A SURVEY PAPER ON: ADROITNESS IN E-CONTENT DEVELOPMENT FOR HIGHER EDUCATION

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ABSTRACT

Educational systems around the world are under increasing pressure to use the new information and communication technologies (ICTs) to teach students the knowledge and skills, they need in the 21st century. To develop a knowledge society, integrating ICT at all levels of education is essential. ELearning is becoming an important tool to further enhancement of an individual. eLearning is not an easy learning but its components have the capacity to deliver simple, responsive and transparent services to student community. Electronic Learning can be seen in education, agriculture, tele-medicine domains where one can interact through computers to get update information.[2] e-Learning serves this purpose in its various forms such as web-based learning, computer-based learning, mobile-based learning, virtual classrooms, and digital collaboration. The ultimate aim of e-Content development is to create an information rich society where everyone, irrespective of caste, religion, race, region, gender, etc., are empowered to create, receive, share, and utilize information and knowledge for their economic, social, cultural and political upliftment and development. [3] In the current times, internet bandwidth is playing a key role particularly people living in terrain and remote areas are facing challenges to access internet in their areas. The existing bandwidth needs expansion immediately. Another problem in Indian environment is electricity failures which are causing severe problems when accessing online information. Thus, it is important to know the prospects and challenges of eContent development in Indian context.

Keyword:- *E – Learning, Class room ,Technology*

1 INTRODUCTION

In this knowledge explosion trend, production of creative contents and incorporating innovative Information and Communication Technologies (ICT) for effective dissemination of such contents play a vital role. Both Education and Knowledge are stepping stones for nation development [4]. Large Population, Poverty, Illiteracy are the constraints which lead to exploitation of education. The traditional education system in India was able to serve only a small section of people who were rich and could afford to receive education. To develop a knowledge society, integrating ICT at all levels of education is essential. However, even today one of the greatest challenges of integrating ICT in education is lack of quality e-Content. For the upcoming generation we need to create a digital learning culture and environment. Mastering ICT skills and utilizing ICT towards creating an improved teaching and learning environment is of utmost importance to teachers in creating new learning culture.[2] It includes the delivery of content via internet, intranet/extranet, satellite broadcast, mobile technology. This great transformation poses challenges to educators regarding their basic tenets, to deploy the media in creative and productive ways, as "teachers are the central forces in tapping the learning opportunities created by ICT. The transformation from conventional methods of education to using of Information and Communication Technologies (ICTs) was a wake up phenomenon. Because ICTs were capable of providing instant and wider access to electronic content that is

interesting to the people. In the past, the information seekers physically commute to libraries, but the current ICTs are enabling the knowledge seekers, students to find the required information at their door step. A Desktop Personal Computer, Laptop or a Tab with internet connection is able to provide a huge measure of worldwide data. With the Internet, people are not just accessing information, but also communicating with each other. Students, teachers and domain specialists are formed into special interest groups and communicating with each other.

2 E- CONTENT

E-content is digital information delivered over a web-based electronic devices, i.e., symbols that can be used and understood by human during communication processes, which permit them to share visions and influence each other's knowledge, positions or conduct. E-contents are basically a package that satisfies the conditions like i.e. minimization of the distance, cost effectiveness, user-friendliness and adaptability to local conditions [3]. The initiative taken by the UGC in collaboration with the Consortium for Educational Communication (CEC) to train the teachers and provide funds for multimedia & E-content development is gaining momentum. E-content is packaged of knowledge in electronic form which can be retrieved by the use of electronic devices. [1] In fact, packaging of knowledge through E-Content may enable teachers to contribute to knowledge field. Each instructor takes in some potency in that his/her subject area. S/he desires to express and share it. This technology provides opportunities for them to contribute in their respective strength areas. In E-Content development knowledge content can be packaged in the shape of short learning object of 1 to 2 minutes or a module of half an hour and even hours. Thus, in packaging of knowledge through E-content size could be as small as a few minutes and can also be of several hours, which is not possible in traditional publishing of knowledge content, where a publication has necessarily to be of certain size I. e. 150-200 pages. In E-Content domains of cognition can be unitized, visualization can be done, graphs and charts can be added and knowledge can be conveyed effectively. [4] A person dwelling in remote countries can view live webcast or video lectures offered in Western Universities by having an internet connection with a Personal Computer (PC). Therefore, E-content is a classroom anywhere, anytime along with a handy instrument to study.

3 THE OBJECTIVES OF THE STUDY

- To examine the current challenges in electronic scholarship
- To address consequences of electronic content development
- To study how to generate e-Content for development
- To recognize the purpose of multimedia in higher education.
- To know the role of e-content in higher education.

4 REAL UTILIZATION OF E-CONTENT IN A PRESENT SCENARIO

4.1 Open Education Resources (An alternative for chalk and talk method)

An Open Courseware is defined by the OCW Consortium as a free and open digital publication of high quality of University-level education materials. These materials are organized as courses, and often include course planning materials and evaluation tools as well as thematic content with state-of-art technologies. Information technology, especially the internet has profoundly changed the ways of distribution of learning resources available in digitized form. Digitized content can so easily be shared between students and institutions, sharing it publicly under an open public license. Open learning is an approach to teaching that tries to take away all unnecessary barriers to reading, while purporting to supply pupils with a reasonable probability of success in an education and training system centered on specific needs and located in multiple areas of learning. In other terms, both manual content and online content is same whether the physical trainer presence is available or not, many a times. [2]

4.2 Open Education Resource creation initiatives in India

Indira Gandhi National Open University (IGNOU) National Digital Repository of learning resources established by the Indira Gandhi National Open University (IGNOU) in India. The repository eGyankosh, envisage to store, index preserve, distribute and share the digital learning resources of Open and Distance Learning (ODL) institutions in the

country. The repository supports seamless aggregation and integration of learning resources in different formats such as self-instructional study materials, audio-video programmes, and archives of radio and television-based live interactive sessions.

National Program on Technology Enhanced Learning (NPTEL) aims to raise the quality of engineering instruction in India by developing curriculum based video and web forms. This is being carried out by seven premier institutions as a collaborative project. Approximately 140 courses are in various stages of preparation and distribution.

National Council of Educational Research (NCERT) is leader in the area of 'open courseware' (OCW). NCERT is in the process of making schoolbooks freely available — mainly in English, Hindi and Urdu — to students and teachers via its website (www.ncert.nic.in). This portal provides easy navigation to textbook chapters by title / subject of the book for a particular class.

5 OPEN EDUCATION RESOURCE CREATION INITIATIVES IN INTERNATIONAL LEVEL

The UNESCO-SALIS e-learning Portal is a collaborative project of the society for the Advancement of Library and information Science and UNESCO. This project aspires to promote awareness and enhances information literacy competency skills of laymen as well as information professionals and educators in the south Asian sub-area.

5.1 MIT OpenCourseWare

Massachusetts Institute of Technology (MIT) has most well-known institutional OCW project and is responsible for pulling many colleges from all over the world into the OER movement. MITOpenCourseware has currently over 2150 of course materials on internet at no cost for non-commercial purpose.

5.2 OpenLearn

Open University is one of the world's most successful distance education universities which is providing free access to Open University course materials. This website delivers an option of flexible navigation by visually impaired competitors. Instead of surfing the pages, they can listen the same content that was posted on .xml pages without any difficulty.

Massive Open Online Courses (MOOCs) also play a dominant role among all these countries. Shodhganga, a Knowledge Repository is playing a vital role in providing lot of research dissertations and theses submitted by various scholars in various subjects that helps a normal student. It is going to be a single-stop-shop for all such knowledgebase programs. Digital Library project that was allocated by Ministry of Communications and Information Technology, Government of India under consortia with IIIT Hyderabad,JNTU and Sanskrit Vidya Peeth of Tirupathi digitized number of books that are available online at present (Pratha et al) namely, the Regional Mega Scanning Centre (RMSC).RMSC has digitized the content of Osmania University, Salarjung Museum and Telugu University with over 1 lakh books and 15000 million pages are stored in Digital Library Service and are available online[2]

6 BENEFITS OF E-CONTENT

Increasingly, organizations are adopting e-Content as the main delivery method to train employees. At the same time, educational institutions are moving toward the use of the internet for delivery, both on campus and at a distance mode. For the instructor, tutoring can be done at any time and from anywhere. Online materials can be updated, and apprentices are able to understand the changes at one time. When learners are able to access materials on the internet, it is easier for instructors to direct them to appropriate information based on their needs. [2]

6.1 Multi-access

Despite teacher, student or tutor, the availability of information is made available 24 x 7 days on websites (Replacement of teacher in classroom). The challenge part is access of information by users for which project

implementers have to update the websites continuously. Acceptance of technology in determining not merely serves the soul but also benefit multiple users at the same time.

6.2 Speed

Using electronic resources, Search feature has become quicker and faster to extract the page. Integration of information from one to many, cross-search reference between different publications has become little easy.

6.3 Functionality

Starting with content page to Index page with prominent links will ease user navigation skills. E-Resource will also allow user to identify the publication with a single on-mouse click.

6.4 E-content

e-Resources can contain a huge quantity of data, but more importantly the material can consist of mixed media i.e. images, video, audio and animation which could not be replicated in print.

6.5 Storage

With the increasing storage capacities and multi-variant devices, the ability to Store and retrieve large amounts of data has become simple and lucid.

7 CHALLENGES AND ISSUES

The recent statistics reveal that there is a dearth of quality teachers for various education programs in the country. To fulfill this goal, Government of India has recently issued guidelines for e-Content development (UGC, 2012). Another hassle in manual content is search feature which is of course, dynamic in online resources. Retrieval of vast content is so quick with online search feature in e-Content resources. But the challenge lies in the internet penetration which is little slow in India, though we have occupied third position beating Japan recently. Merely 14% e-literacy is observed against 74% literacy rate among the country's population. e-Learning and e-Content both are proportionately related to each other in library domain. Particularly, in distance Learning institutions that skills up gradation are becoming mandatory. Having insufficient internet bandwidth and power constraints are big challenges in the Indian context. Since the technology depends on expensive tools like server, personal computer, scanner, photocopier etc. thus, selection of automation tools will remove economic inequality among the users.[2]

A standard tool that can support all the activities of library in a University by providing not only English content but also content that supports other languages going to play a key role [5]

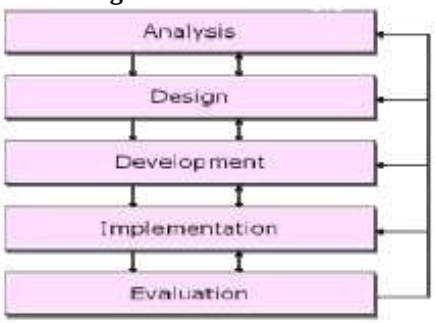
- Inadequate and uncoordinated Information and Communication technology characterized by low access and usage.
- Lack of formal training in teaching and poor teaching aids/laboratory equipment.
- Sound knowledge of practical cases of usage of OER to illustrate key points and up-to-date Knowledge of the arguments for and against use of OER.
- Expertise in technical skills to develop and maintain web platforms to host OER

8 CONCLUSIONS

Global village has two important features, information and knowledge sharing through Knowledge center, but libraries can also sustain its own identity and can become leaders in developing knowledge resources. The trend is now switching over to creating eBooks and open access journals where an intellectual property right is becoming a barrier. After the introduction of ICTs, every entity has doubled their tasks. One side, they have to cope up with their day-to-day activities then again maintaining websites which is an additional task. In conventional mechanism, we stressed to generate content for publishing papers, scripts, mags. Similarly, with introduction of ICTs, it has equal

important to generate digital content that will be there forever on the internet. Existing materials and documents cannot be automatically transformed into e-content materials by just making them available from a Web site. A systematic and scientific approach is needed to develop quality content. Instructional Design is the teaching device that makes instruction as well as instructional material more engaging, effective and efficient. There are three learning theories (Cognitism, Constructivism and Behaviorism) support the Instructional Design as backbone. Cognitism envisages the organization of the content, storing and retrieving of the content. Constructivism supports the learner centered holistic approach in e-learning. Behaviorism stresses the reinforcement, retention and transfer of knowledge in the e-Content development. The ADDIE model is a basic model for planning and developing learning courses as well as educational content. Figure shows the interactive relationships among the stages

Figure : 1 IDDE Model



A systematic model for designing instruction and learning content, the so-called Dick and Carey systems approach model for designing instruction is also useful for making good E-content materials.

E-Content production enrich the e-learning in a dynamic way. It is averred that people are visual minded. They retain 20% of what they hear. 50% of what they hear and see. And probably, 100% of what they hear and see and do. This is what e-contents are poised to do and what e-contents are intended for.

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