Technologies collaboration to Library services for Harnessing professional excellence: A Case Study of Technical Institutes of Haryana & NCR

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(The pivotal Triangular Sails comprising Traditional Library, E-Library & M-Library)
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Abstract:

The nascent technological advancements being introduced everyday in daily lives are also reflecting demands in the up-gradations of various emerging skill-sets to cope up with the day to day problems of human beings' life and their work. The most impatient Generation Z users are heavily depend on technology, consequently, many new concepts are emerging like e-newspaper, e-banking, e-marketing, e-buying and tab-accounting. The users of the Generation Z feel suffocated in the traditional academic and professional environment without their technology-integration. On information superhighway they find themselves handicapped in the absentia of advanced technological gadgets and their uninterrupted availability and smooth accessibility. The ever widening gulf of the developing nations like India, Pakistan, Nepal and Bhutan are facing amongst metropolitan library users having every instrumental accessory on their threshold available at their disposal; and the users of rural and suburban areas who are yet to witness the taste of the augmented technological advancements. At this critical juncture 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 analyses complex situations where the Triangular Sails of Traditional Library, E-Library and M-Library are roped jointly for harnessing the academic growth and pacing the professional excellence when at the same time ICT integrated libraries are ready to bid adieu to the age old traditional library set up standing solely on the shoulders dead tree media.

Key-Words:

Generation Z; ICT; E-Library; M-Library

Introduction

It will be merely a reiteration to say that technology has opened new pathways to mankind. In order to cope up the emerging challenges even the academic system has to dress up in new garb. Library only wearing the fabric of dead tree media are the stories of yesterday but to prepare the youth of tomorrow even the libraries has to be equipped with the new tools and consequently the concepts like e-library, m-library, online learning, virtual library, e-learning, e-coaching, e-journal etc came into being. Generation Z mobiles are also the part of the latest technology. When the whole humanity is going through the transitional phase of the technology, significant studies elicit that the maximum (about 80%) technologies are at maturity level and users are familiar with the existing and forthcoming technology. They have set up their mind in respect to cope up with the technology, its application and usage. In fact, a few decades ago technology began at introductory level in academics to accelerate the professional pursuit in developing countries like India. Initial introductory technological phases witnessed agitations of a few professionals 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 personnel engaged on job-work and yield harmful health hazards. However, by passing the time, people started using the same without any fear and hesitation with realizations that if they really wish to join the techno-world, they have to cope up with the emerging technologies. This revelation was nonetheless impactful on human mind than a classical innovation.

Knowledge existed in the olden days too but in the print form in every corner of the world. Researchers and scientists always faced the problems and restrictions as they were unable to transcend the geographical restrictions and limitations while accessing to the relevant information, as information took time for floating due to the non availability of electronic media. Once the electronic media was introduced it has become easier to access the information from one place to another in the twenty first century. The emergence of latest technological tools facilitated the accessibility of any type of information and the same could be send anywhere in no time. Consequently, the advent of this knowledge growing era introduced and multiplied the information volume day by day into manifold. Accessibility of the knowledge became much easier as a few search engines like google, yahoo, rediff and Babylon were introduced and became the basic tool for the knowledge search. So in this way technologies started stimulating and helping mankind in harnessing the knowledge growth.

What is Library?

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"(Oxford Advanced Learner's OUP. p-884)[1]. As per the information available in Reader's Digest Great Illustrated Dictionary library can be described as: "A repository of literary and artistic materials such as books, periodicals, newspapers, pamphlet, and prints, kept for reading and reference. 2. A collection of such materials, especially when systematically arranged for reference or borrowing"[2].

What is Technology?

From last few decades, technology has completely transformed our lives and daily routine activities in all possible ways. It won't be an exaggeration to say that in the

present era technology generally use to exchange the information and knowledge. Due to advent of technology, accessibility of information and knowledge have increased even every corner of the world has been connected and flow of knowledge become possible from one part to another part. As per the description available Oxford Advanced Learner's Dictionary Technology can be defined as: "Scientific knowledge used in practical ways in industry, for example in designing new machines" (Oxford Advanced Learner's OUP. p-1576).

What is Information and Communication Technology?

Information and Communication Technology basically refers to the all form of technology used to transmit, create, store, display, share or exchange information by electronic means. In other words 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].

What is Techno-Library?

Techno-Library is a collection or store house of information, documents, audio-visual, graphic materials stored in a variety of media ranging from Printed books, Periodicals, Poster and Microfilms, Reports, Slides, Films, Video Audio Disks, Audio tapes, Optical Discs, Magnetic Tapes etc. Techno-Library of the future is likely to be a part of network.

What is Knowledge?

The word 'knowledge' is familiar with everyone as everyone using the word but in different context. Many author(s) defined knowledge in a different ways and context. Some basic definitions are as under. 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]

Objectives of the Study

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.

1. To know about the technology and its applications usages.
2. To determine the emerging level of technology with traditional library system.
3. To know the impact of technology on library services.
4. To study the usage of technology in knowledge growing.
5. To find out is technology really benefitting the traditional knowledge.
6. To know the views of the users in respect to technology impact on harnessing the knowledge growth.
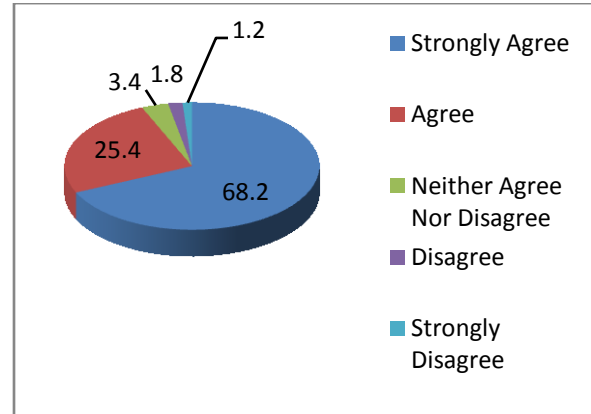
Summary of the Contemporary Articles Published

LaRue, James (2014) discussed 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 libraries [6]. Bhat, Iqubal and Mudhol, Mahesh V (2014) gave 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 records [7]. Breeding, Marshall (2013) elaborated 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 access [8]. 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 effective [9]. Dougherty, Conor (2010) 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 books [10].
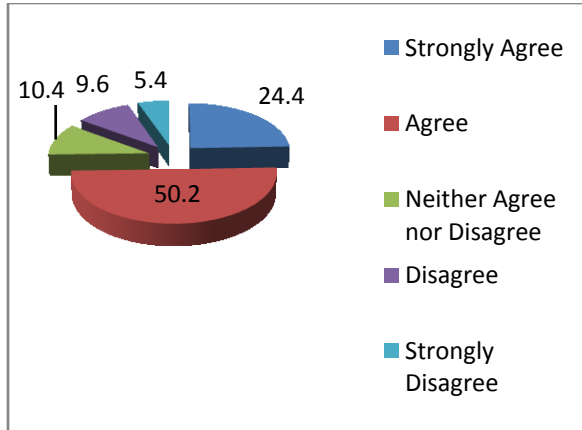
Data Analysis and Interpretation

Library is the source of harnessing of knowledge growth

Library is the source of harnessing of knowledge growth.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	1023	68.2	68.2	68.2
Agree	381	25.4	25.4	93.6
Neither Agree nor Disagree	51	3.4	3.4	97.0
Disagree	27	1.8	1.8	98.8
Strongly Disagree	18	1.2	1.2	100
Total	1500	100	100	

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 above tabular form it may comfortably be inferred that 93.60% persons are in agreement with the statement and 03.40% remain in the state of indecisiveness whereas 03.00% dared to deny the contribution of library as the source of harnessing knowledge growth.
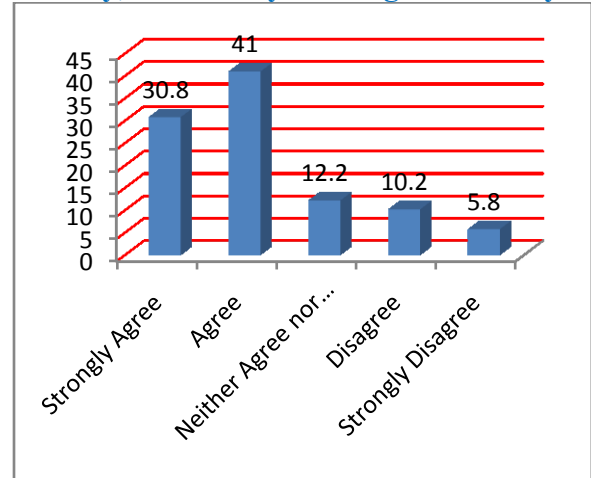
Traditional Libraries are outdated and cannot cater to the emerging needs of twenty first century users.

As a user you are fully aware of E-Library, M-Library and Digital Library.

Traditional Libraries are outdated and cannot cater to the emerging needs of twenty first century users.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	366	24.4	24.4	24.4
Agree	753	50.2	50.2	74.6
Neither Agree nor Disagree	156	10.4	10.4	85.0
Disagree	144	9.6	9.6	94.6
Strongly Disagree	75	5.4	5.4	100
Total	1500	100	100	

As a user you are fully aware of E-Library, M-Library and Digital Library				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	462	30.8	30.8	30.8
Agree	615	41.0	41.0	71.8
Neither Agree nor Disagree	18	12.2	12.2	84.0
Disagree	15	10.2	10.2	94.2
Strongly Disagree	87	5.8	5.8	100
Total	1500	100	100	

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 mentioned tabular form reflected that 74.60% persons are in agreement with the statement and 10.40% remain in the state of indecisiveness whereas 15.00% accepted that the traditional libraries are still significant and competent enough to cater to the needs of twenty first century users.
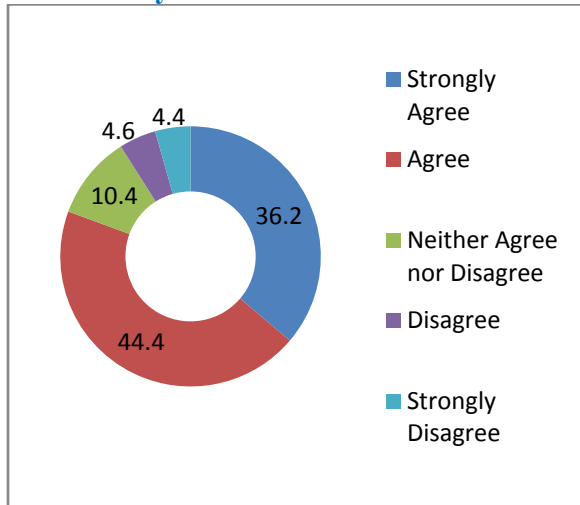
In response to the inquisitive inquiry to test the awareness level of the users with regards to the statement i.e. "As a user you are fully aware of E-Library, M-Library and Digital Library" the data received from the respondents was quite interesting. The mentioned tabular form reflects that 71.80% users were found fully aware and using these services and 12.20% remain in the transitional state struggling while coping up with the nascent technology whereas 16.00% found in the ignorance zone with regards to the technological advancements and remain in the state of discomfort nurturing Luddites tendency.

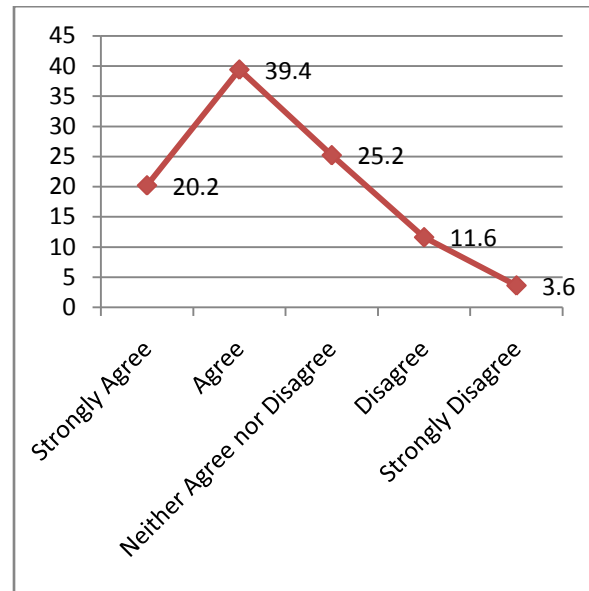**Usages of E-Library in Sub-Urban areas are not fully functional.**

Usages of E-Library in Sub-Urban areas are not fully functional.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	543	36.2	36.2	36.2
Agree	666	44.4	44.4	80.6
Neither Agree nor Disagree	156	10.4	10.4	91.0
Disagree	69	4.6	4.6	95.6
Strongly Disagree	66	4.4	4.4	100
Total	1500	100	100	

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. The mentioned tabular form reflected that 80.60% persons are in agreement that E-libraries are not fully functional. Probably the reason may be poor infrastructural 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 10.40% of the respondents couldn't be able to form an opinion in this regard because of their present technological knowledge and

its limitations whereas 09.00% users were found to be benefited and satisfied by the limited services of E-library.

Libraries of the Sub-Urban areas are equipped enough to adopt function and trigger with the latest technological advancement.
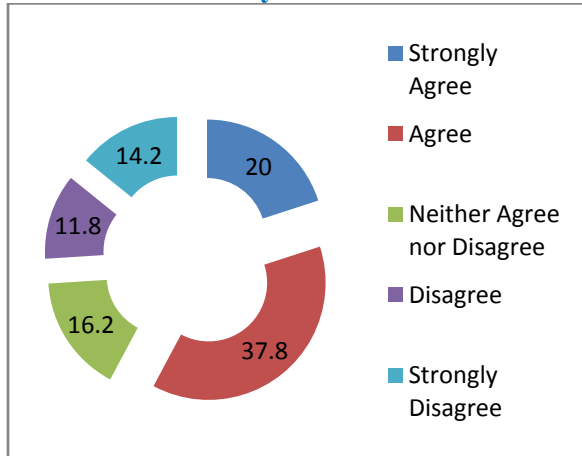

Libraries of the Sub-Urban areas are equipped enough to adopt function and trigger with the latest technological advancement.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	303	20.2	20.2	20.2
Agree	591	39.4	39.4	59.6
Neither Agree nor Disagree	378	25.2	25.2	84.8
Disagree	174	11.6	11.6	96.4
Strongly Disagree	54	3.6	3.6	100
Total	1500	100	100	

In response to the fifth question i.e. "Libraries of the Sub-Urban areas are equipped enough to adopt function and trigger with the latest technological advancement" reflected that 59.60% persons are in agreement zone believing that the penetration level of the technological advancements in the suburbs are quite effective while 25.20% could neither agree nor disagree with the statement. 15.20% 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.
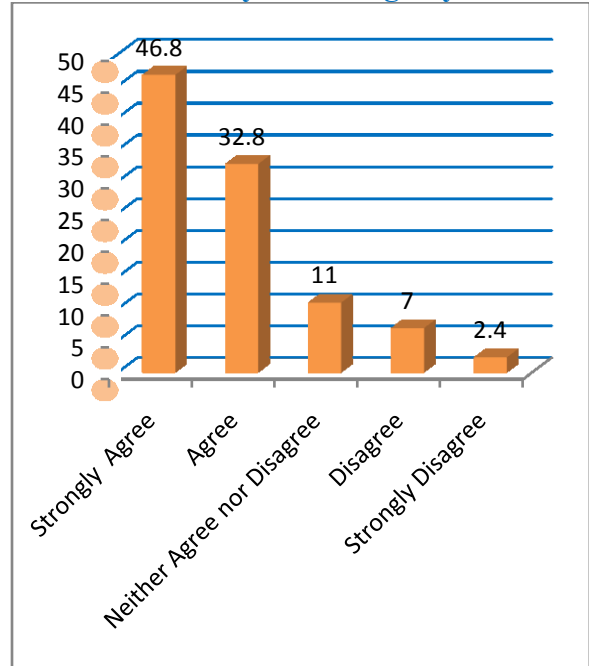
M-Library is better than E-Library and Traditional Library.

M-Library is better than E-Library and Traditional Library.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	300	20.0	20.0	20.0
Agree	567	37.8	37.8	57.8
Neither Agree nor Disagree	243	16.2	16.2	74.0
Disagree	177	11.8	11.8	85.8
Strongly Disagree	213	14.2	14.2	100
Total	1500	100	100	

57.80% respondents agreed that M Library is better than E-Library and Traditional Library and 16.20% remain in the state of indecisiveness whereas 26.00% denied straightforwardly and favored E-Library and Traditional Library.
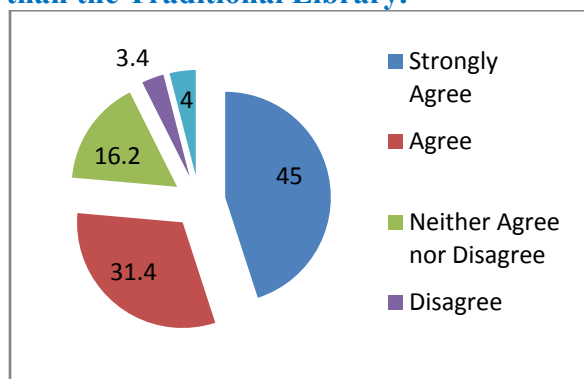
Concept of E-Library will replace traditional library in coming to years.

Concept of E-Library will replace traditional library in coming to years.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	702	46.8	46.8	46.8
Agree	492	32.8	32.8	79.6
Neither Agree nor Disagree	165	11.0	11.0	90.6
Disagree	105	7.0	7.0	97.6
Strongly Disagree	36	2.4	2.4	100
Total	1500	100	100	

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, 79.60% persons agreed with the statement, 11.00% couldn't form their opinion and 09.40% denied the same.

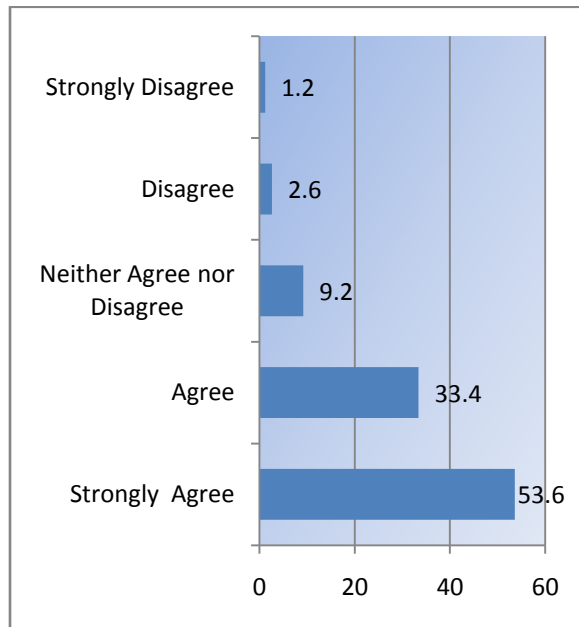**As user I am more comfortable with the E-Library, M-library and Digital Library than the Traditional Library.**

Librarians/Service Providers need training to the emerging nascent technological tools to offer to the library services through technology to the modern users.

As user I am more comfortable with the E-Library, M-library and Digital Library than the Traditional Library.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	675	45.0	45.0	45.0
Agree	471	31.4	31.4	76.4
Neither Agree nor Disagree	243	16.2	16.2	92.6
Disagree	51	3.4	3.4	96.0
Strongly Disagree	60	4.0	4.0	100
Total	1500	100	100	

For the purpose of assessing the competence level of users with regards to the technological advancements of the twenty first century, the second last question was framed out as "As user I am more comfortable with the E-Library, M-library and Digital Library than the Traditional Library" the mentioned tabular form reflected that 76.40% of the users are in agreement with the statement and 16.20% remain in the state of indecisiveness whereas 07.40% denied and supported traditional libraries.

Librarians/Service Providers need training to the emerging nascent technological tools to offer to the library services through technology to the modern users.				
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly Agree	804	53.6	53.6	53.6
Agree	501	33.4	33.4	87.0
Neither Agree nor Disagree	138	9.2	9.2	96.2
Disagree	39	2.6	2.6	98.8
Strongly Disagree	18	1.2	1.2	100
Total	1500	100	100	

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" the mentioned tabular form reflected that 87.00% persons are in agreement with the statement and 09.20% remain in the state of indecisiveness whereas 03.80% 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.

i.   To make understandable the concept of E-Library, M-Library and Digital Library to users, some technical training programs must be organized time to time thereby technological knowledge gap may be bridged up. In addition to this, through such programs technology should be user friendly and effectively usable.

ii. In the twenty first century technology has to be sent among the masses and make sensible in respect to its use in progressive way as technology is just like a double edged sword (positive or negative). Hence, need to plan and execute some technical sessions online and offline to enable the users in easy access of the Digital Library, M-Library, and E-Library.

iii. The users who are living in the modern society and are well aware with the latest and forthcoming technologies can easily understand the concept of M-Library, E-Library and Digital Library even easy to access for them, however, those who are not aware about technology they need to be acquainted with these concepts for future use. This would help the users in searching the desired contents and would also maximize the use of E-Library, M-Library and Digital Library.

iv. To give the proper accessibility to e-contents and make them more effective among the users community the bandwidth of the internet must be proper or as per the demand of users. Every institution, organization and association must create their own Electronic Repository and make accessible to each student thereby users shall feel comfortable in using the technology.

v.   New concepts such as e-choupals, internet café, cyber café and low cost hardware infrastructural support which should be offered to the rural and must be in the reach of unreached areas users. In fact to make this operational need to be organized online and offline training programs.

vi. Library has to be taken encouragingly feedbacks properly to know the status and usages of services being offered by the library system at regular intervals. Thereafter, improvement and value addition are possible in offered and existing services.

vii. User Education Programs and modules like 'Train the Trainers' should be introduced and conducted regularly for every level student.

viii. To cope up with the thrust of Generation Z users of M-Library, E-Library and Digital Library are to be adopted at every level and in order 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.

ix. 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).

x.   Though this study processed the data of engineering institutions of Haryana and NCR, 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

After processing the above data and having all the limitations into account some invaluable inferential remarks can safely be proclaimed by following the path of transparent and approved methodology. By combining technologies to existing library system for harnessing the knowledge growth there could be three pivotal triangular sails i.e. Traditional Library, E-Library and M-Library functioning to accelerate the traditional knowledge mechanism to lead the academic system to the sublime summits of mind that may in turn yield revolutionary multidimensional knowledge-growth and facilitate gaining exceptional outcomes. Traditional Libraries are almost outdated and cannot cater to the emerging needs of twenty first century users. Thus the fiber-optics set up is essential for ensuring infrastructural requisites. In given scenario, 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.

This is also safely concluded that M-Library is better than E-Library and Traditional Library. The given micro-suggestion is that the modern day users are more comfortable with E-Library, M-Library and Digital Library but simultaneously the stressing point is that the service providers need training to the emerging nascent technological tools to ensure quality 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 pivotal futuristic needs. These libraries will be the most significant assets for harnessing knowledge growth amongst the futuristic world of spearheading competitiveness.

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