E-Shala Learning Hub

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Abstract: Education through the internet is becoming one of the most domineering forms of education. A lot of efforts is being put into improve the quality of learning and to improve the relationship among learners and their teachers. Advanced development in the technologies being used in the internet.

E-Shala has become very popular in Western countries like India have not yet been able to keep pace with their western counterparts as far as adaption to such a concept is concerned. Keeping this scenario in mind the authors in this work have tried to find how to do the students of technical courses in higher educ1ation in North India use this new learning methodology and how do they react on it. It is in this context that paper analyzes the usage of E-Shala tools by these students of technical courses. It brings out the response analysis of the same set of students (those who use traditional learning methods only as well as those who, in addition, use E-Shala methods) on the issues bout role of E-Shala in their studies.

Keywords: E-Learning, Traditional Learning Artificial Intelligence and Machine Learning, Cloud Computing

I. INTRODUCTION

ICT revolution has given a boom to 'Learning Economy' whereas the real strength of an individual or institution, region or a country is determined by the way it reacts to new knowledge and make the best use of it. This has increased the demand for e-learning at the formal as well as informal sector of education. E-Shala supports use of Information and Communication Technologies. Therefore, E-Shala is based upon anywhere anything learning content generated using videos, audios, text, animations and/or simulation to enrich the learning process. At present we can feel that the knowledge is available all around us and it has been possible through the techniques of E-Shala. In the informal education sector especially the industrial sector is progressively switching over a workforce of a large number of hired trainers. This ensures the optimal use of two of the most crucial resources i.e. money and time in any organization. Even in the informal education sector of higher education nowadays, many universities/ institutes are offering a number of online courses to its students in two modes-

1) As a support to their traditional courses and 2) As pure online classes. The students enrolled in these online courses can even appear for their examinations online saving a lot of hassles for them as well as educational institutions.

E-Shala is made possible through the Internet, Intranet, even CDs and DVDs or their combinations. It provides learning platforms to people who have the quest to learn anytime and anywhere. It also includes learning online from the experts as an alternative to face-to-face training.

E-Shala provides training or educational courses with the help of some electronic equipment's such as - 1)A computer or a mobile computing device like a notebook, a tab or a smart mobile phone, b)Some multimedia support equipment in the form of mike, speakers, video cameras, LCD projectors, CD/ROMs/DVDs, touch screens, light pens, smart boards, video-conferencing, etc., 3)Some communication and telecommunication support equipment's used in addition to Local Area or Wide Area Networks. In addition to these electronic equipment, E-Shala also needs solid support from some very accurate quality software. Many software programs are being developed for supporting the concepts of E-Shala and efforts are on to replace the blackboard – chalk system prevalent in the ore traditional education systems in the developing countries, to say the least.

E-Shala has also introduced the concept of virtual teachers. Although some or all of these virtual facilities are available in India, especially the North India part for past so many years but the status of usage of these e-learning facilities has not been in the public domain till date.

The authors could not find any authentic literature either on the usage of E-Shala tools by the students of technical courses in higher education or on the issues involved in the role of E-Shala as far as the formal education of these students is concerned. In order to popularize E-Shala, the concept of the technology involved in it must be popularized among its various stakeholders. Various researchers which include teachers such as Nanayakkara in, Yuen and Ma in as well as some students such as Keller, et al.in and Masrom in through their studies conducted have thrown some light on the concepts and usage of technology for the purpose of E-Shala. But incidentally, these studies are restricted to the developed nations only where the availability and affordability countries are two very critical issues and India too, is no exception in this case. The authors find from the available literatures that no extensive research has been conducted in this direction as far as Indian students are concerned.

This research paper is an attempt to achieve the following objectives. Both qualitative and quantitative approaches have been associated with this word so as to achieve these research objectives. 1) Understand the meaning of E-Shala, 2) Highlighting the usage of tools of e-learning among students of technical courses, 3) Response Analysis of the students on issues about the role of E- Shala in their studies. (The survey data includes the response of the students of technical courses who use only traditional methods for learning and of the students who use E-Shala in addition to traditional methods of learning.) The research tool used for the purpose was the questionnaires and the target audience was the students. The students belonged to two categories: 1) ones who use the traditional methods of learning and 2) the ones who use E-Shala as a support to their traditional methods of learning. The data obtained from the students through the questionnaires was stored in SPSS V16 software for further data analysis and inference of results.

II.   DEFINATION

E-Shala is also known with a lot of other names depending upon the purpose for which it is being used, such as: Learning Support System (LSS), Learning Management System (LMS), Managed Learning Environment (MLE), Virtual Learning Environment (VLE), Learning Platform (LP) and Course Management System (CMS).

The purpose of a E-Shala learning hub platform is that it creates a robust learning experience that feels like a classroom experience, offering the traditional classroom characteristics (like instructor-student interaction, Q&As, discussion, games, collaborative projects, quizzes, etc.) but either online or through a device (e.g. a laptop, desktop, tablet or mobile.) These important learning environments are achieved through a learning platform's features and tools that create the level of interaction and engagement students need.

Usage of E-Shala Tools the knowledge and skill of the set of students as mentioned above were analyzed from the data collected through the questionnaires so as to find out the type of uses of different techniques of E-Shala - video-conferencing, emails, search engines, audio/video tapes, virtual classrooms or CDROMs/DVDs. It has been found that 54% of students never used video-conferencing and 15% had somehow used it at their coaching centers. It was only 11% students who were using the videoconferencing facilities regularly for their studies. Electronic mail was being used by all students and around 97% students admitted that they definitely used search engines to find out answers to their queries related to the courses of their respective studies. The audio/video tapes were also not found to be much popular since 59% of the students had never used these. Only 31% were using it occasionally and it is only 10% students who used these tools on a regular basis. Components can include content delivery in multiple formats, management of the learning experience, and a networked community of learners, content developers and experts. E-Shala provides faster learning at reduced costs, increased access to learning, and clear accountability for all participants in the learning process.

With the help of E-Shala we provide e-learning platform that we no longer need to spend long periods travelling to a location to attend a course; you can now have access to learning when we want it, at the time we want it - day or night, wherever we want it - at home, at work, in local library. For many students this has opened up a new, much more flexible and accessible world of learning that was previously closed to them due to disability or family circumstances, or perhaps due to the fact that the course they wanted was on the other side of the world. In other words, there are now no longer any geographical constraints to learning; e-learning brings learning to people, not people to learning.

A.   Categories of E-Shala

These are considered as follows

1) *Teacher:* Teachers are best known for the role of educating the students that are placed in their care. Beyond that, teachers serve many other roles in the classroom. Teachers set the tone of their classrooms, build a warm environment, mentor and nurture students, become role models, and listen and look for signs of trouble. In E-Shala teacher plays a main role that they can provide knowledge to students and take care of their studies. Teachers teach in many ways including lectures, small group activities and hands-on learning activities.

2) *Student:* In Online Education, students have role to learn. In that process, student has difficult and different roles according to traditional learning process.

3) *Courses:* Most discussion if e-learning focuses on educational courses. Educational course materials or courseware are usually modified and added with various different media and are uploaded to a networked environment for online accessing. E-Shala has distinct similarities with classroom environment whereby both of the learners (students) and instructors (teachers) are together related to the common course arrangement and flow.

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III. MOTIVATION

Motivation directly affects the way people learn) as they put emotional investment – interest to achieve a task in their learning process. In many articles the importance of the motivation is highlighted that the success of a learning program or the students is closely related with motivation of the students.

Therefore the motivational factors should be considered in e-learning course design. The ARCS motivational model (Keller & Burkman, 1993) provides a systematic approach in the design of the instruction (online learning systems also). According to the ARCS model there are four components that need to be satisfied in order to construct a learning system, including e-shala hub, which can motivate learners.

These four components are as follows: A – Attention

R – Relevance C – Confidence S – Satisfaction Using these four component based ARCS model in our e- shala learning lectures and design is the another important question. The ARCS model is valid enough to use in various kinds of e-learning strategies. Also there are studies showed that the ARCS model is very useful to improve e-learning programs.

IV. METHODOLOGY

E- Shala 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.

A. The Most Advanced and Highest Quality e- Learning

E-Shala is based on the most advanced and highest quality e-learning. The educational content is attractive and efficient due to its interactivity, with up-to-date and all course materials which lead and guide the student from the very first moment, guaranteeing training success.

B. Total Freedom and Flexibility

Our E-Shala platforms and online courses allow students to learn from anywhere at any time. Courses which work through any browser and on all devices such as PCs, laptops, tablets, mobile phones, with automatic synchronization of progress. Total freedom and flexibility to be trained, wherever the student is.

C. Interaction In Learning

Learner(Students) - Instructors(Teachers) Interaction, Learner(Students) - Learner(Students) 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 [13], 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.
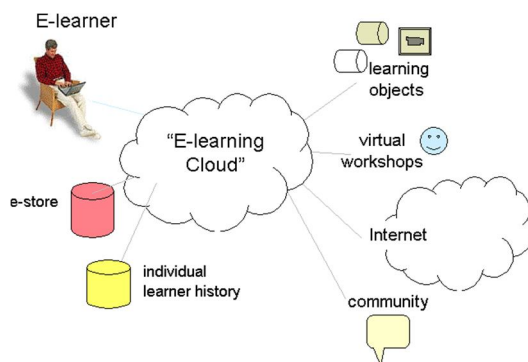
V. TECHNOLOGIES

With the advancement in technology, a huge change is happening in the education system. In this E-Shala project, we will develop an e-learning platform using cloud computing, artificial intelligence and machine learning. E-learning is one of the fast and efficient ways to spread knowledge to learners from different parts of the world. E-Shala uses modern technology and digital content to make the learning process more attractive.

Effectiveness, consistency, scalability, reduced costs, etc. are some of the advantages of the E-learning platforms. But to set up an e-learning platform it requires a huge software and hardware resources.

A. Cloud Computing in E-Learning

Cloud computing is widely used in various fields because of its various applications and easy deployment. Nowadays with easy access to the internet and smartphones, everyone is able to connect and access online resources. This also expanded the use of cloud computing services. Cloud computing provides the best solution to set up the infrastructure for the e-learning platform with reduced costs. It uses the internet and remote servers to maintain data and applications.

B. Related Work

Given the increasing importance of Cloud Computing in recent years, the application of this technology in the field of E-Learning has been interest to researchers and in various articles and research on this topic has been discussed, continue to mention some of them.

Masud, et al., "the general characteristics of the E-Learning system is described the outline of the system architecture is presented that combines the capabilities of learning and provides Cloud computing services."

Gamundani, et al., "cloud based E-Learning system design, system architecture based on distributed resources which provided by PC users. The proposed architecture although the elastic characteristics of the specific features of Cloud Computing architecture will provide, another characteristics feature is the high scalability of the architecture of this type of not supported. In other words the coordination of distributed resources of the node to the central computer system, which is, the bottleneck of the system."

E-Learning cloud is cloud computing technology in the field of e-learning, which is a future E-Learning infrastructure, including all hardware and software computing resources to engage e-learning. After the virtual computing resources, they can be in the form of services of educational institutions, students and business to lease computing resources.

C. Machine Learning and Artificial Intelligence (AI)

According to research the online learning industry is growing stronger with the help of technologies like machine learning and Artificial Intelligence (AI). Machine learning is a sub-division of artificial intelligence. The technology involves algorithms that can draw conclusions and make predictions based on large data sets. Machine Learning algorithms predict outcomes, which allows you to provide specific eLearning content based on past performance and individual learning goals. Machine learning allows any software application to behave more intelligently and automatically improve on its own. AI machines utilize decision tree learning, artificial neural networks, Bayesian networks and other such machine learning algorithms to undertake different tasks. AI enabled learning management system can utilize artificial neural networks or even deep learning algorithms to process the data and optimize the course content without manual intervention; possibly much faster and accurately than humans. Artificial Intelligence and Machine Learning are shaping E-learning. Artificial intelligence and machine learning are not mere buzzwords; they are revolutionary technologies that here to stay and change the landscape of human civilization. E-learning can hugely benefit from these technologies and that can change the way students will learn new things through online courses.
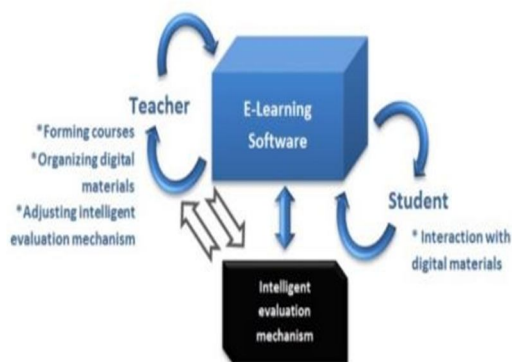
VI.   CHALLENGES AND SOLUTIONS

As your company implements new policies and procedures, it is crucial to ensure that your workforce is properly trained in their use. The obvious course in training your students might be to organize a seminar or training session to knock the training out in one or two simple sessions, but this can be impractical depending on your workforce. Students or Learners could be spread out over a wide area and unable to easily gather in one location. Such a seminar is difficult to schedule for a time when it would not impact some learner's productivity.

1) *Adaptability Struggle:* Switching from traditional classroom and face to face instructor training to computer-based training in a virtual classroom makes the learning experience entirely different for students. Their resistance to change doesn't allow them to adapt to the online learning environment, whereas it takes time for them to get accustomed to Course Management Systems (CMS) and the methods of computer-based education. While passive listening and notes taking are expected in a traditional classroom, online discussions or creating a web page demand springing into action. Students with a "traditional" mindset find it difficult to adapt; however, they need to accept the new learning circumstances with an open mind and heart. Understanding the benefits of eLearning and even discussing them with their peers may change this mindset and better prepare students for online classes.

2) *Technical Issues:* Many students are not provided with the high bandwidth or the strong internet connection that online courses require, and thus fail to catch up with their virtual classmates: Their weak monitors make it hard to follow the Course Management System and their learning experience becomes problematic. Moreover, most of them live off campus and find it difficult to keep in tune with the technical requirements of the chosen course. Some of them don't even own computers and seek help in Learning Resource Centers for technical assistance. The only solution to this problem is knowing exactly what kind of technological support they will need for a certain course before enrolling in it, as well as properly equipping themselves for the course's successful completion.

3) *Computer Literacy:* Lack of computer literacy is a major issue among students today. Many of them cannot operate basic programs such as Microsoft Word and PowerPoint and therefore are not able to handle their files. Furthermore, many students find fixing basic computer problems troublesome, as they have no knowledge in this area. However, technological proficiency is a must for following online courses, as it enables students to manage their assignments and courseware in an organized manner without struggling. Basic courses in computer literacy enhance students' knowledge in the field; having a fundamental knowledge of computer hardware would help them participate in online classes without interruptions and hindrances.

4) *Time Management:* Time management is a difficult task for e-learners, as online courses require a lot of time and intensive work. Furthermore, whereas it is mostly adults who prefer web-based learning programs for their place and time flexibility, they rarely have the time to take the courses due to their various everyday commitments. A regular schedule planner would be a significant help to these learners, as they could even set reminders for their courses and assignments.

5) *Self-Motivation:* Self-motivation is an eLearning essential requirement; however, many online learners lack it, much to their surprise. After enrolling in distance learning courses, many learners fall behind and nurture the idea of giving up, as difficulties in handling a technological medium also seem insurmountable. Students need to find the motivation to follow the new educational trends and also properly equip themselves for future challenges in their education and careers. Only a positive attitude will help them overcome the challenges in eLearning; though this is hard to practice, students need to understand that it is necessary in order to reap the eLearning's benefits in the future.

VII. CONCLUSION

This system is designed to provide an online educational learning platform to learners as well as instructor. For that we provide various modules using various technologies and methods. E-Learning is one of learning methods that can benefit both the students and educators as it has become increasingly popular learning approach due to growth of Internet technologies. Also researchers over the years has shown that there is no significant difference in learning outcomes between E-Learning and Traditional Learning. E-learning is not just a change of technology. It is part of a redefinition of how we as a species transmit knowledge, skills, and values to younger generations of workers and students. E-learning has become the default way to conduct training or to provide education to teach what learners need to learn in the way they most naturally learn to define clear learning. Online learning surely has the potential to revolutionize the education sector and can surely make learning more effective, engaging, and student-friendly.

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