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A Review on Emerging Trends in E-Learning

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ABSTRACT: We live in a digitalized era where all the information's are just a touch away (Shivam and Singh, 2015). E-learning is defined as attainment of knowledge and information using electronic medium like computer, mobile phones and internet and intranet/extranet. In the present time, we all are so much dependent on online learning that we can say that e-learning is the need of ours. The study throws the light on a brief differentiation between conventional and non-conventional learning. In this study, we will see some emerging e-Learning trends and some of the government initiatives to make learning digitalized and the role of online learning in today's era. The data is collected from various authentic and reliable secondary source of information. And, it has been concluded that e-Learning market has high scope of growth in India, but it is full of challenges.

KEYWORDS: E-learning, Conventional and non-Conventional learning, Intranet/Extranet, Emerging e-Learning trends.

I. INTRODUCTION

E-learning is not a new concept for all of us. It has been introduced in India in 1995, when it is also known as "web-based learning" or "Internet Based Training". E-Learning means learning through the electronic mode. The basic two components required for e-learning are – an internet connection and a computer or mobile phone. If one has internet connection with him, he can access to all the online resource for education purpose. Therefore, e-learning is based upon anywhere-anytime learning content generated using videos, audio, text, animations and/or simulation to enrich the learning process (Sood and Singh, 2014).

After Independence in 1947, the government of India has biggest challenge to educate our people as Literacy Rate at that time was low to only 12 *per cent*. Due to the innovation in ICT sector, we are not limited to traditional mode of face-to-face teaching and learning only. The revolution in computer technology has increased the usage of computer, smart phones and internet among the youth. Also, initiatives by government like Digital India has helped in promoting e-learning in our country. All these measures leads to rise in Literacy rate from 64.8 *per cent* in 2001 to 74.04 *per cent* in 2011.

The basic reasons why people prefer online education is 24×7 availability, lower cost, worldwide accessibility, save travelling time, self-paced learning, variety of courses, etc. The scope of e-learning is not limited to education. It has been widely used for training purpose. In training it can be used by companies to train and upgrade their employees (Fatma, 2013). Through e-learning we can narrow the gap between rural and urban education rate in our country as students in rural areas can learn even without going to schools. In fact, e-learning can assist traditional classroom learning in India but unfortunately, it cannot completely replace it because of lack of technological infrastructure.

II. RESEARCH OBJECTIVE

- To understand the concept of e-learning and its different types.
- To know about emerging trends in e-learning.
- To know the difference between conventional and Non-conventional Learning.

III. LITERATURE REVIEW

According to Fatma's (2013) research, e-learning will continue to grow in future but it is full of challenges. So, there is need to make a thoughtful evaluation while make choice of learning software. According to Bhongade and Sarode (2018), online learning has modernized the learning experience and Massive Open Online Courses are the one of

prominent trend in higher education in recent years. The benefit of e-learning can be extended to customers (CRM) and employees (B2E). Lone (2017) in his research has said that online education has emerged as a powerful contender for the next new education technology and social media as a tool is widely used to enhance learning. Technology based learning can bring change in socio-economic lives of learners.

IV. RESEARCH METHODOLOGY

The research is conceptual and Exploratory in nature. The information collected adds to the current piece of knowledge. Data is collected from various valid and authentic secondary source of information. The major sources of data collection used in research process is –

- Census reports of various department of Government of India,
- Journals and periodicals,
- Research reports,
- Internet, books and newspapers

Different Approaches to E-Learning:

- **Synchronous online Learning:** Synchronous e-learning also known as **Real-time** learning as learner and the teacher from different location has to be present at the same time. It includes online chats and video conferencing. Synchronous learning improves teacher-student relationship as one can discuss the problems at the same time and it reduces the confusion.
- **Asynchronous online Learning:** In asynchronous learning there is no real-time communication taking place as teacher and student need not to be present at the same time, they can participate from different locations at different time. It allows students to learn at their own pace, so it is also known as **student-centered** mode of learning.
- **Linear online learning:** As the name suggest “linear online learning” means there is one way flow of information from sender to receiver only. There is no one-to-one interaction between teacher and student, so it is the limitation of this type of online learning.
- **Interactive online learning:** In interactive online learning both teacher and student take active part in discussion, so there is two-way flow of communication. Interactive learning is more widely used then linear online learning in today’s time.
- **Collaborative online Learning:** Collaborative e-learning is a modern type of learning method, through which multiple students learn and achieve their learning objectives together as a group. Students have to work together and practice teamwork in order to achieve their common learning objectives (Tamm,2021).

Conventional and Non-Conventional Learning

Traditional Learning: India has adopted traditional classroom teaching and learning since ancient time where there is a face-to-face interaction between teacher and student. It mainly focus on schooling education where classes were held on a fixed place in a predetermined time limit. It is preferred mainly because there is direct connection between teacher and student and teacher will directly be able to focus on each student’s progress. It is also known as back-to-basics or conventional mode of learning where education is limited to brick and motor classroom facility.

Non-Conventional Learning: The non-conventional learning is well known as student-centered approach as in this student can decide as per there convenience what to study and at what time. It is not limited to on-campus learning, it has wider reach. It focus on individual need rather than the need of all the student at one time. It basically includes distance learning, vocational studies, skill-based learning, online learning, etc. E-learning is a type of non-conventional or modern learning technique.

Literacy in India:**Literacy Rate after Independence**

Census year	Persons (%)	Male (%)	Female (%)	Male-female gap in literacy rate
1951	18.33	27.16	8.86	18.30
1961	28.3	40.4	15.35	25.05
1971	34.45	45.96	21.97	23.98
1981	43.57	56.38	29.76	26.62
1991	52.21	64.13	39.29	24.84
2001	64.83	75.26	53.67	21.59
2011	74.04	82.14	65.46	16.68

Table 1

(Source: Census of India, 2011)

As per census of India anyone who is seven years or above, who can both read and write in any language is considered as literate (census, 2011). From the Table 1, we can clearly see that after the independence Literacy Rate of India is quite low to only 18.33%. There is a great need to educate India at that time. However, due to various initiatives taken by the government literacy rate starts rising. From time-to-time the Government of India has come up with various measures to increase enrollment of students in school and higher education. Some of these measures are Sarva Siksha Abhiyaan, Mid-day Meal Program, scholarship program, distributing free textbooks to poor, etc. It also come up with various policies on education like National Policy on Education, 1968 and amending it in 1986.

As per the National sample survey held from July 2017 to June 2018, the overall literacy rate in India is 77.7%. Out of which –

- Urban Areas: 87.7%
- Rural areas: 73.5%
- Male Literacy Rate: 84.7%.
- Female Literacy Rate: 70.3%

e-Learning and Today

The modern learning environment is a complete modified version of traditional system of classroom learning. Today's learning is based on student-centered approach, where student is considered as the king of his own thoughts, he can learn whatever he wants and as per his convenience. Now a days most of the schools and colleges has equipped themselves with digital classrooms. During to the Corona crisis, when many of industries were collapsing some industries took it as an opportunity to capture the market. As the Educational Institutions were shut down due to the growing pandemic, e-learning came as boon for all the students. As per the report shown by KPMG "Online Education in India: 2021", India's online education market is set to grow to USD 1.96 billion and around 9.6 million users by 2021.

The extent of online learning is not limited to schooling and higher education, rather it is now being used for training purpose also. So, we can say that current user-base of online learning in India comprise of – (i) school students (ii) working professionals. Re-skilling is the major reason for rise in online training. Better salary hikes and promotions are also the reasons why people undertake new courses. A lot of start-ups are already setting their foot in what they think will be the next big thing in India after e-commerce (Lone, 2017). Also, different e-learning tools has increased the productivity of teachers and they can focus more on student's development. Availability of learning material in the form of e-books, videos and audios has enhanced the interest of students in learning and their understanding is tested through online quizzes, assignments, etc.

Online education and Government

The Government of India has also come up with various initiatives for the growth of digital learning. For higher education, the government has already started various platforms like **ePathshala** where resources are available for teachers, students, researchers and educators. **Virtual labs** to provide remote-access to Labs in various disciplines of Science and Engineering. **National Digital Library of India** which provides a host of services for the learner community, started under NMEICT. **E-Shodh Sindhu** with the main objective to provide access to qualitative electronic resources including full-text, bibliographic and factual databases to academic institutions at a lower rate of subscription. Many more other platforms at the primary level and higher education level like National Academic

Depository, e-Yantra for robotics, Swayam, Swayam Prabha, Vidwan, GIAN, DIKSHA, etc. has been started by the government for the growth of e-learning.

Also, Government can make use of e-learning medium in various ways. A good e-learning solution can help government in multiple aspects. A government can bring transparency in governance by way of a meaningful education among the people through e-learning (Bhongade and Sarode, 2018). The government can create awareness among industries about their societal responsibilities as well as among citizens regarding laws and taxation.

Some e-learning classrooms technologies –

1. **One-to-Many:** (communication between instructor and class as a whole). It includes lectures given in online classroom, video-conferencing, interactive online platforms like SWAYAM, SWAYAM Prabha, etc.
2. **One-to-One:** (communication between a teacher and a student). It includes teacher giving feedback to individual student or solving individual student's problem.
3. **One-Alone:** (self-paced learning). It includes e-textbooks and other reading material, student doing research and writing in laptop or mobile phone, etc.
4. **Many-to-Many:** (communication among students). It includes class group discussion, student's online chatting groups, group presentation, etc.
5. **Teacher Training:** (enhancing teachers knowledge base). Teacher training enhance quality learning. It includes teacher access to training material through various portals like NISHTHA which build competencies among teachers.

Emerging trends in e-learning:

1. **Mobile Learning (m-Learning):** Mobile learning has evolved from the use of technological device mobile phone or smart phone that we all use now a days. At present, education using mobile device is very common among students because student can decide what and when to study. Mobile learning focuses mainly on the development of mobile applications and software platforms used to create digital content in the form of digital textbooks for e-learners and access to educational resources through mobile devices. While it's a decent step, m-Learning architectures still need to find ways to embrace the same learning facets trends that eLearning managed to do before it can become widespread and commonplace (ViewSonic, 2020).
2. **Gamification:** The application of gamification in a pedagogical context provides some remedy for many students who find themselves alienated by traditional methods of instruction (Alsawaier, 2017). Gamification is based on the concept that one can learn better when he is having fun. Gamification as an emerging trend in learning involves game-based elements like quizzes, point scoring, score table, peer competition, etc. Game-based learning is most widely used in self-learning apps and courses. The main benefit of gamification is learner starts thinking out of the box, one can learn while playing and student has control over what they are learning.
3. **Adaptive Learning:** The word "adaptive" means "being flexible". In adaptive learning style the all the learning resources are modified according to the needs of individual student. There are many ways to review learner's performance in order to personalized coursework appropriately. They are called as *adaptive factors*. It include learner's prior or present knowledge base, learner behavior, content preference, demographic status, and so on.
4. **Computer Supported Collaborative Learning (CSCL):** Collaborative learning is when a group of people are encouraged to come together to acquire knowledge. CSCL is using modern Information and Communication Technology (ICT) to interact with each other. In this, learners from different location participate or interact with each other through computer or by using internet. Computer support can be synchronous (Real-time) or asynchronous. CSCL not only means learning from distance it can even be used in classroom to make interaction among instructor and students more creative or representative. Blogs, wikis, and Google Docs are commonly used CSCL mediums within the teaching community (Fatma, 2013).
5. **Learning Management System (LMS):** LMS is one of emerging e-learning platform. A learning management system (LMS) is a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content. A LMS helps instructor to create and deliver content, monitor students and access their performance. LMS also helps students to attend group discussions, video conferencing and enhance their capabilities. Modern LMS has number of user-friendly features. It helps control the content to be available for student, teacher, visitor or editor. Instructor can check the progress of each student and can create customized tests for individual

student. Many educational institutions are creating their personalized LMS for the ease of their students and teachers.

6. **Cloud-based Learning:** Cloud computing is an excellent alternative for the academic organizations and institutions which are having less budget for hosting and operating their online learning management systems. The cloud computing involves large number of interconnected computers. While using cloud computing platform, you do not need over expense on hardware or software for building or maintaining IT infrastructure for individuals (Bora and Ahmed, 2013). One need to have a high-speed Internet connection to access and upload data. One can share text, images, audios, videos and documents in cloud learning platform. Some top cloud providers are Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform, etc.
7. **Micro Credential:** Micro-credentials represent an alternative approach to career and professional development whereby an individual's skills, achievements, and accomplishments are recognized. They offer the possibility to enhance skills, to manage career pathways as well as adding practicality in the academic content. Micro credentials also known as nanodegree (Ghasia et al., 2019). One of the reasons why micro credential is attractive is that it divides complex teaching skills into basic pieces. Trainees can develop and demonstrate competence at the beginning of each instruction and then link these skills to master competence in complex skills. Teachers can choose which skills or which parts of a skill they will most benefit from professional practice and demonstrate competence by offering what they can do.
8. **Blended Learning:** The word "blend" means mix or combine together. Blended learning can be described as a learning program where more than one delivery mode is being used with the objective of optimizing the learning outcome and cost of program delivery (Singh and Reed, 2001). Blended learning is the combination of traditional classroom learning and modern online learning. Blended learning (BL) or hybrid learning a learning environment that either combines teaching methods, delivery methods, media formats or a mixture of all these. Most of the Indian educational institutions are doing with blended learning. Blended Learning is flexible as student can learn according to their pace and can share time-to-time feedback with teacher. There is increased participation of students in learning process where teacher act more as a guide to the students than as instructor. For example, a student can attend the classes in real-world classroom and complete the online assignments given at its own pace.

V.CONCLUSION

As per the study on e-Learning it has been concluded that the role of online learning is enhancing in today's life and its role is not limited only for education purpose but it has major playing in training of executives also. The advent in ICT sector has played in major role in raising demand of e-Learning in India. In developing country like India, e-Learning has contributed a lot in improving Literacy Rate and economic development of the country. Not only, the Government of India has taken initiative by introducing numerous platforms for online learning, but also various companies like BYJU's, Edukart, Dexler Education, Meritnation, etc. are creating opportunity to learn while sitting at home. E-Learning is widely accepted among learners because of the several advantages related to accessibility and convenience in usage. But it has certain limitations also. The majority of population in our country live in rural areas and introducing them with the concept of e-learning is a big challenge because of the lack of network connectivity over there and awareness is also lacking in majority of rural areas till now.

Undoubtedly, e-Learning has high scope of growth in our country, this can be evidenced from the fact that there are number of emerging trends in the field of education like distance learning, mobile learning, video learning, etc. Also, new players are joining in to provide more exciting features in their education software and making the e-Learning market competitive. The Bottom line is that, 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 (Fatma, 2013).

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