

ICT in Library: Marching towards E-Contents

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Abstract

The integration of ICTs has put forth so many challenges in front of the academic libraries and information & resource centers. However, due to demand of the hours, the academic library environment is in a state of transition in terms of resources and users and panic to address and adopt the applications of ICTs in its pursuits and ready to develop the e-contents according to the syllabi and according to need of their bonafide users. It has been observed that ICTs increases the transparency, efficiency and effectiveness. Countless benefits have been noticed in the presence of ICTs in the library pursuits. Libraries are being strengthened after adopting information and communication technology (ICT) and are well equipped with state-of-the-art services which seems that the use of information technology i.e. computers, telecommunication, reprography, communication etc. has a indispensable role in the modernization of library practices. Hence, with ICT, the library is accessible 24*7*365 for its users with unlimited time. The present paper will try to elicit that how ICT is responsible for paradigm shift of the annals of library and makes library available round the clock for academic communities.

Keywords: ICTs; Transparency; Effectiveness; 24*7*365; Annals.

Introduction

The applications of ICT are omnipresent and are giving the pace to academic, non-academic, technical, non-technical and social activities which seems that ICT is only the single solution for all teaching-learning system ranging from pedagogy to heutogy. It is the most effectual mode of information and knowledge exchange among various associates of the society viz. corporate sector, industrial sector, government sector, science, research and academic society. Modern electronic gadgets and high speed internet technology have multiplied its potential and make it versatile and adoptable in nature and making it true i.e. anytime-anywhere-lifelong-life-wide. Some of the common terms are being used as synonymous viz. multimedia learning, technology-enhanced learning, computer based training, computer based instructions, computer-aided instruction, internet

based training, computer based training, web-based training, online education and online learning, virtual learning, online courses, management information system, massive open online courses, distance learning and life-long learning etc. All these are the part and partial of the concept e-learning. E-learning has transformed the way of delivery of the contents as video contents and chapters are available through National Programme for Technical-Enhanced Learning-NPTEL- an initiative of IITs and IISCs. Presently, IIT Bombay is looking after the activities of NPTEL Local Chapters.

E-Learning: Electronic Learning

The literary meaning of learning is knowledge acquired by study. E-learning means the knowledge acquired by using the technological means. Among both terms, the knowledge is common and way is also common but the acquiring technology is different. E-contents are the gateway to access, disperse and preserve the knowledge. Delivery of speed is high in electronic environment. The availability of the high tech gadgets on nominal price and high speed internet connectivity give the pace to electronic learning environment. The Akash Tablets are the example of this revolution. An internet is the land of origin of E-contents. The growth of internet concept gave the

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birth of networking which leads the development of many networks namely DELNET, BONET, ERNET, CALINET, ARPANET, INFLIBNET, MALINET, INFONET and many more. Emerging technologies are responsible to give the birth of Mobile Learning, Classroom Learning and Ubiquitous Learning. The 3G communication technology has proved the miracle

for all above learning.

Guiding Principles of ICTs Practices

The guiding principles should be defined for appropriateness of ICT practices. While preparing ICT policy for a library, the following guiding principles may be used as outline.

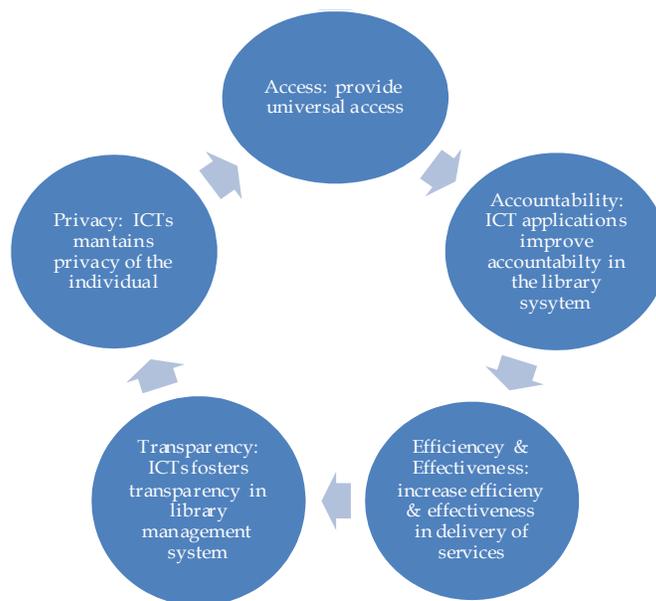


Fig. 1: Guiding principles of ICTs practices

Government of India Initiatives for E-Learning Contents Development

To make available e-contents for all, the GOI has taken initiatives to start major projects so that under-developed and under-budgeted libraries and academic societies can also participate in the rapid changing world with e-learning. Some of them are here:

- Gyan Vahini: It is a collection of intranet based projects which aim to develop interactive multimedia CDs.
- Gyan Sanchar: Internet based project for imparting education services to the widely spread stakeholders.
- Gyan Darshan: It is developed for schools kids, university students and adults in 2000.
- Gyan Vani: It is developed by IGNOU and IITs in 2000 for students who are involved in distance education.
- E-Gyankosh: a digitized learning resource launched by IGNOU in 2005 to facilitate the distance learners.
- NPTEL: National Programme for Technology

Enhanced Learning has been started in the year 2001 by the IITs and IISc as a joint venture. Earlier, the programme was looked after by the IIT Madras but now the same is being looked after by IIT Bombay for establishing its Local Chapter and Video Contents in the higher education institutions. The contents are available freely but for use offline and uninterrupted the interested institutions have to send the external hard disks of 10 TB capacities for uploading the local chapters and video contents of Engineering, Humanities and Science & Technology. The aim of this program is to enhance the quality and usability of e-contents among the academic community.

- NMEICT: National Mission on Education through Information and Communication Technology: NMEICT is a mission of MHRD and Cabinet Committee on Economic Affairs. The aim is to develop the qualitative and standard digital contents especially for Indian higher education system with a mission to cater the need of approx. 500 million students which are enrolled in approx. 45000 degrees and diploma institutions.
- NCTEL: National Programme Technology

Enhanced Learning: an initiative of National Institute of Technical Teachers Training, Chandigarh. Through ICT, NITTTR Chandigarh is being organized short term courses in different regions and many courses have been conducted successfully. ICTs proved cost effective for the participants and regional office of NITTTR.

- Under NME-ICT mission nearly 400 universities have been provided 1Gbps connectivity and more than 14000 colleges have also been provided VPN connectivity so far. This program is centrally sponsored to make use of the potential ICT applications in teaching, library and stakeholders activities.
- IIT Madras has taken the initiative to create the e-contents for 996 courses in Engineering, Sciences & Technology, Humanities and Management.
- University Grant Commission has given the green signal to the proposal to publish e-contents for 77 post graduates courses.
- UGC-INFONET: University Grant Commission has started the Infonet programme with the objective to provide the access of scholarly contents to teaching fraternity. The contents are available through INFLIBNET as it is the nodal agency for coordination of the UGC-INFONET and facilitates linkage between ERNET and the universities. But everyone cannot access the contents which are available under the auspices of UGC-INFLIBNET. For free access of scholarly contents of Infonet, the concerned institution or

university must be established under section 12(B) 2F. In addition, to enhance the usability of e-contents among the academic colleges, INFLIBNET has started the program i.e. NLIST- a hub of e-journals and e-books. The UGC-INFONET helps higher education system in the following ways:

- It provides the solution to distance learning program.
- It helps the user communities which are situated in the interior areas of the country. It gives the freedom to access the scholarly contents remotely even they can download the contents according to their syllabi. They can easily satisfy their information need.
- Simultaneously, member libraries data is accessible.
- Users can maintain the database of their favorite journals on the home page of the concerned e-resource so that as and when theses are required, the user can access without wasting his/her time.
- Numerous searching tools are available.
- It is the hub of sources and resources for researchers and scholars for getting up-to-date information of their related discipline or area.
- It gives the platform to teachers and students not only locally but also globally.
- It helps the user to participate in rapid changing world.

GOI Initiatives for Electronic Theses and Dissertation

Shodhganga:	It is a reservoir of Indian theses @ UGC-INFLIBNET. The objective of this project is to create the database of the Indian theses on the single platform and provide their access in the public domain. But to participate in this project, the interested university has to sign the MoU with the INFLIBNET for Shodhganga Repository. Thereafter, member universities and their libraries can send the database of their theses for uploading into Shodhganga repository, however the research work should be original one and to check the originality, the anti-plagiarism software viz. URKUND: a pedagogical support system for plagiarism checking has been provided to its member libraries. Currently, 66936 full text theses, 2131 synopsis have been uploaded into ETD Repository up to February 25, 2016 and are available to access in the public domain. Moreover, 231 Universities have been contributed and 249 universities have signed MoU with INFLIBNET for Shodhganga Repository. The repository has the ability to capture, index, store, retrieval, disseminate and preserve e-theses. The beauty of this project is duplicate research work may be avoided and helps the researchers in select their research topics. The Shodhganga Repository @ INFLIBNET is set-up by using the open source digital library software namely DSpace developed by MIT,USA.
Krishi Prabha:	It contains the full text electronic database of Indian Agricultural Doctoral Theses submitted by the research scholars of the state, Deemed and Agricultural Universities. Currently, 7900 doctoral theses with a full text of about 6250 theses. This is very prominent database in the field of agriculture.
Vidyanidhi:	This project has been started by the Department of Library and Information Science, University of Mysore in the year 2000 with the sponsorship of National Information System for Science & Technology, Government of India whose objective is to enhance the quality of doctoral theses in India.

ICT Enabling Libraries to Play with MOOCs Programme

Massive Open Online Courses have recently received the great attention among the academic communities from the media, education professionals

and technologically literate sections of the public. The objective of MOOCs is to provide the free access of online courses. In this connection, some major developments are noticed.

Key Developments of MOOCs

edX (http://www.edx.org)	It is a non-profit platform founded by MIT and Harvard University Institutions to support the project. Under this platform, chemistry, computer science, electronics and public health and 30 to 50 courses are also available on other disciplines.
Coursera (http://www.coursera.org)	It is profit platform. Currently, Coursera has 197 courses in 18 subjects.
Udacity (http://www.udacity.com)	It is also profit platform start-up founded by Sebastian Thrun. Udacity currently offers 18 online courses in computer science, mathematics, general sciences, programming and entrepreneurship.
Udemy (http://www.udemy.com)	A profit platform founded in 2010. It provides a learning platform which allows anyone to teach and participate video classes. Udemy currently offers 5000 courses.
P2PU (http://www.p2pu.org/en)	It was launched in 2009 as non-profit platform. It offers 50 courses.
Khan Academy (http://www.khanacademy.org)	It is also known as non-profit learning platform. It is started by Salman Khan in 2008, offering 3600 video lectures in academic subjects with automatic exercises and continuous assessment.

Conclusion

The ICT has become the indispensable and will remain exist in present and coming generation education system. In the twenty first century, it won't be an exaggeration to say that the present education system cannot stay without incorporate the ICT applications, in fact, won't be able to address the demands of the modern users. However, it needs utmost care that governing authorities have to ensure proper control, licensing to ensure quality, availability, accountability, affordability, viability, and vitality in higher education. With ICT, the academic libraries are taking new shape. Things are moving globally. Every sector like education, industry, agrarian, corporate, medicine, engineering science and technology are being influenced by the ICT. A significant transformation has been noticed in the activities of every sector, in fact, a common man can also participate in the transforming world up to affair degree. The service provider agencies are also being changed. Due to information and communication technologies some new concepts of library have been emerged i.e. hybrid library, digital library, electronic library, virtual library and mobile library which lead the high-tech environment for their accessibility. In olden days, the library services were available for limited people; limited access and limited time. Now, there is no limit of contents and their access tools because of ICTs and library is available at the finger tips of the users with unlimited contents. But

still some challenges are also available in front of the stakeholders which need to be addressed at the earliest. To ensure proper IT infrastructure and maintain 3G communication speed are still challenge. ICT policies need to be defined properly so that everyone can use fairly. We proclaim that the present era is the digital era as education systems are highly influenced by the incredibly rapid technological changes. But still, the education sector is expected to have a well defined ICTs policy for appropriate and effective use in academic and administrative activities. Although things are becoming easier but there are some lacuna on the part of policy frame work.

Last but not least, libraries are being changed and making available round the clock for users and playing a vital role in the development of country in general and research in particular. Information and Communication Technologies are proved mile stone due to their merits. Some issues are still available; nevertheless, the libraries are moving forward and achieve the new heights in the academic with ICT.

Suggestions

After undergoing all issues and policies, the author feels that though online contents are being strengthened the Indian Education System and stakeholders but to make available for under-budgeted and under-developed institutions and libraries is still challenge in front of the GOI and stakeholders. To address all these challenges, some

suggestions have been recommended who may be considered up to fair degree.

- Only few organizations are being benefitted from online interactions as under-budgeted institutions cannot afford the expenses of installation of ICT applications. Hence, GOI will have to provide the subsidized on Online Courses, Contents and Electronic Gadgets for the masses so that everyone can enjoy the online contents, speed of delivery and can give his/her contribution in the development of the nation in general and their own field in particular.
- India is a place where multiple languages culture privilege which demand the quality contents in multiple languages. For 100% implementation of online contents, qualitative contents in multiple languages shall be developed so that the student of every region may participate in the new technical environment and enjoy with e-contents.
- To run the online courses and ensure their continuity, the trained technical staff shall be deployed. Thus, online courses may be strengthened in Indian education system.
- Policies may be defined clearly for effective use of the online contents in the academic pursuits.
- To ensure the delivery of speed of contents and uninterrupted accessibility, proper IT infrastructure need to be developed.
- Every academic institution has to make the provision in annual budget for implementing the ICTs applications and need to start the technical activities in their academic pursuits.
- Every institute has to take the responsibility to

develop its own e-repository so that it may be the part of online contents.

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