

E-CONTENT DEVELOPMENT: PROSPECTS AND CHALLENGES

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ABSTRACT

E-learning is a kind of web-based training. It has experienced a remarkable evolution and growth in the last few years. This is certainly due to enormous advances in information and communication technologies (ICT).

This paper focuses on the prospects and challenges in e-content development. It also focuses on e-content development in the changing education concepts and discusses the importance and benefits of e-content resources. E-learning is supposed to be an excellent solution for the old problem of mass education, since there are far too many knowledge seekers and not enough knowledge providers.

INTRODUCTION:

E-Learning is the use of technology to enable people to learn anything, anywhere at any time. It includes all forms of electronically supported learning and teaching, including educational technology. Developments in internet and multimedia technologies are the basic enabler of E-learning. It is commonly thought that new technologies can make a big difference in education.

Ministry of HRD, Government of India has introduced several e-Content development programs viz., National Programme on Technology Education Learning (NPTEL) by offering free online video lectures in engineering, science and humanity courses. NPTEL is an open courseware initiative collaboratively started by seven Indian Institutes of Technology (IITs) and Indian Institute of Science (IISc). The purpose of e-content development is to create an information rich society. Everyone in the society is empowered to create, receive, share and utilize information for their progress. Very well designed, developed and validated e-content will provide access to high quality meaningful digital content and serve as an effective virtual teacher.

Many important developments have occurred in education with the arrival of the net. Nowadays, even the youngest of persons are able to effectively use smart phones, internet, text messaging etc. Thus implementing an e-learning course has become an easy matter. Social media, message boards and other forms of online communication allow learners to stay in touch and conduct discussions on course materials, thus giving a feel of a community.

THRUST AREAS OF E-CONTENT DEVELOPMENT:

Is an e-Content alternative of chalk and talk method?

The e-learning does not seem to replace the conventional classrooms with black boards but it seems to coexist with the already existing system. "Chalk and talk" is still the predominant method of delivering instructions and traditional face-to-face meetings can still be effective. Using an online environment and saving course time for discussion, questions, and problem solving will be quite effective in content delivery. Many instructors have found that they can save time and increase student learning by allowing students to engage in the material outside of the class. This allows them to use face-to-face time for troubleshooting.

Online discussions give many students the opportunity to express themselves in ways they couldn't in a regular class. Many students are reluctant to speak in class because of shyness, uncertainty, or language issues. It's a boon to many students to have the ability to take their time to compose questions and answers in an online discussion, and instructors report much higher participation levels online than in class.

Primarily the traditional methods of learning have been in use in the education. But ICT enabled education, training and learning is much more convenient than traditional methods.

Can e-Content replace teacher in class room?

Technology has immense potential to upgrade today's educational system. Though there are several advantages of making use of technology in teaching, the question remains – can technology replace teachers in future classrooms? Well, the answer is clearly no. Though beneficial, technologies can never replace a teacher.

No matter how advanced or smart a computer program or a product is, it can never come close to the knowledge and life experience a teacher brings. A teacher leads, guides, facilitates and mentors a student. They are role models who set an example to students and drive them towards a brighter future.

E-CONTENT A HANDY TOOL TO STUDY:

Along with the increased retention, reduced learning time, and other aforementioned benefits to students, particular advantages of e-learning include:

- Students are becoming more technically savvy, and they want to get many of their course materials off the Web. Once online, they can access the latest information at any time and make as many copies of the materials as they need.
- With a **Learning Management System (LMS)**, students can communicate with the instructor or their peers whenever their schedules permit. They can also take quizzes or read course material during their free time. Working students need flexible access to courses, and a **Course Management System (CMS)** is a powerful way to give them what they need.
- CMS can make the classes more effective and efficient. By moving some parts of the course online, the teacher can effectively take advantage of scheduled face-to-face time to engage students' questions and ideas. Today, CMS's are more mature and easier to use than they've been at any time in the past. The underlying technology is becoming more robust, and programmers are writing good web applications.
- **Interactivity** engages users, pushing them rather than pulling them through training.
- **Confidence** that refresher or quick reference materials are available reduces burden of responsibility of mastery.

A CLASS-ROOM ANYWHERE – ANYTIME:

With the advances in internet technology, web based e-learning systems are gaining popularity. Being online, these systems provide an opportunity to learn any course/subject from any part of the world at any time. It may be helpful in resource saving in terms of time, money, paper, etc. that will improve the accessibility to the course instructors as well as students. In consideration with the changing trends in ICT (Information and Communication Technology) and scarcity of time, the role of e-learning has increased. Once the course contents are digitized using some Content Management System (CMS) and the same are made available on the web, they can be effectively used by researchers, instructors and students anywhere at any time.

REAL UTILIZATION OF E-CONTENT IN A PRESENT SCENARIO:

In India, the education processes are primarily class room lectures, presentations and laboratory experiments. These are supplemented with audio-visual aids like the use of projectors, stereo systems and the projection of films.

The e-learning does not seem to replace the conventional classrooms with black boards but it seems to coexist with the already existing system. This system rather promises to reach too far off rural areas in India where education is still a looming darkness. This objective can be achieved by providing PCs at low cost with broadband connection. The scope of e-learning is much wider in India with many e-learning companies stepping forward in providing the service. In India, e-learning scenario is still growing and at an experimental stage.

CHALLENGES IN E-CONTENT DEVELOPMENT:

- **Technology dependent:** Learners will need access to a machine of minimum specification as dictated by the e-learning supplier or access to a service with a high bandwidth to transfer the course materials in a timely way.
- **Material Incompatibility:** Some materials designed for one particular system will not function properly on another (for example, the Apple Macintosh and the Windows PC).
- **Unsuitable for Certain Types of Learners:** e-learning requires a high-level of self-discipline and personal time management. E-Learners need to be highly self-motivated to take full advantage of the medium as often the online learning experience can be impersonal.
- **Expensive:** Start-up cost of an e-learning service is expensive and the cost of production of online training materials is very high. Teachers must be confident that the extra costs are balance with the benefits of delivering a course online. Significant time needs to be invested in course set-up and in on-going maintenance (checking links, updating course content etc.).
- **Reliant on Human Support:** e-learning is still dependent on help on either the course materials or the software.
- **No Match for Face-to-Face Teaching:** Electronic communication does not necessarily provide a good match for face-to-face communication and is more linear than face-to-face discussion.
- **Too Reliant on IT Skills:** Learners may have limited IT skills, or be uncomfortable with electronic communication and need to learn how to use the medium effectively.
- **Disabilities:** Students with visual or physical impairments may be disadvantaged.

- **Inflexible:** Flexibility may be lost as adjustments to the course in response to student reaction are not easy to make once the course is underway.

FEW NOTABLE INITIATIVES BY THE INDIAN GOVERNMENT (MINISTRY OF HUMAN RESOURCE DEVELOPMENT):

NPTEL: NPTEL provides E-learning through online Web and Video courses in Engineering, Science and humanities streams. The mission of NPTEL is to enhance the quality of engineering education in the country by providing free online courseware.

Virtual Labs: Objectives of the Virtual Labs to provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to students at the undergraduate level, post graduate level as well as to research scholars.

CEC: Annually CEC organises Video Competition and Prakriti. Prakriti is an annual film festival on environment, human rights & development. Video Competition is an annual competition meant to nurture within media centres and other educational institutes in the country.

E-Yantra: e-Yantra is an initiative to incorporate Robotics into engineering education with the objective of engaging students and teachers through exciting hands-on application of math, computer science, and engineering principles.

Digital Library Infflibnet: The UGC-Infonet Digital Library Consortium was formally launched in December, 2003 by Honourable Dr. A P J Abdul Kalam, the President of India soon after providing the Internet connectivity to the universities in the year 2003 under the UGC-Infonet programme.

OSCAR++: Project OSCAR (Open Source Courseware Animations Repository) provides a repository of web-based interactive animations and simulations that we refer to as learning objects (LOs). These learning objects span topics in science and engineering at the college level, and maths and science at the school level. Students and teachers can view, run and download these learning objects.

E-Kalpa: This project on 'Creating Digital-learning Environment for Design' also called 'e-kalpa' is sponsored by the Ministry of Human Resources, Government of India as part of the National Mission in Education through Information and Communication Technology.

FOSSEE: FOSSEE project is part of the National Mission on Education through ICT with the thrust area being "Adaptation and deployment of open source simulation packages equivalent to proprietary software, funded by MHRD, based at the Indian Institute of Technology Bombay (IITB).

CONCLUSION:

Technology is a tool that can and should be effectively harnessed and utilized in the practice of education. E-Learning is naturally suited to distance learning and flexible learning, but can also be used in conjunction with face-to-face teaching, in which case the term Blended learning is commonly used. The e-learning does not seem to replace the conventional classrooms with black boards but it seems to coexist with the already existing system.

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