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

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ABSTRACT

The main aim of this study was to design 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 were 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 of materials to the students (Hartley, 2001). There 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).

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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 the 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 (Islam et al., 2011). since its inception, LIS education has come a long way as it has been expanded to incorporate 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 (Islam et al., 2011). The following are the needs for embracing e-learning in LIS education:

➢ To expand the level of LIS Students
➢ To fulfil 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

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

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 sent next 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 experts 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.

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Implementation of Institutional Repository using DSPACE: A Case Study at University of Peradeniya

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ABSTRACT
This article describes the Implementation of Institutional Repository using Dspace Software at the University of Peradeniya. This IR is aimed to give access to research scholarly articles to the Institution's researcher and to make the visibility of the University of Peradeniya researcher. It also gives access to University database and more importantly some of the logical approach is made in different collections and communities. This article also explains the hard and software requirements provided along with information about the open source software. This article provides evidence on how the University of Peradeniya IR was built from scratch and how various different types of collection with many forms and file formats can be uploaded using Dspace software. Huge amounts of problems were faced during the installation and customization of metadata forms for different collections using Dublin core metadata fields. Dspace permits workflow, customization and community/collection based content and submission by different user communities. This paper helps in planning to build an IR and also helps the beginners in getting an idea of how different file formats can be used for different collections in order to maintain uniformity.

Keywords:Institutional repository, D space, Digital collection

INTRODUCTION
The idea of converting library materials into digital formats for creating digital collections has advanced rapidly in the last few years, thus leading to the concept of a virtual library or a library without walls. Making the concept functional involves the use of hardware and software for capturing and converting an item into a digital format. Further, it is to be matched by developing a set of methods for describing and retrieving the digital information. The collections, services and information needs of the University of Peradeniya library are different from other types of libraries. The information required for R&D work, Engineering, Agriculture, dental, Medical, Veterinary Sciences, Management, Allied Health Sciences, Arts and Science members and students are normally available in books, journals, technical reports, patents, standards, theses, databases, institutions websites etc., in various places and also in various formats and media. These users require the latest information for the time bound for their study. It is very difficult for a single library to acquire all these resources and provide them to their users, yet, at the same time, it is the duty of the librarian to provide the required latest information, wherever available and in whatever form and whenever required. Universally, librarians are being urged to digitize information in anticipation of the advantages. Even if this new technology does, indeed turn out to be revolutionary, one should be cautious keeping in mind the limitations. It is important to find out the various patterns in digital applications that enable effective and creative use in the traditional library functions of collecting, reserving, and making information accessible. That is

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