

Article on E – Learning with Social Media to scale up the Quality Education in India “Anywhere Anytime Classroom”

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ABSTRACT:

This paper presents the survey of mobile education in instruction environment. Technology and trends rapidly increase day by day and the evolution of 4G system is being implemented. Currently users of PDA and smart phones are using different applications (Like Instagram, whatsapp's etc.) to save time and price. The methodology of the paper is based on survey of latest research. The analysis of Mobile learning is Universities and academic institutions have been discussed. Mobile learning provides lot of benefits to the student at the moment. Students can easily learn through mobile, Smartphone and other compact devices. The objective this paper is too present the analysis of mobile learning and education.

KEYWORDS: Mobile learning, Mobile education, Teacher Perspective, Student Perspective.

1. INTRODUCTION:

This is the age of knowledge and we are living in a globalize era, where the world is massively being connected. The E-learning initiatives have connected the whole world and have removed the barrier of age, place, time and socio-economic nature. The technological revolution has created a new dimension in whole education scenario. With the amazing development of Internet, the field of education has tried to exploit web as a communication channel to connect distant learners with their learning resources. Tom Kelly quoted that “E-learning is about information, communication, education and learning” [1]. It is a platform with flexible learning using Information Technology and Communication (ITC) resources, tools and applications, and focusing on interactions among teachers, learners and online environment [2]. E-learning usually refers to structured and managed learning experiences, and may involve the use of Internet, CD-ROMs, software, multi-media and telecommunications. Because of the flexible nature of E-learning and since it provides the right information in right time and in right place, students are now more familiar and feel more comfort in this new education system.

As the technology is advancing, the demand of online learning is also increasing. The technologies, tools, techniques, methodologies and standards are advancing in such a way that it has to overwhelm the ability of educationists to isolate, study, and report on the best methods to be used for any given audience [3]. With all these advances, the prospects for E-Learning are clearly bright and many.

Social media [technology] has become a growing phenomenon with many and varied

definitions in public and academic use. Social media generally refer to media used to enable social interaction. The use of social media interfaces through computer and mobile devices has become quite widespread, and currently, the two most prominent interfaces are Facebook and Twitter.

E-learning can make the learning process more efficient, systematic and easier but to bring this into reality, there is a need of Social Networking services like *facebook*, *twitter*, *flickr* etc., and mobile applications such as What's App, Lime etc as a auxiliary tool to bring mass learners from different regions of India to join into the system and form a learning network into various domains and educated themselves through ICT and Multimedia (Video and Audio) contents.

2. CHALLENGES IN HIGHER EDUCATION OF INDIA

In present scenario the challenges in higher education are:

2.1 Demand-Supply Gap:

According to the recent report of HRD ministry [6], presently about 12.4 percent of students go for higher education from the country. If India were to increase that figure of 12.4% to 30%, then it would need another 800 to one thousand universities and over 40,000 colleges in the next 10 years.

Addressing a higher education summit organised by the Federation of Indian Chambers of Commerce and Industry (FICCI), HRD Minister Kapil Sibal said "We will need 800 new universities and 40,000 new colleges to meet the aim of 30 percent GER (gross enrolment ratio) by 2020. Government alone cannot meet this aim," Statistics show that there is a huge gap between the demand and supply.

2.2 Quality Education:

Quantity and quality of highly specialized human resources determine their competence in the global market. According to a recent government report [3] two-third of India's colleges and universities are below standard. However, according to MHRD annual report 2009-10 [6], a proposal for mandatory accreditation in higher education and creation of an institutional structure for the purpose of regulation is under consideration. India's highest-quality institutions have severely limited capacity. In order to increase the supply quality should be maintained. Recently MRD ministry has decided to derecognize as many as "44 deemed universities". These 44 deemed universities have 1,19,363 students at the undergraduate and postgraduate levels. In addition, there are 2,124 students pursuing research at M. Phil and Ph. D. levels and another estimated 74,808 students pursuing distance education programmes. As many as 41 of the 44 deemed universities have several constituent institutions under them, which would further swell the number of affected students.

2.3 Research and Development:

Research and higher education are complementary to each other. According to the available official statistics [9] the expenditure on R&D in the field of Science & Technology as a percentage of gross domestic products (GDP) was 0.8 percent during the year 2005-06 in India. For perspective, countries spending the most on S&T as a percent of their GDP were Israel (5.11percent), Sweden (4.27 percent), Japan (3.11 percent), South Korea (2.95 percent), the United States (2.77 percent), Germany (2.74 percent) and France (2.27 percent). Among other countries, China (1.54 percent), Russia (1.74 percent), U.K. (1.88 percent) and Brazil (1.04 percent) have spent more than India.

Moreover, India's higher education institutions are poorly connected to research centers. So this is another area of challenge to the higher education in India.

2.4 Faculty Shortage:

According to a recent report of HRD Ministry premier educational institutes like the Indian Institute of Technology (IITs) and the Indian Institute of Management (IIMs) are facing a faculty crunch with nearly one-

third of the posts vacant. According to a report published in IANS [10] around 35 percent posts are vacant in the central universities, 25 percent in the IIMs, 33.33 percent in the National Institute of Technology (NITs) and 35.1 percent in other central education institutions coming up under the Human Resource Development (HRD) Ministry. However in order to overcome this, government is planning to have short-term measures like raising the retirement age in teaching posts from 62 to 65 years and enhancement in salaries and other benefits for teachers. Also some long-term measures have also been initiated for attracting young people to opt for this (teaching) career. These include enhancement in fellowships and attractive start-up grants in various disciplines.

3. OBJECTIVES OF E-LEARNING:

3.1 Perform task analysis:

Determine the tasks to be taught, identify subtasks and other elements involved, and identify the knowledge, skills, and attitudes required to complete the tasks efficiently and effectively.

3.2 Perform training:

Need analysis Identify the target audience for the training. Identify the shortfall in knowledge, skills, and attitudes of this audience and determine what the target learners need to know.

3.3 Review existing capabilities:

Review existing methods and infrastructure for providing training or meeting learning needs.

3.4 Determine expectations:

Identify concrete expectations and/or requirements from the desired E-Learning solution. The development of an E-Learning strategy begins by setting goals. What will the E-Learning strategy accomplish? Without a true understanding of the goals of the E-Learning strategy, it will be difficult, if not impossible, to be successful. Before implementing E-Learning, organizations need to set common goals or objectives. Common goals and objectives include the following:

(a) **To reduce learning costs**

As a small business owner, you know that online transactions cost a fraction as much those requiring paper or staff. It's the same with E-Learning because there are no papers, no delays, and no travel expenses. To reduce the time required for effective learning Electronic learning is sometimes called "just-in-time" learning. Such learning enables students to take what they have just learned from their computer screens and apply it to the tasks at hand.

(b) **To motivate students**

E-Learning is considered an effective way to keep up with new technology, to generate new ideas, and to keep your learners updated and inspired.

(c) **To improve flexibility of course delivery**

Smaller institutes don't have the staff to manage their training and development initiatives. E-Learning technologies can overcome these administrative restrictions.

4. E-LEARNING METHODOLOGY

With the resources provided by communication technologies, E-learning has been employed in multiple universities, as well as in wide range of training centers and schools.

E-learning exploits Web technology as its basic technical infrastructure to deliver knowledge. As the current trend of academic and industrial realities is to increase the use of e-learning, in the near future a higher demand of technology support is expected. In particular, software tools supporting the critical task of instruction design

should provide automated support for the analysis, design documentation, implementation, and deployment of instruction via Web.

4.1 Interaction in Learning

Learner(s) - Tutors(s) Interaction, and Learner(s) -Learner(s) Interaction: these two types of interactions are among humans, and they are the interaction forms that people are most familiar with. Therefore, most research studies are focusing on these two types of interaction, especially in the research of Computer Supported Collaborative Learning (CSCL). According to [7], if collaboration rather than individual learning designs were used in an online class, students should be more motivated to actively participate and should perceive the medium as relatively friendly and personal as a result of the online social interactions. This increased active group interaction and participation in the online course, hence, resulted in higher perceptions of self-reported learning. Whereas individuals working alone online tended to be less motivated, perceive lower levels of learning, and score lower on the test of mastery. In CSCL, researchers usually distinguish two types of interactions between learner- tutor and learner- learner.

The first one, synchronous interaction, requires that all participants of interaction are online at the same time. Examples include Internet voice telephone, video teleconferencing, text-based chat systems, instant messaging systems, text-based virtual learning environments, graphical virtual reality environments, and net based virtual auditorium or lecture room systems. Synchronous interaction promotes faster problem solving, scheduling and decision making, and provides increased opportunities for developing. In 2000, Heron et al. studied the interaction in virtual learning groups supported by synchronous communication. They found that learning in virtual environments can be greatly enhanced by content-related dialogues with minor off-task talk, coherent subject matter discussion with explanation, and equal participation of students supported by synchronous interaction. However, the cost of synchronous interaction is usually very high, and synchronous interaction is more constricted due to time differences.

The second one is asynchronous interaction, in which learners or tutors have freedom of time and location to participate in the interaction, examples including interaction using e-mail, discussion forums, and bulletin board systems. It has been reported that by extending interactions to times outside of classes, more persistent interaction and closer interpersonal bonds among students can occur [8]. Thus, while one cannot totally simulate a real classroom with synchronous interaction, one can offer asynchronous interaction that provides time for better reflection, and allows global communication un-bounded by time zone constraints. Asynchronous interaction thus is more commonly provided in CSCL systems than the costly synchronous interaction. There are seven-step development methodology is applicable on every E-Learning (fig-2).



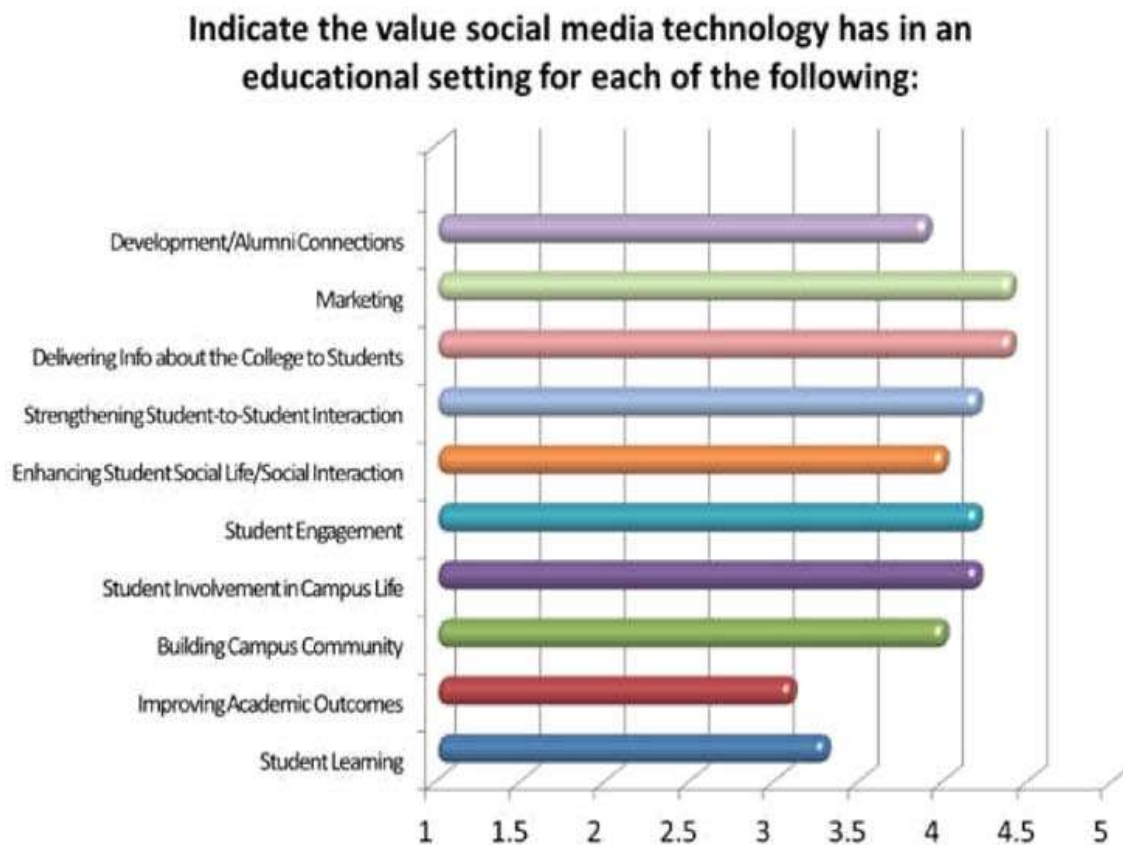
Fig-2: seven-step development methodology is applicable on every E-Learning

5. OBJECTIVES OF E-LEARNING & SOCIAL NETWORKING

| Users/Actors | Objectives for using E-Contents on Mobile |
|--|---|
| Learners/ Students/Pupils | <ul style="list-style-type: none"> • To personalize e-learning • To recommend activities to learners and resources and learning tasks that could further improve their learning • To suggest interesting learning experiences to the students • To suggest path shortening or simply links to follow, to generate adaptive hints, to recommend courses, relevant discussions, books through system and on social networking sites. |
| Educators / Teachers / Instructors / Tutors | <ul style="list-style-type: none"> • To get objective feedback about instruction • To analyze students' learning and behavior • To detect which students require support • To predict student performance • To classify learners into groups • To find a learner's regular as well as irregular patterns about their attendance for learning • To find the most frequently made mistakes • To determine more effective activities • To improve the adaptation and customization of courses, etc. |
| Course Developers/ Educational Researchers | <ul style="list-style-type: none"> • To evaluate and maintain courseware • To improve student learning • To evaluate the structure of course content and its effectiveness in the learning process • To automatically construct student models and tutor models • To compare data mining techniques in order to be able to recommend the most useful one for each task • To develop specific data mining tools for educational purposes etc. |
| Organizations/ Learning Providers/ Universities/ Private Training Companies | <ul style="list-style-type: none"> • To enhance the decision processes in higher learning Institutions • To streamline efficiency in the decision making process • To achieve specific objectives • To suggest certain courses that might be valuable for each class of learners • To find the most cost-effective way of improving retention and grades • To select the most qualified applicants for graduation • To help to admit students who will do well in university, etc. |
| Administrators/ School District Administrators/ Network Administrators/ System Administrators | <ul style="list-style-type: none"> • To develop the best way to organize institutional • Resources (human and material) and their educational offer • To utilize available resources more effectively • To enhance educational program offers and determine the effectiveness of the distance learning approach • To evaluate teacher and curriculum • To set parameters for improving web-site efficiency and adapting it to users (optimal server size, network traffic distribution, etc.). |

6. EFFECTS OF E-LEARNING & SOCIAL MEDIA TECHNOLOGY USE

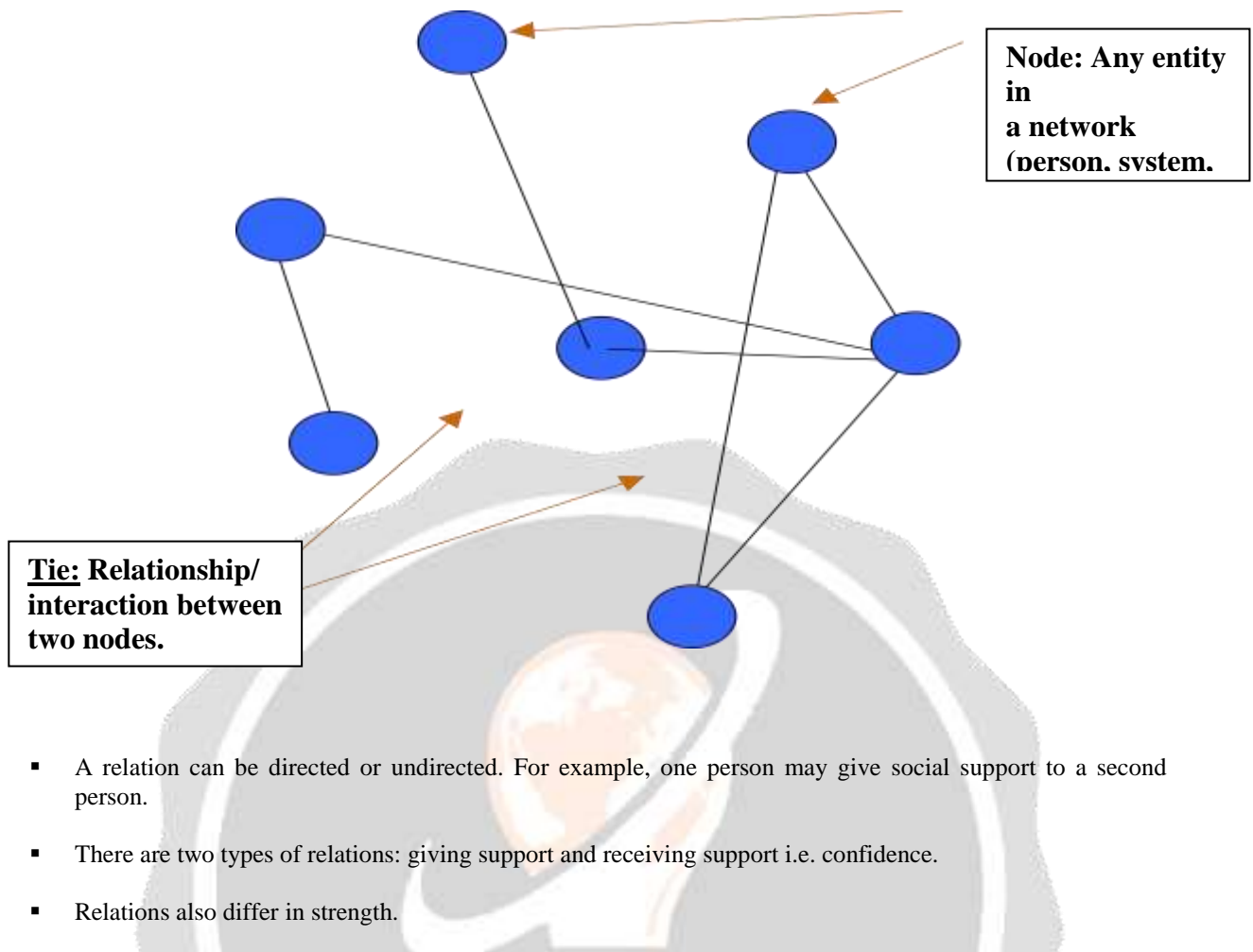
In an effort to understand the effects of what has become arguably the fastest growing advancement in consumer-used computer-based technology, research about social media has crossed disciplines, tending to focus on the social dynamics of the interactions and their impact generally on our lives and ways of communicating. Taken together, these research findings point to a reality in which a) social media provides a rich data source for better understanding the concept more generally, and b) social media use has varied effects – effects that are highly dependent on the nuances of exactly how people use social media, in addition to how much they use it.



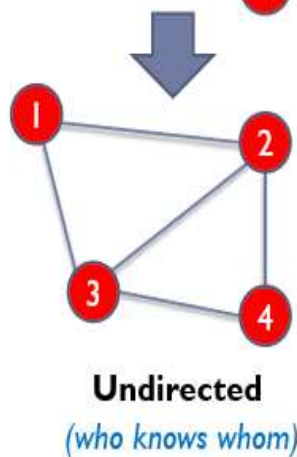
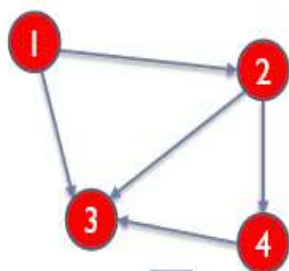
1 = No value, 2 = Minimal value, 3 = Moderate value, 4 = Substantial value, 5 = Great value

7. REPRESENTING DATA STRUCTURE TO MAINTIAN RELATIONS IN NETWORK

So for maintaining the relationship between a huge mass of learners we need to understand the relations and for which I have taken into consideration as Node as entity and Edges (Tie) to represent relationship and used for content sharing.



Directed
(who contacts whom)



Edge list remains the same

| Vertex | Vertex |
|--------|--------|
| 1 | 2 |
| 1 | 3 |
| 2 | 3 |
| 2 | 4 |
| 3 | 4 |

But interpretation is different now

Adjacency matrix becomes symmetric

| Vertex | 1 | 2 | 3 | 4 |
|--------|---|---|---|---|
| 1 | - | 1 | 1 | 0 |
| 2 | 1 | - | 1 | 1 |
| 3 | 1 | 1 | - | 1 |
| 4 | 0 | 1 | 1 | - |

7. PROSPECTS OF SOCIAL MEDIA IN EDUCATION

| LEARNING/ACADEMIC | STUDENT SUPPORT | COMMUNITY BUILDING | EXPANDING CONNECTIONS |
|--|--|---|-------------------------------|
| Faculty communicate with and engage students in their courses | Provide student support | Build and strengthen campus community | Connect students with alumni |
| Construct links between Facebook and Blackboard so students can check class assignments and receive course announcements | Offer workshops on financial aid | Increase sense of belonging for students taking online courses | Conduct outreach to community |
| Create stronger learning communities | Resolve issues and allow students and the community to provide feedback to the college | Actively encourage and facilitate student involvement and participation in activities | |
| Post portions of lectures for downloading | Offer orientation | Invite participation in campus-wide blogs (i.e., student blogs, president's Blog, blog focused on Innovation in instruction). | |
| Facilitate class discussion and group project work | Provide mentoring to students | | |
| Facilitate study groups and other in-class collaboration | Help to navigate the registration process | | |
| Boast about students' academic accomplishments | Aid in improving student retention | | |
| Recruit students into specific academic programs | | | |

8. CONCLUSION

E-learning is among the most important explosion propelled by the internet transformation. This allows users to fruitfully gather knowledge and education both by synchronous and asynchronous methodology to effectively face the need to rapidly acquire up to date know-how within productive environments. E-learning delivers content through electronic information and communications technologies (ICTs). According to [6], the use of these facilities, involves various methods which includes systematized feedback system, computer-based operation network, video conferencing and audio conferencing, internet worldwide websites and computer assisted instruction. This delivery method increases the possibilities for how, where and when students can

engage in lifelong learning. Finally we conclude that synchronous tools should be integrated into asynchronous environments to allow for “Any-time” learning model. This environment would be primarily asynchronous with background discussion, assignments and assessment taking place and managed through synchronous tools that integrate into the asynchronous environment. It is also finding that E-learning seems unsuitable for those individuals without self-discipline. Some times it requires a lot of self-discipline, mostly because learners are busy working adults as explained earlier. Besides, E-learners also seemed to need preparatory training especially in ICT skills in order for them to get used to e-learning environment.

Social Networking sites have proved to be the fastest connecting tool for dissemination of knowledge major in video formats which covered maximum of learners in south gujarat.

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