

# E-CONTENT DEVELOPMENT

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## ABSTRACT

*E-content is digital information delivered over network-based electronic devices, i.e., symbols that can be utilized and interpreted by human actors during communication processes, which allow them to share visions and influence each other's knowledge, attitudes or behavior. The ultimate aim of e-Content development is to create an information rich society where everyone, irrespective of caste, religion, race, region, gender etc., are empowered to create, receive, share and utilize information and knowledge for their economic, social, cultural and political upliftment and development. In the process of e-learning, structured and validated e-content can serve as an effective virtual teacher. This Paper describes the E-Content Development, E-Learning through E-Content and Indian initiatives in E-Content*

**Keywords:** E-Content, E-Learning, Indian initiatives

## INTRODUCTION

E-Contents use in education can be from the usual electronic journals (E-Journals), and electronic books (eBooks) to electronic research reports (E-Research-reports), electronic lecture modules (E-Lecture-modules), electronic lecture notes (E-Lecture-notes) and electronic lecture slides (E-Lecture-slides). Electronic content (e-content) which is also known as digital content refers to the content or information delivered over network based electronic devices or that is made available using computer network such as internet. According to Oxford dictionary 'e-content is the digital text and images designed to display on web pages'. According to Saxena Anurag (2011) 'E-content is basically a package that satisfies the conditions like minimization of distance, cost effectiveness, user friendliness and adaptability to local conditions'. Towards a broader definition "the design (pedagogical and learning principles used to create the digital intervention) of the subject matter (E.g. Math, Science etc.) in question and the digital delivery mode (Computer, Video etc.) used (NUEPA, 2007). It may also be defined as "digital text and images designed for display on web pages." (<http://oxford.dictionaries.com/definition/e-content>). E-content means content in the electronic form. It is a combination of text, audio, video, images, animation with visual effects. Any digitized content that can facilitate the learning process and/or learning outcome can be termed as e-content. e-Content (defined as learning material with relation to new media) the acquisition of these contents takes place via four different channels: purchase of materials, use of freely available content on the Internet, self production of material, exchange of existing material in a network with other institutions of Higher Education .

## 1. OBJECTIVES OF THE STUDY

1. To know the E-Content Development Process.
2. To know the E-Learning through E-Content
3. To know the Indian initiatives in E-Content.

## 2. E-CONTENT DEVELOPMENT

### 2.1 Design and Developmental Process of E-Content

Generally e-Content development classified as follows: i) Assembled e-Content ii) Short Courseware/Unit/Module iii) Full Courseware iv) Short learning Objects. Those can be represented in the form of e-Learning modules and Short learning objects. e-Learning Module is a comprehensive package containing a

lesson. According to the guidelines of University Grants Commission(UGC- India, 2007), the academic content for each of the module should comprises of a) Home b) Objectives c) Subject Mapping d) Summary e) Text, Case studies, FAQs f) Video and audio g) Assignments/Quiz/Tutorial h) References/Glossary/Links i) Download j) Blog k) Contact. Short Learning Object is a new way of thinking about learning content. They are much smaller units of learning, typically ranging from two to three minutes. It may be a description about an item, a concept, equipment, a property, characteristic feature, process, form, definition, activity, reaction, plan, cause and effect relations, causative factors of events, results of events, applications of phenomena or processes, explanation of components in a subject of learning etc.

## 2.2 Phases of E-Content Development

In e-content development aspects consists of six phases viz., analysis, design, development, testing, implementation and evaluation.

The Analysis Phase: It is the most important as it identifies area's in our current situation. This phase accountability considered by the views of subject experts, target audiences, objectives and its goals. In this phase, we must know the audience, and their skill, budget of the e-content, delivery methods and its constraints with due dates.

The Design Phase: It involves the complete design of the learning solution. It helps to plan of an e-content preparation. In this phase, we must know the planning, use of relevant software; required skills; creative and innovative interactions of subject contents like texts, pictures, videos and suitable animations.

The Development Phase: It concerns the actual production of the e-content design. It helps to create the e-content by mixing of texts, audio, video, animations, references, blogs, links, and MCQs (multiple choice questions) with some programming specifications like home, exit, next etc.

The Testing phase: It helps to administer the e-content in the actual educational field. In this phase, we must test the spelling mistakes, content errors, clarity of pictures, relevant videos, appropriate audios, timing of animations, and hyperlinks.

## 3 E-LEARNING THROUGH E-CONTENT

E-content is the heart of e-learning. Online articles, streaming video, audio segments, images, specially designed websites and unique learning objects - these electronic elements are created to enhance courses and improve learning. They may be selected segments from a larger information resource, such as a video clip, or a custom-made object designed by a faculty member, such as an animated map that shows how national boundaries have changed over time. They engage today's computer-savvy student, whose learning style is more interactive, having been raised with computers, the Internet and video games.

One of the most innovative and promising outcomes of distance learning and telecommunication relationship is e-learning. It is a process whereby teachers and students are linked up in an electronic media/computer network (Majumdar, S. and Park, M. 2002). E-learning facilitates the learner in terms of any time learning, anywhere learning, asynchronous interaction and group collaboration. E-learning provides the possibility of teaching based on learning objects (Wiley, 2001). Learning objects are the smallest independent educational components which can be reused in e-content of different subjects and authors; thus it is more economical and time-saving in e-content development. The teaching method in e-learning has changed from being teacher-based to being student-based. Virtual environment can create pervasive and dynamic interaction through virtual simulation which will upgrade learning accompanied by hearing and seeing to practical learning and experiencing (Ataei & Najibi, 2010).

## 4. INDIAN INITIATIVES IN E-CONTENT

### 4.1 Open Education Resource:

Indira Gandhi National Open University (IGNOU)

National Digital Repository of learning resources established by the Indira Gandhi National Open University (IGNOU) in India. The repository eGyankosh, envisage to store, index preserve, distribute and share the digital

learning resources of Open and Distance Learning (ODL) institutions in the country. The repository supports seamless aggregation and integration of learning resources in different formats such as self instructional study materials, audio-video programmes, and archives of radio and television-based live interactive sessions.

National Programme on Technology Enhanced Learning (NPTEL) aims to enhance the quality of engineering education in India by developing curriculum based video and web courses. This is being carried out by seven premier institutions as a collaborative project. Approximately 140 courses are in various stages of preparation and distribution.

National Council of Educational Research (NCERT) is leader in the area of 'open courseware' (OCW). NCERT is in the process of making schoolbooks freely available —mainly in English, Hindi and Urdu — to students and teachers via its website ([www.ncert.nic.in](http://www.ncert.nic.in)). This portal provides easy navigation to textbook chapters by title / subject of the book for a particular class.

#### **4.2 E- Journal and E- Content Acquisition**

**FORSA (Formula for Resource Sharing in Astronomy and Astrophysics, Hyderabad) :** The Astronomical Research Institute with common subject interests formed in to a group in 1981 to share the information related to common interests for Resource sharing and establish common tools for information retrieval.

**CSIR (Council of Scientific and Industrial Research) :** The Council of Scientific and Industrial Research (CSIR) can take the credit being the first major and formal consortium at national level. This well conceived pilot project with a limited central funding set a process and model for identification of resources and favorable licensing negotiation. This has been established in April 1, 2000 to benefit its 40 laboratories in India.

**JCCC & VIC, Hyderabad :** This consortium was set up on January, 2002 by Virtual Information Centre of ICICI knowledge park, Hyderabad. The members are OU, Hyd., NIN, CCMB, IICT, ICRISAT, and NCL, VIC fully funded by VIC. The site is accessible via JCCC interface for information.

**IGCAR (Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamil Nadu) :** IGCAR has 12 units and 14 field stations under one umbrella for sharing the information through consortia. The institute has agreement with Elsevier journal publishers.

**OUHYD Maths Consortium: Hyderabad, A.P :** Osmania University, Hyderabad was pioneer to establish consortia in 1998. The members are IISC, ISI and Maths. This is the only consortium in the field of Mathematics covered by mathematical science network of American Mathematical Society.

**INDEST (Indian National Digital Library in Engineering Sciences and Technology, MHRD, New Delhi):** This Consortium can truly take the credit as the first well planned and thoughtfully implemented national and multi-sector consortium with both funding and management commitment. This was established by Govt. of India, Ministry of HRD, New Delhi in December 2000. This consortium disseminates electronic resources of information to Technical education system in India. All IITs, IIMs, RECs and 38 leading Engineering and Technological institutions can search online access of journals. INDEST has expanded its consortium membership to 120 institutions at present.

**SONET (Society for Networking for Excellence in Technical Education, Hyderabad):** Sonet has been established in September 2003 with Association of all engineering colleges in A.P. The Department of Technical Education A.P. is coordinating to e-direction of all engineering colleges of A.P.

**Health Sciences Library & Information Network (HELINET):** Health Sciences Library and Information Network (HELINET) is the first such initiative of a University consortium piloted by the Digital Library at the Rajiv Gandhi University of Health Sciences (RGUHS) covering 25 medical libraries in the State of Karnataka. HELINET planned its funding for content licensing costs from the participating members, with central infrastructure and service development funding at HELINET headquarters coming from RGUHS. WHO has encouraged this project by providing support funding for the development of a resource-sharing gateway.

**UGC – Infonet (University Grants Commission – Information Network) :** University Grants Commission has launched two projects namely “UGC-INFONET” and “UGC-Infonet: E-Journals Consortium” for dissemination of e - information to the academic community of the country in the year 2004. Both the projects are being

executed and implemented by INFLIBNET in collaboration with UGC and ERNET India. This is the largest consortium with a vision and plans to reach out to more than 150 universities and several thousand colleges affiliated to these universities, over a period of time.

An UGC- INFONET E journal consortium is a memorable project in the history of academic community and users in India. All Academic institutions, which come under the purview of UGC, are members of this consortium. It is the largest academic library consortium in India monitored by INFLIBNET. It is subscribing e – resources of high quality collection of more than 4000 full text e - journals, Indexing and abstracting databases for the benefit of millions of users in India, from 25 different publishers to the academic community, comprising of faculty, staff, researchers and students.

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