Design and Development of E-Content for Distance Learning Students: A Special Reference to Library and Information Science Courses in Baharathidasan University

Abstract

The main aim of this study was to design an e-learning course materials for distance education learners in the field of Library and Information Science (LIS) of Bharathidasan University, India. The design phase of the content preparation, the steps to be followed, validation of the content by a set of jury members and finally integrating and hosting of the content was discussed. The study also emphasizes the need for e-learning and provides directions for further research.

Keywords: E-Content, LIS, BLIS, MLIS, Distance Learning, Bharathidasan University

Introduction

In the recent times, Information and Communication Technology (ICT) has become an essential component of human life (Castells, 2010). It has changed the means by which people generate, distribute and utilize knowledge (S. Islam, Kunifuji, Hayama, & Miura, 2011). Due to the increase in population, people who are on a quest for life-long education has enhanced rapidly (Horrigan, 2016). This has made the educational establishments to implement innovative ways to meet the demands of these mass learners. The usage of ICT in higher education has influenced the process of teaching and learning, which led to the development of new teaching and learning environments (Raschke, 2002). These technology-based learning is becoming essentially ubiquitous in higher education and e-learning allows diverse forms of learning and teaching with the help of ICT (Lonn & Teasley, 2009; Nishino, Toya, Mizuno, Aoki, & Fukumura, 2009). E-learning could be interpreted as a computer-based educational system that permits you to learn without any geographical barrier (TalentLms, 2014). It is delivered with the help of internet with the aim of dissemination materials to the students (Hartley, 2001). The are numerous advantages associated with implementing e-learning systems in higher education. Implementation of the conventional learning system is time-consuming, expensive and challenging (Hazeri & Farzin-Yazdi, 2015) whereas e-learning has the advantage of making the educational content available anytime (24*7), anywhere.
without geographical barriers and the real time of learning would be decreased to 25-30\% (Atreja et al., 2008). Electronic content (e-content) denotes to the dissemination of information or content by means of network media or internet (Commonwealth of Learning and KSOU, 2016). It is an important tool and powerful tool in an e-learning system which is valuable to both instructors and learners (Panneerselavam, 2013).

Centre for Distance Education, Bharathidasan University

The Centre for Distance Education (CDE) of Bharathidasan University (BDU) was established in 1992 with the aim of offering education to remote learners. At present, it offers nearly 60 programmes at undergraduate (UG), postgraduate (PG), diploma and certificate levels (Centre for Distance Education, 2018). It offers LIS education in both UG (Bachelor of Library and Information Science, BLIS) and PG (Masters in Library and Information Science, MLIS) levels.

Research Incentive and Aim

At present, CDE-BDU is offering distance education to its learners by means of conventional ways like face to face interactions and classroom teaching on Saturdays and Sundays. The advent of ICT has brought a great shift in world educational systems (M. S. Islam, Kunifuji, Hayama, & Miura, 2011). Hence, this study was formulated with the aim of taking the first step towards that shift, by designing e-content for the distance learning courses in the field of LIS.

Need For E-Learning in LIS

Library and Information science (LIS) is one of the essential academic domain which is obtained by the merging of two disciplines Library science and Information Science. It teaches how the resources are organized, stored, preserved, managed and effectively disseminated to the user community (M. S. Islam et al., 2011). Since its inception, LIS education has come a long way as it has been expanded to incorporates new areas like blogging, wiki, podcasts (Wani, 2008), digital library, knowledge management, web 2.0 tools, etc (Roknuzzaman & Umemoto, 2009). As a result, institutions offering LIS programmes across the globe are
welcoming technology to impart LIS education (M. S. Islam et al., 2011). The following are the needs for embracing e-learning in LIS education:

- To expand the level of LIS Students
- To fulfill the needs of the demands in the digital world
- To produce trained and qualified LIS professionals
- To enlarge the employment opportunities
- To start e-publishing
- To revamp traditional LIS education in India (Ramdas Lihitkar, Anilkumar Naidu, & S. Lihitkar, 2013).

**Design and Development of E-content**

Before developing any e-content, it is essential to have a clear and well structured instructional design. Instructional design is a methodical process designed to find out solutions for instructional problems (Nachimuthu, 2012). It makes the process of knowledge acquirement more effective and engaging (Commonwealth of Learning and KSOU, 2016). Various steps are associated with the process of instructional design: fixing a goal for instruction, analyzing the goal, domains involved in the learning process, learning outcomes, questions for assessment and well structured instructional layout (Dasari, 2001). The mere hosting of existing and readily available materials on a separate website doesn’t transform as e-content. It requires a methodological and scientific approach by following appropriate instructional design to produce good quality e-content. Any e-content should have its prime focus on four aspects: Cognitive Perspective (learning involves brain activity), Emotional Perspective (involves motivation, engagement), Behavioural Perspective (role-playing, setting of job etc) and Contextual Perspective (social and environmental aspects of learning) (Mishra, Patel, & Doshi, 2017). The development of e-content consists of six stages as furnished below (Nachimuthu, 2012).

**Table 1: Development Process of e-content**

<table>
<thead>
<tr>
<th>Stages</th>
<th>Description</th>
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<tbody>
<tr>
<td>Analysis Phase</td>
<td>Identifies subject experts, target audience, budget, methods of delivery</td>
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<tr>
<td>Design Phase</td>
<td>Involves planning of the e-content: software selection, creative contents with multimedia interactions</td>
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<tr>
<td>Development Phase</td>
<td>Involves production of the designed e-content: mixing content</td>
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<tr>
<td>Phase</td>
<td>Aids in administering the content: spelling mistakes, content errors, videos, hyperlinks are tested</td>
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<td>-------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Testing Phase</td>
<td>Implementing the e-content to the target audience: explains how to install, use, difficulties experience and so on.</td>
</tr>
<tr>
<td>Implementation Phase</td>
<td>Receives feedback from learners and instructors, accordingly modifications are carried out.</td>
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</table>

**E-Content: Development Process**

The existing materials based on the syllabus of subjects will be collected at the initial stage and will be organized according to the different subject heads. The content will be modified and will be depicted in a simple and coherent language by emphasizing the notions in the form of bulletin points instead of a long paragraph. The modified content will be next sent for expert validation to a set of jury members who are subject experts in the LIS domain. After getting consent from the subject experts, the e-content is ready for its intended target audience but it needs to be integrated with a learning management system (LMS) and should be hosted in a separate domain in order to ensure remote access.

**Conclusion**

The effective e-content is created when the skills of domain expert are merged with the skills of instructional designer (Lihitkar, 2013). This study was initiated to develop a framework for creating e-content for distance learning students in the field of LIS in Bharathidasan University. The development of e-content is not an easy task, as it needs to undergo repetitive scientific procedures to make it pedagogically ready for the learners. It can be further assured, that e-content enhances the teaching-learning process in e-learning systems. This study explained the design phase of the proposed e-content development of two subjects on LIS domain. The next phase of this study would be delivering the content to the learners by means of LMS and assessing the same for its effectiveness.

**References**


