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ROLE OF EDUCATIONAL TECHNOLOGY & E-LEARNING IN TEACHING LEARNING PROCESS IN INDIA

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ABSTRACT

Technology is a necessary component in the world today. Technology in today's world touches, impacts and shapes each part of human life. Technology plays critical parts in work spots, education, entertainments and the lifestyle surviving. Technology acts as impetuses for changes, change in wok environments, conveniently and trading information, teaching process and methods, learning approaches, research field and in utilizing knowledge, information. The life of knowledge and human skills today is shorter than at any other time, mounting the strain to stay fully informed regarding one's education and preparing all through a vocation. In the time of globalization and technological revolution, four-year degrees are only the beginning of a forty-year proceeding with education.Life-long learning is rapidly turning into a basic in today's world. Electronic learning (or e-Learning or e-Learning) is a sort of Technology supported education learning (TSL) where the medium of direction is computer technology. Despite the fact that e-learning has potential in India, selection has been moderate and will require a noteworthy showcasing and mindfulness exertion. In India, globalization has produced a decent vibration and life for education. E-learning technologies can possibly spread adapting be that as it may, the benefits of these technologies have to achieve the provincial masses of India, and else they will be one of the reasons for the Digital Divide. This paper concentrates on the Indian education scenario, e-Learning content planning and introduction instruments, application of e-Learning to spread education to the remote territories, advantages and disadvantages of e-Learning and eventual fate of e-Learning in India. A couple of proposals have been made to utilize e-learning for casual and vocational training, which is exceedingly powerful for a developing country like India where a greater part of populace is living in country/remote zones and has gotten relatively insignificant formal education.

KEYWORDS: *Technology, Teachers, Education, Institutions, e-learning, ICT, web technology, web training, distance education, digital divide, online course, communication technology.*

1. INTRODUCTION

Educational Technology in some cases abbreviates to EdutechorEduTechis an insightful field. Educational technology is an outline science, a club of different sorts of research area managing essential, principal and key issues of learning, teaching and social organization. It is a procedure in which modern technology is utilized as a part of a sorted out and methodical route for improvement, betterments and upgrades of the nature of the education. Technology implies orderly, organized application of logical or others organized knowledge to commonsense work. Thusly, educational technology is relies upon dramatic information from various orders (Communication, psychology, sociology, philosophy, counterfeit consciousness, computer science and so forth.) Plus experiential knowledge from educational practice.Educational technology goes for expanding efficiency, effectiveness of current practices and all the while goes for bringing academic changes for improvement of education. E – Learning is characterized as procurement of information and expertise utilizing electronic technologies, for example, computer andInternet based courseware and local and wide area networks [1]. Wide meaning of the field of using technology to convey learning andtraining programs.Ordinarily used to depict media, for example, CD-ROM, Internet, Intranet, wireless andmobile learning. Some incorporate Knowledge Management as a type of e-learning. The term was presented in 1995 when it was altogether called "Internet basedTraining", then "Web based Training" (to clear up that conveyance could be on the Inter-or Intra-net), at that point "Online Learning" lastly e-learning, adopting the in vogue utilization of "e" amid the spot comboom. The "e-" leap forward empowered the business to raise many millions from investors who might put resources into any industry that began with this magic letter.

"Technology provides us with capable apparatuses to experiment with various outlines, so that rather than speculations of education; we may start to create a scienceof education. Be that as it may, it can't be a logical science like physics or psychology; rather it must be a design science more like air transportation or artificial intelligence. For instance, in flying the objective is to clarify how unique outlines add to lift, drag mobility, and so on. Also, an outline investigation of education must decide how extraordinary plans of learning environments add to learning, cooperation, motivation, etc."

2. SIGNIFICANCES OF EDUCATIONAL

Technology Educational technology analysis forever had degree formidable agenda. Typically it solely aims at hyperbolic efficiency or effectiveness of current practice, but usually it aims at education modification. Whereas it's going to be thought-about as a method science it together addresses basic problems with learning, teaching and social system so makes use of the entire vary of recent science and life sciences methodology [2]. We sleep in a very dynamic world capsulated by just about endless amounts

of knowledge. Riding the coattails of data is all of the technology wehave at our fingertips. For as prevailing as technology is presently, is it commutation real lasting education? Can technology have a neighborhood in our classrooms? I think any level-headed skilled would agree that kids ought to be able to use technology to be competitive inside the geographical point once graduation. With all the trends and advancements in technology no one can argue that we'll go backwards from here. I don't foresee technology commutation impassioned lecturers educating their students. I just see it as a significant tool to help the education methodology and prepare students for the long-term. From the studies I've scan, lecturers got to use plenty of technology inside the space. The kids seem to basically get pleasure from it and area unit excited concerning exploitation it. Those interested by grip technology ought to be compelled to coach themselves on what's out there. Here could also be a small sliver of the advantages we tend to tend to achieve from exploitation technology to show people [3].

Equality: School districts across the country are not created equal. There is so much disparity in educational resources depending on the wealth, or lack thereof, depending on certain areas. Students using technology in low income districts gain significant skills and advantages in the learning process. Using the same technology is an equalizer for disadvantaged students.

Future: The world is moving towards technology at a breakneck pace. Educators have a responsibility to introduce, encourage, and help students master technology, as well as subjects, as it applies to school and the future. Technology will be used in every aspect of the professional lives of current students. So upon graduation, whether the next step is college or career, technology will be used daily. Why not use it daily in school?

Mobile: Using technology the classroom can be taken anywhere. With all the knowledge and resources contained and deliverable on demand in a mobile device, students can learn at home or in the "field". Mobile technology allows for greater collaboration between students promoting strong foundations in group work.

Motivation: Technology tracks and reports student's progress instantly. What fun is running a marathon if you don't know how long it takes. Runners can get instant feedback for hundreds of data points as to their condition. This feedback provides instant motivation to improve performance.

Social: This runs along the same lines as motivation. Creating a social element to educational technology can allow for healthy competition amongst peers both in the same classroom and across the country. Performing well and earning badges to gain virtual social status is of the heart of many social applications today. Personal identities do not have to be used, instead students could use avatars to hide possible confidentiality breaches. Using technology to make education have social elements can make learning very addictive.

Savings: The savings which result from using technology can come in many facets. On a basic level technology can replace infrastructure. Desks, books, lab equipment and other items are a heavy cost burden on schools everywhere. Technology and devices can help save on these costs. In addition geographically isolated or economically disadvantaged children can benefit from access to online software or resources which would be cost prohibitive without technology.

Assessments: Assessing students' performance can be done instantly with technology. It's more than just test scores, simply understanding student's grasp of the subject in real time can be done on tablets in classrooms. A classroom could be questioned with a multiple-choice problem. Students could then input their answer and the feedback score is instantly given to the student and teacher. Corrections can be made long before examinations.

Global: Students and classrooms or even schools can be connected to anyone in the world instantly. Devices coupled with the Internet can allow for a free way to communicate globally. The chance to understand international or different cultural perspectives on the same topic is incredible.

Convenience: Having children carry heavy backpacks, text books, and binders isn't very efficient. A new lightweight laptop weighs less than 5 pounds and can have an internal storage capability of more than 2 million illustrated pages. In addition to an internal hard drive, access to the Internet can provide an almost unlimited source of information. Ergonomic issues and back pain are a real problem in children. These conditions can lead to chronic problems throughout adulthood.

3. SCOPE OF e-LEARNING IN INDIA

E-learning can be examined at two levels. The first one is education and another one is training. For education can be used at both elementary and higher levels. In training it can be used by companies to train and upgrade their employees. E-learning permits the delivery of knowledge and information to learners at an accelerated pace, opening up new vistas of knowledge transfer [4]. Early adopters are companies that have tried to supplement face-to-face meetings, demonstrations, training classes and lectures with this technology. ―The adoption of e-learning in all spheres—corporates, schools, universities, etc—is low at present. The Indian market is not substantial when compared to the international market [5]. E-learning in India has been most successful in the corporate segment where it is seen as a means of achieving business goals and motivating employees [6]. A lot of work has to be done to make e-learning successful for education, both formal and informal and to cultivate faith of people in online degrees in India apart from the ones given by renowned institutions like IITs [7]. If e-learning reaches the remote and rural parts of India, it would be much faster to educate people. One major problem faced by India is that almost all highly skilled professionals are based in bigger cities that deprive the rural population from getting educated through them. E-learning simplifies this process by taking the knowledge to masses provided

that there's internet connectivity available at some nearby area. Even in the area of higher education, the supply and demand are not balanced. Looking at the population, the available universities are not enough to accommodate all the people seeking education [8]. At this point distance education comes in and has already been quite popular. E-learning can play a major role even here.

1) Advantages of e-Learning: There are a number of advantages of e-learning. First, we are using state of-the-art technology and instructional strategies. Cultures can be shared through e-learning. Disabilities can be accommodated, with or without the knowledge of other participants. Gender may not be an issue, because in many situations, gender is unknown—or it can be. Because of global access, the classroom may be the world. Nothing can replace traditional classroom teaching, but e-learning complements the process and can help reach out to the masses [9]. The biggest advantage of e-learning lies in its ability to cover distances. For an organization that is spread across multiple locations, traditional training becomes a constraint. All trainees need to come to a classroom to get trained. Additionally, the trainee's learning pace is not addressed as all trainees are treated as having equal abilities and there is little flexibility in terms of timing and completion of the course. The major advantage is the consistency that e-learning provides. e-learning is self-paced, and learning is done at the learner's pace. The content can be repeated until it is understood by the trainee. It can be made compelling and interesting with multimedia, and the trainee can be given multiple learning paths depending on his or her needs [10].

2) Disadvantages of E-Learning: Just as a glass may be half full, it may also be half empty. Which means, there are also disadvantages to e-learning? Class members with disabilities may be functioning at a disadvantage for a number of reasons. Some participants may be technologically challenged and are hesitant to participate in full. Online discussions may inhibit class members, or they may encourage banter. One of the common disadvantages to e-learning is that some students, especially those for whom English is not their native language, have difficulty communicating and being understood. Another group of students may experience computer or technology anxiety, which may in turn impact their learning and their final grades.

4. SCOPE OF EDUCATIONAL TECHNOLOGY

Educational generation is a process-oriented method. Educational era is not confined to teaching and studying manner and theories nonetheless teaching-getting to know method is inspired a whole lot more by using educational technology. Theories were shifted from getting to know to teaching simplest because of educational generation. If the academic technology is limited to audio-visible aids, mechanical and electronic devices the scope of educational era becomes constrained, but educational technology isn't always restricted to all this stuff alternatively, it pervades all over. Instructional era need to move into:

A. At home with family and relative

B. Help by External sources

C. Continuous and rigorous analysis

D. Obstacles in solving problems

E. Specification of direct behavior

F. Clear Specification of the problems

G. Management and organization of man, material, resources

H. Determination of pre-requisites and the gradual direct behaviour.

I. Availability of a few media as for example films, television, radio etc.

5. E-LEARNING CONTENT PREPARATION AND PRES ENTATION TOOLS

The advent of e-learning has been a shock to some people. Flexibility is a huge issue. The administration may have courses taught face-to-face, online, or hybrid—to meet the needs of the institution, the department, the faculty, and/or the students. For the faculty, online courses permit them to multitask and be ―in two places at one time‖. And for the students, they may take classes simultaneously at institutions anywhere in the world. Competition is steep for online courses, especially when many institutions offer the same course and the transferability from one program or institution to another is fairly uncomplicated. Teaching strategies for online courses do not necessarily parallel those strategies used in a face-to-face class. It is paramount that instructors receive adequate training in using the technology as well as knowing (and using) strategies which are most appropriate for online learning [11]. Not only should instructors be trained to use a course management system, but also it would be beneficial if students received some type of official training in how to participate in an online course; this ―introduction‖ could be in the form of a required course or perhaps even a tutorial which must be completed satisfactorily prior to registration for an online course. The technology demands of an online course can create chaos for faculty and students alike. The institution has an obligation to provide appropriate technology for the online course. The students, in turn, have an obligation to meet the minimum technology standards established by the institution. Of course, a dial-up system of interconnect can be a challenge, and faculty need to determine options that can be readily received by these users. Technology enabled learning is evolved through a combination of hardware, software, media delivery system and communication systems including networking.

Desktop, laptop or notepad, palmtop or hand held computers, electronic blackboard, electronic writing pads, mouse, trackball, joystick, light pens touch screen, optical mark / character recognition, bar code reader, digitizing tablet or digitizers and a cursor (puck) or a pen (stylus), speech or voice input device, printers, scanners, copiers and faxes are some of the hardware devices. Software‘s includes voice recognition, hand writing recognition, information management programs, learning packages in removable disks and in hard disks, data base

management and data processing software‘s, information banks (dictionaries, encyclopedias, almanac, references), digital books, educative games, programmes and languages, skill Training, self-learning packages, edutainment (education and entertaining) software's, presentations, word processors, spreadsheets, designers, audio and video animating and editing software’s.

6. CHALLENGES FACED BY e -LEARNING IN INDIA

Majority of population staying in rural areas and making them aware about the concept of e-learning is a major challenge. Lack of infrastructure in terms of connectivity, availability of Internet, etc. is another issue. The government is taking various measures to improve the communication systems and new technologies like 3G in the telecom space have already started to be implemented to make things better. Social Implications of E-Learning is another segment of study that is very important to be understood for the success of e-learning in India. The social implications of e-learning may be categorized into the following types of issues: cultural, gender, lifestyle, geographical, religious/spiritual, literacy, disabilities, and digital divide [9]. Within the cultural issues category are content, multimedia, writing styles, writing structures, Web design, and participant roles. Some content, although crucial to the course, may be either unacceptable or unfavorable with certain members of the class. If faculties are aware of a sensitive component of the discussion or material covered, how can that faculty member lead the class to include or exclude the materials? Even writing styles can impact the process of holding an online course. The students and instructor need to know the ―rules of the road‖ of written assignments. And, what participant roles are expected and/or tolerated; and, if the expectations are not met, who is responsible for keeping discussions and homework on track? Gender issues continue to be a part of class, even though people are separated by miles and even continents. Possibly it is the instructor‘s responsibility to monitor facilitation and rotate leadership roles in groups to assure gender neutralization. Any behavior issues must be addressed and corrected immediately. Lifestyle differences take on any number of forms, and the instructor will need to be on guard to assure equal treatment of class members, regardless of their respective lifestyles and preferences. In some situations the students themselves will take on this monitoring role, while in other situations the instructor must step in. The ―different strokes for different folks‖ adage must be maintained― preferably with a minimum of disruption to the entire class. Geographical issues and differences make be very apparent, especially when we are looking at a global perspective. For example, if a chat room activity is to take place, all impacted time zones need to be accommodated.

7. FUTURE OF e -LEARNING IN INDIA

India has a major role to play in the international e-learning services industry. It is already one of the leading IT service provider countries, and it is now aiming to achieve the same position in the IT enabled services. The presence of world-

class educational infrastructure and training professionals enables it to be one of the leading e-learning services providers in the world. On the domestic front, the government and private sectors have taken many e-learning initiatives. Though these initiatives have been met with a lot of enthusiasm and user acceptance, their commercial viability is still under consideration. The government has been taking some proactive measures in a regulatory and financial capacity to boost the e-learning environment in India. Funds have been invested in setting up Internet kiosks in rural areas for the purpose of communication, which can be used for e – learning initiative as well and can help in providing informal and vocational training as well as formal education. The main strengths of the Indian e-learning services industry are:

- English speaking, highly qualified and techno savvy manpower
- Safe Electronic Environment – Official recognition for Digital Signatures and E-transactions
- Lower costs of human capital when compared to developed countries
- Strong and buoyant domestic education industry that facilitates up-gradation of skills and introduction of new products

Business-to-employee initiatives will address e-learning: Companies can build B2E intranets or corporate portals to conduct business with employees, and provide them self-service for access to benefits, forms and information. B2E capabilities will become increasingly important tools for recruitment, retention, and employee-relationship management. Also will reduce cost, save time for the company. E-learning will extend to customers: CRM initiatives might include customer education. Companies can use e-learning to introduce new products, educate customers in self-service techniques, and compare competitors‘ products and services Simulation, gaming and interactivity will enrich e -learning: Research shows that student understanding and retention improves when they learn by experience. Technologies such as collaboration, interactivity, modeling, simulations, virtual reality interfaces and gaming will help students experience the skill while being taught. There will never be enough of the right skills: Along with technologies and business practices, some skills are changing so quickly that they‘re outdated within a few months of introduction. In addition, the number and range of skills required of the average employee is increasing.

8. CONCLUSION

In a market such as India where the concept is still new, one crucial element that will make a difference in generating a good response is marketing. This not only holds true for segments such as government and education, but for the corporate sector as well. Experts are of the view that there needs to be a mindset for the adoption of e-learning. The other point is content. If content providers are giving off-the-shelf content, there should be scope for customization since each organization has its own needs. Regions without university education can access universities in other regions via the Web, a

solution much cheaper than building university infrastructure. In underdeveloped countries, e-learning can raise the level of education, literacy and economic development. This is especially true for countries where technical education is expensive, opportunities are limited, and economic disparities exist. However, one of the problems with e-learning in India is the lack of course content, especially outside the mainstream focus areas of IT education, English-language content, and tutorial-like courses. The social implications of online learning center around one primary requirement that students need to feel a part of the class, regardless of where they are located physically or geographically. The ―missing of connection‖ to the other students in the class and with the institution can impact the success of an online student. Bottom line: the Indian market is still young, but it will continue to adopt the concept of e-learning in order to meet its communication needs and seize business opportunities.

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