



E-LEARNING TOOLS TO ENHANCE SELF-LEARNING PROCESS IN MODERN SYSTEM OF EDUCATION

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ABSTRACT

Learning is a relatively a permanent change in human behavior. This behavior is result of certain internal processes such as thinking, attitudes, emotions and educational programs that have taken place. With innovations in technology, the traditional methods of learning are transforming from instructor centered to learner-centered. These ubiquitous technologies provide huge mass of learning resources to meet their diverse needs of all learners. Role of the instructor has been sidelined by these cost-effective emerging pedagogies. E- Learning is the merging result of technological and pedagogical developments.

For today's generation, technology is an integral part of their life and personal identity. With revolution in Information technology, learning has shifted from classrooms to home and offices. E-learning has widened the learners' area of knowledge by providing flexible and personalized way of learning. It has become a vital tool of learning process of 21st century. This paper will focus on e-learning and its new approaches towards learning. It will describe the demand, importance, application and integration of e-learning and classroom learning.

INDEX TERMS— learning, e-learning, online learning, knowledge management, blended learning

I. INTRODUCTION

According to Remtulla (2007), E-learning is a 'Grand Solution' for the future education. E-learning pioneer Bernard Luskin (2001) explains 'e' as existing, energetic, enthusiastic, emotional, extended and educational. E-learning is an educational technological tool which embraces self-motivation, communication, efficiency and technology. E-learning simply means learning through technology. With rapid development of user interface technologies, learning process is no more limited to traditional classrooms. Information and communication technologies (ICT) have brought a paradigm shift in education system. Focus of learning has shifted from teacher to learner. Technology is now the most vital element of e-learning. It provides learner with flexible time and space, indirect social interactions, abundance of learning resources and dynamic learning interfaces, Tsai (2009). Learning models are changing from industrial model of learning to digital age learning model, N-gen or digital learners. Internet has changed the outlook of education. Learning is no more limited to physical space. Today's learners want to gather information from all perspectives. Their research is no more limited to classrooms and few books available in library. The mindset of N gen learners has been changed. To gain knowledge about small topic, learners explore all the information across World Wide Web. Learning is now more than just acquiring knowledge.

II. WHAT IS LEARNING

Learning is a process by which learners acquire skills or knowledge to improve their proficiency. It develops sense of competition in the market. [1]. A learned person creates a value in terms of quality and cost efficiency. From organization point of view, learning improves the capabilities of an employee. Learning helps in improving their understanding towards the vision of an organization. Organization wants the prospective employees to have in depth knowledge across globe about all recent trends in the market. Market manager wants its team to learn new strategies to capture the market for their product. During the learning process, learner perceives the knowledge, organize the learning and construct the knowledge from experience. In the learning process, brain plays a major role. Brain is built up of processes which receives information, understand it and try to relate it to prior knowledge. Learning is not a one-time process. It is a continuous process and interaction of



learners with outside environment. However, learning process and its output are different for each person because of different brain structures and its functioning. In learning process, previous stored knowledge plays a vital role. Learners make conclusion on the basis of connections between what is already known, understood and new information. So, learning can be said as process of encoding, storing, retrieving and applying information as per the need [2]. Different learning performance is the result of different ways of perceiving knowledge. ‘Channel of perception’ has a considerable impact on learning of the learners. Correct learning style can help to develop the knowledge effectively and efficiently. Different approaches have been adopted to enhance the learning process such as ‘Learning through all senses’, ‘holistic learning’ and ‘action oriented learning’. Learning through senses involved using all five senses to learn about environment around us. It is especially applicable for elementary schools where children use their senses to explore, learn and discover new world around them. Sensory organs play a vital role here. In holistic learning, concept is understood by relating all the concepts of ideas through many unique perceptions and senses. It is the process of identifying, relating and fitting all ideas together to create an understanding of complex idea [5]. In comparison to above mentioned techniques, action oriented learning is learner centered and is based on experiments. It is widely accepted in many communities of business, government, non-profit organization and educational institutions. This learning process is based on learner’s knowledge, its application in real world, experience and ability to question an experiment [3]. Currently, all organizations are focusing on increasing the role of learning however the pace of learning is not as fast as growth of knowledge economy. Learning models need to change from industrial model of learning to digital age learning model. E-learning concept can help the organizations to broaden this perspective.

III. THE E-LEARNING EVOLUTION

According to Remtulla (2007), E-learning is a ‘Grand Solution’ for the future education. E-learning pioneer Bernard Luskin (2001) explains ‘e’ as exiting, energetic, enthusiastic, emotional, extended and educational. E-learning is an educational technological tool which embraces self-motivation, communication, efficiency and technology. History has been evident of how technology developments have changed the look of the society. One of the breakthrough was brought by Johann Gutenberg with invention of printing press in 1436. The 2000 years old hand written and paper based system of communication was replaced by machine making multiple copies. These copies were used to share information in form of books and newspapers. It increased the learning process as information could be stored with individual learner in form of books. The mid 1800s and the early 1900s have stood as years of rapid development in the means of communication with invention of telegraphs, telephone, radio, films and Television. Television made the whole world look as “global village” (Marshall McLuhan). People could experience the sights, sounds and knowledge of the surrounding environment in their homes on daily basis. Television also became important part of classroom learning. Information was recorded on video tapes for continuous use. Knowledge had moved from text in books to motion pictures on Television. But it was a one way traffic for the information. There was no interaction of learner with the person who is providing information. Learners could not personalize the information according to their need. This brought the need for more development in the field of Computer Based Teaching (CBT). CBT had primary focus on time. In mid-1980’s, invention of personal computers (PC) proved to be a turning point in the field of technology. Gradually all schools, offices and homes were equipped with PCs. Organizations started investing hugely in technology to keep pace with the changing times and remain hi tech. CBT was developed to take learning to another dimensions however that dream couldn’t succeed further because of small hard drives, poor graphics and slow computer speed. Poor adaptability of hardware and software with changing contents in the competitive landscape led to failure of CBT. Learning expectations were not met. To break the cycle of failure, arrival of “dotcom”, World Wide Web (www) became a success. With the power of www, the learning was made easily accessible with the condition that one should have internet connection and knowledge of handling computers. Education became accessible online anytime and anywhere. Learners were not only sharing files but information was exchanged across the web worldwide in a single click. Information and Communication Technologies (ICT), internet-based applications like www, e mail, teleconferencing, computer supported collaborative learning (CSCL) and Learning Management Systems (LMS) are building their bases in the field of learning. The rapid developments in technology and pedagogies redefined the structure of education and its processes. Learning is no more limited to traditional classrooms. E-learning was a result of merger of global technologies and new teaching methodologies. With the emergence of e-learning, everything is dramatically changing with the way people learn, work and think. E-learning has enabled the learners to interact face to face all over the world breaking geographical barriers. A researcher sitting in India can take notes from experts from other countries through video conferencing and blogs. It is most efficient method of distributing information in a cost-effective method. It can reach out to large scale virtually at the same time. Information distributed will be consistent and tailored as per the need of the learner. Same information can be customized and translate into different languages as per different cultures. Time is no more a constraint. “Just in Time approach” makes e-



learning truly global. Information can reach to a wider audience via e-learning at reduced cost and little efforts. Once the information is ready and processed, it can be shared with multiple points on the wide network. It helps the people of same thinking, views or interests to create communities. These communities can work together while being apart geographically and involve in creative and innovative learning. With the technological revolution, they are able to match with complex relation of e-learning and organizations. A true e-learning strategy requires focus on technology, effective and efficient learning, leadership, culture, talent and thus recognizing the changes in the organization. According to Spector and Davidson (2000:243), a single and simple approach of using technology cannot bring success in learning. It demands for integrated learning approach. To meet the demand for complex learning, higher flexibility and long term learning, new approaches of e-learning need to be search out [7].

IV. NEW APPROACHES FOR E-LEARNING

Learning pedagogies plays a major role in the development of human brain. Centuries ago, only source of education was contact with the teacher. Instructor knowledge was only source of information. With increase and demand of knowledge, classroom teaching system came into existence. One instructor for many learners methodology was adopted however learners used to meet in the classroom, share their ideas, had discussions and results were formed on the bases of instructor knowledge. With up rise of Computer Based Technology (CBT), growing needs of learners were identified and satisfied to a certain extent. Now each learner can have their own computer to have personalized learning with increase in level of interaction. It was during this period, organizations and educational institutions invested hugely in computer technologies. All education institutions were transformed in interactive learning models. But due to just plain screen, slow speed, incompatibility of hardware and software, Computer based teaching (CBT) was unable to meet the increasing demands of various sectors. But simply CBT was not enough. So, two new approaches were introduced to enhance e-learning. These new strategies were online learning and knowledge management [2].

V. ONLINE LEARNING

Two new approaches for e-learning are online learning (instructional strategy) and knowledge management (informational strategy). Today internet is the source of mass communication along with wireless and mobile phones. This networking of devices has allowed for timely, interactive, self- directed learning and sophisticated communication. Online learning not only presents the information in a creative way but provide space for exiting methods of sharing and learning. Learning was now self-managed and learner centered with the help of latest web 2.0 technologies (Alex-ander 2006) and e learning 2.0 approaches (Downes 2005). Many universities transferred them to ‘e-universities’ or offered online courses. Being cost effective, learning was now in reach of many with interactive classrooms. Those who were not able to go to schools during their time were now returning back to school via e- classrooms. Many educational institutions transformed them to Virtual Learning Environments (VLE) which uses Information and communication technologies for learning and teaching. These online learning are based on robust hardware servers and web-based data software. VLE provides communication channel between the instructor and its student [8]. Online Learning platforms like Blackboards, WebCT are instructor friendly. Being flexible in time, it is important that students possess the qualities of self-management and self-study. Online instructors also need to have proper training and understanding of computer tools and delivery systems. With the changing lifestyles and increasing organizational needs, people want to learn and work at same time. Online learning is a solution to their needs however it requires properly trained online educators with continuous updating of material available online. It is time consuming for instructor and requires certain induction for students to manage their learning before they start operating it.

VI. KNOWLEDGE MANAGEMENT

It is the informational strategy of e-learning which deals with databases and support tools. With the arrival of internet, library is not limited to the walls of institutions or organizations. Now, with World Wide Web, world library is just a single click away with the help of various search engines. All search engines are similar to each other. Knowledge Management deals with the management of information. They should not be mistaken with data storage houses. But they support in creating and sharing of valued information among learners. Sometimes Knowledge management systems are supported by internet technologies [2]. According to Librarian Sheila Corral Knowledge management is “a management philosophy, which combines good practice in purposeful information management with a culture of organizational learning, in order to improve business performances”. Integration of e-learning with Knowledge management systems has expanded learning beyond training. Both Knowledge management and e-learning have been growing over the years. Both need to be complimentary to each other to be successful [9]. Knowledge management has been able to control the flow of information for better understanding and preserving the information of the organization, developing the community sense and



thus overall increasing the organization efficiency. Its focus is on better integration of learning and technology to make day to day life easier and better. Both e-learning and knowledge management deal with capturing, creating, sharing and application of knowledge. Both aim at smooth and fast knowledge transfer and retention for continuous knowledge. Some researchers see knowledge management as tool for eLearning that can lead to growth of more stable economies and societies based on principles of sharing knowledge. Lau and Tsui (2009), discuss about integration of e-learning and knowledge management. They discuss how they can provide with learning grid that can enable the learner to identify the correct learning objects associated with learner need, content and preferences. Knowledge management deals with right knowledge being available at the right time and right place for learners however learner shouldn't be lost in the web of information. It should provide learner to create their community of common interests with "people to people" approach. These new approaches are still not able to meet the expectations of digital age learners' to a certain extent. Much time is lost into the jungle of information finding contents which satisfies business need and learners objectives while engaging in fun. The results are remarkable when both approaches are used together. But the results are magnificent, when these two approaches are integrated with traditional classroom pedagogies. Such concept is often referred as Blended learning which uses multiple learning tools to promote learner centered learning.

VII. BLENDED LEARNING

In 21st century, the most important question is to differentiate where to apply e-learning and where the classroom learning. Everything cannot be taught electronically. Certain knowledge needs face to face interaction. Different learners have different requirements and process of understanding. It's an important factor while designing learning models to make it effective and efficient. Blended learning solutions are the strong tool to push organizations into e-learning. Blended learning means different things to different people [10]. Blended learning helps the organizations and the educational institutions to adapt to the changes in learning approaches in an easier way. Classroom learning plays a major role in learning models as compared to the past. Certain activities are still better understood under classroom environment like group discussions, problem solving, presentation evaluation, and assessment evaluation and instructor observation [2]. Blended learning could simply start with putting assessment or test online. Blended learning can be used to bring effective delivery of learning and high returns on investment. Blended learning can take place in many forms like face to face discussions, mixture of traditional classroom led by instructor and online conferences. It can be structured as on the job training by experienced mentor. Tasks could be provided online with instructions. Later the assessment can be made by expert observation. Online and offline learning can be blended in the educational institutions also [11]. Teachers could provide the course material and research resources online on web and later the module could be taught by instructor in the class. Collaborative learning can be enhanced by providing the literature to the community members ahead of open discussions via web. The main task of Blended learning is to make e-learning as support for traditional classroom learning [1]. Under the blended learning, teaching will be reduced rather facilitation will prevail. This will evolve classroom teaching and will create a value. It's not a new concept. In the past, learning was a mix of class teachings, books, magazines, conferences and libraries. So, blended learning is based on the fact that learning is a continuous process which can provide many benefits even with learner using a single delivery channel of learning. But a single delivery channel cannot reach a vast majority due to restrictions of physical boundaries whereas virtual classrooms will break geographical barriers. Blended learning can be done in synchronous and asynchronous methods. In synchronous learning, all learner's login at the same time through live sessions of teaching with instructor and large number of learners interact online at the same time. Usually organizations go for synchronous learning for training their employees at the same time but at different locations by the experts. Here time plays a major role. All the learners and instructor have to login at the same time. This time restriction can be faded out with asynchronous learning. Instructor will record information and place all course material, case studies and other resources on the web. Learner can access the information anytime and anywhere according to their convenience. The classroom timings can be used for more structured online exercises, video sessions, and online case study discussions that emphasis on application of learning material of the course. This hybrid teaching methodology focuses on increasing the skills and knowledge of learner by emphasizing on self-study management, improving communication between learners and thus, strengthening the learning experience. We can say that blended learning use classrooms as extension for online learning.

VIII. CONCLUSION

With continuous growth of e-learning across the globe, soon there will not be any difference between 'e' and 'non-e' pedagogies. N-gen or digital learners will stand as evidence to this. Technology developments may go across the horizons but learning will remain as important as it was in the past. Enhanced learning and better performance are the future goals. E-learning will bring new dimensions to the organizations and educational



institutions with integrated blended learning or online learning, knowledge management and traditional classrooms.

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