefits for cybersecurity, including:

1. **Improved Threat Detection:** AI can analyze vast amounts of data and identify patterns that may indicate a potential threat, enabling organizations to detect and respond to attacks more effectively.
2. **Enhanced Security Operations:** AI-powered tools can automate routine security tasks, such as log analysis and incident response, freeing up security professionals to focus on more strategic activities.
3. **Real-time Response:** AI can analyze data in real-time, enabling organizations to respond to threats immediately and minimize the impact of cyber attacks.

4. Scalability: AI-powered tools can scale to analyze large volumes of data, making them suitable for organizations of all sizes.

Challenges and Limitations of AI in Cybersecurity:

Despite its benefits, AI also poses several challenges and limitations for cybersecurity, including:

1. Complexity: Implementing AI in cybersecurity requires specialized knowledge and expertise, which may be lacking in many organizations.
2. Data Quality: AI algorithms require high-quality data to function effectively, and poor-quality data can lead to inaccurate results.
3. Bias: AI algorithms can be biased based on the data they are trained on, leading to inaccurate or unfair results.
4. Security Risks: AI-powered tools themselves can be vulnerable to cyber attacks, and malicious actors may attempt to manipulate AI algorithms to evade detection.

Future Prospects and Conclusion:

The future of AI in cybersecurity holds great promise, with ongoing advancements in AI technologies and their applications in cybersecurity. However, addressing the challenges and limitations of AI in cybersecurity will be crucial for realizing its full potential. This paper provides insights into the role of AI in enhancing cybersecurity capabilities and mitigating cyber risks, highlighting the importance of responsible AI development and deployment in ensuring a secure and resilient cyberspace.

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Reservation Station Architecture of Processors to Implement Parallelism at Instruction Level

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ABSTRACT

Parallel processing utilizes the concurrent events in assembly level language. Concurrent events engage parallelism, simultaneity, and pipelining. Parallelism in program can be implemented as coarse grain, middle grain and fine grain called Job level, Module level and Instruction level parallelism. Instruction-level parallelism is realized by processors. Superscalar and VLIW are examples of processor architectures that implement instruction-level parallelism to derive the benefit.

The processor architectures use different techniques to achieve instruction-level parallelism, such as reservation station, reorder buffer, branch prediction etc., up to a desire level. Thus, for achieving instruction-level parallelism, a very closely tied instruction-level parallelism exploiting techniques should be embedded in the processor. In this paper, various processors architectures are compared to explore the characteristics which are significant for instruction-level parallelism in assembly level language.

Keyword: - Parallelism, Superscalar, VLIW, Reservation Station, Reorder Buffer, Branch Prediction.

1. INTRODUCTION

Computer industry has grown adapted to the spectacular rate of increase in microprocessor performance at assembly level. Architectural advances enhance the performance more because it achieves higher degree of parallelism and future increase in performance will be forced to rely more heavily on advances in computer architecture. Parallelism can be applied at various levels of processing such as job, module, and instruction.

Instruction-level parallelism (ILP) realized by processor architecture and compiler techniques that speed up execution by causing individual machine operations to execute in parallel. It is necessary to take decisions about executions of multiple operations handled by compiler or processor hardware. According to decision taking power, instruction-level parallelism architectures can be classified in two categories: Superscalar and VLIW (Very Long Instruction Word).

Superscalar architectures use special hardware to analyze the instruction stream at execution time and to determine which operations in the instruction stream are independent of all preceding operations and have their source operands available. These operations can then be issued and executed concurrently [7], [21]. VLIW architectures increase the resources available to the compiler. VLIW architectures use static scheduling techniques that utilize the compiler to determine sets of operations that have their source operand ready and have no dependencies within the set, the hardware can issue and execute directly with no dynamic analysis [7] [24].

Instruction-level parallelism is implemented in superscalar processor at micro-architecture level by reservation station, reorder buffer and branch prediction. The reservation station holds the instructions which are ready to execute but wait for their operands. When instructions get their operands, they are dispatched to respective execution units in parallel form. Reorder buffer tracks all instructions from dispatching to retiring and arranges the instructions in in-order form that are executed in out-of-order form. Branch prediction techniques predict the branches that will occur in future. Branch prediction increases the number of instructions in executions as it resolves the branch in program before execution. Parallelism and its different levels are discussed in next section. Details of

different ILP architectures are described in section 3. Architectural features of processors are explained in section 4. In the section 5, different processor’s architectures are compared and conclusion appears in section 6.

2. INSTRUCTION-LEVEL PARALLELISM (ILP)

Parallelism has been exploited at various processing levels such as job, module and instruction, also called coarse grain, middle grain and fine grain. These levels of program execution represent different computational grain sizes and changing communication and control requirements. The lower the level, machine gets the finer the granularity of the processes. Granularity or Grain size is a measure of amount of computation involved in processing of software. The simplest measure is to count the number of instructions in the grain. Grain size determines the basic program segment chosen for parallel processing.

Instruction Level Parallelism is the lowest level of parallelism. At instruction or statement level, a typical grain contains less than twenty instructions, called “fine grain”. Depending on individual programs, fine-grain parallelism at this level ranges from two to thousand. The advantage of fine- grain computation lies in the excess of parallelism [24], [25]. ILP can be defined by various ways. Some are as follows.

- (a) Instruction-level parallelism defined as degree of parallelism (measured by the number of instructions) that can be achieved by issue and execute multiple instructions concurrently [24], [39].
- (b) Instruction-level parallelism may be defined as the ability to exploring a sequential instruction stream, identify independent instructions, issue multiple instructions per cycle and send to several execution units in parallel to fully utilizing the available resource [21], [39].
- (c) Instruction-Level parallelism results from a set of processor and compiler techniques that speed up execution by causing individual machine operation to execute in parallel form [7], [21].
- (d) Instruction-level parallelism processing remains only the viable approach for continuously increasing performance without fundamentally rewriting applications [35].

3. ILP ARCHITECTURES

The end-result of instruction-level parallel execution is that multiple operations are simultaneously in execution. It is necessary to take decision about when and whether an operation should be executed the alternatives can be broken down depending on the extent to which either these decisions are made by the compiler rather than hardware. With this, ILP architecture can be classified as follows.

Superscalar Architecture- Superscalar processors are based on sequential architecture. Superscalar machines incorporate multiple functional units to achieve greater concurrent processing of multiple instructions and higher execution throughput. A superscalar processor makes a great effort to issue an instruction every cycle so as to execute many instructions in parallel, even though program is sequentially handed by the hardware.

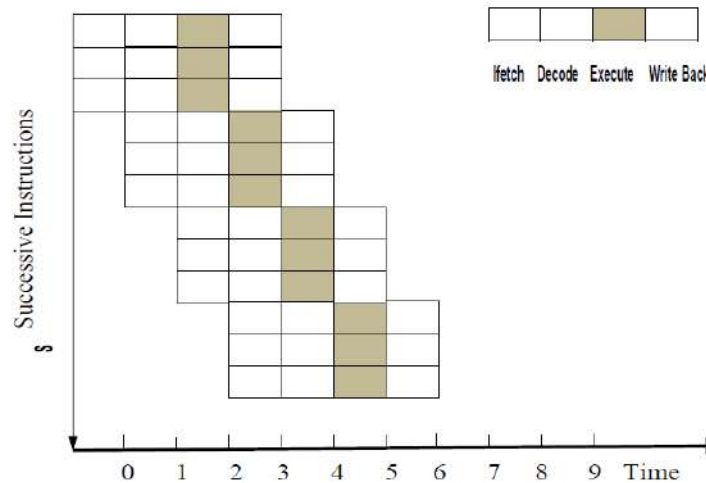


Fig. 1- Pipeline structure of Superscalar processor of degree 3

With every instruction that a superscalar processor issues, it must check the instruction's operands interfere with the operands of any other instruction in flight. Once an instruction is independent of all other ones in flight, the hardware must be also decide exactly when and on which available functional unit to execute the instruction. Superscalar processor rely on hardware for the scheduling the instructions which is called Dynamic instruction scheduling. Figure 1 shows pipelining structure of superscalar processor of degree 3. In order to fully utilize a superscalar processor of degree m must issues m instructions per cycle to execute in parallel at all times. If ILP of m is not available, stalls and dead time will result where instructions are waited for results of previous instruction [24], [25], [27], [36], [39].

Very Long Instruction Word -VLIW processors represent the dominant examples of machines with independence architecture. Instructions in VLIW architecture are very long and may contain hundred of bits. Each instruction contains a number of operations that are executed in parallel. The program for a VLIW processor specifies exactly which functional unit each operation should be executed on and exactly when each operation should be issued so as to be independent of all operations that are being issued at the same time as well as those that are in execution. VLIW's hardware is not responsible for discovering opportunities to execute multiple operations concurrently. That means, parallelism is implemented by Static Scheduling which schedules the instructions at compile time in a static way so run-time scheduling and synchronization are eliminated.

Figure 2 shows pipeline structure of VLIW processor of degree 3. The main advantage of VLIW architecture is its simplicity in hardware structure and instruction set. VLIW machines behave much like superscalar with three differences:easy decoding of VLIW instructions than superscalar, code density of superscalar is better than VLIW and superscalar machines can be object-code compatible with a large family ofnonparallel machines [25], [27], [36], [37], [38], [39].

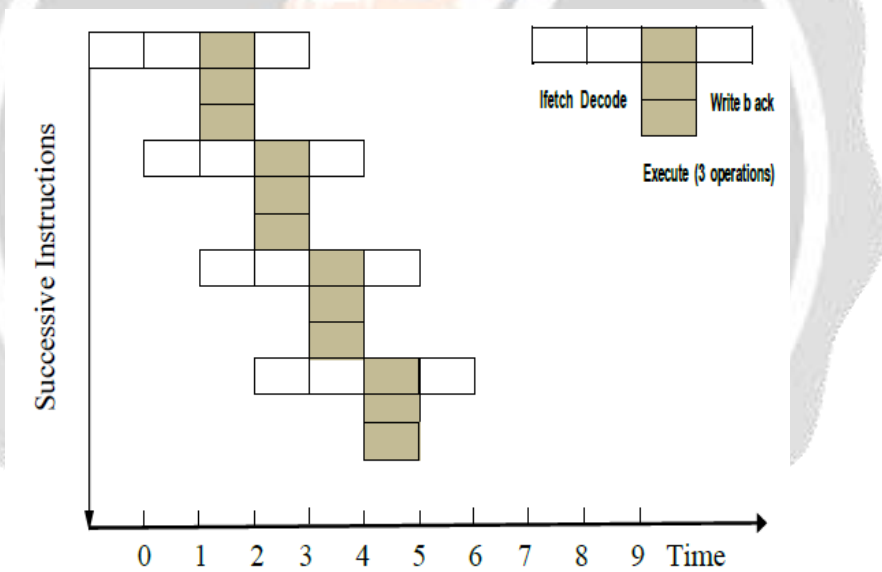


Fig. 2- Pipeline structure of VLIW processor of degree 3

4. ARCHITECTURAL FEATURES

The outcome of instruction-level parallel execution is that multiple operations are simultaneously in execution. Instruction-level parallelism is implemented in assembly level language by micro-architecture features of processors. The term micro-architecture refers to the design features used to reach the target cost, performance, and functionality goals of the processor. These features are realized by Superscalar processors as hardware is responsible for ILP. Branch Prediction, Reservation Station and Reorder Buffer are one of the main features that are used to implement ILP in processor's micro-architecture. In this section, these three features are discussed.

Branch Prediction- The early stages deal with instruction flow or the processing of branches. The primary goal for processing of branches is to maximize the supply of instructions that executes in parallel to the execution pipeline. Modern processors used key approach branch prediction and speculatively execute the instructions in the predicated

path of program control flow as shown in figure 3.

There are two types of branch prediction techniques: (i) static branch prediction, (ii) dynamic branch prediction. Static branch prediction algorithms are very simple and by definition do not incorporate any feedback from the run-time environment. By observing, run-time behavior, a dynamic branch predictor could easily predict all branches. Dynamic branch prediction may require more complex algorithm.

Processing of conditional branches has two major components: *predicting the branch direction* and *branch target*. Prediction of branch direction decides whether a branch taken or not taken. After the direction of a branch is known, the actual target address of the next instruction along with the predicted path must also be determined. If the branch is predicted to be not-taken, then the target address is simply the current branch's address. If the branch is predicted to be taken, then the target will depend on the type of branch. Target prediction must also cover unconditional branches [24], [25].

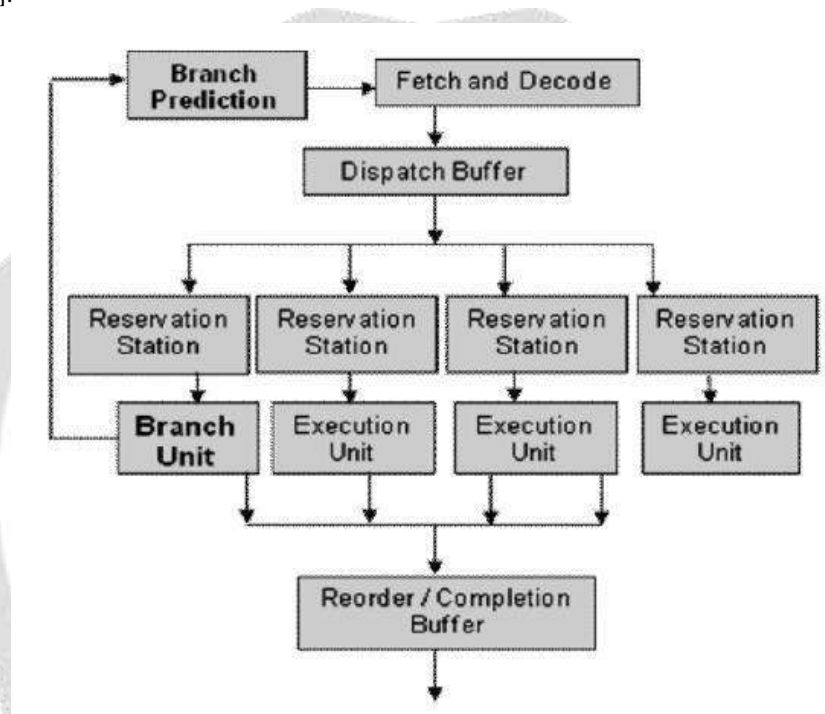


Fig. 3- Structure of Branch Prediction in Superscalar processor

Most current state-of-the-art superscalar microprocessors consist of an out-of-order execution core (also referred to as the dynamic execution core). The operation of such a dynamic execution core can be described by reservation station (RS) and reorder buffer (ROB) that are the critical components of the dynamic execution core.

Reservation Station- Reservation station is one of the main components of dynamic execution core. There are three tasks associated with the operation of a reservation station: dispatching, waiting and issuing. The use of a reservation station decouples instruction decoding and instruction execution and provides a buffer to take up the slack between decoding and execution stages due to the temporal variation of throughput rates in the two stages. Each reservation station is responsible for identifying instructions and for scheduling their execution. When an instruction is first dispatched to a reservation station, it may not have all its source operands and therefore must wait in the reservation station. When an instruction in reservation station has all its source operands, it become ready for execution and can be issued into the functional unit. In each machine cycle if multiple instructions in a reservation station are ready, a scheduling algorithm is used (typically oldest first) to pick one of them for issuing into the functional unit to begin execution. Figure 4 shows the structure of reservation station.

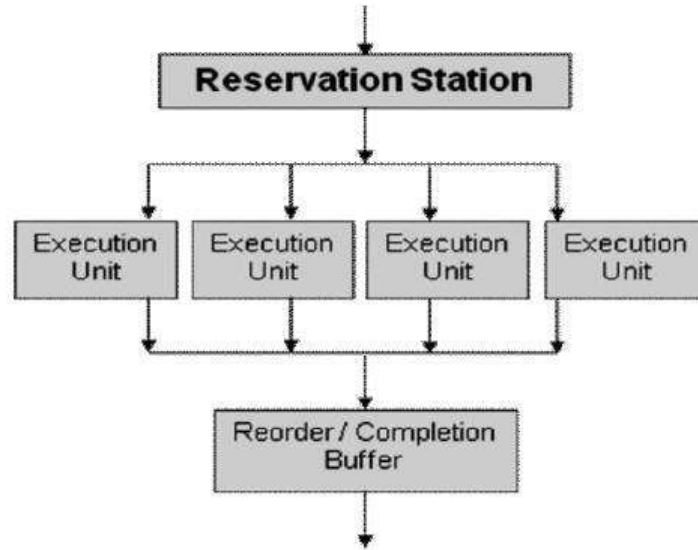


Fig. 4- Structure of Reservation Station in Superscalar processor.

Based on the placement of the reservation station relative to instruction dispatching, two types of reservation station implementations are possible. First, if a single buffer is used at the source side of dispatching, it is identified as a centralized reservation station. In such implementation, one reservation station with many entries feeds all the functional units. Instructions are dispatched from this centralized reservation station directly to the all-functional units to begin execution. On the other hand, if multiple buffers are placed at the destination side of dispatching, they are identifying as distributed reservation station. In this implementation, each functional unit has its own reservation station on the input side of the unit. Instructions are dispatched to the individual reservation station based on their type. These instructions remain in these reservation stations until they are ready to be issued into the functional unit for execution.

Dynamic instruction scheduler is also used in dynamic execution core and includes the instruction window and its associated logic. Instruction window is a one single structure that is combination of reservations station and reorder buffer. At dispatch, a combine entry as one is done in instruction window. Hence, instructions are dispatched into the instruction window, entries of the instruction windows monitor the tag buses for pending operands, results are forwarded into the instruction window when ready and instructions are completed form instructions window [24], [25].

Reorder Buffer (ROB) - Reorder buffer is one of the main gears of dynamic execution core. Instructions are fetched and decoded in program order but are executed out of program order. In order to accommodate out-of-order finishing of execution and in-order completion of instructions, a reorder buffer is needed in the instruction completion stage. As instructions finish execution in program order, they enter in the reorder buffer out-of-order, but they exit in program order from ROB. The reorder buffer contains all the instructions that are in-flight, i.e., all the instructions that have been dispatched but not yet completed architecturally.

These include all the instructions waiting in the reservation stations and execution in the functional units and those that have finished execution but are waiting to be completed in program order. The status of each instruction in the reorder buffer can be tracked in each entry of the reorder buffer. Each instruction can be several states, i.e., awaiting execution, in execution and finished execution. The status is updated as an instruction traverses from one state to the next. Reorder buffer also tracks the instructions whether an instruction is speculative (in the predicated path) or not.

When a branch is resolved, a speculative instruction can become nonspeculative (if branch is correct) or invalid (if the predication is incorrect). Only finished and nonspeculative instructions can be completed. An instruction marked invalid is not architecturally completed when exiting the reorder buffer. Reorder buffer can be viewed as the heart or central control of the dynamic execution core [24], [25].

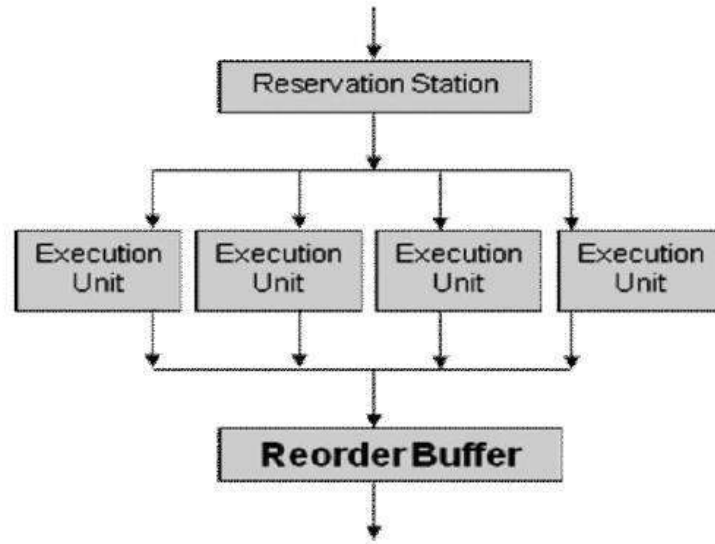


Fig. 5- Structure of Reorder Buffer in Superscalar processor.

5. CASE STUDY

Instruction-level parallelism is implemented in processors micro-architecture using architectural features (branch prediction, reservation station, reorder buffer). Processor's designing and manufacture market is dominating by Intel, AMD and Motorola in their respective order from over the years. In the section, various processors micro-architecture of these companies, as shown in table 1, are compared to explore architectural characteristic i.e. reservation station.

ILP is initially implemented by Intel in 1993 called 5th generation. In this micro-architecture called P5, Intel used two parallel execution pipelines that were worked in lock-stepped manner called U pipe and V-pipe [8], [13]. In the same year, Motorola came with its micro-architecture 68060 that was used dual execution pipeline called primary and secondary, worked in lock-stepped manner [23] but AMD appeared with micro-architecture K5 in 1995. In this micro- architecture AMD implemented distributed reservation stations and each reservation station has 2-entries [6], [10], [33]. In the next generation i.e. 6th, Intel launched its new micro- architecture, compare to its pervious micro-architecture, called P6 in 1996. Centralized reservation station was used in this micro-architecture and has 20-entries to hold uops [16], [30]. AMD arrived in same year with K6 micro-architecture. Scheduler was used in this micro-architecture and has 24- entries to hold ROPs [1], [6], [34].

In the 7th generation, AMD launched its micro-architecture earliest than Intel and came with micro-architecture K7 in 1999. AMD divided its pervious scheduler micro-architecture into Integer and Floating-point scheduler. Integer scheduler also called reservation station and works in distributed manner. Integer scheduler has 15-entries and FP scheduler has 35- entries [2], [6], [26]. Intel arrived with micro-architecture Netburst in 2001. Scheduler used in this micro-architecture and several individual schedulers attached to various execution units. Each scheduler has 24-entries [14], [16], [18], [19], [20]. In the 8th generation, Intel introduced its new micro- architecture Pentium M in 2003. Intel used centralized reservation station in this micro-architecture and has the capacity of 20 entries [19], [20], [40]. In the same year, AMD came with new micro-architecture K8 with same scheduler style as its pervious design. Integer scheduler has 8-entries and FP scheduler has 36-entries [3], [6], [9]. Intel redesigned its pervious micro-architecture and came with new micro- architecture called Core in 2006. Centralized reservation station is used in this design and has 32-entries to hold uops [16], [19], [20].

Table 1- Generations of Processor's Micro-architecture

Processor's designing Companies →	INTEL Micro- architecture	AMD Micro- architecture	MOTOROLA Micro- architecture
Generations ↓			
5 th	P5	K5	68060
6 th	P6	K6	----
7 th	Netburst	K7	----
8 th	Pentium M, Core	K8	----
9 th	Nehalem	K10	----
10 th	Sandy Bridge	Bulldozer	----

In the next generation i.e. 9th, AMD launched its design earliest from Intel in 2007. The micro-architecture called K10 or Barcelona. AMD continued its previous scheduler design but increased the number of entries. Integer scheduler has 24- entries and FP scheduler has 42-entries [4], [6], [11]. Intel launched its new micro-architecture Nehalem that is follow up of successful Intel Core and Core 2 products in 2008. In this design, centralized reservation station is used and has 36- entries to hold uops [12], [16], [19], [20], [31], [32]. In the 10th generation, AMD disclosed its new micro-architecture just before Intel disclosed its micro-architecture in 2011. AMD launched new micro-architecture called Bulldozer. In this design, AMD incorporated two integer clusters and one shared FP cluster in one module and AMD counts each module as two cores. Each scheduler has 40-entries [5], [6]. Intel introduced its new micro-architecture Sandy Bridge in the year 2011 on success of Intel Core and Intel Nehalem. Intel used scheduler in this design and scheduler has 54-entries [16], [19], [20], [29].

6. CONCLUSION

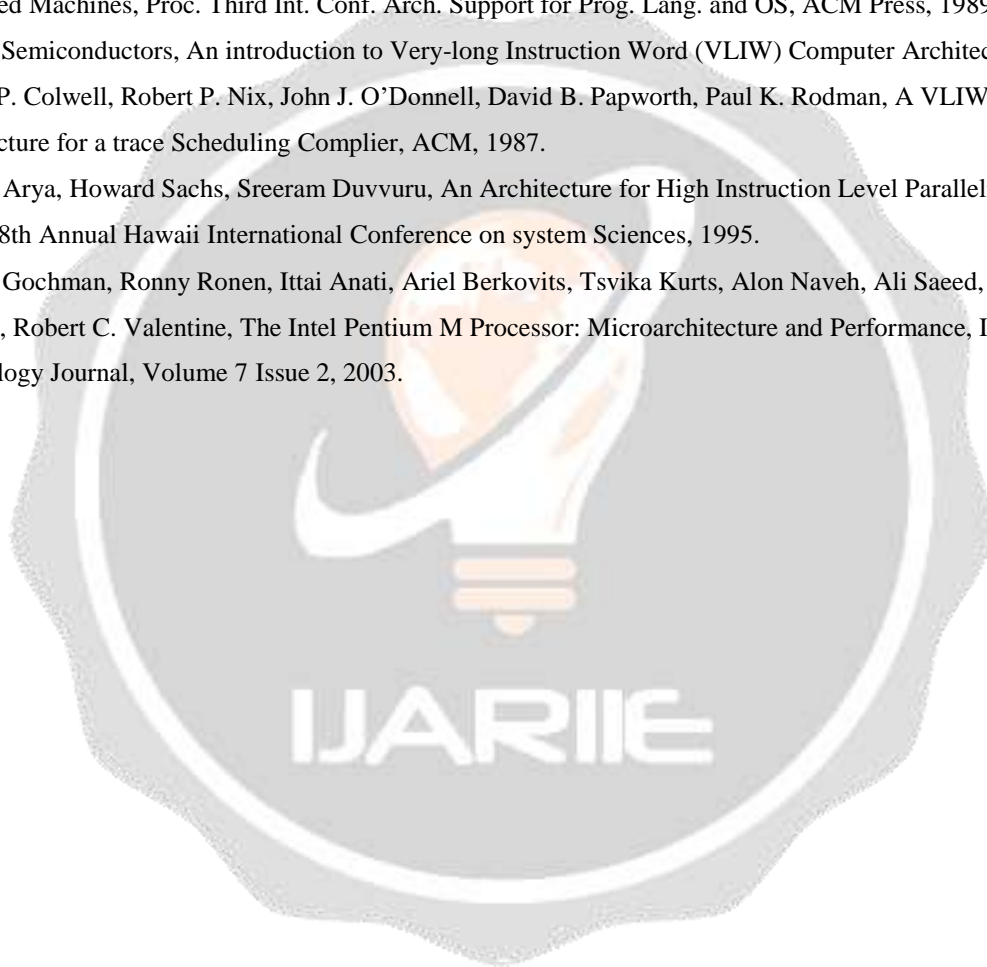
Present and future era of computer architecture belongs to micro-architecture invention in assembly level language. Instruction-level parallelism is most appropriate technique to deal efficiently with micro-architecture issues. Instruction-level parallelism is implemented using most significant elements reservation station, reorder buffer and branch prediction. These are essential characteristics to realize instruction-level parallelism at micro-architecture level in superscalar processors. As compare to VLIW design, superscalar design is preferred choice of leading processors designing companies. Reservation station can be implemented either centralized or distributed manner.

Motorola did not utilize reservation station in their ILP design. AMD and Intel increase the size of reservation station to handle multiple operations simultaneously with generations passes. Intel's center of attention is becoming multi-core processor architecture but AMD is moving in the direction of multithreaded processor architecture. Performance of processor will depend on instruction-level parallelism provided by individual core using these architectural characteristics as well as coarse-grain parallelism supplied by multiple cores in multi- core environment and multithreaded environment.

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EXAMINATION OF ACCOUNTING PRACTICES IN VARIOUS ENTERPRISES

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ABSTRACT

This research paper delves into the diverse accounting practices employed by enterprises across different industries. By analysing the methods, standards, and technologies utilized in accounting, this study aims to provide insights into the variations and similarities in accounting practices. The research highlights the importance of accounting in decision-making processes and financial reporting, emphasizing the need for standardized practices to ensure transparency and accuracy in financial data.

Keyword: - Accounting practices, Enterprises, Financial reporting, Standards, Technology

1. INTRODUCTION

Accounting plays a crucial role in the functioning of enterprises by providing a systematic way to record, analyse, and report financial transactions. The diversity in accounting practices among enterprises stems from factors such as industry-specific requirements, regulatory frameworks, technological advancements, and organizational preferences. This paper explores how different enterprises approach accounting practices and the impact of these practices on financial management and decision-making processes.

2. METHODOLOGY

The research methodology for this study involved a comprehensive analysis of accounting practices in various enterprises across industries. Data was collected through a combination of literature review, case studies, and interviews with accounting professionals. The study focused on comparing financial and management accounting practices in small and medium enterprises (SMEs) based on data from sources highlighting practices in Malaysia, Europe, Latin America, England, France, and Germany (**Table -1**).

Table -1: Comparison of Financial and Management Accounting Practices in Small and Medium Enterprises (SMEs)

Accounting Practices	Financial Accounting	Management Accounting
Adoption Rate	High	Moderate
Importance	Compliance with regulations, financial reporting	Decision-making, value creation
Challenges	Cash flow management, securing financing	Lack of financial skills, organisational structure
Implications	Timely data for decision-making, tax planning	Sustainable achievements, value creation

Additionally, variations in management accounting approaches among enterprises were examined across different countries and regions (**Table -2**).

Table -2: Variations in Management Accounting Approaches Among Enterprises

Country/Region	Management Accounting Approach	Key Characteristics
Europe	Diverse approaches based on country-specific regulations and practices	Emphasis on compliance, financial reporting
Latin America	Varied practices influenced by cultural and regulatory factors	Focus on decision-making, value creation
England	Established accounting practices with a historical perspective	Emphasis on rules and procedures
France	Adaptive practices reflecting changing business environments	Focus on innovation, sustainability
Germany	Structured approaches integrating traditional and modern techniques	Emphasis on efficiency, cost control

The research also explored the wide range of accounting practices adopted by enterprises in industries such as manufacturing, technology, retail, services, and healthcare (**Table-3**).

Table -3: Accounting Practices Across Industries

Industry	Accounting Practice	Key Characteristics
Manufacturing	Innovative management accounting practices	Emphasis on sustainability, value creation
Technology	Adoption of operational technology in accounting	Focus on efficiency, data-driven decision-making
Retail	Traditional financial accounting methods	Compliance with regulations, financial reporting
Services	Diverse management accounting approaches	Decision-making support, cost control
Healthcare	Integration of management accounting into strategy	Emphasis on value creation, sustainable achievements

Furthermore, the impact of technological advancements and industry-specific standards like GAAP and IFRS on accounting practices was analysed (**Table 4**).

Table -4: Technological Advances and Standardization in Accounting Practices

Aspect	Description	Examples
Accounting Methods	Accrual-based vs. alternative methods	Accrual-based accounting, Activity-Based Costing, Lean Accounting

Technological Tools	Cloud-based accounting software, automation tools	QuickBooks Online, Xero, Zoho Books, BlackLine, Workday Financials
Regulatory Framework	GAAP (US), IFRS (Global), other regional standards	US GAAP, UK GAAP, Australian ASX Listing Rules, Indian Companies Act

4. RESULTS

The analysis revealed a diverse landscape of accounting practices among enterprises, showcasing a mix of traditional accrual-based methods and advanced technologies such as cloud-based accounting software and automation tools. In SMEs, financial accounting practices were found to be more prevalent for compliance with regulations and financial reporting, while management accounting approaches varied based on decision-making needs and value creation strategies. Variations in management accounting approaches were evident across different countries and regions, reflecting cultural influences and regulatory frameworks. The comparison of accounting practices across industries highlighted industry-specific trends such as innovative management accounting practices in manufacturing and technology sectors.

5. CONCLUSION

In conclusion, the research underscores the dynamic nature of accounting practices in enterprises, with a blend of traditional methods and modern technologies shaping financial and management accounting processes. The study emphasizes the importance of adapting to industry-specific standards like GAAP or IFRS to ensure consistency and transparency in financial reporting. By understanding the variations in accounting practices among enterprises, stakeholders can make informed decisions regarding financial management, compliance with regulations, and strategic planning. Moving forward, it is essential for enterprises to leverage technological advancements and best practices to enhance their accounting processes and adapt to evolving industry requirements for sustainable growth and success.

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Competency based education: Examining teacher's challenges in implementation

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ABSTRACT

In the past few years, there has been a thrust towards a competency-based approach to education across all educational policy documents for example, the National Educational Policy (NEP) 2020 strongly recommends that the curriculum adopt an interdisciplinary, competency-based approach that helps develop sensitivity, evidence-based thinking, scientific temper, and innovativeness in students. Competency based education (CBE) presents a revolutionary approach to learning, focusing on student's mastery of skills rather than time spent in the classroom. However implementation is not without challenges. Transitioning from traditional systems to competency based educational systems requires a fundamental shift in mindset and pedagogy. This paper discusses the various challenges faced by the educators in implementing CBE. Designing and implementing individualized learning plans requires careful planning, differentiated instruction and Continuous monitoring of student progress. This paper discusses the challenges faced by the educators in implementing CBE and its implications in teacher education.

Keywords : - Competency based Education, Mastery learning, NEP 2020

1. INTRODUCTION

The national education policy (NEP 2020) introduced competency based education as a major revolutionary transformation to teaching and learning in India . CBE is an outcome based approach that focuses on developing and demonstrating specific skills, knowledge, abilities and dispositions , rather than solely relying on rote memorization.

WHAT IS CBE?

Competency-based education has been defined in multiple ways and interpreted differently across academic programs. Le, Wolfe, and Steinberg (2014), says that competency-based education “is an evolving field with no universally shared definition of what makes a model competency based”. Book (2014) and Riesman (1979) agree and argue that because there is no commonly accepted definition, competency-based education (CBE) lacks conformity around standards and a theoretical backing thus making it difficult to clearly define and implement consistently across programs. It is imperative, as more emphasis is placed on outcome-based education, that a universal definition of CBE be created.

Spady (1977) defines CBE as “a data-based, adaptive, performance-oriented set of integrated processes that facilitate, measure, record, and certify within the context of flexible time parameters the demonstration of known, explicitly stated, and agreed upon learning outcomes that reflect successful functioning in life roles”. Riesman (1979) defines CBE as: A form of education that derives curriculum from an analysis of a prospective or actual role in modern society and that attempts to certify student progress based on demonstrated performance in some or all aspects of that role. Theoretically, such demonstrations of competence are independent of time served in formal educational settings.

Other phrases that have been used to describe CBE are problem-based learning, mastery-based learning, outcome-based learning, and performance-based learning. Based on the collection of data from the literature the following definition of CBE was constructed: CBE is defined as an outcome-based approach to education that incorporates modes of instructional delivery and assessment efforts designed to evaluate mastery of learning by students through their demonstration of the knowledge, attitudes, values, skills, and behaviours required for the degree sought.

Characteristics of CBE

CBE advocates that traditional modes of education have been too narrowly focused on academic skills such as content memorization and test taking and that traditional educational practices have emphasized uniformity of learning and yearly content coverage over pedagogy informed by learning science (Sturgis & Casey, 2018). They have further argued that traditional practices overvalue summative assessments and allow teachers’ assessment of effort to unduly sway student grades, a practice that has been shown to disadvantage traditionally under-served students (Howley, Kusimo, & Parrott, 2000). CBE – sometimes referred to as mastery-based education or mastery-based learning (Sullivan & Downey, 2015) – has been proposed as a solution to these concerns, both by the U.S. Department of Education (2018a) and by advocates of innovative or technology-based educational reforms (e.g., Sturgis & Casey, 2018).

CBE Grading Practices

CBE is meant to support the concept that students’ grades should only reflect what they know and are able to do, not their attitude, demeanour, or level of effort; however, reconceptualizing grading practices has been shown to be a challenge for teachers in CBE programs. Indeed, alternative grading methods – particularly those that do not include grading for effort or other non-cognitive skills – have long been difficult for teachers to get behind because grades are often seen by teachers as multidimensional constructs; while they measure academic knowledge, they also encompass teachers’ ratings of non-cognitive student traits such as persistence, or authentic engagement with course material (Brookhart et al., 2016). This multi-dimensional approach to grading, however, can result in inequities for historically disadvantaged students (Campbell, 2012). The proponents of CBE assert that grades should only reflect cognitive performance (e.g., Brookhart, 2011), this component of CBE is difficult for teachers to implement because they do not always agree that grading should not include non-cognitive factors.

CBE Implementation and Outcomes

There is limited research on CBE in K-12 contexts. Existing research has indicated various challenges associated with implementation (e.g., Sullivan & Downey, 2015), and has shown mixed results for student outcomes in CBE models (e.g., Steele et al., 2018)

Implementation Challenges

The National Education Policy (NEP) 2020 introduced competency-based education (CBE) as a teaching and learning approach in India. As the teachers in this case made sense of the CBE model in their classrooms, they experienced a variety of successes and challenges. The primary challenges identified are centered on issues of time, student progress, communication, and state-level/ national level requirements.

However, schools face many challenges in implementing this approach in the teaching and learning of science. Important systemic challenges include a shortage of secondary-level teachers with training in science, a lack of physical infrastructure such as labs, etc., and inadequate teacher support. At the classroom level, pedagogical

processes and assessment practices at all grades tend to reinforce the memorization of scientific facts over mastery of scientific skills. This is partly due to what is commonly understood as being the goals of science education, and partly because of the nature of board examinations. A study conducted by Azim Premji University showed that an average of 60-70% of the questions in the Grade X science examination papers of selected Boards of India tested recall of facts and information. Also, close to 40-50% of questions in the paper were directly lifted from the prescribed textbooks. In contrast, almost all the process skills of science, such as hypothesizing, drawing inferences, predicting, analyzing, etc., were left untested. Several secondary school science teachers have shared how such examination papers contribute in significant ways to a narrowing of the science syllabus that gets transacted at the secondary level. To overcome these challenges, it is important to arrive at a common shared understanding of the goals and outcomes of science. It is from this perspective that the National Council of Educational Research and Training (NCERT) has identified and published Learning Outcomes (LOs) for Grades VI-X. However, several teachers find the LOs quite abstract and disconnected from their practice. This is mainly because these documents offer little clarity on the interlink ages between these LOs and the prescribed textbooks for these grades. Also, they lack adequate guidance on ways to translate these LOs into classroom practices through appropriate pedagogical and assessment strategies.

Time Challenges:

Time limitations commonly appear throughout education, especially for teachers, as they study standards, prepare lessons, deliver instruction, evaluate student work, and analyse data. Although planning periods and teacher workdays are scheduled throughout the school year, time continues to be an issue for teachers. In a CBE model, time limitations heighten as the extensiveness of student data-driven instruction and personalization require teachers to constantly know where their students are performing. At any given time, a student may advance a level, and CBE teachers must identify this advancement and restructure the learning for the student guaranteeing learning continues to progress.

Communication of CBE to Other Stakeholders.

Communication in education involves various stakeholders, including central and state agencies, school districts, school buildings, community, and parents. This diverse collection of stakeholders requires a level of clarity and context to communicate results to an array of audiences. In CBE, communicating with parents can be a challenge, as CBE's innovative approach to education goes against traditional understandings of learning. Teachers and administrators reported that they had to educate parents on the complexities of the CBE model. Moreover, parents had to be asked to disregard their existing knowledge of school operations and traditional functions, in order to understand their child's educational experience in a CBE classroom. As a potential response to the current concerns in the Indian educational system for the re organisation of the professional qualification route for becoming a teacher, the issues raised in the study provide an opportunity for reflection on teacher education programmes from the perspective of competency based education (Biswas, S., & Sarkar, P, 2023).

Conclusion:

Implementing CBE model takes a considerable amount of time and effort from students, faculty, administration, employers, and community partners. In this study, we sought to examine CBE practices, how teachers make sense of CBE, and what successes and challenges emerge in implementing a CBE model. We found that teachers consider developing student ownership for their own learning and creating the conditions for student cooperative learning as being critical to understanding CBE and enacting it in the classroom. We also found that teachers encountered challenges around time, communication, and assessments, but they were successful in meeting students on their level. Finally engaging in CBE required educators to reconstruct their teaching identities. Systemic changes and appropriate teacher trainings is the way of implementation of the CBE in India.

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COVID-19: AWARENESS AND KNOWLEDGE AMONG ADOLESCENTS OF JODHPUR (RAJASTHAN)

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Abstract

Covid-19 has impacted the lives of people around the world including children and adolescents in an unprecedented manner. Throughout the world, an essential modus of prevention from Covid-19 infection has been isolation and social distancing strategies to protect from the risk of infection. Social distancing is a preventative measure recommended to the general population to flatten the curve of the contagious disease. Government also spread awareness and knowledge about the virus among people. **Objective:** (i) To study the influence of Age on Awareness & Knowledge related to COVID-19 in Adolescents of Jodhpur City. (ii) To study the influence of Gender on Awareness & Knowledge related to COVID-19 in Adolescents of Jodhpur City. **Methodology:** For the present study, purposive random sampling technique was used. Total 300 (150 boys and 150 girls) subjects were selected purposively from Jodhpur city. Both girls and boys were randomly selected with age ranged between 10 to 15 years. The following three tools were used for data collection:- (i) Covid-19 Awareness & Knowledge questionnaire developed by LouayLabban et al. (2020), (ii) The Brief-COPE questionnaire developed by (Carver, 1997), (iii) DASS-21 questionnaire is developed by Lovibond, P.F.; Lovibond, S.H. (1995). **Result and Conclusion:** It may be concluded that significant no. of girls in age groups below 15 years response were yes with regards to awareness and knowledge about Covid-19. Response no was highest in boys above 17 years age group while lowest was in girls in age group below 15 years. Girls of age group above 17 years have highest don't know response scores and girls of age group below 15 years lowest don't know response scores.

INTRODUCTION:

Coronavirus disease was found initially in Wuhan, Hubei Province, China, on December 31, 2019. The novel coronavirus disease 2019 (COVID-19) which was declared a public health emergency of international concern by the World Health Organization (WHO), swept across 210 countries and territories with over 5.2 million cases and 337,736 deaths reported as of May 24, 2020. COVID-19 is a highly contagious viral illness caused by severe acute respiratory syndrome SARC-CoV-2. It has emerged as the most consequential global health crisis since the era of the influenza pandemic of 1918.

During this pandemic phase psycho-physical health of the students across the country was gravely affected due to isolation, uncertainty, abrupt transitions and students were prone to have feelings of stress and anxiety. Under such circumstances ignorance of the coping strategies and low level of approach towards the life are also one of the contributing factors of distress. Depression is a common psychiatric disorder that presents with depressed mood, loss of interest or pleasure, feeling of guilt or low-self-worth, disturbed sleep or appetite, low energy and poor concentration (Otokpa, 2022). Depression, anxiety and stress affect many adolescents and often go by unnoticed and untreated. These states silently affect their academic performance, family lives and rob them of their self-image.

The coronavirus disease 2019 (COVID-19) pandemic and the social distancing measures that many countries have implemented- have caused disruptions to daily routines. As of 8 April 2020, schools have been suspended

nationwide in 188 countries, according to UNESCO. Over 90% of enrolled learners (1.5 billion young people) worldwide are now out of education. The UNESCO Director-General Audrey Azoulay warned that ‘the global scale and speed of the current educational disruption is unparalleled’ (Lee, 2020). In the face of the global COVID-19 pandemic, schools have confronted unprecedented challenges as they moved to quickly shift classes to an online format, provide equitable access for all students, support teachers’ and students’ educational needs, and make plans amidst great uncertainty. The pandemic itself has caused much worry, stress, and grief.

COVID-19 pandemic can affect the children largely as less understanding about the concept of social distancing is a serious issue for educational institutes as well as for parents. Commencing the educational institutes at this point of time is a risky affair, especially when the number of cases is increasing, and the medical department has not confirmed any vaccine or impactful treatment for COVID-19. Therefore, analysis and planning of future actions for managing the education system and implementation of changes in the approach of educational institutions are essential (McKibbin and Fernando, 2020).

Children in India have been through a challenging time living through the risks and restrictions posed by the pandemic. Nothing could have prepared them for the onslaught of the second wave of the pandemic that hit India earlier this year. Children witnessed suffering and uncertainties that no child should have to see. Being away from family, friends, classrooms and physical games cause isolation and anxiety. Children have not only been living an emotional tragedy, many are also at a higher risk of neglect and abuse, said UNICEF India Representative Dr. Yasmin Ali Haque.

In light of all the harmful ramifications that derive from the current COVID-19 pandemic, it is essential that the government, the health authorities and the population articulate to endorse preventive and supportive measures, not only for the transmission of the disease, but also for emotional, behavioral and psychological impact. In this context, it is important to include mental health professionals to manage the pandemic more effectively (Sani et al., 2020). Their knowledge and experience are crucial to monitor the situation and to coordinate supportive measures in order to prevent an even higher increase in psychological disorders, including panic, OCD, addiction and PTSD (Fiorillo and Gorwood, 2020). Finally, considering that poor mental health is associated with lower adherence to preventive measures for SARS-CoV-2, improving well-being might even decrease the rates of infection (Adhanom G., 2020).

OBJECTIVES:

These are the following objectives:-

- To study the influence of Age on Awareness & Knowledge related to COVID-19 in Adolescents of Jodhpur City.
- To study the influence of Gender on Awareness & Knowledge related to COVID-19 in Adolescents of Jodhpur City.

REVIEW OF LITERATURE:

- **Moitra P. and Madan J. (2022)** their study “Impact of screen time during Covid-19 on eating habits, physical activity, sleep and depression symptoms: A cross-sectional study in Indian adolescents” aimed to address the limited knowledge regarding the impact of screen time (ST) on lifestyle behaviors in Indian adolescents during the Covid-19 pandemic. The PA levels, sleep quality, and depression symptoms were evaluated using the Physical Activity Questionnaire for Children/Adolescents (PAQ C/A), Pittsburg Sleep Quality Index (PSQI), and Patient Health Questionnaire-2 (PHQ-2) respectively. A higher ST was associated with lower PA and increased sleep problems and a greater screen addiction was inversely associated with the eating habit, PA, and sleep-related variables.
- **Pande D., Parekh Z. and Kanhere S. et al. (2022)** conducted study on “Covid-19 Pandemic: Effect of prolonged lockdown on adolescents and young adults”. The main purpose of the study was to assess the impact of the prolonged lockdown, due to the Coronavirus Disease 2019 (COVID-19) pandemic, on the daily life, education, mental and family health, and general well-being of adolescents and young adults in India. A total of 210 participants aged 12-21 years formed the study sample. Overall, the pandemic and prolonged lockdown had a mixed impact on 82(39%), a negative impact on 65(31%) and a positive impact on 63(30%) of adolescents and young adults.
- **Chaturvedi, Vishwakarma and Singh (2021)** investigated on “Covid-19 and its impact on education, social life and mental health of students: A survey”. In order to explore the impacts of this pandemic on the lives of students, researcher conducted a survey of a total of 1182 individuals of different age groups from various educational institutes in Delhi- National Capital Region (NCR), India. This

research identified the following as the impact of Covid-19 on the students of different age groups: time spent on online classes and self-study, medium used for learning, sleeping habits, daily fitness routine, and the subsequent effects on weight, social life and mental health. This study suggests that public authorities should take all the necessary measures to enhance the learning experience by mitigating the negative impacts caused due to the Covid-19 outbreak.

- **Hatami et al. (2021)** investigated on knowledge, attitudes and safety practices about Covid-19 among high school students in Iran during the first wave of the pandemic and results showed that school closures have inevitably deprived students of their traditional source of information. Most students believed that people need to keep safe physical distancing, everyone should isolate themselves upon symptoms onset, people should avoid unnecessary in-person contact with family and friends, and that cities need to go under lockdowns if needed. High school student's knowledge and safety practices about Covid-19 were somewhat satisfactory, and their attitudes toward the disease were mainly positive. Social and mass media's significant role and potential could be utilized to battle misinformation and deliver proper knowledge to young adolescents.

METHODOLOGY:

For this study, the researcher employed descriptive research which involves survey and fact finding enquiries of different kinds. The present study will be conducted in the schools of the Jodhpur city (Rajasthan). Purposive random sampling technique was used in which elements were chosen from among the whole population based on purpose of the study. Total 300 (150 boys and 150 girls) subjects were selected purposively from Jodhpur city. Both girls and boys were randomly selected with age ranged between 10 to 15 years. The tools which were selected for measuring Covid-19 awareness, knowledge and psychological variables are as follows:- (i) Covid-19 Awareness & Knowledge questionnaire is developed by LouayLabban et al. [2020] (ii) The Brief-COPE questionnaire developed by [Carver, 1997] (iii) DASS-21 questionnaire is developed by Lovibond, P.F.; Lovibond, S.H. [1995].

RESULTS:

Table-1

Covid-19 Awareness and Knowledge Irrespective of Age & Gender

Responses	Gender	Age	N	Mean	Std. Deviation
Yes	Boys	Below 15 years	50	16.450	1.720
		15-17 years	50	16.427	1.850
		Above 17 years	50	16.247	1.930
	Girls	Below 15 years	50	17.067	1.922
		15-17 years	50	16.429	2.033
		Above 17 years	50	16.450	2.055
No	Boys	Below 15 years	50	1.745	1.345
		15-17 years	50	1.927	1.421
		Above 17 years	50	1.856	1.389
	Girls	Below 15 years	50	1.527	1.356
		15-17 years	50	1.677	1.319
		Above 17 years	50	1.556	1.156
Don't Know	Boys	Below 15 years	50	1.737	1.345
		15-17 years	50	1.658	1.425
		Above 17 years	50	1.854	1.666
	Girls	Below 15 years	50	1.401	1.372
		15-17 years	50	1.795	1.415
		Above 17 years	50	1.926	1.562

Figure-1 shows of response Yes of Boys and Girls of Different Age Groups

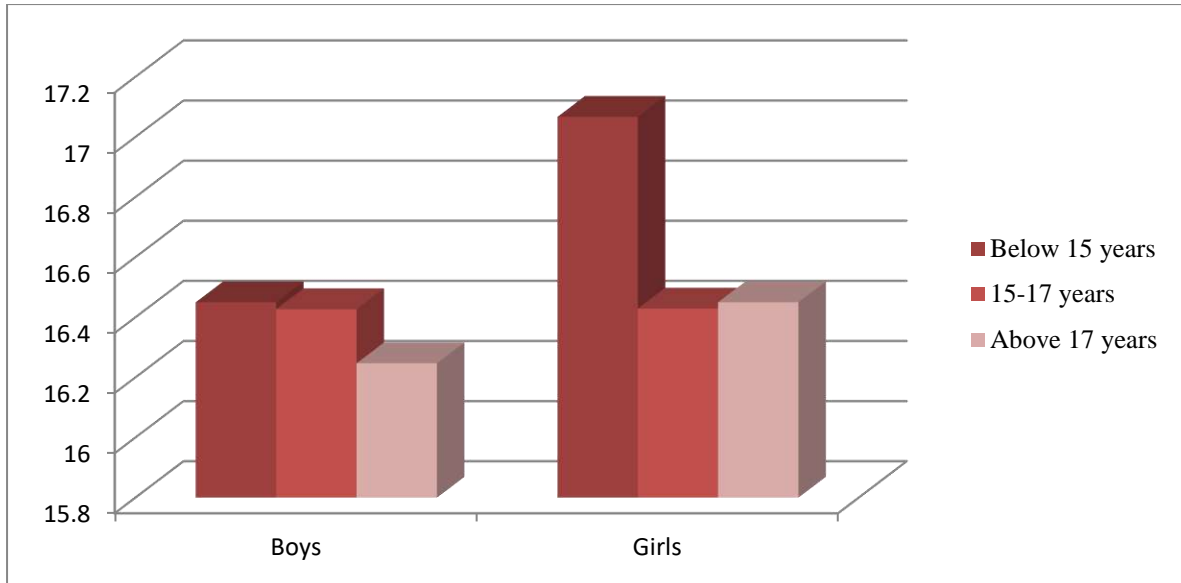


Figure-2 shows of response No of Boys and Girls of Different Age Groups

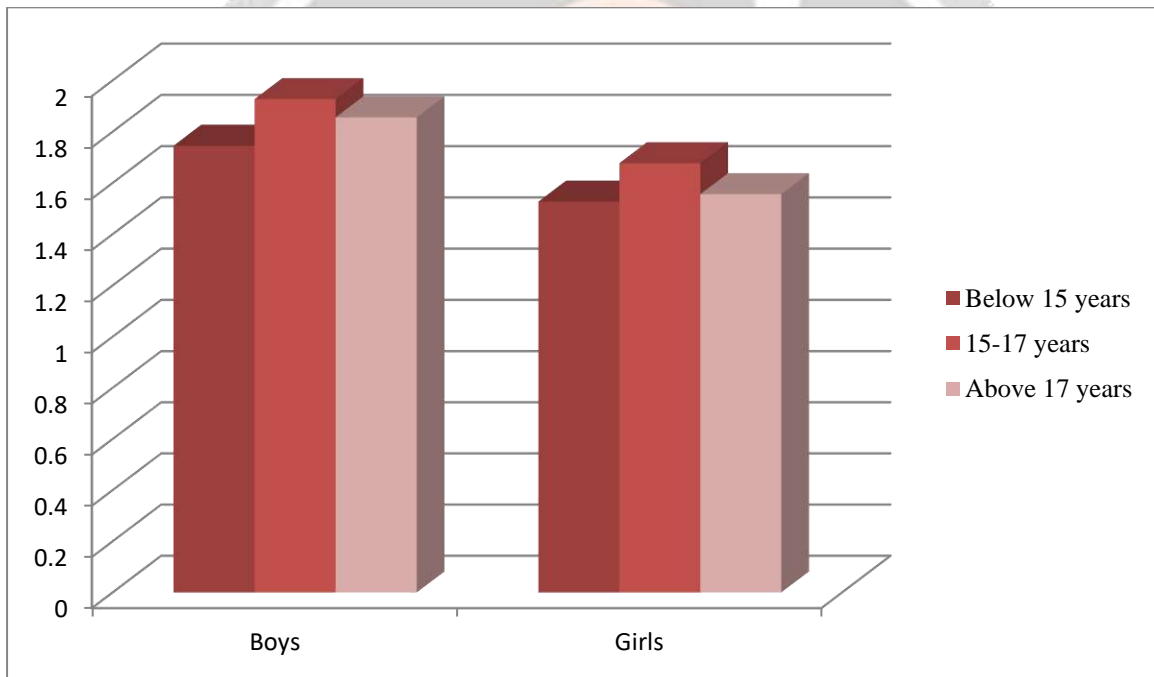


Figure-3 shows of response Don't Know of Boys and Girls of Different Age Groups

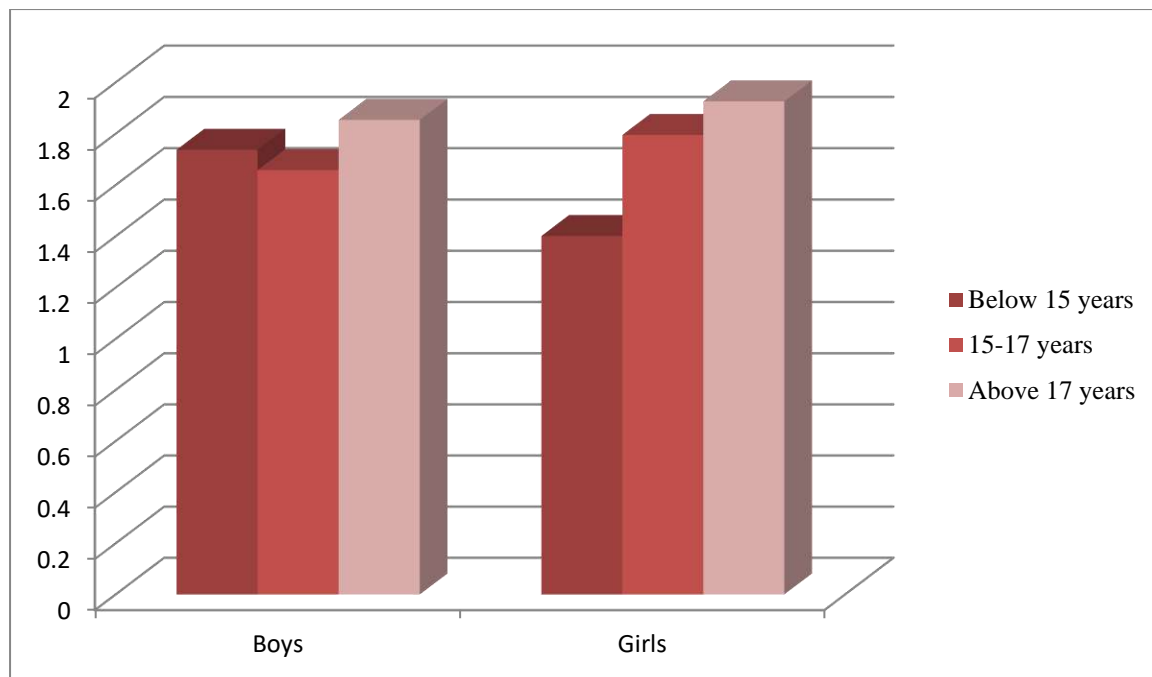


Table-1 depicts that response yes was highest in girls in age group below 15 years and lowest in boys above 17 years age group. Response no was highest in boys above 17 years age group while lowest was in girls in age group below 15 years. Girls of age group above 17 years have highest don't know response scores and girls of age group below 15 years have lowest don't know response scores. This has been shown in **figure-1,2 and 3**.

Table-2

Pair wise Comparison of Gender

Dependent Variable		Mean Difference	Std. Error	p-value	
Yes	Boys	Girls	-.293	.130	.024*
	Girls	Boys	.293	.130	.024*
No	Boys	Girls	.253	.088	.004*
	Girls	Boys	-.253	.088	.004*
Don't Know	Boys	Girls	.038	.099	.702
	Girls	Boys	-.038	.099	.702

Significant at 0.05 level

Table-2 shows that for mean scores for yes were statistically significantly different between boys and girls ($p=.024$) which is less than 0.05; mean scores for no were statistically significantly different between boys and girls ($p=.004$) which is less than 0.05; mean scores for Don't Know were not significantly different between boys and girls ($p=.702$) which is more than 0.05.

Table-3

Pair wise Comparisons of Age Group

Dependent Variable	Age Group	Mean Difference	Std. Error	p-value
Yes	Below 15 years	.330	.159	.114
	Between 15-17 years	.330	.159	.114
	Above 17 years	-.427*	.159	.022*

No	Below 15 years	-.163	.108	.389
	Between 15-17 years	.163	.108	.389
	Above 17 years	.103	.108	1.000
Don't Know	Below 15 years	.157	.121	.588
	Between 15-17 years	.157	.121	.588
	Above 17 years	.323	.121	.023*

Significant at 0.05 level

Table-3 reveals that for mean scores of Yes were not statistically significantly different between below 15 years and between 15-17 years ($p = .114$) which is more than 0.05; and above 17 years ($p = .022^*$) is statistically significant because the p-value is less than 0.05 level. Also mean scores of No were significant different between below 15 years and between 15-17 years ($p = .389$); above 17 years ($p = 1.000$) is not significant because the p-value is more than 0.05. The mean scores of Don't know were not statistically significantly different between below 15 years and between 15-17 years ($p = .588$) which is more than 0.05; and above 17 years ($p = .023^*$) is significant because the p-value is less than 0.05.

CONCLUSION:

- It is concluded that response yes was highest in girls in age group below 15 years and lowest in boys above 17 years age group.
- Response no was highest in boys above 17 years age group while lowest was in girls in age group below 15 years.
- Girls of age group above 17 years have highest don't know response scores and girls of age group below 15 years have lowest don't know response scores.

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Gender inequality laws and suggestions for gender equality

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सहायक आचार्य

ऐश्वर्या कॉलेज ऑफ एजुकेशन (लॉ)

लैंगिक असमानता कानून एवं लैंगिक समानता हेतु सुझाव

मुल शब्द – समानता, कानून, मूल अधिकार, मूल कर्तव्य

हम 21वीं शताब्दी के भारतीय होने पर गर्व करते हैं, जो एक बेटा पैदा होने पर खुशी का जश्न मनाते और यदि एक बेटी का जन्म हो जाए तो शांत हो जाते हैं, लड़के के लिए इतना प्यार की लड़कों के जन्म की चाह में हम लड़कियों को जन्म से पहले या जन्म के बाद जान से मारते आ रहे हैं। यदि सौभाग्य से वह नहीं मारी जाती तो हम जीवन भर उनके साथ भेदभाव के अनेक तरीके ढूंढ लेते हैं। लैंगिक असमानता से तात्पर्य लैंगिक आधार पर महिलाओं के साथ भेदभाव से है। परंपरागत रूप से समाज में महिलाओं को कमजोर वर्ग के रूप में देखा जाता रहा है वह घर और समाज दोनों जगह पर शोषण अपमान और भेदभाव से पीड़ित होती है, महिलाओं के खिलाफ भेदभाव दुनिया में हर जगह प्रचलित है।

वैश्विक लैंगिक अंतराल सूचकांक 2023 में भारत 146 देश में से 127 से स्थान पर रहा। इससे साफ तौर पर अंदाजा लगाया जा सकता है, कि हमारे देश में लैंगिक भेदभाव की जड़े कितनी मजबूत और गहरी है भारतीय समाज में लिंग असमानता का मूल कारण इसकी पितृ सत्तात्मक व्यवस्था में निहित है। प्राचीन भारतीय कानून के निर्माता मनु के अनुसार ऐसा माना जाता है, की औरतें अपने बाल अवस्था में पिता के अधीन शादी के बाद पति के अधीन और वृद्धावस्था या विधवा होने के बाद अपने पुत्र के अधीन रहना चाहिए। लैंगिक असमानता आज भी वैश्विक समाज के लिए एक चुनौती बनी हुई है। अगर समाज में लैंगिक भेदभाव खत्म नहीं किया गया तो संयुक्त राष्ट्र के 2030 के सतत विकास लक्ष्य के मूल में निहित महिला सशक्तिकरण और लैंगिक समानता के लक्ष्य की प्राप्ति में हम पीछे रह जाएंगे। लैंगिक असमानता लोगों की मानसिकता में बदलाव लाकर ही दूर किया जा सकता है। यह समझना होगा कि सामाजिक उत्थान में जितना योगदान पुरुषों का है उतना ही महिलाओं का भी है। एक और कुछ मुस्लिम देशों को छोड़कर सभी देशों के कानून किसी भी लैंगिक भेद को न मानते हुए स्त्री और पुरुषों को समान अधिकार देने के पक्ष में है। दूसरी ओर व्यवहार में कोई भी देश ऐसा नहीं है जिसमें जीवन के प्रत्येक क्षेत्र में स्त्री पुरुषों की तुलना में पूरी तरह समान हो पुरुष प्रधान सामाजिक व्यवस्था में स्त्रियों को पुरुषों की वासना पूर्ति तथा साधारण सेवाओं की एक साधन के अतिरिक्त और कुछ नहीं समझा जाता। महिलाओं के कार्य क्षेत्र में दो भूमिका है घर और नौकरी या मजदूरी। जो महिलाएं नौकरी पेशा या मजदूर है उन्हें परिवार में दोहरी जिम्मेदारी निभानी पड़ती है, जो व्यक्तियों के बीच युक्त विभेद को वर्जित करता है।

भारतीय संविधान के अनुच्छेद -16 सार्वजनिक नियोजन के मामलों में अवसर की समानता की गारंटी करता है। अनुच्छेद 17 अस्पृश्यता का उन्मूलन करता है और अनुच्छेद 18 उपाधियों का उन्मूलन करता है। अनुच्छेद 21 ए, 86 वां संशोधन 2002 के माध्यम से शिक्षा के अधिकार में मूल अधिकार के रूप में घोषित किया गया है। इस उपबंध के तहत 6 से 14 वर्ष के बच्चों को मुफ्त और अनिवार्य शिक्षा का प्रावधान है। संविधान के अनुच्छेद 23 में शोषण के विरुद्ध अधिकार है, जिसमें स्त्रियों एवं बालकों का अनैतिक व्यापार, मानव दूरव्यापार को प्रतिबंधित किया गया है। भारतीय संविधान के भाग-4 के अनुच्छेद 36 से 51 तक में राज्य के लिए नीति निर्देशक तत्वों का प्रावधान किया गया है। नीति निर्देशक तत्वों के माध्यम से राज्य से यह अपेक्षा की गई है, कि राज्य अपनी नीतियों का निर्धारण एवं कानून का निर्माण इस प्रकार करें, ताकि सामाजिक, आर्थिक, राजनीतिक, सांस्कृतिक क्षेत्र में महिलाओं का सशक्तिकरण संभव हो तथा यह नीतियां महिला उत्थान की और अग्रसर हो। हिंदू विवाह अधिनियम 1955, महिलाओं को विवाह विच्छेद और पुनर्विवाह का अधिकार प्रदान करता है, महिला सुरक्षा हेतु प्रावधान इस अधिनियम में किए गए हैं। हिंदू उत्तराधिकार अधिनियम 1956 महिलाओं की पैतृक संपत्ति में पुरुषों के समान अधिकार प्रदान करता है। विशेष विवाह अधिनियम 1954 यह अधिनियम अंतरजातीय विवाह या प्रेम विवाह का अधिकार प्रदान करता है, परंतु इस विवाह हेतु महिला की उम्र 18 वर्ष या इससे अधिक होना आवश्यक है। समान पारिश्रमिक अधिनियम 1976 के प्रावधानों के अनुसार कामकाजी महिलाओं के वेतन या मजदूरी के मामले में लिंग के आधार पर भेदभाव नहीं किया जा सकता। कामकाजी महिला को समान कार्य के लिए समान वेतन प्राप्त करने का अधिकार है। दहेज निषेध अधिनियम 1961 में दहेज निषेध किया गया है। कार्यस्थल पर यौन उत्पीड़न निषेध और निवारण अधिनियम 2013 में कार्यस्थल पर होने वाले महिलाओं की यौन उत्पीड़न से सुरक्षा प्रदान करता है। घरेलू हिंसा से महिलाओं का संरक्षण अधिनियम 2005 में महिलाओं को सभी प्रकार के घरेलू हिंसा से बचाने के लिए एक व्यापक कानून ने इसमें उन महिलाओं को शामिल किया गया है, जो दुर्व्यवहार करने वाले के साथ घरेलू संबंध में है और किसी भी प्रकार की हिंसा के अधीन है, जो चाहे शारीरिक, मानसिक, मौखिक, आर्थिक या भावनात्मक हो। और नैतिक व्यापार रोकथाम अधिनियम 1956 महिलाओं और लड़कियों को जीवन यापन की एक साधन के रूप में वेश्यावृत्ति के उद्देश्य से तस्करी को रोकने के लिए बनाया गया है, महिलाओं का अश्लील प्रतिनिधित्व निषेध अधिनियम 1986 विज्ञापनों में या किसी भी लेखन पेंटिंग या किसी भी अन्य तरीके से महिला के अश्लील अभद्र प्रदर्शन को प्रतिबंधित करता है। सती निवारण रोकथाम अधिनियम 1987, यह सती प्रथा को रोकने और महिलाओं को सती होने के महिमा मंडन करने से रोकने हेतु सजा का प्रावधान करता है। मातृत्व लाभ अधिनियम 1961— यह अधिनियम महिलाओं को उनके मातृत्व के दौरान रोजगार में लाभ देता है, जिससे नवजात शिशु की देखभाल करने के लिए कम से अनुपस्थित के दौरान वेतन का भुगतान किया जा सके। गर्भावस्था अधिनियम 1971— इस कानून के अंतर्गत महिलाएं कुछ विशेष परिस्थितियों में सरकारी अस्पताल में या सरकार की ओर से अधिकृत किसी भी चिकित्सा केंद्र में अधिकृत व प्रशिक्षित डॉक्टर द्वारा गर्भपात करवा सकती है। गर्भधारण पूर्व और प्रसव पूर्व निदान तकनीक लिंग चयन का निषेध अधिनियम 1994 यह अधिनियम गर्भधारण से पहले या बाद के बाद में लिंग चयन को प्रतिबंधित करता है और कन्या पूर्ण हत्या के लिए लिंग निर्धारण के लिए दुरुपयोग या प्रसव पूर्व निदान तकनीक को रोकता है। मुस्लिम महिला तलाक पर अधिकारों का संरक्षण अधिनियम 1986 यह अधिनियम तलाकशुदा मुस्लिम महिला के अधिकारों की रक्षा करता है भारतीय दंड संहिता 1860, इसमें महिलाओं को दहेज, हत्या, बलात्कार अपहरण, साइबर अपराध और अन्य अपराधों के दंड का प्रावधान है। आपराधिक प्रक्रिया संहिता 1973 इसमें महिलाओं की सुरक्षा के लिए कुछ प्रावधान है, जैसे किसी व्यक्ति पर परभरण पत्नी के भरण पोषण की बाध्यता महिला पुलिस द्वारा महिला की गिरफ्तारी आदि। विधिक सेवा प्राधिकरण अधिनियम 1987 यह अधिनियम भारतीय महिलाओं को निशुल्क विधिक

सहायता उपलब्ध करवाने का प्रावधान करता है । न्यूनतम मजदूरी अधिनियम 1948 यह पुरुष और महिला श्रमिकों के बीच महिलाओं के रोजगार पर प्रतिबंध लगाता है यह उनकी सुरक्षा और कल्याण के लिए प्रावधान करता है । कारखाना अधिनियम 1948 यह अधिनियम शाम 7रू00 बजे से सुबह 6रू00 के बीच रोजगार पर प्रतिबंध लगाता है ,यह उनकी सुरक्षा व कल्याण के लिए है ।

लैंगिक असमानता दूर करने हेतु सुझावः-

भारत में शिक्षा तथा साक्षरता में वृद्धि तो दर्ज की जा रही है, परंतु लिंगीय विभेदों के संबंध में स्थिति अभी भी चिंता जनक है । लिंगीय विवादों के कारण स्त्री पुरुष अनुपात की खाई निरंतर बढ़ती जा रही है हरियाणा और राजस्थान जैसे राज्यों में तो यह स्थिति और भी भयावह है संवैधानिक सूची के साथ-साथ सभी प्रकार के भेदभाव या असमानताएं चलती रहेगी । लेकिन वास्तविक बदलाव तो तभी संभव है, जब पुरुषों की सोच को बदला जाए और यह सोच तब बदलेगी जब पुरुष महिला के साथ समानता और सम्मान का व्यवहार करना शुरू कर दे । लैंगिक असमानता को समाप्त करने के प्रयासों में निम्नलिखित प्रमुख है –

1. स्त्रियों को अपनी प्रतिष्ठा बढ़ानी होगी तथा अपने प्रति अबला होने की धारणा बदलनी होगी ।
2. स्त्रियों को प्राकृतिक मौद्रिक तथा बौद्धिक संसाधनों तक अपनी पहुंच बढ़ानी होगी ।
3. स्त्रियों को उन प्रक्रियाओं को आलोचनात्मक रूप में समझना होगा जो उनके सशक्तिकरण के मार्ग में बाधक है ।
4. स्त्रियों की सामाजिक आर्थिक तथा राजनीतिक संरचनाओं व प्रक्रिया में दखल देने संबंधी अपने विश्वास ज्ञान सूचना तथा क्षमताओं को प्राप्त करना होगा ।
5. स्त्रियों को परिवार एवं समुदाय के अंदर तथा बाहर निर्णय लेने संबंधी प्रक्रियाओं पर अपना पूर्ण पूर्ण नियंत्रण एवं सहभागिता बढ़ानी होगी ।
6. स्त्रियों को अन्य नवीन भूमिकाओं की ओर आगे बढ़ना होगा जो अब तक केवल पुरुष वर्ग के ही अधिकार क्षेत्र में माना जाता है ।
7. स्त्रियों को अन्यायपूर्ण एवं असमान विश्वासों प्रथाओं संरचनाओं एवं संस्थाओं को चुनौती देनी होगी तथा बदलना होगा जो लैंगिक असमानता के लिए उत्तरदायी हो ।
8. स्त्री शिक्षा न केवल अनिवार्य की जाए, वरन निर्धन परिवारों की कन्याओं को छात्रवृत्तियां भी दी जाए स्त्री छात्रावास की व्यवस्था की जावे ८ शिक्षा का उद्देश्य स्त्री को आर्थिक रूप से आत्मनिर्भर बनाना होना चाहिए ।
9. महिलाओं पर कोमल या नाजुक होने का ठप्पा हटाना होगा ,इसके लिए महिला को उसकी बालिका अवस्था से ही स्कूली शिक्षा के साथ-साथ जूडो कराटे मार्शल आर्ट बॉक्सिंग आदि सिखाया जा सकते हैं ८ जिससे महिलाओं के प्रति होने वाले अपराधों पर काफी हद तक लगाम लगाया जा सके इन सभी कलाओं को सीखने से महिला अपनी सुरक्षा करेगी ही ,वरन अन्य व्यक्तियों और अन्य महिलाओं की भी रक्षा करेगी ।
10. आर्थिक क्षेत्र में महिलाओं को आत्मनिर्भर बनाने हेतु अधिक से अधिक योजनाएं चलाई जानी चाहिए ।
11. विद्यालय शिक्षा के दौरान बच्चों में लड़के या लड़की का भेद समाप्त करने का प्रयत्न किया जाना चाहिए, इस समय बालकों को शिक्षा अध्यापकगण द्वारा दी जानी चाहिए कि लड़के विशेष

नहीं है, तथा उनको प्राथमिकता केवल इस आधार पर नहीं दी जानी चाहिए क्योंकि वह पुरुष है बल्कि यदि किसी को वरीयता दी जाए तो उसके गुणों के आधार पर दी जाए चाहे वह किसी भी लिंग का क्यों ना हो । अध्यापकगणों द्वारा बालकों की प्रारंभिक शिक्षा से ही बालिकाओं का सम्मान करना सीखाना चाहिए ,ताकि जब वह बालक बड़े हो तब भी उनके मन में महिलाओं के प्रति आदर व सम्मान का भाव हो तथा इस प्रकार लिंग असमानता को काफी हद तक दूर किया जा सकता है ।

12. लैंगिक असमानता की समस्या सर्वप्रथम हमारे घर से दूर करनी होगी । अगर यह समस्या हमारे घर से दूर हो जाए तो धीरे-धीरे यह समाज से फिर देश से और फिर विश्व से समाप्त हो सकती है । इसके लिए घर की महिलाओं का आदर व सम्मान किया जाना आवश्यक है तथा घर के अहम मुद्दों में महिलाओं की राय ली जानी चाहिए,पुरुष सदस्यों के बराबर ही महिला सदस्यों को भी महत्व दिया जाना चाहिए तथा घर के कामकाज केवल महिलाओं के जिमें हो यह आवश्यक ना,हो वरन पुरुष सदस्यों को भी घर के कार्यों में बराबर की भागीदारी निभानी चाहिए ।
13. महिलाओं के विरुद्ध हिंसा, छेड़छाड़, अश्लील संकेत तथा तेजाब हमले और रेप के प्रकरणों में कमी लाई जाए । तथा इन अपराधों के लिए कठोरतम सजा के प्रावधान किया जाए, कार्य स्थलों पर पुरुषों द्वारा महिलाओं का लैंगिक शोषण पर और अधिक सजा का प्रावधान हो ।

निष्कर्ष :

हम भारतीयों को गर्व है ,कि धर्म –परंपरा जाति से जुड़ाव होते हुए भी हम संसार के उन देशों में शामिल हैं, जिन्होंने अपने कानून में समानता को स्थान दिया । हमारे देश में प्रधानमंत्री, राजनीतिज्ञ, वकील, जज ,मुख्यमंत्री ,राज्यपाल डॉक्टर व सैन्य महिलाएं हुई हैं । और अभी-अभी आधुनिक समय में हम विश्व का दूसरा देश बन चुके हैं ,जहां सर्वोच्च न्यायालय में महिला जज है ८ यह सच है, कि इन विशेषताओं को छोड़कर स्थिति आज भी वैसी बनी हुई है । आज ज्यादा से ज्यादा महिलाएं पुरुषों के कार्य क्षेत्र में दाखिल हो रही हैं ,आज हमारे देश में महिला रेलवे इंजन ड्राइवर, इंजीनियर ,उत्पाद प्रबंधक, विज्ञापन एजेंसी की संचालक और यहां तक की महिला विमान चालक व सेवा में भी महिलाएं प्रवेश कर चुकी हैं । आज महिलाओं ने पुरुषों द्वारा शासित इस विश्व की बहुत सी सीमाओं को तोड़ा है ,और सफलतापूर्वक अपने भविष्य को उज्ज्वल बनाया है । साथ ही साथ एक संतोषजनक घरेलू जीवन को भी व्यतीत कर रही हैं ,लेकिन लैंगिक असमानता का दर्द आज भी कहीं ना कहीं झेल रही हैं ।

संदर्भ –

1. 'श्रीनिवास मिश्र' भारत में महिलाओं की सामाजिक और आर्थिक स्थिति पृष्ठ संख्या 42
2. 'पीसी त्रिपाठी' महिलाओं के प्रति अपराध APA पब्लिकेशन नई दिल्ली ।
3. सुधारनी श्रीवास्तव महिला उत्पीड़न और वैधानिक उपचार अर्जुन पब्लिकेशिंग नई दिल्ली पृ. सं 40-41, 2009
4. भट्ट एस. (2010) बीमेन एण्ड ह्यूमन राइट्स नई दिल्ली अलतार पब्लिकेशिंग हाउस ।

सुमन
सांदड़
सहायक आचार्य
ऐश्वर्या कॉलेज ऑफ एजुकेशन (लॉ) राजस्थान भारत
संस्तुति

हम 21वीं शताब्दी के भारतीय होने पर गर्व करते हैं, जो एक बेटा पैदा होने पर खुशी का जश्न मनाते और यदि एक बेटी का जन्म हो जाए तो शांत हो जाते हैं, लड़के के लिए इतना प्यार की लड़कों के जन्म की चाह में हम लड़कियों को जन्म से पहले या जन्म के बाद जान से मारते आ रहे हैं ।

यदि सौभाग्य से वह नहीं मारी जाती तो हम जीवन भर उनके साथ भेदभाव के अनेक तरीके ढूंढ लेते हैं । लैंगिक असमानता से तात्पर्य लैंगिक आधार पर महिलाओं के साथ भेदभाव से है । परंपरागत रूप से समाज में महिलाओं को कमजोर वर्ग के रूप में देखा जाता रहा है वह घर और समाज दोनों जगह पर शोषण अपमान और भेदभाव से पीड़ित होती है, महिलाओं के खिलाफ भेदभाव दुनिया में हर जगह प्रचलित है । भारतीय समाज में लिंग असमानता का मूल कारण इसकी पितृ सत्तात्मक व्यवस्था में निहित है । लैंगिक असमानता आज भी वैश्विक समाज के लिए एक चुनौती बनी हुई है ।

अगर समाज में लैंगिक भेदभाव खत्म नहीं किया गया तो संयुक्त राष्ट्र के 2030 के सतत विकास लक्ष्य के मूल में निहित महिला सशक्तिकरण और लैंगिक समानता के लक्ष्य की प्राप्ति में हम पीछे रह जाएंगे । लैंगिक असमानता लोगों की मानसिकता में बदलाव लाकर ही दूर किया जा सकता है । यह समझना होगा कि सामाजिक उत्थान में जितना योगदान पुरुषों का है उतना ही महिलाओं का भी है । राज्य अपनी नीतियों का निर्धारण एवं कानून का निर्माण इस प्रकार करें, ताकि सामाजिक, आर्थिक, राजनीतिक, सांस्कृतिक क्षेत्र में महिलाओं का सशक्तिकरण संभव हो तथा यह नीतियां महिला उत्थान की ओर अग्रसर हो ।

एक और कुछ मुस्लिम देशों को छोड़कर सभी देशों के कानून किसी भी लैंगिक भेद को न मानते हुए स्त्री और पुरुषों को समान अधिकार देने के पक्ष में है । दूसरी ओर व्यवहार में कोई भी देश ऐसा नहीं है जिसमें जीवन के प्रत्येक क्षेत्र में स्त्री पुरुषों की तुलना में पूरी तरह समान हो भारत में शिक्षा तथा साक्षरता में वृद्धि तो दर्ज की जा रही है, परंतु लिंगीय विभेदों के संबंध में स्थिति अभी भी चिंता जनक है । लिंगीय विवादों के कारण स्त्री पुरुष अनुपात की खाई निरंतर बढ़ती जा रही है हरियाणा और राजस्थान जैसे राज्यों में तो यह स्थिति और भी भयावह है संवैधानिक सूची के साथ-साथ सभी प्रकार के भेदभाव या असमानताएं चलती रहेगी । लेकिन वास्तविक बदलाव तो तभी संभव है, जब पुरुषों की सोच को बदला जाए और यह सोच तब बदलेगी जब पुरुष महिला के साथ समानता और सम्मान का व्यवहार करना शुरू कर दे ।

लैंगिक असमानता की समस्या सर्वप्रथम हमारे घर से दूर करनी होगी । अगर यह समस्या हमारे घर से दूर हो जाए तो धीरे-धीरे यह समाज से फिर देश से और फिर विश्व से समाप्त हो सकती है । इसके लिए घर की महिलाओं का आदर व सम्मान किया जाना आवश्यक है तथा घर के अहम मुद्दों में महिलाओं की राय ली जानी चाहिए v पुरुष सदस्यों के बराबर ही महिला सदस्यों को भी महत्व दिया जाना चाहिए ।

Impact of Artificial Intelligence on Banking System

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बैंकिंग व्यवस्था पर आर्टिफिशियल इंटेलिजेंस का प्रभाव

व्योमेश प्रताप सिंह

रिसर्च स्कॉलर

जय नारायण व्यास विश्वविद्यालय जोधपुर, राजस्थान, भारत

शोध सारांश

वैश्वीकरण के दौर में मानव श्रम के द्वारा किया गया कार्य काफी नहीं है खासकर बैंकिंग जैसे क्षेत्र में एक ऐसा क्षेत्र जिस पर उपभोक्ता ग्राहक पूरे देश की अर्थव्यवस्था संचालित होती है। इसलिए आज के दौर में आर्टिफिशियल इंटेलिजेंस के द्वारा सभी काम कम लागत में और सही समय पर पूर्ण हो जाते। मेरा शोध पत्र बैंकिंग व्यवस्था पर आर्टिफिशियल इंटेलिजेंस का प्रभाव और आने वाले भविष्य में आर्टिफिशियल इंटेलिजेंस के द्वारा बैंकिंग व्यवस्था में क्या-क्या चुनौतियां आने वाली है इसके बारे में संपूर्ण जानकारी देगा।

मुख्य शब्द-

आर्टिफिशियल इंटेलिजेंस, वैश्वीकरण, उपभोक्ता, बैंकिंग।

उद्देश्य-

1. आर्टिफिशियल इंटेलिजेंस का बैंकिंग व्यवस्था में योगदान।
2. आर्टिफिशियल इंटेलिजेंस के द्वारा बैंकिंग में आने वाले चुनौतियां।

शोध विधि- अध्ययन के लिए डाटा मुख्य रूप से पुस्तकों पत्रिकाओं विभिन्न वेबसाइट और इंटरनेट जैसे माध्यमिक स्रोतों का प्रयोग किया गया है।

संकल्पना—

आर्टिफिशियल इंटेलिजेंस दो शब्दों से मिलकर बना है। इसका अर्थ है मानव निर्मित सोच शक्ति जो मनुष्य की तरह सोचने और कार्य करने के लिए प्रोग्राम किया जाता है। इस तकनीक की सहायता से कई बड़े कार्य आसानी से किया जाता है। इसके द्वारा जटिल डाटा को आसानी से समझा जा सकता है और उसे अपने हिसाब से तैयार किया जा सकता है बैंकिंग क्षेत्र में आर्टिफिशियल इंटेलिजेंस का इस्तेमाल दिन प्रतिदिन बढ़ता जा रहा है। बैंकों में ग्राहकों को बैंक नहीं जाना पड़ता और घर बैठे बैंकों के अपने सारे कार्य कर सकते हैं। लेकिन जैसे-जैसे आर्टिफिशियल इंटेलिजेंस का प्रयोग बढ़ता जा रहा है वैसे-वैसे चुनौतियों भी बढ़ती जा रही हैं ग्राहकों के द्वारा बैंकों के आर्टिफिशियल इंटेलिजेंस को जो जानकारी साझा की गई है वह कितनी सुरक्षित है कि आज भी सबसे बड़ा प्रश्नचिन्ह है आर्टिफिशियल इंटेलिजेंस पर।

बैंकिंग क्षेत्र में आर्टिफिशियल इंटेलिजेंस की भूमिका:—

बैंकों के रियल टाइम डाटा प्रबंधन के एआई का उपयोग किया जा रहा है रिजर्व बैंक ऑफ इंडिया बैंकों पर निगरानी रखने के लिए आर्टिफिशियल इंटेलिजेंस का व्यापक उपयोग करने की योजना बना रही है। रिजर्व बैंक ये सुनिश्चित कर रही है कि इसका फायदा उसके पर्यवेक्षक विभाग को मिल सके इससे रिजर्व बैंक नॉन बैंकिंग फाइनेंसियल कम्पनीज और बैंकों पर निगरानी रख सकती है। केंद्रीय बैंक ने नियामक पर्यवेक्षक के लिए आर्टिफिशियल इंटेलिजेंस विकसित करने का फैसला किया है जिसके लिए उसने मैकिन्से एंड कंपनी इंडिया एलएलपी और एक्सचेंजर सॉल्यूशंस प्राइवेट लिमिटेड इंडिया को चुना है देश में बहुत सारे बैंकों ने आर्टिफिशियल इंटेलिजेंस आधारित सिस्टम का इस्तेमाल करना शुरू किया है जिसका फायदा बैंकों को भी मिल रहा है।

बैंकिंग व्यवस्था में आर्टिफिशियल इंटेलिजेंस की भूमिका**1. धोखाधड़ी का पता लगाना**

बैंकों में डिजिटल लेनदेन हर दिन होता है। ऑनलाइन खातों के माध्यम से बिलो का भुगतान, लेनदेन खरीदारी आदि। अगर इन सब के बीच में धोखाधड़ी हो जाए तो धोखाधड़ी की पहचान आर्टिफिशियल इंटेलिजेंस कर सकता है। डेनमार्क के सबसे बड़े बैंक डांस्के बैंक में धोखाधड़ी का पता लगाने के लिए आर्टिफिशियल इंटेलिजेंस सिस्टम आधारित एल्गोरिथम को लागू किया है तब से धोखाधड़ी का पता लगाने की क्षमता 50% तक की बढ़ोतरी हुई।

2. चैटबॉट्स:

चैटबॉट्स 24x7 दिन काम करते हैं इसके प्रयोग बैंक ग्राहकों के लिए 24 घंटे उपलब्ध रहते हैं ग्राहकों के व्यवहार को समझकर चैटबॉट्स व्यक्तिगत ग्राहक सहायता की पेशकश कर सकता है। इसे ईमेल और अन्य चैनलों पर काम का बोझ कम कर सकते हैं। यह चैटबॉट्स 24x7 दिन काम करते हैं ग्राहक कभी भी प्रयोग कर सकते हैं। यह आर्टिफिशियल इंटेलिजेंस का ही रूप है जिसका प्रयोग मैसेजिंग एप में किया जाता है। यह ग्राहकों को सुविधा प्रदान करते हैं। जो ग्राहक से मानव की तरह बातचीत करते हैं। एक रिसर्च के अनुसार चैटबॉट्स बैंकिंग क्षेत्र के लिए एक गेम चेंजर की तरह है इससे 2017 से 2022 तक सालाना 800 करोड़ रूपए की बचत हुयी है।

बैंकिंग में उपभोक्ता सहभागिता के लिए चैटबॉट्स का उपयोग करने के कई कारण हैं।

1. लागत बचत
2. आसानी से उपयोग
3. वित्तीय सलाह
4. नया खाता निर्माण
5. चैटबॉट्स का भाषाई लचीलापन
6. चैटबॉट्स के माध्यम से बेहतर ग्राहक अनुभव
7. डेटा संग्रह और विश्लेषण
8. वित्तीय सलाह
9. स्मार्ट भुगतान प्रसंस्करण
10. 24x7 उपलब्धता

3. ऋण और क्रेडिट निर्णय:-

बैंकों ने अधिक जानकारी, सुरक्षित और लाभदायक क्रेडिट निर्णय लेने के लिए आर्टिफिशियल इंटेलिजेंस आधारित सिस्टम का प्रयोग करना शुरू किया है। वर्तमान में कई ऐसे बैंक हैं जो किसी व्यक्ति या कंपनी को रेट देने के लिए पुराना सिस्टम प्रयोग करते हैं जो की बहुत सारी त्रुटियों से भरा हुआ है। इसमें वास्तविक दुनिया के लेनदेन का इतिहास गायब होता है और लेनदारों का गलत वर्गीकरण होता है।

4. डेटा संग्रह और विश्लेषण

बैंकिंग हर दिन लाखों लेनदेन रिकॉर्ड करता है इसका संग्रहण और पंजीकरण कर्मचारियों के लिए अत्यंत कठिन हो जाता है बिना किसी त्रुटि के इतना बड़ा डाटा रिकॉर्ड करना और संरचना करना अत्यंत संभव हो जाता है इनोवेटिव आर्टिफिशियल इंटेलिजेंस सॉफ्टवेयर के माध्यम से ऐसे डाटा संग्रह करना और विश्लेषण करने में मदद करती है इस जानकारी से हम धोखाधड़ी का पता लगाना और क्रेडिट निर्णय लेने के लिए भी किया जाता सकता है।

5. ग्राहक अनुभव:-

ग्राहक लगातार बेहतर अनुभव की तलाश में रहते हैं। आर्टिफिशियल इंटेलिजेंस के प्रयोग के बाद ग्राहकों को घर बैठे बैंकिंग सुविधा मिल जाती है। इससे ग्राहकों का अनुभव दिन पर दिन बढ़ता जा रहा है। उदाहरण के तौर पर एटीएम सफल क्यों हुआ क्योंकि ग्राहकों को अब पैसे निकालने के लिए लाइनों में नहीं लगना पड़ता ऐसी ही आर्टिफिशियल इंटेलिजेंस आने के

बाद ग्राहक घर बैठे अपने स्मार्टफोन का प्रयोग करके बैंकिंग सुविधाएं हासिल कर सकता है। आर्टिफिशियल इंटेलिजेंस के द्वारा ग्राहकों की जानकारी कम समय में रिकार्ड कर सकते हैं और उचित सेवाएं प्रदान कर सकते हैं।

बैंक के द्वारा प्रयोग किये जा रहे आर्टिफिशियल इंटेलिजेंस आधारित सिस्टम निम्न प्रकार से है—

बैंक का नाम	ए-आई का नाम	कार्य
स्टेट बैंक ऑफ इंडिया	सिया चैट बॉक्स	ग्राहक की समस्या और बैंक को के कुछ कार्य करने में सक्षम
HDFC बैंक	ईवा	ग्राहक के ऋण संबंधी समस्या का समाधान, लेने देन आदि
ICICI बैंक	आइपल	ग्राहक बैंक से जुड़े शिकायत, खाते में जमा बैलेंस आदि की जानकारी प्राप्त कर सकते हैं
CANARA बैंक	मित्रा	ग्राहक बैंक से जुड़े शिकायत और लेन देन ऋण संबंधी, खाता खोलने का कम आदि कर सकते हैं।

आर्टिफिशियल इंटेलिजेंस के फायदे:

1. ऑनलाइन और मोबाइल बैंकिंग में सुधार
2. व्यक्तिगत डेटा की सुरक्षा
3. कार्य कुशलता में वृद्धि
4. बैंकिंग सेवाओं का बढ़ना
5. घोटाले और धोखाधड़ी की पहचान
6. डेटा विश्लेषण
7. उत्पादकता में वृद्धि
8. बेहतर ग्राहक अनुभव
9. निवेश प्रक्रिया का स्वचालन

आर्टिफिशियल इंटेलिजेंस से बैंकिंग सिस्टम एवं क्षेत्र में आने वाली चुनौतियाँ—

आर्टिफिशियल इंटेलिजेंस को अगर बैंकिंग में पूरी क्षमताओं और सीमाओं के साथ लागू किया जाए तो उसकी संपूर्ण जानकारी होना जरूरी है ग्राहकों का बैंकों के पास आर्टिफिशियल इंटेलिजेंस के द्वारा जो भी डाटा पहुंचेगा वह कितना सुरक्षित है या आज भी बड़ा प्रश्न चिन्ह है डाटा का प्रयोग नापाक उद्देश्य के लिए भी किया जा सकता है। करोड़ों कुशल और अर्ध कुशल कामगार बेरोजगार का शिकार भी हो सकते हैं। भारत जैसी बड़ी जनसंख्या वाले देश के लिए आर्टिफिशियल इंटेलिजेंस एक बड़ी चुनौती होगी। डेटा जितना बड़ा होगा त्रुटि उतनी ही कम होगी एवं डेटा जितना कम होगा त्रुटि उतनी ही ज्यादा होगा ये भी एक बड़ी चुनौती के तौर पर देख सकते हैं।

निष्कर्ष—

भारत भारत जैसे यह बड़े देश में आर्टिफिशियल इंटेलिजेंस के द्वारा बैंकिंग सेवाएं घर घर तक यह पहुंच सकती है और वही भी क्षेत्रीय भाषा में। बैंकिंग में आर्टिफिशियल का प्रयोग अभी शुरूआती दौर में है अभी इस क्षेत्र में काफी कुछ करना बाकी है इसके साथ भारत को रोजगार को लेकर भी नीति बनानी होगी क्योंकि आर्टिफिशियल इंटेलिजेंस बेरोजगारी का माध्यम भी बन सकता है।

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A Study of The Effectiveness of 5Es Constructivist Instructional Model in Enhancing Communication Skills

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Abstract

According to constructivism, a person creates knowledge on the basis of his experience. When a person sees something new in his life, he connects it with his previous thoughts and experiences, then if the previous knowledge is not relevant, he discards it and accepts the new knowledge. According to constructivism, a person is the active creator of his own knowledge. For this, the person is free to ask questions, investigate and evaluate. In the '5Es Constructivist Model' based on constructivism, students are taught by following Engage, Explore, Explain, Elaborate and Evaluate. Through the presented research, the effectiveness of '5Es constructivist model' has been studied in improving notes making skills. Experimental research method was selected for the research. In the form of pre-test and post-test experimental and controlled group design, 30 students each of class 9 were selected and the package was administered to the students of the experimental group. A 'Communication Skills Package' based on '5Es Constructivist Model' has been created as a research tool. Research findings show that the 5Es Constructivist Model is effective in enhancing students' notes making skills.

Keywords: Constructivism, 5Es Model, Notes making skills, Writing skills, Communication skills.

Introduction

Constructivism explains how a person learns based on observation and scientific principles. According to this, a person creates knowledge on the basis of his experience. When we see something new in our life, we connect it with our previous thoughts and experiences, then if the previous knowledge is not relevant, we discard it and accept the new knowledge. According to constructivism, we are the active creators of our own knowledge. For this we are free to ask questions, investigate and evaluate.

The constructivist approach to learning in the classroom emphasizes multiple teaching methods. Constructivism encourages students to use active techniques to construct knowledge (experimentation, learning by doing, solving real situations in the outside world) and reflects on what students are doing and how their understanding is changing. Is it? The teacher, playing the role of a guide in this entire process, sees how the student creates new knowledge by understanding his previous concepts.

Constructivism creates a cognitive structure for learning. Constructivism was originally developed by Jesse Delia at the University of Illinois in the United States during the 1970s. Constructivism flourished in the 1980s and 1990s and promoted experiential learning in the communication discipline (Burlison, 2007, p. 108; Koopman, 1997, p. 103). Constructivism has been used to better understand the development of social cognitive and communication skills in children and adolescents (Delia, J.G. 1977, p. 68).

According to NCF-2005, in the constructivist concept, learning is a process of construction of knowledge. Students actively construct knowledge for themselves based on materials/activities available in pre-existing ideas. The constructivist concept provides strategies that encourage learning by doing. The role of teachers in children's cognition also increases when they become more actively involved in the knowledge construction process in which children engage. A boy or girl engaged in the learning process creates his/her own knowledge. Allowing children to ask questions that relate the content taught in school to the outside world, encouraging them to respond in their own words and reflect on their experiences rather than memorizing and giving the same answers to do. These are all small but very important steps in developing children's understanding. Inquiry, exploration, asking questions, debate, practical experiments and thinking that can create new concepts, ideas/situations, all these ensure the active engagement of children. Such opportunities should be provided by

the school so that children can assimilate concepts by asking questions, discussing and thinking (NCF 2005, p. 20). Thus, NCF 2005 also emphasizes on constructivist concept in teaching-learning process.

Role of Teacher in Constructivist Learning

Constructivism calls upon teachers to abandon traditional teaching methods and promote child-centred teaching. Constructivism expects the teacher to act as a guide. A mentor (teacher) "provides opportunities for students to explore the ideas of others and their own, supports, encourages, and encourages students to find, rather than present, solutions to meaningful problems." Hand and Vance, 1995 p.39).

In a constructivist classroom, the teacher remains in the background of a facilitator, director and friend. He is a participant in the learning process. The teacher facilitates discussion, guides students, directs them to ask questions and allows them to come to their own conclusions. The role of a constructivist teacher includes attracting students' attention, engaging and involving them, being aware of the classroom environment, giving clear and timely instructions, providing opportunities to ask questions, using constructivist strategies, etc. The teacher creates a constructivist environment in the classroom which depends on his management skills (assignment, group discussion, time, material, space, management etc.) (Saruparia, Shima 2013, p. 219).

Role of Student in Constructivist Learning

Constructivist learning encourages students to take active roles, explore, take initiative, communicate with teachers and other participants, discuss, develop their own ideas. It discourages students from rote learning or being passive in the learning process. Encourages both individual and cooperative learning, helps develop logical thinking and problem-solving skills, and activates students' natural curiosity through activity-based learning (Knapp, N.F. 2019, p. 89).

Constructivist Class-Room

The Constructivism classroom environment encourages free discussion and mutual understanding among students. In constructivism, emphasis is laid on student-centred teaching. Students are active learners and learn by interacting with each other. Teachers play the role of guides in the learning process of students.

5E Constructivist Model

In the presented research, 5E Constructivist Model means the use of the following 5E in classroom teaching:-

(1) Engage: In this stage, students are motivated to engage in upcoming activities by connecting past and present learning experiences. In this stage, the student is activated to ask questions related to what has come to his attention and his previous knowledge. In this way, students become fully engaged in the activity and share experiences and ideas related to the concept with their peers.

(2) Explore: In this stage the student is given work to do by engaging him in the activity. The teacher gives the students such activities to do so that the students can engage in the learning process by exploring. Students explore the subject matter in depth with the help of various techniques, materials and activities in groups.

(3) Explain: In this stage, students interpret the discovered knowledge and create understanding, arriving at concepts. Here students are provided opportunities to interpret and learn new skills. In this stage the role of the teacher becomes more important, the teacher has to explain and explain the formal words and definitions used for concepts, processes, skills.

(4) Elaborate: This stage provides opportunities for the student to build, extend and practice conceptual understanding, skills and behaviour. In this stage the learner tries to understand the depth of the concept.

(5) Evaluation: In this stage the teacher evaluates the students on the basis of the activities done in the above stages. After this stage, the learner's progress is reflected in his experience.

Notes Making Skill

Note making is one of the most important writing communication skills that all students need to achieve academic success at the school level. Notes are a permanent record of information prepared for success in presentations, assignments and exams. "The use of note-taking serves as a basis or foundation for other writing skills such as precise writing, summarizing and essay writing" (Sarda, M. 2006 p. 16). In short, notes making is an advanced writing skill which is gaining immense importance in the present time due to the explosion or expansion of knowledge. It is brief and objective. In this, important facts, ideas and words are presented in a logical form. Making notes is a process of systematically compiling and creating important information, ideas, facts, concepts and arguments contained in a written text for future reference. Note making skills require students to have various abilities such as quick comprehension, identification of main ideas and their relevance to the occasion as well as the ability to record them quickly and concisely.

The process of making notes involves selection, analysis, summary and organization of information. By making notes, relevant information about the subject matter is underlined and organized into good notes (Shahila, 2015 p. 309). Kevara, K.A. According to (1989, p. 147), "Note making is a more active process which involves reading, summarizing key points and information, questioning, evaluating."

Study of Review of Literature

In the presented research, Indian and foreign research literature related to the problem was studied, the details of which are as follows-

(1) Babu, N. Samuel (2016). "The Utility of Note-Making: A Study."

The aim of this research was to evaluate the perceptions of English teachers on note-making at the entry level and to highlight the usefulness of note-making as an aid in learning English writing. The study was limited to the perceptions of English lecturers working in government funded institutions at the entry level in Hyderabad district of Telangana state. The accessible participants in this study were 32 lecturers (male and female) teaching English in government funded institutions in Hyderabad district. In this research a self-made questionnaire was developed. The research findings demonstrated that English lecturers in government funded institutions of Hyderabad district imbibe some strategies of note taking among the students at the entry level. Furthermore, it was found that notes making teaching effectively plays a positive role in teaching English writing skills.

(2) Humbi, Jenifer (2004) "Explicit Writing Instruction : Effect on Sixth Grade Students' Writing And Reading Achievement".

The present Ph.D. research on the subject at San Diego State University. Did high level research work. The purpose of this research was to study the effect of explicit writing instruction on the writing and reading achievement of sixth grade students. Two groups of 124 students from two primary schools were selected for the research. The findings revealed that the group of students who received explicit writing instruction showed significant improvement in writing, whereas no significant difference was found in the reading of the control group.

(3) Jisha, Joy (2014). "Effectiveness of 5E Learning Cycle Model on Scientific Creativity Scientific Interest and Achievement in Physics of Students at Secondary Level."

The objective of this research is to find out the scientific creativity of students from 5E learning model and activity based teaching and to compare the scientific creativity of students from 5E learning model and activity based teaching, the achievement of students in physics from 5E learning model and activity based teaching. Had to know. The researcher selected 335 students of class 9 from Idukki and Ernakulam districts of Kerala state using purposive random method. Experimental method was used for the research work. The findings of this research showed that the scientific creativity of students was higher through 5E learning model based teaching as compared to activity based teaching, 5E learning model based teaching significantly increased the scientific creativity of students as compared to activity based teaching and students' physical Academic achievement was higher in science with the 5E learning model than with activity-based learning.

(4) Kunvariya, Rita R. (2015) "Development and Effectiveness of Task Based Strategies for Enhancing Communication Skills of Class IX Students in English."

The objective of this research is to study Difficulties faced by students in task based strategy and use of task based strategy for effectiveness of communication skills. The equipment had to be manufactured. The

delimitation of the research was kept till Gujarati medium schools of class 9th. 12 secondary schools were selected as sample. Observational pre-test and post-test, task-based strategy were used as instruments. In conclusion, significant difference was found in the mean score of control and experimental group at 0.01 and 0.05 level in oral and written communication pre-test and post-test, which shows the positive effect of task based strategy.

(5) Londhe, Gautam D. (2014) "Development and Efficacy of Teaching Writing Skill Package in English.

The objective of this research was to study the difficulties in English writing of class 9th students, to overcome these difficulties through writing skills package and to study the effectiveness of the writing skills package. Survey experimental method was used in the research. Marathi secondary schools of Maharashtra state were selected for the research. The findings showed that there was significant improvement in writing skills after implementing the package. The pre-test was satisfactory but the package resulted in a high positive difference in the post-test.

(6) Mehmet, Fatih Ozcan (2017). "The Effects of Animation Supported 5Es Model on Teaching 'Indicative and Subjunctive Moods' in 7th Grade Turkish Lesson."

The purpose of this research was to investigate the impact of the empirically supported 5Es model in teaching Indicative and Subjunctive Moods in the Turkish 7th grade curriculum on students' academic achievement and attitude. Research findings show that students enjoy and take interest in studies through experience-supported 5Es model-based teaching, which increases their academic achievement and attitude. And students learn more actively while doing 5Es model based activities.

(7) Mosle, Denis Soilo (2003) "Vocabulary Instruction and Its Effect on Writing Quality".

Ph.D. on the topic at Louisiana State University. Did high level research work. This research work was done on 87 students. Under this research work, the effect of semantic teaching on writing skills was studied. Intensive vocabulary training was given to all the students. But one group of them was introduced to an additional element which was related to the use of previously taught words in writing. This teaching, divided into four cycles, was carried out for twelve weeks. At the end of each cycle, a test was taken which was based on essay writing through pictures. Data analysis was done using Chhvatam. A significant difference was found in the pre- and post-test scores of the students. Students of both the groups showed signs of efficiency improvement in the use of purpose-oriented words during practical teaching, in which the writing guidance group performed better.

(8) Radhakrishnan, S. (2012) "Teaching Learning Strategies for Developing Oral Communication Skills in English of the Secondary School Pupils of Kerala."

The objective of this research was to develop oral communication skills of secondary school students of Kerala through teaching-learning strategies in English. 200 teachers and 570 students from Thiruvananthapuram district of Kerala state were selected as the research sample. Descriptive survey was used as the research method and questionnaire as the instrument. The research findings show that teachers use translation method in teaching. Due to which children do not develop oral communication skills in English. Teachers do not use direct method of demonstration and conversation for developing oral communication skills.

(9) Rexhaj, Xhavit (2016) "Constructivism Approaches and Strategies for improving the Listening Language Skills"

The present research was related to activities to develop listening skills in the context of authentic teaching of the subject of English language in Kosovo schools. used the results of visits to English and Albanian language classes in 30 Kosova schools and administered the results of a questionnaire with 229 English language teachers in ten Kosova schools. In the conclusion of this research, it was found that the curriculum structure based on learning approach and linguistic proficiency develops communication skills in children.

(10) Shrimali, B.L. (2007) "An Experimental Study for Developing Secondary Level Students Linguistic Competence, Reading and Writing Skills in Sanskrit through Task Based Approach (TBA)."

The objective of the presented research study is to find out the needs of students in linguistics ability, reading and writing skills in Sanskrit at the secondary level. To find out the effectiveness of task based method in teaching Sanskrit. For this study, 30 students of class 9 at secondary level were selected on the basis of random method. Questionnaire was selected as the instrument. Appropriate conclusions were drawn by the researcher by using mean, standard deviation, 't' test in statistical techniques. The results obtained in this test found that most of the students have taken interest in writing skills like letter writing, question-answer, story, invitation letter, information, summary article etc. No significant difference was found in the pre- and post-test values in the traditional group, whereas a significant difference was found at the .01 level in the pre- and post-test values of the experimental group.

Statement of the Problem

“A Study of the Efficacy of 5E Constructivist Model in Enhancing Notes Making Skills.” Research

Objectives

The following objectives of the presented research have been set-

1. To study the level of Notes Making Skills of secondary level students.
2. To create a package based on 5E constructivist instructional model for enhancing Notes Making Skills.
3. To study the effectiveness of 5E constructivist instructional model in enhancing Notes Making Skills.

Hypotheses

For the presented research work, the following null hypotheses were formulated and tested systematically:-

1. There is no significant difference in the mean scores of pre-test of Notes making skills of students of experimental and control group.
2. There is no significant difference in the mean scores of post-test of Notes making skills of students of experimental and control group.
3. There is no significant difference between the mean scores of pre-test and post-test of Notes making skills of the students of the experimental group.
4. There is no significant difference between the mean scores of pre-test and post-test of Notes making skills of the students of the control group.

Sample

To complete the present experimental research work, 60 students of class 9 of a private school of Jodhpur city were selected through random sampling method. These 60 selected students were identified as two groups experimental group and control group of 30 students each.

Research Method

In the presented research, keeping in mind the nature of the research problem, the reliability and validity of the research work, the researcher used experimental research method to obtain authentic findings.

Tools

Keeping in mind the objectives of the presented research, the following self-made equipment was used in this research work :-

1. Notes Making Skills Package based on '5Es Constructivist Model'
2. Notes Making Skills Pre-Test
3. Notes Making Skills Post-Test

Statistical Techniques

Keeping in mind the objectives of the presented research, the following self-made equipment was used in this research work :-

1. Notes Making Skills Package based on '5Es Constructivist Model'.
2. Notes Making Skills Pre-Test.
3. Notes Making Skills Post-Test.

Finding

The findings of the research found that teaching through the activity-based 5E constructivist model yielded effective positive results in the post-test in enhancing the note-making skills of students. The research findings show that the 5E constructivist model plays an important role in enhancing students' note making skills. Therefore, it was suggested that the 5E constructivist model is a good way to enhance the note-making skills of students and for this, it should also be used in classroom teaching.

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CORPORATE SOCIAL RESPONSIBILITY AND INSURANCE SECTOR

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ABSTRACT: In the present times, Corporate Social Responsibility (CSR) is playing an important role in the societal development. The corporates are organising various activities under the umbrella of CSR.

It is getting increasingly important for companies to be good corporate citizens. Society has started to demand it and more so in the globalized economy. CSR is a method to hold responsibility for the company's actions and encourage a positive impact through its activities on the environment, consumers, employees, communities and stakeholders. The interests of stakeholders are vast, and insurers should focus on those that are affected by, or align with their business operations.

There are many benefits an insurer can reap such as better image in the market. They can increase engagement and loyalty among staff while reducing turnover rates. CSR can also increase long-term sustainability and profitability by shaping the market's competitive environment and the community as a whole. Finally, it will result in insurers becoming more attractive to investors, who are increasingly concerned about CSR and corporate governance.

This paper makes an attempt to understand the usefulness of CSR in insurance sector and also tries to examine the various CSR initiatives undertaken by leading Insurance companies in India. The data is largely obtained from secondary sources i.e. from annual reports of insurance companies, journals and websites. CSR initiatives not only help the organization but also the economy towards sustainable development. The concept of CSR should not be merely a statement of intent or promise made by some insurance companies but it should be effectively operational.

1. Introduction

Corporate Social Responsibility (CSR) is the commitment of companies to provide resources and support activities focused on enhancing economic and social development.

It is the effort made by companies to improve the living conditions of the local area in which they operate and the society at large.

The activities taken up as part of corporate social responsibility reflect the intent to create a positive impact on society without seeking any commensurate monetary benefits.

The basic objective of CSR in today's world is to maximize the company's overall impact on the society and stakeholders. CSR policies, practices and programs are being comprehensively integrated by an increasing number of companies throughout their business operations and processes.

The concept of CSR in Insurance law is, encouraging or enforcing contribution to the society at large, thus upholding the interests of the society in which the firms are operating. The two main relevant laws that protect the stakeholders' interests are the Companies Act 2013 and the IRDA Act 1999.

The insurance regulator has identified insurance firm's commitment towards community and society as per the obligation of insurers Rural and Social sector Rules 2002 by proposing obligation towards community and society. These rules mandate insurance companies to penetrate into the rural sector market with insurance products suitable for the rural poor.

The Rural and Social sector Rules 2002 is a part of the inclusive agenda which do not enforce these insurance companies to spend any sum towards these segment of their market. The compliance to CSR clause 135 of the companies Act 2015 applies to all the companies registered under the Act. Alongside the CSR agenda, the allied purposes of the Act include good governance, fraud mitigation, accountability, inclusions and several others provisions.

The CSR Rules of Clause 135 of the Companies Act 2013 pronounced contain

1. The CSR provisions are applicable to companies with an annual turnover of 1000 crores INR and more or a net worth of 500 Crores INR and more, or a net profit of five crore INR and more.
2. The new rules require companies to set up a CSR committee consisting of their board members including an independent director.
3. The Act encourages companies to spend at least 2% of their average net profit in the previous three years on CSR activities.

India is among very few countries that had legislated CSR as a mandatory activity for corporates. It is estimated that nearly 16,000 companies out of total universe of 11 lakh companies registered in India will fall under the mandatory CSR net. Regardless of the nature of the sector CSR rules of Companies Act surpass all boundaries of the market.

2. Literature Review

Mishra and Suar, 2010 studied whether corporate social responsibility (CSR) towards primary stakeholders have an effect on the financial and thenon-financial performance (NFP) of Indian firms. With the help of questionnaire survey the data on CSR and NFP was collected from 150 senior-level Indian managers.

Controlling confounding effects of ownership, stock-listing and firm size, a favourable perception of managers towards CSR is found to be associated with increase in FP and NFP of firms. The findings suggest that responsible business practices towards primary stakeholders can be beneficial and profitable to Indian firms.

Kumar (2013) examined the CSR activities carried out by Indian private (RIL) and public sector companies (ONGC) and the Indian government policies and programmes of CSR. The study revealed that though the Indian public and private firms are making efforts in the CSR areas but still there is a requirement of more emphasis to be given for CSR.

Singh and Singh (2015) studied the corporate social responsibility (CSR) activities carried out by public and private sector banks in India. The analysis showed that the work of CSR done by the Indian banking industry is a good initiative but there is still there is scope for development in this area. Some banks are lagging in the regulatory norms of CSR. To fulfil their social responsibility banks are focusing more on the social issues and financial issues but environmental issues are given less importance. Moreover, the public sector banks have overall higher spending than the private sector banks.

Das, S. C. (2013) study found that the non-life insurance companies disclosed significantly less social information than life insurance companies. The study also reveals that public life insurers disclosed significantly more social information than the other life insurance companies. On the other hand, a paired difference t-test shows private general insurance companies disclose more social information as the difference significant.

3. Objectives

The present paper makes an attempt:

- To understand the importance of CSR in insurance sector,
- To examine the factors considered in regulating CSR in insurance sector
- To review the various CSR initiatives undertaken by leading Insurance companies in India

4. Methodology

In order to accomplish the above objectives, secondary sources, available literature, reports and data have been used. The data has been obtained from various journals, reports, magazines and websites. The data pertaining to the study has been analyzed and interpretation of data is based on rigorous exercises aiming at the achievement of the study objectives and findings of the existing studies and it is more on qualitative terms than on quantitative terms.

5. Importance of CSR in Corporates

As we are aware that making profit only should not be the objective of any business as eating is not the objective of living. Focus should be laid on wellbeing of the society as that indirectly effects the profits therefore CSR is the DNA of business which incorporated would be beneficial to the business ensuring sustainable development.

Businesses exist to make profit, and this isn't meant to change as a goal. Yet no organisation operates in isolation; there is interaction with employees, customers, suppliers and stakeholders. CSR is about managing these relationships to produce an overall positive impact on society, whilst making money. Companies need to help other peoples by providing them good standard of living.

Commonly CSR programs range from community development to development in education, environment and healthcare etc. The ability to make a significant difference in the society and improve the overall quality of life could be set as a goal for the CSR activity.

Not one but all corporates should try and bring about a change in the current social situation in India in order to have an effective and lasting solution to the social woes. Corporates could increasingly join hands with non-governmental organizations (NGOs) and use their expertise in devising programs which address wider social problems. Partnerships between companies, NGOs and the governments should be facilitated so that a combination of their skills such as expertise, strategic thinking, manpower and money to initiate extensive social change will put the socio-economic development of India on a fast track.

Studies have shown that business operations are disturbed mostly by non-technical issues all bothering on environmental, health and social issues not considered early enough in business planning. Gone are the days when corporations 'did good' because of regulatory requirements, these days, apart from the media attention and stringent reporting requirements and stakeholder scrutiny, impacted communities are now more aware of business operations, even the smallest businesses have started leaving behind the footprints of CSR.

Companies have specialised CSR teams that formulate policies, strategies and goals for their CSR programs and set aside budget to fund them. These programs are often determined by social philosophy which have clear objectives and are well defined, it should also be aligned with the mainstream business.

6. Steps to Achieve CSR in Insurance Sector

CSR practices can be best laid by considering customers, employees, shareholders, intermediaries, suppliers, regulators and the broader community at large. The interests of these stakeholders are vast, and insurers should focus on those that are affected by, or align with, their business operations so that insurers can earn a superior reputation in the market. They can increase engagement and loyalty among staff while reducing turnover rates. CSR can also increase long-term sustainability and profitability by shaping the market's competitive environment and the community as a whole. Ultimately, it will result in insurers becoming more attractive to investors, who are increasingly concerned about CSR and corporate governance.

a. Paying Valid Claims Efficiently

Paying valid claims efficiently sounds simple, but it involves more than the obvious. Having the right technology is essential, as is staff training. Insurers also need to price risks accurately and fairly. If risks are continually underpriced, an insurer will go out of business, which will have wide-ranging effects on all stakeholders. To pay valid claims efficiently, insurers must also keep down costs. Premiums are calculated by account for both the particular risks and operating costs required to provide the policy. It is therefore important to minimize overhead, infrastructure and claims-processing costs so that insurers can offer affordable insurance.

b. Risk Minimization/Loss Control

Insurers are in the business of risk analysis to minimize risks—both internally in their operations and externally for their clients and other stakeholders. Internal risk minimization could be as simple as implementing proper policies and procedures, such as occupational health and safety guidelines. External risk minimization may be more difficult to employ. External risk minimization should reduce claims costs and frequency for clients and insured's will thus be incentivized to reduce the likelihood and severity of loss in order to lower their premiums. Insurers should, and often do, consider offering discounted premiums to insured's that take preventative measures. For example, discounts are offered to households that install security systems, young drivers who take safety courses and life insured's who do not smoke.

c. Climate Change Leadership

For insurers, a big part of risk minimization involves the environment, as insurers have an inherent interest in ensuring their clients are equipped to deal with natural disasters and the effects of climate change. The United Nations Environmental Program Finance Initiative is a collaborative effort of more than 200 companies in the financial services sector to “identify, define and promote good and best environmental practice” in the industry.

d. Recognition for Human Rights

Studies show that few companies have taken steps to implement human rights policies. Companies that show enthusiasm for observing voluntary human rights codes of conduct usually operate in a business with the potential to considerably impact human rights; the majority of their work may be done in developing countries, for example. These companies also tend to have high profile brand names that they wish to protect, and for that reason they can be more easily pressured into action by civil society. These principles provide a useful reference for insurers. It involves making policy commitments to human rights, undertaking “periodic assessments on the actual and potential impact of business operations on human rights, integrating the process into decision making and the tracking of performance.” The principles also recommend that corporations develop a means to hold themselves accountable and to provide for remediation through grievance or other mechanisms.

e. Socially Responsible Investment

Socially responsible investment describes the process of including non-financial criteria—environmental, social and governance considerations—in decision making. Institutional investors, such as insurers, are in a powerful position in that they are able to encourage positive change in investment strategies. There are three main strategies that socially responsible investors can use. The first, called screening, involves selecting investment options based on social or environmental criteria. It makes sense for insurers to screen out companies that, by the very nature of their operations, increase the likelihood and costs of claims, such as tobacco companies. The second strategy, shareholder activism, as its name suggests, involves communication with the investment company through shareholder resolutions, for example. If measures of communication are unsuccessful, then investors can always make their position clear by ceasing to invest in that company. The third strategy, community investing, is self-explanatory.

7. CSR activities conducted by the Public Sector Insurance Companies

The Oriental Insurance Co. Ltd. has spent majority of the amount on the health care and education. They have focused more towards the development of the better healthcare facilities and good education system. This shows the commitment of company towards the society. The company has spent majority of the CSR fund towards healthcare. During the last five years the company has spent majority of the amount in developing education and healthcare facilities.

Life Insurance Corporation of India is considered as a dominant player in the insurance sector. The major contribution of LIC is they purchase the government bonds and indirectly helping towards the development of the society. Besides these they have LIC Golden Jubilee Scholarship Scheme. This is an initiative of the Foundation, which provides scholarships to children from economically weaker sections of the society to pursue higher education till they complete their graduation / professional course. LIC Golden Jubilee scholarship Scheme provides scholarship to children from economically weaker section of the society amount of

₹ 20,000/- p.a for regular students for pursuing higher education and ₹ 10,000/- p.a to special girl child for pursuing 10 + 2 education.

The National Insurance Co. Ltd has significantly contributed towards the healthcare facilities in the country. The notable activities of The National Insurance Co. Ltd are Sponsored Tailoring Unit for skill development for traffic victim adolescent girls, Blind School Infrastructure, Providing an Ambulance to the poor people for carrying patients to hospitals and to home .

The New India Assurance Co. Ltd has also contributed towards various activities among which major highlights are Funding to Civil Hospitals, also for Skill Development they have contributed towards Skilling initiative for Women/men from rural & urban areas of Jammu (J&K).

United India Insurance Co. Ltd has contributed towards the education facilities and sanitation facilities. Besides these they have contributed towards the various projects such as Project to run 300 Ekal Vidhyalaya to provide education and support to underprivileged children.

Agriculture Insurance Co. of India Ltd. has contributed as directed by the Central Government for COVID-19.

General Insurance Corporation of India has spent majority amount towards PM CARES fund for helping the economy to provide better healthcare facilities. They are also committed towards the environment as they have majorly contributed towards National Tiger Conservation Authority. Also, they have contributed towards the Turning Opportunities for Upliftment and Child Help.

8. Conclusion

The concept of corporate social responsibility has gained immense importance throughout the world. The overseas corporate houses as well as Indian corporate sector has realized the importance of CSR activities for attaining the persistent dominance in the marketplace.

Though, the concept of CSR evolved in 1920's but in India, the concept was recognized only in 1990's after the liberalisation of the economy. It can be articulated that on the advent of globalisation, the Indian corporate were inclined towards CSR activities because of the increased competitive pressures. Today, numbers of industries have started CSR activities for enhancing their reputation and brand value and insurance sector is no exception to it. It is worth to be mentioned that number of social welfare schemes by private life insurance companies have noticeably contributed for the welfare of the society. It can be concluded that CSR activities are symbiotic in nature leading to the welfare of all

i.e., customers and the common people. Therefore, in this era of high competition companies need to pin their attention on social welfare projects besides caring for their economic health.

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MICRO-ECOLOGICAL STUDIES OF FERNS OF SOUTH-EASTERN RAJASTHAN

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Distribution, systematics eco-physiology and prothallial morphology of quite a large number of pteridophytic taxa of Rajasthan have been studied by many workers. But micro-morphological characteristics and effect of micro climatic and micro-habitats of ferns have not been studied far by any workers. The present paper describes micro-morphological investigations including type of hair/scales, their distribution, fine structure of hair/scale; vein patterns, vein endings, vein tracheioids; stomata - their distribution, frequency, types; epidermal features such as shape and size of epidermal cells, cuticle and its thickness in selected fern taxa in relation to micro-ecological condition of the environment of south-easter Rajasthan.

Analysis of various components of micro-habitat and micro-climate of fern localities have been made. This analysis has revealed that some pteridophytic taxa grow exclusively under a very particular set up of habitats. Reasons for such a habitat preference need to be further investigated.

Ecological studies which include methods of perennation, effect of hyperthermia on chlorophyll stability and membrane permeability and drought resistance have also been discribed in view of the prolonged xeric climate of south-eastern Rajasthan. These studies have revealed the survival mechanisms and adaptations of these pteridophytic taxa and their annual recurrence of succeeding monsoon suggesting both vegetative and sexual reproduction.

Key words - Ferns, Pteridophyta, microecology, Chlorophyll stability, Hyperthermia, Drought resistance, xeric.

Status and protection of women in India

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भारत में महिलाओं की स्थिति एवं संरक्षण
श्रीमती हेमलता मरेठा शोधार्थी, विधि संकाय, जय नारायण व्यास
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भारतीय संविधान महिलाओं को न केवल समान अधिकारी प्रदान करता है अपितु समस्त असमानताओं को समाप्त करते हुये महिलाओं को विशेष दर्जा भी प्रदान करता है। इसके बावजूद आधुनिक युग में भारतीय समाज में महिलाओं को घर की चौखट तक ही सीमित किये जाने का प्रयास किया जाता रहा है। महिलाओं द्वारा देश व समाज हित में कुछ किये जाने का प्रयास किया जाता है तो सामज एवं विभिन्न व्यवसायों के क्षेत्र में भेदभाव का अनुभव करती है, इसके साथ ही दहेज, जबरन वेष्यावृति और यौन उत्पीड़न जैसी समस्याओं से खुद ही निपटने हेतु लड़ाई जारी रखे हुये हैं। इन सभी समस्याओं, असमानताओं से सामना करने या निपटने के लिए भारतीय संविधान में महिला को विशेष दर्जा प्रदान करते हुये कई उपाय शामिल किये हैं, जिससे उन्हें विभिन्न अवसरों के माध्यम से समाज में प्रमुख महिला बनने के लिए सशक्त बनाते हैं। इसके अतिरिक्त भारत में ऐसे कई कानून हैं जो अन्याय को खत्म करने और विभिन्न परिस्थितियों में भेदभाव करने वालों को दण्डित करने की कोषिष करते हैं। यह लेख भारत में उन कानून की जांच करता है जो महिलाओं की स्थिति से संबंधित हैं। इस लेख में अध्ययन भारतीय समाज में महिलाओं की स्थिति एवं संरक्षण की कमी पर केन्द्रित है, जो भारतीय महिलाओं की स्थिति को दर्शाता है। शोधकर्ता ने कुछ प्रासांगिक रणनीतियां और नीतियां प्रदान करने का प्रयास किया है जो भारत में महिलाओं की स्थिति में सुधार एवं संरक्षण प्रदान कर सकते हैं। शब्दकुंजी : महिलाओं के अधिकार, न्याय, समानता, लिंग, कानूनी सुरक्षा

STUDY OF DIELECTRIC MEASUREMENT OF CERAMICS AT X-BAND

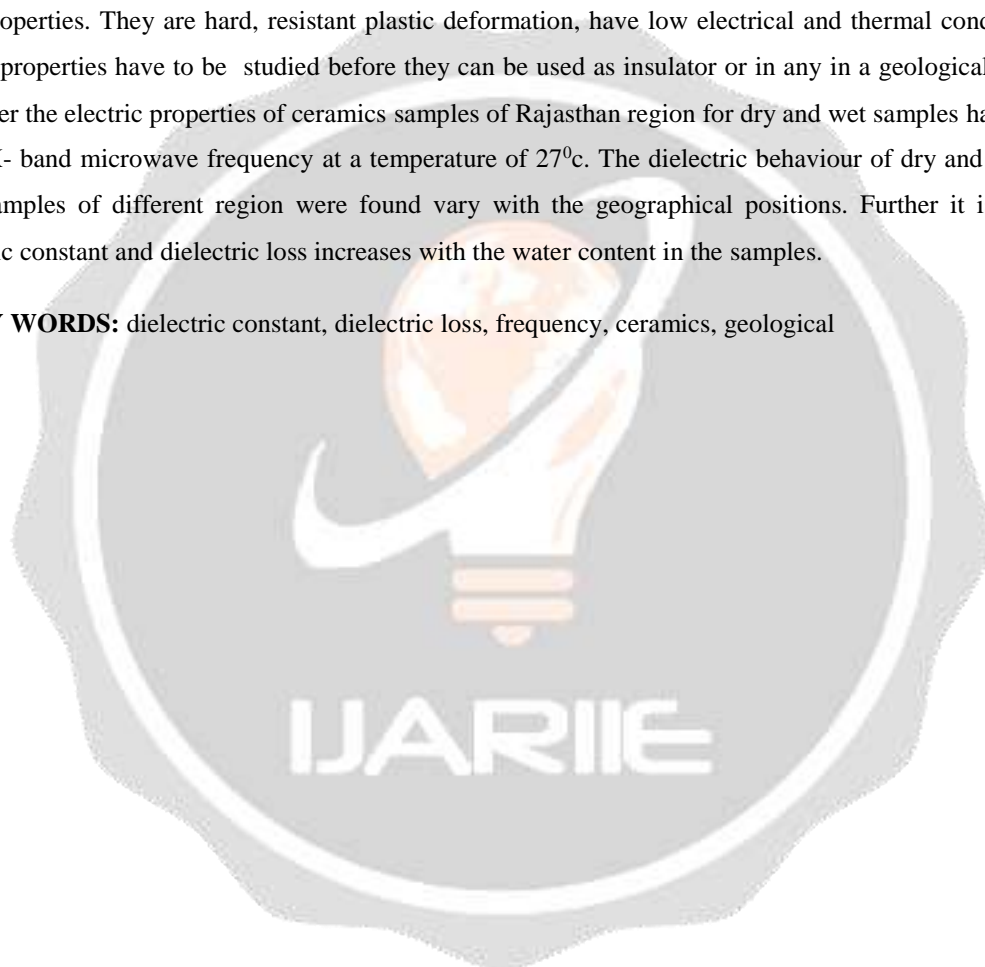
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ABSTRACT: Ceramics behave as dielectric materials. These materials have charge storage capacity and also have lossy properties. They are hard, resistant plastic deformation, have low electrical and thermal conductivity. These electric properties have to be studied before they can be used as insulator or in any in a geological application. In this paper the electric properties of ceramics samples of Rajasthan region for dry and wet samples have been carried out at X- band microwave frequency at a temperature of 27⁰c. The dielectric behaviour of dry and wet samples of these samples of different region were found vary with the geographical positions. Further it is observed that dielectric constant and dielectric loss increases with the water content in the samples.

KEY WORDS: dielectric constant, dielectric loss, frequency, ceramics, geological



Comparison study of the Physical and Optical Properties Telluroborate Glass doped with different rare earth ions

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Abstract

In the present work, the investigation begins with the synthesis of telluroborate glass samples doped with Nd^{3+} rare earth ion using established melt quenching techniques with composition $(50-x) \text{B}_2\text{O}_3 \cdot 20\text{TeO}_2 \cdot 15\text{Mg}_2\text{CO}_3 \cdot 15\text{K}_2\text{CO}_3 \cdot x\text{Nd}_2\text{O}_3$ (where $x = 0, 0.5, 1, 1.5, 2$ and 2.5 mol %) and $(50-x) \text{B}_2\text{O}_3 \cdot 20\text{TeO}_2 \cdot 15\text{Mg}_2\text{CO}_3 \cdot 15\text{K}_2\text{CO}_3 \cdot x\text{Pr}_6\text{O}_{11}$ (where $x = 0, 0.4, 0.5, 1$ and 1.5 mol %). This comparative study investigates the physical properties of Nd^{3+} and Pr^{3+} dopants in telluroborate glass, emphasizing their distinct influences on the glass matrix. The research explores absorption spectra, optical dielectric constant, polaron radius, interatomic separation, molar refraction, and metallization criterion through molar density and molar volume. All samples exhibit an amorphous nature in XRD spectra. Tauc's plot reveals an increase in band gap energy with rising dopant concentration, and the refractive index also increases accordingly. Nd^{3+} demonstrates near-infrared absorption with longer fluorescence lifetimes, suitable for lasers, while Pr^{3+} shows visible absorption and shorter lifetimes, fitting display technologies. Variances in cooperative luminescence, thermal characteristics, stability, crystallization behavior, refractive indices, and luminescence mechanisms distinguish the dopants, guiding their application in optical devices based on specific requirements and enhancing precision and efficiency in optical systems.

Keywords – Telluroborate glass, Physical parameters, Rare earth ion, Band Gap.

Critically evaluate advanced catalytic oxidative processes (ACOPs) and multivariate physicochemical analysis of wastewater treatment in Jodhpur District, Rajasthan

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Abstract:

This research paper evaluates the effectiveness and efficiency of advanced catalytic oxidative processes (ACOPs) in wastewater treatment in Jodhpur District, Rajasthan. The study uses a literature review and data collection from wastewater treatment plants to assess the quality of treated water and its compliance with national and international standards. The analysis examines various physicochemical parameters, such as pH, turbidity, chemical oxygen demand (COD), biological oxygen demand (BOD) and total suspended solids (TSS), to understand the overall quality of the treated water. The study also explores potential environmental impacts of the treatment process, including sludge generation and harmful byproducts, to propose sustainable solutions. The data will be analyzed using statistical methods to evaluate the performance of ACOPs in terms of pollutant removal efficiency and treatment effectiveness. The study also evaluates the economic feasibility of adopting the ACOPs treatment method on a larger scale, considering factors like equipment and maintenance costs, energy consumption, and waste disposal expenses. The findings will contribute to understanding ACOPs applicability and potential for wastewater treatment and ensure clean and safe drinking water for communities worldwide.

Keywords:

Catalytic oxidative; ACOPs; Physicochemical; Wastewater; Jodhpur