Developing E-content for Enhancing Digital Literacy in India.

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ABSTRACT The major intention of this article is to throw light on the development of E-content as an innovative strategy for learning process skills thereby enhancing digital literacy in India. Classroom is a place of ongoing activity all the time which brings in cultural changes, behavior modification and development in various aspects in child. In a century and place where technology is inherent aspect of every nook and corners it is necessary to transfer knowledge through ICT. However amalgamation of ICT into education to suit the needs of the child is quite a key challenge but E-content is perceived to be filling this gap. With a view to bring digital component in the education and enhance the learning and teaching process skills, innovative work in E-content development is needed as a form of digital literacy for quality education.

INTRODUCTION

The explosion in Information and Communication Technology (ICT) in the last decade has brought key changes in all the arenas of human life and education is no exemption. Over the period of time ICT has amplified the possibility of transmission of the knowledge in a better manner. Generation next is miles ahead techno-savvy as compared to present one and there is a critical need to create digital learning environment at all levels of education. However the amalgamation of ICT into education to suit the needs of the child is quite a key challenge but E-learning fits and suits best in this scenario to serve the desired purpose. E-learning facilitates learner interaction through wide set of applications and processes viz. Web-based learning (WBL), Computer-based learning (CBL), Internet–based learning, Online learning, e-content, Open Educational Resources (OER), Virtual Classroom etc. Of all the applications and processes E-content is perceived to be a new education paradigm that aid in the transition from traditional pedagogical practices to techno-pedagogy for the learner. But the paramount important thing to be addressed here is the development of quality e-content to bring in the digital component in education and help in bridging the void of digital divide.

E-CONTENT

According to National Policy on ICT in School Education (2012) "Using computers and internet as mere information delivery devices grossly underutilizes its power and capabilities. There is an urgent need to develop and deploy a large variety of application, software, tools, media & interactive devices in order to promote creative, aesthetic, analytical & problem-solving abilities and sensitivities in students & teachers". The expanding dimension of multimedia has changed the way of imparting instruction in the classroom. This pace of change has deepened the void between the learner and the learned. This void is perceived to be filled by developing quality e-content.

E-content in general terms is easy, effective, efficient, engaging, electronic and educational content which attempts to make teaching-learning interactive, student-centered, systematic and organized. E-content in specific terms is the mixture of information and communication along with audio, video, animations, text and images. According to NUEPA (2007) E-content is "the design (pedagogical and learning principles used to create the digital intervention) of the subject matter (e.g.- Maths, Science etc.) in question & the digital delivery mode (computer, video etc.) used."

The strength of e-content for learning purposes lies in its numerous inherent attributes which includes learner-centered approach that enables the learner to learn at his own speed, according to their own situations and convenience. E-contents are interactive and self-directed in nature as it actively engages the learners in the learning process. It is user-friendly and allows the learners to choose the content that is appropriate to their needs, interest, abilities, capabilities and skills. It is based on the pedagogical principles that enable the teacher to act more often as a mentor and less often as a pedagogue. Convenience and flexibility are just other assets of E-content because the learning sessions are available 24 X 7 and learners are not bound to a specific day/ time to physically attend classes. Lastly learning through the e-content encourages the development and acquisition of digital literacy to meet the expectations of new age learners.

.DEVELOPMENT OF E-CONTENT

Development of E-content for the target audience is a very tedious job. The process needs extensive amount of analysis on the part of developer in terms of course content, objectives, sequence, methods and techniques to create efficient and effective content for yielding better outcomes. There are many instructional systems design models to address the development of e-content, most of which are based on popular one as the ADDIE model.

The **ADDIE model** includes five stages viz. Analysis, Design, Development, Implementation and Evaluation. The Analysis and Design stages are essential to ensure course effectiveness and learners' motivation and participation. The Development part deals with the scripting of the entire course content. In the Implementation phase the developed material is distributed to the learners. Afterwards Evaluation is done to determine the adequacy of distributed materials in achieving the course objectives.

Figure – 1 ADDIE MODEL
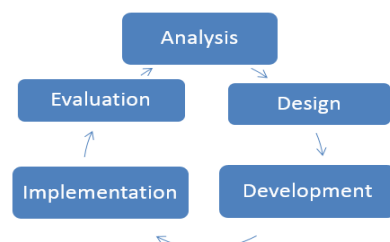
Dick and Carey Design Model starts by identifying instructional goals and ends with summative evaluation. It is focused on specific objectives. **Hannafin and Peck Design Model** (1987) use a three phase process. Phase 1 performs a needs assessment Phase 2 deals with defining the learning objectives, structuring the content logically, specifying the instructional and evaluation strategies, and preparing for visual and technical design and Phase 3 includes development and implementation of the instruction. **Knirk and Gustafson Design Model** (1986) also uses a three stage process of identifying the problem and set instructional goal, designing and developing objectives, set instructional objectives and specify strategies and lastly developing of the materials.

E-content design, development and approach using any of the models described above will depend upon the nature of the content and the learners. It will also depend on the quality and complexity the learning one wish to create.

Generally e-Content development classified as follows: i) Assembled e-Content ii) Short Courseware/Unit/Module iii) Full Courseware iv) Short learning Objects. E-content is a complete package containing a lesson and it can be represented in the form of e-learning modules or short learning objects. According to the guidelines of NME(ICT)-MHRD (2014), e-learning modules should consist of e-text, video, supporting material and self-assessment.

- e-text must include self-check exercises, examples, images, graphics, videos, audio clips and summary.
- Video component may include multimedia, animation, documentary, simulation.
- Supporting material may incorporate glossary, web-links and interesting facts.
- Self-assessment includes minimum 10-15 questions in either multiple-choice questions, true or false statements, fill in the blanks or match the columns.

E-CONTENT FOR DIGITAL LITERACY IN INDIA

Digital India has been envisaged as a striving programme to transform India into a digitally empowered society leading to all-round socio-economic development of nation and global competitiveness. A recent UK-India Business Council Report entitled "Meeting India's educational challenges through e-learning" states that India is the second biggest e-learning market globally after the US. National Policy on Information & Communication Technology (ICT) in School Education (2012) has also pointed out that "the development of digital learning resources in the form of e-books, animations, lessons, exercises, interactive games, models and simulations, videos, presentation slides, plain text materials, graphics or any combinations of the above will be encouraged. Use of digital resources should be harmonized with the requirements of the curriculum and supplement it." From chalk-n-talk method to the use of television and radio to computers and interactive whiteboards to the use of educational software has added to enhance digital literacy among learners. Digital literacy plays a crucial role in defining a child's ability to succeed both in school and throughout their lives. A teacher aims to promote higher order thinking skills and intellectual independence in his students. Incorporation of digital-age literacy and technology into lessons and activities is a sure way for teachers to facilitate their student's construction of knowledge and meaning. Application of innovative teaching methods like E-content equips the students with the skill sets they need to succeed throughout their education and at the workplace post K-12 education. To make added inputs work for exploring and enriching the pedagogy with a view to boost quality of teaching and learning, e-content covers the whole range of learning experiences. The learner imagines his/ her participation in the events being shown to them which in turn elevates the knowledge level of learner and ultimately leading to the development of creative thinking of the learner. Thus e-content is valuable in classroom situations and stimulate the learner to utilize the maximum of its potential in learning. Thus ICT enabled activities and processes should be inculcated in order to improve access, quality and efficiency in the school system and attain digital literacy.

CONCLUSION

Content is the heart of learning and medium acts as nerves in that (Jegan, 2004). However, developing quality e-content is not everyone's cup of tea. It requires expertise and knowledge in the concerned subject area, a sense of inventiveness for the presentation of the content in a systematic, organized and efficient and interactive way matching to the needs and requirements of the child. Teaching and learning through e-content aims at preparing the youth to participate creatively in the growth and development of a digitally empowered and knowledge economy. Digital learning as a format can work better across levels, courses and streams than conventional format. Based on the aforementioned context, innovative work in e-content development is needed as a form of digital literacy for quality schooling. This demand of quality e-content is likely to grow in the near future and this trend has come to stay for a longer period of time.

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