Technology Integration with Library Services of Engineering Institutes of Haryana for Spearheading Competitiveness: A Case Study

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ABSTRACT

The latest technologies are emerging day by day in the routine activities of the human beings life and their work. Generation Z users are maximum dependent upon the technology as many new concepts have been emerging like e-newspaper, e-banking, e-marketing, e-buying and tab-accounting. The users of the Generation Z cannot sustain in the traditional academic and professional environment without technology. In fact they feel suffocating and handicapped in the absentsia of advanced technological gadgets. The dichotomy, that the developing nations like India are facing between metropolitan library users, who are having every instruments available at their disposal and the users of suburban and rural India who are yet to witness the technological advancements at their thresholds. Although we are crossing the transition phase of the technology but some studies elicited this fact that maximum (about 80%) technology is at maturity level and users are familiar with the existing and forthcoming technology because they have set up their mind in respect to fight with the technology, whether they want to do or not its application and usage. In this critical era of technological contamination, where the luddites-type traditional library users of old generation are supposed to go hand in hand with the Generation Z users, it is quite difficult for the service providers to accommodate their various demands, needs and interests. This study attempts to make a need analysis of such complex situations where the Triangular Sails of Traditional Library, E-Library and (Mobile Library) M-Library are roped jointly for harnessing the academic growth and pacing the professional excellence through a case study conducted at The Technological Institute of Textiles and Sciences, Bhiwani.

Key Terms: Generation Z, ICT, E-Library, M-Library.

INTRODUCTION

Undoubtedly, technology has opened new passages like e-library, m-library, online learning, virtual library, e-learning, e-coaching, e-journal etc. Generation Z mobiles are also the part of the latest technology. In fact some time ago technology was at introducing level in academic and professional pursuit in developing countries like India. At the initial stage some professionals were agitating against the new technologies with the excuses that the same will put the adverse impact on employment because the technology will reduce the quantity of the manforce along with harmful for health. However, by passing the time, people started to use the same without any fear and hesitation even they feel if they really wish to join the technoworld, they have to cope up with the emerging technologies. Knowledge was existed in the olden days also but in the print form in every corner of the world. Researchers and scientists were always facing problem to access the relevant information as information took time for floating due to non availability of
electronic media. After introducing electronic media it has become the easier job to move the information from one place to another. In the twenty first century with latest tools of the technology any type of information can send anywhere in fraction of seconds, consequently, knowledge growing era introduced and becoming double day by day. Accessibility of the knowledge has become easier in fact some search engines like google, yahoo, rediffmail and Babylon are become the basic tool of the knowledge. So in this way technologies are harnessing the knowledge growth.

Definitions of ICT based Knowledge Management

Many authors defined Library in their own words but some important definitions are as under.

According to Oxford Advanced Learner’s Dictionary “a building in which collections of books, CDs, newspapers etc. are kept for people to read, study or borrow”1.

“A repository of literary and artistic materials such as books, periodicals, newspapers, pamphlet, and prints, kept for reading and reference. A collection of such materials, especially when systematically arranged for reference or borrowing”2.

Information and Communication Technology can be defined as a “collection of technological tools and resources that are used to produce, store, manage, distribute and communicate information”3.

In the words of Shefali Gupta, the knowledge is ‘something more than belief and opinion’. Knowledge has got an observational foundation. The observation is natural of interpretation”4. One more Social Scientist has pointed out, “by our knowledge we may also refer to our capabilities”5.

Mobile Library

In the olden days a large wagon used to be designed for the purpose of serving as a moving library. It is structured to hold books on shelves in such a ways as the vehicle is parked the books can be accessed by the readers. But the access of the same was limited and the readership was highly restricted to a highly specialized group of audience. Presently, the concept has been drastically changed and modernized and the same has proved mile stone for Library. The concept of M-libraries has converted itself into electronic gadget. Books, journals and other reading materials are available in the digital, electronic and virtual format and easily down-loadable and accessible by the end users. With the mobile gadget, the library has reached into the pockets of end user(s) where the accessibility and availability of the book is no longer an official concern. M-library is now providing platform for an individualized and specialized patterns to cater to the need and choice based services to the readers.

OBJECTIVES

The objectives of the study will basically try to elicit the real picture of the present scenario and will justify the purpose of the study.

- To know about the technology and its applications usages.
- To determine the emerging level of technology with traditional library system.
- To know the impact of technology on library services.
- To study the usage of technology in knowledge growing.
- To find out is technology really benefitting the traditional knowledge.
- To know the views of the users in respect to technology impact on harnessing the knowledge growth.

LITERATURE REVIEW

The world of e-content has so far focused on academic librarians, who were first to immerse their institutions in digital repositories and open access, and public librarians, who struggled to fold the new e-content market into their already crowded offerings. But Chris Harris (my predecessor as the E-Content blogger and director of the School Library System for New York's Genesee Valley Educational Partnership) has been a voice for a too-often-forgotten or overlooked segment of librarianship: our beleaguered school libraries6.

The advent of information technology has resulted in reducing the size of libraries. In fact, these small modern libraries have rich potential of information. It has been possible due to the digitisation of information. The digital and electronic information is based on digitised data / information, which has gradually replaced paper-based records7.

Computer-oriented materials that might find their way into a special collections unit can be incredibly challenging to manage, to enable access, and to preserve. Some of the materials acquired into special collections today may have been created during the earlier phases of the computer era. Archival collections have an interesting set of requirements for the technology that might he used to support their management and access8.

ICT= IT+ other media has opened new avenues like online learning, e-learning, e-library, m-library, virtual library, digital library, e-journals etc. third generation mobiles are also part of latest technology. Mobile is being used in imparting information fast and cost effective9.

Faced with layoffs and budget cuts, or simply looking for ways to expand their reach, libraries around the country are replacing traditional, full-service institutions with devices and approaches that may be redefining what it means to have a library. Later this year Mesa, Ariz., plans to open a new “express” library in a strip-mall, open three days a week, with outdoor kiosks to dispense books and DVDs at all hours of the day. Palm Harbor, Fla., meanwhile, has offset the impact of reduced hours by installing glass-front vending machines that dispense DVDs and popular books10.

METHODOLOGY

To conduct the study, questionnaire tool for data collection was used. A well structured questionnaire was designed scientifically keeping in view the objectives of the study. The questionnaires were distributed to the faculty members, research scholars, master of technology students and bachelor of technology students to a sample for 800, however, 540 of them responded and the same used for data analysis.
**DATA ANALYSIS**

**Library is the Source of Harnessing of Knowledge Growth**

After having an organized analysis of the data compiled in response to the statement i.e. “Library is the source of harnessing of knowledge growth” in the fig 1 it may comfortably be inferred that 90.4% persons are in agreement with the statement and 4.4% remain in the state of indecisiveness whereas 5.2% dared to deny the contribution of library as the source of harnessing knowledge growth.

**Traditional Libraries are Outdated**

Moving forward to the data offered against the second statement i.e. “Traditional Libraries are outdated and cannot cater to the emerging needs of twenty first century users” the fig 2 reflected that 69.6% persons are in agreement with the statement and 15.6% remain in the state of indecisiveness whereas 14.8% accepted that the traditional libraries are still significant and competent enough to cater to the needs of twenty first century users.

**Awareness of E-Library, M-Library and Digital Library**

In response to the inquisitive inquiry to test the awareness level of the users with regards to the statement i.e. “As a user you are fully aware of E-Library, M-Library and Digital Library” the data received from the respondents was quite interesting. Fig 3 reflects that 65.9% users were found fully aware and using these services and 9.6% remain in the transitional state struggling while coping up with the nascent technology whereas 24.5% found in the ignorance zone with regards to the technological advancements and remain in the state of discomfort nurturing Luddites tendency.

**Usages of E-Library in Sub-Urban areas**

While moving forward to the data offered against the query i.e. “Usages of E-Library in Sub-Urban areas are not fully functional” the respondents observations were found to be highly alarming. Fig 4 reflected that 76.3% persons are in agreement that E-libraries are not fully functional. Probably the reason may be poor infra structural set up, lack of fiber optical networking system in the developing and under developed nations or even poor budgetary planning and their non-transparent sloppy executions for technological up-gradation may be accountable factors for the same. The 10.3% of the respondents couldn’t be able to form an opinion in this regard because of their present technological knowledge and its limitations whereas 13.4% users were found to be benefitted and satisfied by the limited services of E-library.

**Frequency of Satisfaction about Latest Technological Advancement**

In response to the question i.e. “Libraries of the Sub-Urban areas are equipped enough to adopt function and trigger with the latest technological advancement”, fig 5 reflected that 55.8% persons...
are in agreement zone believing that the penetration level of the technological advancements in the suburbs are quite effective while 22.2% could neither agree nor disagree with the statement. 22.3% of the users denied the statement disagreeing that the Sub-Urban libraries are equipped enough to adopt function and trigger with the latest technological advancement.

Fig 5: Frequency of Satisfaction about Latest Technological Advancement

In response of a technically futuristic question that the concept of E-library will wipe out the tradition libraries in coming days and there will be the dream actualization of paperless universities with paperless libraries and dead tree media will be a story of yesterday, 77.8% persons agreed with the statement, 11.1% couldn't form their opinion and 11.1% denied the same.

M-Library is better than E-Library and Traditional Library

Fig 6: M-Library is better than E-Library and Traditional Library

57.8% respondents agreed that M Library is better than E-Library and Traditional Library and 16.3% remain in the state of indecisiveness whereas 26% denied straight forwardly and favored E-Library and Traditional Library.

Concept of E-Library will Replace Traditional Library in Coming Years

Fig 7: E-Library will Replace Traditional Library in Coming Years

For the purpose of assessing the competence level of users with regards to the technological advancements of the twenty first century, a question was framed out as “As user I am more comfortable with the E-Library, M-library and Digital Library than the Traditional Library” fig 8 reflected that 72.6% of the users are in agreement with the statement and 16.3% remain in the state of indecisiveness whereas 11.1% denied and supported traditional libraries.

Fig 8: Comfort with E-Library, M-library and Digital Library

Librarians need Training to the Emerging Nascent Technological Tools

Fig 9 : Librarians need Training to the Emerging Nascent Technological Tools

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The data offered against the final statement i.e. “Librarians/Service Providers need training to the emerging nascent technological tools to offer to the library services through technology to the modern users”, fig 9 reflected that 85.2% persons are in agreement with the statement and 9.6% remain in the state of indecisiveness whereas 5.2% denied straightforwardly the significance of training needs for the Library service providers with regards to the emerging nascent technological tools to extend better library services to its users.

**SUGGESTIONS**

Based on the data analysis of the present study the following suggestions are recommended to improvise the technical and engineering education by using technology with the library services of conventional systems.

- User techno-friendly training programmes in respect to know the E-Library, M-Library and Digital Library should be organized from time to time or at regular intervals for bridging up the technological knowledge gap.
- Mass Awareness Campaigns for Library Users has to be planned, developed and organized to generate on the online as well offline basis to enable the users in easy access of the Digital Library, M-Library, and E-Library.
- M-Library, E-Library and Digital Library should be made ‘easy to use’ and ‘easy to know’ to their users by making them user friendly. This would help the users in searching the desired contents and would also maximize the use of E-Library, M-Library and Digital Library.
- The problem of slow accessibility of poor LAN, WAN and MAN facilities can be overcome by enhancing the bandwidth of the internet connection and also by increasing the institutional infrastructural facilities.
- To make public library as well as institutional libraries within the reach of the most deprived and underprivileged users’ new concepts such as e-choupals, internet cafe, and low cost hardware infrastructural support which should be offered to the rural and unreached areas.
- Library professionals and librarians should encouragingly take feedbacks properly to know the status and usages of services being offered by the library system time to time or at regular intervals and should modify the services and plan strategies accordingly to optimize the uses and accessibility.
- Data analysis shows that there is a need to create awareness among the users (faculty, research scholars, M. Tech. and B. Tech students). Hence, User Education Programmes and modules like ‘Train the Trainers’ should be introduced and conducted regularly.
- To meet and sustain the thrust of Generation Z users of the M-Library, E-Library and Digital Library are to be adopted at every level and to cope up with the demands of the Generation Z users some workshop in respect to know your library must be conducted time to time even instructions must be flashed on the web page of the library or institute also.

- Librarians and service providers have to go for training to execute the emerging technologies in their system and offer better services to their users through Information and Communication Technology (ICT).
- Though this study processed the data of engineering institutions imparting education in the field of technology, yet the conditions of institutions imparting education in the areas of Polytechnic and Industrial Training Institutes in rural India are apparently pathetic and their libraries are showing alarming situations where reformative steps are required at war footings.

**CONCLUSION**

Having the above data into the account and all the limitations into considerations this study attempted to reach to some invaluable inferential remarks by following the path of transparent and approved methodology. Authors reach to the conclusion that by combining technologies to library for harnessing the knowledge growth there could be three pivotal triangular sails i.e. Traditional Library, E-Library and M-Library functioning to gear up the traditional knowledge mechanism to lead the academic system to the sublime summit of minds that may in turn give birth to the revolution of multidimensional knowledge-growth. Traditional Libraries are outdated and cannot cater to the emerging needs of twenty first century users. The awareness level of the users and infrastructural facilities with regards to the E-Library, M-Library and Digital Library is good in the urban sector but in sub-urban and rural areas authors found situation to be highly alarming. Authors also found it safe to conclude from the study that in a century of few E-library will be in the position to wipe out the tradition libraries in coming days and there will be the dream actualization of paperless universities with paperless libraries and dead tree media will be a story of yesterday. Authors also found that M-Library is better than E-Library and Traditional Library. The study gives a micro-suggestion that users are more comfortable with E-Library, M-Library and Digital Library. Also the service providers need training to the emerging nascent technological tools to offer to the library services through technology to the modern users so that knowledge and research may spread beyond the concrete boundaries of four walls of traditional libraries. Technology integrated libraries are not only pivotal futuristic need but also the most significant requisite for harnessing knowledge growth amongst the futuristic world of spearheading competitiveness.

**REFERENCES**


