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E-Learning and Its Impact on Library & Information Services

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Abstract

Recently there has been a rapid growth in internet in the use of on-line education, which means of becoming literate with new mechanism such as computer networks, content portals, e-libraries, distance learning and web enabled class rooms. The present paper covers what is e-learning, need for e-learning, technological tool used for e-learning etc. Designing aspects of e-learning will also be covered. As we have living in the era IT, it has pervaded the all fields of human lives. So, it has entered the library and information profession also. Areas of library and information profession, which is influenced or brought revolutionary changes with the impact of e-learning are also mentioned.

1. Introduction

 Technology has dominated all spheres of life. The education is also one of the fields where we can see the impact of information technology. Education and library is twin sister. Over several years the education process has seen drastic changes in imparting knowledge. During the last few years it has been seen, an almost exponential development and growth of the digitalization and the Internet, with little sign of a slow down. No longer is Internet access restricted to a few selected education establishment it is now available to anyone in their place of work, local libraries, the internet cited and even in the information that has becomes the key to the success in different walks of life.

E-learning is becoming an influential force in higher education today; a force, which has some kind of presence on almost every campus and in an ever-increasing number of college and university courses. It is a growing and dynamic environment, one in which fluidity and change is the norm culturally, institutionally and technically. Within this environment, the academic library is still searching for a permanent, comfortable and serviceable position that is nimble enough to be flexible, accessible and continually up-to-date with the wider university structure. Once synonymous with distance learning, e-learning has quickly evolved to include not only courses that are taught primarily online and over a distance, but also to include traditional "brick and mortar" courses that have been enhanced with electronic elements. In fact, these hybrid courses now outnumber distance-learning courses.

2. What is E-education?

The term e-education means electronic and it is basically the online delivery of information communication, training and learning, E-education seems to have a multiplication of definitions to each of its users and the term seems to mean something different. A very comprehensive definitions has been given by the Cisco system, which defines E-education is Internet–enabled learning, components can include content delivery in multiple format E-education provides faster learning at reduced costs, increased aces to

learning and clear accountability for all participants in the learning process in today's fast- paced culture, organizations that implement E-education provide their work force with the ability to turn change into an advantage.

3. Why E-learning?

- ➢ Learning is self paced and gives students a chance to speed up to slow down necessary
- ➢ Learning is self-directed, allowing students to choose content and appropriate to their differing interests, need and skills levels
- ➢ Accommodates multiple learning styles using as verity of delivery methods geared to different learners, more effective for entrain learners
- ➢ Designed around the learner
- ➢ Geographical barriers are eliminated, opening up broader education options
- ➢ Accessibility makes scheduling easy and allows a greater number of people to attend classes on demand access means learning can happen precisely when needed travel-time is reduced or eliminated
- ➢ Overall students costs are frequently less (tuition, residence, food)
- ➢ Potentially lower costs for companies needing training and for the providers
- ➢ Fasters greeters students interaction and collaboration
- ➢ Fasters greater student/instructor contact
- ➢ Enhance computer and internet skills
- ➢ Draws upon hundreds of established pedagogical principles
- ➢ Has the attention of every major university in the work, most with their own online degrees, certificate and individual course

4. Need for E-education

Due to the social technological and economical transformation, e-education has become an important aspect of learning as globalization encompasses local economies like never before; the development of a skilled work forced becomes an international concern. W.R. Hambrecht views some general e-education benefits as seen from the corporate side e-education are given.

The new global economy posse more complex challenges to work, requiring higher levels of education, computer literacy, critical thinking, information analysis, and synthesizing skills. However, education deficiencies have to be eliminating through the organization of need based curriculum and teaching methods as they relate to market needs. Academic and corporate environments must redesign to adequately prepare people to function in a information society.

At the beginning of the new millennium, corporation view learning increasingly as a competitive weapon rather than an annoying cost factor. Business success depends more and more on high-quality employee performance, which is turn, requires high-quality training, corporate executives are beginning to understand that enhancing employee skills is key to create a sustainable commutative advantage. In the quest to remain competitive in today's labour marked, companies are exploring advances in technology to train employees more rapidly, more effectively, and at fewer expanses than in the past.

Organizations and training providers need to evaluate whom they train and how. Today, traditional students in higher education make up less than 20% of all students. The fastest growing group attending higher education institutions is working professionals. This new group of "learning adults" is seeking education principally to advance their careers and increase their salaries. For universities and business-to-consumer (B2C) training providers, these individuals are excellent candidates for education delivered to their homes or offices.

5. Strategies for Developing E-learning Infrastructure and Services

There should be a more holistic approach is required in the development of e-learning within the institution. While there are significant technical challenges to be addressed, the major institutional impediments are cultural and historical in nature. Leadership and visions are needed to make e-learning a satisfying and cost-effective teaching strategy. In more practical terms there is a need for top-down and bottom-up strategies together with short term and long-term strategic initiatives. Given the present policy

vacuum in many institutions with regard to e-learning, the library community has a major opportunity to articulate its requirements in the e-learning space. In the short term, with the judicious use of existing collaborative mechanisms, it is possible for libraries to make significant progress in integrating and exposing library services in course management systems and learning activities. At a broader level, there is a need for a coherent planning approach to managing existing and emerging digital assets. There are no quick solutions for addressing this complex issue, but opportunities exist for the library both within institutions and within collaborative frameworks to contribute to the building of infrastructure for digital asset management. It is highly likely that there will be multiple repositories within any one institution, which will require metadata schema and federated searching services to ensure specified levels of interoperability. It is also likely that the institutional repository infrastructure will need to interact with repositories in other institutions; therefore, there will be a requirement to offer services that support a distributed network of repositories across various functional and disciplinary domains. In other words, there is a need for conceptual and technical infrastructures that allow the library to offer pertinent services. At the same time the library should be well positioned to update services as new opportunities and viable alternatives present themselves. While the rate of change will continue to differ across institutions, the underlying challenges of infrastructure development common to all create a strong case for collaborative effort among institutions.

6. Designing Aspects of E-learning

Linking analyzing and synthesizing at a conceptual level helps to facilitate learning, and to capture and mange the knowledge that results form learning. Relationship requires interaction, including both intellectual and personal relationships. And strategy requires a synthesis of information about procedures and context, and the experience and knowledge against measure and evaluates them, knowledge includes content, context, and relationships that learning required exploration, and links at the conceptual level, as well as personals an intellectual interaction, and the ability to

manage information about procedures and contexts against the template of experience.

6.1 Creation of Course Modules

The quality of the e-learning experience follows from the quality of the course modules and of the interactions among students and instructors that make up on-line courses. The faculty members, students and instructional staff who design and produce on-line courses modules need access to powerful, easy-to-use authoring tools and reliable pedagogical strategies. Responsibility for this element is distributed among all levels of the university, form individual employees and students to departments, colleges, and central university support facilities.

6.2 Management of Course Modules

Innovative databases management practices are required to facilitate efficient revision and re-purposing of courses modules and to faster sharing of modules among course authors and programs. Responsibility for this element is shared among departments, colleges, and central university support facilities.
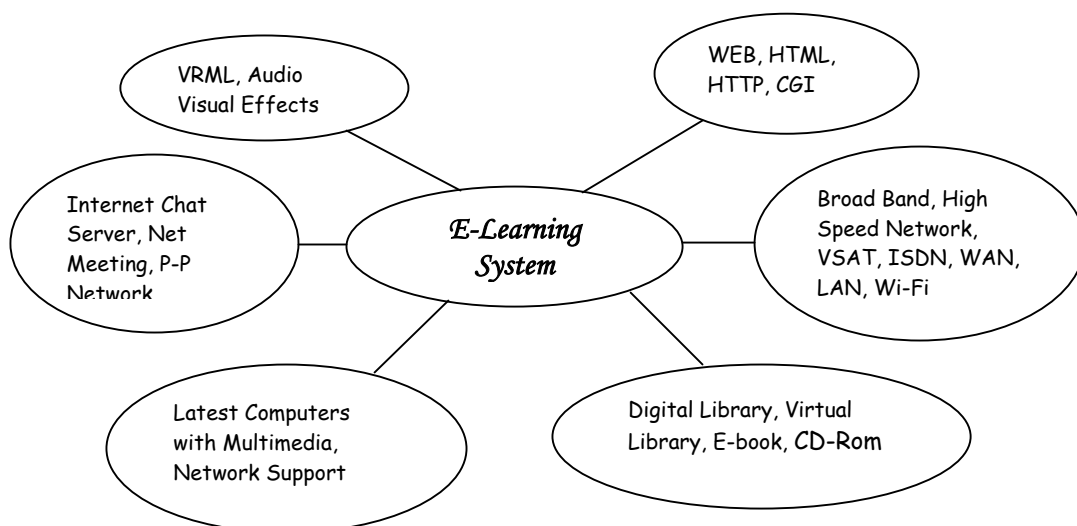
6.3 Delivery of Courses

At the core of the common-learning environment is a delivery system that makes course modules available on-line, mediates instructions between instruction and students, and helps the university to efficiently manage students' records. Primary responsibility for the element resides with support facilities.

6.4 Delivery of Support Services

All Penn state students-on campus or off- deserves access to technical support, library resources, advising services, and other key aspects of the university experience. A common e-learning environment will help facilitate this access. Primary responsibility for this element resides with central university support facilities.

7. Tools for E-learning

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      ┌─────────────┐                    ┌──────────────┐
      │ VRML, Audio │                    │ WEB, HTML,   │
      │Visual Effects│                   │ HTTP, CGI    │
      └─────────────┘                    └──────────────┘
 ┌──────────────┐                                  ┌──────────────┐
 │ Internet Chat│        ┌─────────────┐           │ Broad Band, High│
 │ Server, Net  │────────│ E-Learning  │───────────│ Speed Network,  │
 │ Meeting, P-P │        │  System     │           │ VSAT, ISDN, WAN,│
 │ Network      │        └─────────────┘           │ LAN, Wi-Fi      │
 └──────────────┘                                  └──────────────┘
      ┌──────────────┐              ┌──────────────────┐
      │Latest Computers│            │ Digital Library, Virtual│
      │with Multimedia,│            │ Library, E-book, CD-Rom │
      │Network Support │            └──────────────────┘
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8. Different Modes of E-learning

At present the online courses can be offered in following modes:

- Online mode
- E- correspondence mode Underline, mode, the learners are entitled to the following benefits:
- Access to virtual classroom in the website for collaborative learning experience via a host of interactive tools including chat, discussion forum, electronic white board and e-mail.
- Semester wise interactive courseware CD
- Optional short duration contact program in each semester
- Facility top order the courseware books (optional)
- Access to information section, providing links to latest news channels, book publishers providing facility to order books online, online games, greetings, music software downloads and certification.
- Facility to create a personal web page.

9. Impact of E-learning on LIC Services

In the every walk of our day-to-day life we are finding the use of technologies and libraries are not exception for that. The single force that has brought revolutionary changes in functioning of libraries is IT. The introduction and application of these modern means have evaluated and modern day library to a very high pedestal, improving and altering its image, functions and services to revolutionary extant and with great efficiency and effectiveness.

IT had virtually immense potential for a variety of applications in libraries. IT helps libraries in creating databases of their collections and making them available for easy access to users inside as well as outside through networks. IT enables libraries to provide most efficient and specialized information services. It has fairly established that efficient information support and effective communication in an organization are closely associated with high performance, productivity and innovation.

Computers can be used in performing most of the repetitive works of library in a desired number of times speedily and economically without fatigue and vantage of time.

Most of the operations with library are inter-related, inter dependent and mutually supportive for the overall mission of library. Use of IT applications to interface and integrate each function with the other saves lot of staff time as the same data used not to be entered at every stage.

E-learning has brought many changes in Library Activities and Services. There are four broader areas of which E-learning has brought many changes;

- Library Automation
- Information Storage and Retrieval (IRS)
- Office Automation
- Resources sharing network.

9.1 Library Automation

Automation has helped libraries improving library operations and accelerating their working. Now the computers are being used in the areas like of acquisition, technical processing, circulation control and serial control.

The computer acquisition system has eased the burden for reorder checking of duplicate purchase orders and follow-up action can also taken automatically. IT has speed up the accession, processing work by elimination a large amount of repetitive and time – time consuming work Machine-readable cataloguing is easy to manipulate as it can be searched on-line and from which varies of outputs are available. On-line bibliographic databases have significant effect on collection development.
The lengthy and time consumable procedures of conventional circulation system are taken by the technological devices like computers, barcode scanners and its software's helps in performing these operations quickly and thus saving the time of users and staff. IT helps in charging and discharging of document, reservation of documents, sending reminders, and collection of overdue, maintenance of various records.

Computers help in periodical scrimption and subsequent monitoring of the receipts of individual issues. It helps in management record of budget sanctioned and amount expended for different categories of serials.

In the process of ILL services, IT has influenced very much. By using the modern IT devices like computers, Fax, E-mail, etc. the LICs can easily search the on-line public access catalogues (OPAC) of others libraries for a particular document and sends the requisites for ILL and get the document in a short time.

A reference service is influenced by the IT than any other services of the library and ICs. The new IT has reduced the response time for reference query. The major reference is readily available in Optical Discs as well as online databases.

9.2 Information Storage and Retrieval

After quit accusation and processing of documents through computerized systems, the focus is to retrieve and disseminate the required information. On line information retrieval is one of the required information. On line information retrieval is one of the speediest and the most effective menace of getting the required information. The main advantages of using online information retrieval are;

- Specific requires with reference to information requirement can be great speed.
- A large volume of information an be searched rapidly and accurately
- It s possible to search databases to witch the library information center does not subscribe. This is of great advantage as very few libraries/ Information Centers have the financial resources to have all the databases they need, witch are very costly.
- Many searches easily done on online would be extremely difficult to do manually.
- One can search and get the required information online in a matter of minutes what take perhaps many hours or days by the manual method.

Off-line: Use of computers made it possible to produce retrospective bibliographic indexes on various subjects and project profiles, when such data was available in cumulative form for some year and possible to review the historical development of any subjects in a few seconds

Office Automation: Computers in the form of word processors can be effectively for office automation. Word processor makes typing, storage and editing jobs easier. Electronic mailing can reduce lot of office work.

The applications of computers in the library also enable to reduce time wasted on non-productive routine work and to improve the quality of the work. Every library and information center now considers the speed and efficiency as a major criterion of better functioning of its information retrieval system for fast dissemination of information to its Users.

9.3 Resources sharing networks

The libraries are also using computers for resource sharing. It can be a part of local library network or part of large joint program, now widely known as 'Resource Sharing Networks'. Libraries having computerized their working and services can be linked with each other through a suitable telecommunication network system. The systems enables the participating library to obtained material from each others collection in the form of list of books, indexes and abstracts of required article, facsimile copies of required pages or documents, charts, figures, graphics, drawings by using computer terminals attached to a large or very units (VDUs) and attached with printing facility. Information can be scanned first on the screen, and if required, relevant information can be obtained in the print out form.

IT facilities the library and information centers in providing the Literature search Services various information sources in print form within the library, outside the library or at national or international level, in a short time with accuracy. CAS and SDI services have become easy and it can be provided without causing any delay by using the new IT.

Thus IT is showing its impact on the time, accuracy, efficiency and effectiveness of the various library and information services. Due to advantages of IT devices, it has inevitable to adopt such technologies by the library and information centres.

10. Conclusion

E-learning is not merely a new concept but also has grown as the world wide web has developed in each and every country and spreading its roots for Indian environment as well. In the era of Information Technology, students can stay at home and get educated through distance education across the world via Internet. Education and community are effectively being re-engineered. Though the information technology is dominated our all fields of life, but it can't surpass the traditional system of education and learning. It can be a part of the existing educational system, particularly in the country like India. Some standards have to be developed in reading

material, infrastructure facilities, suitable for the Indian conditions so that the growth of e-learning can be made much faster.

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