

Implementing E-Learning and Digital Library for Improved Learning and Teaching Skills

Akingbade L. O.

Department of Computer Engineering, Federal Polytechnic Ilaro, Ogun State

Abstract:

E-learning and digital libraries applications have become increasingly important in addressing the needs of both students and teachers eager to gain fast, accurate, specific, and wide range of knowledge in formal education courses just by the click of a button. E-learning and digital libraries applications work in partnership to offer a different method of gaining knowledge and information to staff, students and other teaching bodies in a school. Digital Libraries are key to providing opportunities for students to have access to quality assured documentation for studies via the Internet. The aim of this paper is to explore the implementations and opportunities facing e-learning and digital libraries if they are to play an increasingly active role in lifelong learning. E-learning tools helps to ensure that teachers become significant partners in the education process. Findings reveal that as the volume of web information grows, both applications becomes a central player in the modern world of education and information dissemination, to help both teaching staff and students structure their learning in a meaningful way so that they can share their understandings, knowledge and skills in using information and communication technology (ICT) to work in the context of lifelong learning.

Keywords: E-learning, digital libraries, internet, communication technology.

Introduction

Schools are the most vital social institution in any advanced society. How well they work is a concern for teachers, students, parents, managers, and the society at large. For this reason, the standard of our schools is centered around effective teaching skills and efficient learning process. Promoting the learning and achievement of students is a main aim of school education. Teaching is the main way of achieving this. Teaching and learning are what ultimately make a difference in the mind of the learner, and thus affect knowledge, skills, attitudes and the capacity of young people to contribute to contemporary societies.(Dahl, 2012). That is why we need to introduce advanced methods of teaching and learning through the use of Electronic learning and Digital Libraries. Teachers and students can easily communicate via E-learning whether in or out of class of classroom, also student and teacher can collect and drop information respectively in the absence of the other.(Biggs, 2010) The Digital library system brings the library to your finger tips over a network, thereby making information and learning more interesting and easily accessible at any particular time. This research complements that effort by introducing advanced technology for better teaching aid and building learning skills.

The Concept of Electronic learning and Digital Libraries

Digital library also known as electronic or virtual library is a managed collection of information, with associated services, where the information is stored in digital formats and accessible over a network. (Ubogu, 2013) A crucial part of this definition is that the information is managed. A stream of data sent to earth from a satellite is not a library. The same data, when organized systematically, becomes a digital library collection. Most people would not consider a database containing financial records of one company to be a digital library, but would accept a collection of such information from many companies as part of a library. (Tripathi, 2012) Digital libraries contain diverse information for use by many different users, they range in sizes from tiny to huge. They can use any type of computing equipment and any suitable software, Universal access to digital libraries and information services is a goal.

E-learning also called "Internet-Based training" or "Web-Based Training", is any kind of learning supported with the aid of information and communication technology (ICT) or e-media: not only the Internet, but also more traditional media as video, television, radio, telephone, satellite, and CD-ROM are envisaged.(Akeroryd, 2011) E-learning is essentially the network-enabled transfer of skills and knowledge, it refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms and digital collaboration.

E-learning and digital library resources

As libraries work to enhance their presence on the web, a growing number are investigating the potential of electronic course reserves (e-reserves). In the e-reserves model, the library makes available, through the worldwide web, items that faculty have selected and "placed on reserve" for students on a particular course. Many libraries have initiated their

own e-reserve projects. Electronic delivery of course reserve material has become a hot topic in the library literature (Slade, 2010). Managing the remote access and authentication issues involved in making digital resources available has become a significant area of support to users of the digital library. Librarians may be called upon to respond to questions concerning log-in and password information, browser configuration, software installation, and a range of troubleshooting needs. Access problems are hugely frustrating for e-learners, and must be resolved quickly. (Raitt, 2010). Technology offers opportunities to be innovative, but it is important to bear in mind that not all e-learners are equal when it comes to access to computing equipment, the availability, speed, and stability of internet connections, or the information skills that are needed to make optimum use of digital libraries. (Simmons, 2012). Although there has been a shift away from purchasing print materials to be housed in a physical building and toward providing access to licensed digital resources made available over a computer network, librarians continue to work to resolve issues pertaining to distance delivery of resources that are unavailable in digital format. Online catalogues and indexing and abstracting systems provide e-learners with convenient access to bibliographic information about valuable scholarly documents. (Peacock, 2010). A library website can function as an information gateway, an entry point to a range of online resources, with key components being the library catalogue and journal databases. Most online catalogues permit the integration of electronic books and electronic journals, enabling

Relationship between Digital Libraries and E-Learning

The definitions of E-learning and digital libraries indicate an inseparable link between E-learning and digital libraries or electronic libraries. (Karim, 2012) To a large extent both apply similar communication technologies to enhance learning, teaching and research. E-learning assumes a collaborative effort and integration of content, resources, and services in support of flexible learning and research. (Campbell, 2010) An academic library, faculty, and academic development department managing e-learning may use same technologies to facilitate learning and access to resources and services. With the tremendous growth of the internet, e-learners have access to an overwhelming range of information sources available at the click of a mouse: library resources, government information, news sites, advertising, and many other forms of resources. Librarians have traditionally selected and organized resources with great care. In building digital libraries, librarians have the opportunity to provide e-learners with direction and to rescue them from information overload. A digital library can link e-learners to library catalogues, licensed journal databases, electronic book collections, selected internet resources, electronic course reserves, and tutorials, and to forums for communication and interaction with others. The digital library permits e-learners to access library and networked resources and services anytime and anywhere that an Internet connection and computing equipment are available.

Generally, E-learning has been integrated into university curricula by different faculties, while from the library side its integration was seen as an opportunity to integrate library resources and services in support of learning, teaching, research, and outreach. It is clear from research that Digital library and E-learning are related and integrated in technology managed environment. E-learning can effectively take place in a digital environment. According to (Wang, 2013), E-learning “denotes information and communications technology enhanced learning by delivering learning contents and activities via internet, intranet/extranet, audio/video, satellite broadcast, interactive TV, and CD-ROM” Many authors agree with this definition and the fact that e-learning is blended traditional face to-face teaching and learning that is combined with using communications technologies to enhance student focused and directed learning and teaching processes (Ojedokun, 2012) that support both life-long and distance learning.

Why The Need for E-learning and Digital libraries

- The number of students keeps growing, thus there is a need for more efficient and effective education. Different types of students are asking for education; Different students bring different experiences with them.
- Increasingly, work and study are combined, and that leads to a need for more flexible learning arrangements in which the campus or school building is no longer central to the educational process.
- Lifelong learning leads to an emphasis on "learning to learn". Knowledge becomes obsolete at an ever-increasing rate in a knowledge economy, and knowledge workers need to be able to refresh their knowledge on a regular basis.
- Because of the differences between students, there is a need to accommodate different learning styles, customization and alternative learning routes. Courses have to take more into account the different experiences and backgrounds of students.
- Higher education institutions have long had a monopoly in providing education, but increasingly, companies and public bodies possess knowledge that can be reused for educational purposes, partly for in-house training (knowledge management) but also to offer to external markets.

Benefits of Implementing E-Learning and Digital libraries into Teaching sills

The potential of E-learning to significantly affect education in developing countries is thus significant. Identifying the actual impact that e-learning programs have had on students, schools and their countries is, however, difficult. Because

of the newness and diversity of the programs and the complexity of factors affecting outcome, measuring E-learning's impact is an emerging science. (Twigg, 2011). Here are some of the benefits:

- The library resources will never be out or misplaced and will be available at anytime, any place, and anywhere for the students to learn from.
- The need for added library space may decline, as student no longer have to struggle for space to sit within the library and cost of retrieving and shelving materials will be reduced.
- Learning access is provided to more complete set of journals than, in many instances, now exist on many library shelves.
- Through the Internet, course material can be offered independently of time and place. Modularization makes it possible to offer different and flexible learning routes.
- An ever-increasing number of students have access to the Internet, whether at home or on campus. Costs of Internet access will continue to drop.
- Addresses the shortage of learning material such as textbooks for students. The material could be made available on hand-held devices through Digital libraries. Interactive features such as quizzes or games could improve the level of learning and understanding.
- Improves the quality of education by providing improved informational content and learning approaches. Interactive, communicative e-learning may promote the development of skills in students (so called "21st Century Skills") such as critical thinking and problem solving, communication, collaboration and creativity.
- Provides students information and communications technology skills. The graduates will be better equipped to contribute to the knowledge-centered globalized economy of their counties.
- Provide a learning environment through which students can build on their acquired knowledge to build on existing concepts, or build new concepts altogether.
- To promote student active learning skills and strategies
- To develop student independence and responsibility for own learning and to encourage more co-operative and project-based learning
- To give students drill and practice exercises and make the learning process more interesting and engaging.

Benefits of Implementing E-Learning and Digital libraries into Teaching sills

The technology of E-learning and Digital library, enable teachers to use their knowledge of matter, teaching and learning, and technology to facilitate experiences that advance student learning, creativity, and innovation in both face-to-face and virtual environments. It continuously improves their professional practice, teaching skills through effective use of these digital technological tools.(Karim, 2012) Teachers are able to design, develop, and evaluate an authentic teaching experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes as related to the standards for students.(Biggs, 2010) Below are some of the benefits:

- The cost of tracking the arrival of each journal issue in libraries, claiming, and periodical binding will be eliminated through the use of digital libraries
- Upgrade the level of knowledge and skills of the teachers in parallel to that of the students. Empower the teachers to facilitate the learning process by transforming themselves into team leaders and role models of "continuous learning".
- Addresses the shortage of teachers, especially science and other specialty teachers. It can do this by providing high quality teaching materials, such as videos, interactive software or information from a "cloud" on the Internet or a local computer
- The full integration of e-learning into the school curriculum, textbooks and tests

Online Services in E-learning and Digital libraries

There are many E-learning and Digital library settings and technologies available to use in schools, each with their own advantages and applications.(Lukasiewicz, 2012) Often the best solution is a combination of technologies depending on the particular need and the learning environment. Online services in e-libraries have evolved since computers were first used in education. Lang, (Ubogu, 2013) identifies the following as core services in e-libraries.

- The collection: a wide variety of materials in digital forms – books, journals, manuscripts, reference works, theses and dissertations, government documents, maps video, images and pictorial materials, music scores.
- Networking and imaging technologies to support and enhance all aspects of library basic operational activities, repository software – Dspace, E-print, etc. Open Archival Initiative (OAI).
- Expertise within the library for the application of new technologies to library activities and bibliographical research of all kinds.

Conclusion

Digital library and E-learning are generally seen as application of emerging communication technologies in a collaborative environment in support of learning, teaching, and research. With E-learning technology, teachers and students are provided with seamless access to electronic information resources and services. Digital Library has made some proactive initiatives in support of E-learning using emerging cutting-edge technologies to provide access to print and electronic resources and services. However more remains to be done as emerging technologies provide great opportunities for Digital Library to integrate its resources and services into learning, teaching and research. More efforts need to be put in place to exploit available cutting edge technologies to implement electronic reference service and digitize multimedia resources. Finally, the digital library should conduct online tutorials for improving the information searching skills of the students and so doing, contributing greatly in improving teaching skills of our teachers.

REFERENCES

- [1] Akeroyd, .J. (2011): Information management and E-learning: some perspectives. As library Proceedings: New Information Perspectives, 57(2), 157-167
- [2] Biggs, J. B. (2010): Teaching for Learning: The view from cognitive psychology. Hawthorn, Vic: Australian Council for Educational Research.
- [3] Campbell, N. G. (2010): Learning to teach online: An investigation of practice in teacher education. Unpublished masters thesis, University of Waikato, Hamilton, New Zealand.
- [4] Dahl .M. (2012): Digital libraries: Integrating content and systems. Great Britain: Chandos Publishing Limited.
- [5] Karim, .H.A. (2012): Uniting e-libraries and e-learning: challenges and opportunities for Vilis Brunei.
- [6] Lukasiewicz, .A. (2012): Exploring the role of digital academic libraries: changing student needs demand innovative service approach. Library Review, 56 (9), 821-827
- [7] Ojedokun, .A. (2012): Transforming the library into a teaching-learning laboratory: the case of University of Botswana Library. Campus-Wide Information Systems, 20 (1), 25-31
- [8] Peacock, J. (2010), Information literacy education in practice, in Levy, P. and Roberts, S. (Eds), Developing the New Learning Environment: The Changing Role of the Academic Librarian, Facet Publishing, London, pp. 153-80
- [9] Raitt, D. (2010), Digital library initiatives across Europe, Computer in Libraries, Vol. 20 No. 10, pp. 26-35
- [10] Simmons, D.E. (2012), The forum report: e-learning adoption rates and barriers, in Rossett, A. (Ed.), The ASTD E-Learning Handbook, McGraw-Hill, New York, NY, pp. 19-23
- [11] Slade, A. (2010), International trends and issues in library services for distance learning: present and future (Keynote Address), in Brophy, P., Fisher, S. and Clarke, Z. (Eds), Libraries Without
- [12] Walls 3: The Delivery of Library Services to Distant Users, Library Association Publishing, London. Tripathi, M. (2012): E-learning through digital libraries: An Indian scenario. Book of Abstracts of 2nd E-learning Africa Conference held at Nairobi, Kenya.
- [13] Twigg. M. (2011): Strategic change in higher education libraries with the advent of the digital library and E-learning during the fourth decade of Program. Program: electronic library and information systems.
- [14] Ubogu, F.N. (2013): Trends in digital library services in academic libraries in South Africa: Library portals and ETD System. Conference Proceedings of 44th Annual National Conference of NLA held in Abuja, Nigeria.
- [15] Wang, .M. (2013): The e-learning library: only a warehouse of learning resources. The Electronic Library, 22(5), 408-415.