



MODERN TECHNOLOGY APPLICATION IN ACADEMIC LIBRARIES: CHALLENGES AND OPPORTUNITIES

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ABSTRACT

As the data innovations are changing everyday and developing at a colossal speed, the information society is becoming and data blast. This paper discusses the modernization of scholarly libraries occurred during the last 50% of the last hundred years. This modernization worked with their transformation into the 21st century scholastic libraries. With making sense of the exceptional elements of 21st century scholastic library the land denotes the forward walk like proficient writing dissecting the short lived period, new fine laws of library science are shown. This paper additionally making sense of the new top ten patterns which are made sense of by ACRL examination and arranging board. This affiliation encompasses patterns in scholarly librarianship, advanced education and more extensive climate. Current technologies, Library Robotization, Library 2.0, Cloud Computing, Mobile innovations change the face and working of scholarly libraries. Hence there is need to adapt to these innovation scholastic library proficient require some legitimate preparation. We talk about open doors and difficulties for innovation advancement and reception in open libraries. The outcomes depend on a multi-site similar review and topical examination of ethnographic work in three libraries, each in an alternate European country. The outcomes investigate the sociotechnical practices, understandings, and viewpoints of library staff and supporters with regards to the role(s) and function(s) of libraries today. The commitments, which target illuminating the plan and execution regarding new computerized administrations in open libraries, are two-overlay. The fundamental discoveries from the review, first and foremost, is introduced under six topics.



- Furthermore, a rundown of key open doors and difficulties zeroing in on
- 1) media and innovation proficiency,
 - 2) institutional change and specialized foundations,
 - 3) asset imperatives among library staff, and
 - 4) a change in center towards supporting exercises.

KEYWORDS: Scholarly Libraries, ACRL, Library robotization, Library 2.0, Distributed computing, Versatile innovation.

INTRODUCTION-

Mechanically determined change essentially affects the field of Library and Data Science during recent many years. Procedures for answering the general changes in data use have been reflected in a wide range of library settings. Scholarly libraries have fostered different new administrations close by their clients changing approaches to collaborating with data. Improvement of Data Correspondence Advances (ICT) have altered the data taking care of abilities of scholarly libraries and data focuses all over world. An impression of a cutting edge scholarly library in India began arising broadly from 1931, the extended period of the

distribution of Dr. Rangnathan's progressive book ' Five laws of Library Science '. This book could be suitably called ' The book of the Thousand years' in our field because of its colossal effect and impact on libraries and Librarianship. New five laws of library science formed by Michael Gorman the previous leader of ALA, alongside Walt Crawford in 1995. Which have given new implications to Rangnathan's five regulations in changing circumstances they are The walk of scholastic libraries and librarianship towards 21st century is well reflected in these. Libraries assume a crucial part in gathering the data needs of clients. Thusly the College Libraries and libraries need the utilization of ICT in their everyday library exercises, taking into account the significance and jobs it plays in ones' data dispersal. Powerful use of ICT in library exercises assists the custodians with completing their obligations and administrations successfully and proficiently. This paper evaluated the requirement for ICT application in present day librarianship. It talks about the effect of ICT in Scholarly Libraries and the additions of ICT. It went further to consider ICT to be a progressive pattern rather than as an instrument. This paper went further to evaluate utilization of ICT in libraries as an open door, the variables that influence data innovation in current librarianship.

Data innovation has changed the entire world into a worldwide town with a worldwide economy, which is progressively reliant upon the imaginative administration and conveyance of data. Over the course of the last many years the world has been encountering tremendous changes in which the need to gain, use and offer information has become progressively fundamental. Presently, in the 21st 100 years, the period of information and data is in its higher stuff. This is an age when undetectable information and data play the job of central players driving all area. The World Bank has utilized analogy "information is improvement". All in all, absence of information is to a great extent liable for underdevelopment. In an information and data situated society, imaginative cerebrums become heads of economy and information laborers are overwhelmingly popular. On the off chance that information can be compared with advancement, then, at that point, the more extensive the information hole, the more extensive the improvement hole. With the creation of Data and Correspondence Innovation, libraries presently utilize different kinds of advances to help the administrations they render. Regular new mechanical advances influence how data is dealt with in libraries and data focuses. The effects of new advancements are felt by libraries in each angle. Figuring innovation, correspondence innovation and mass stockpiling innovation are a portion of the areas of nonstop improvement that reshape the way that libraries access, recover, store, control and disperse data to clients. The scholarly library has been from its beginning a basic piece of establishments of higher learning, as opposed to an informative supplement or assistant.

Headway in Innovation and birth of Web set out many open doors and difficulties to cutting edge libraries and acquired quick advancement data dealing with, putting away, coordinating and conveying to clients. As additional libraries move towards offering their types of assistance in a computerized climate, the superior admittance to far off library assortments is utilizing electronic data assets more sensible and more appealing. The inevitable objective of each and every library is to give speedy and thorough connection to assets by utilizing most ideal potential apparatuses and procedures that anyone could hope to find in the current day. The rise of data and correspondence innovation has repositioned the assets, tasks, and administrations as well as the assumptions for clients of a scholastic library. Nowadays the clients like to peruse the web for their data needs instead of visiting the library. It is outside the realm of possibilities for scholarly libraries to adapt to changing electronic necessities of clients with conventional assortment of print materials. Clients' fascination depends on the quality administrations gave in the library particularly in scholastic libraries where clients principally rely upon more unambiguous, moment and easy to understand data.

OBJECTIVES:

- To uncover existing rules accessible in scholarly libraries for choice of e-resources
- To features qualities and impediments of obtaining of e-assets.
- To find techniques utilized for preparing of library staff and clients
- Techniques utilized for client mindfulness and admittance to e-assets.

- To distinguish various techniques for safeguarding of e-assets
- Investigate the determination measures of e-assets.
- To realize various sorts difficulties confronted and potential open doors accessible to scholastic libraries to oversee e-assets. Dissect future innovative changes to clear a path for new advances

21st Century Academic Libraries:

The new climate acquired by the presentation of data and correspondence innovations is all around depicted by express 'Twenty First Hundred years'. All the three significant course of the insightful world viz. age, association and scattering of data and information were dependent upon consistent change since 1980s. Medias were changed for recording, safeguarding and dispersing data and information. Libraries became interactive media communities of data assets. Abandoning their dull and dreary picture or storehouses of old dusty books, materials like microforms, sound and video tapes and new different electronic items for utilize both disconnected and internet addressing borned computerized and changed over advanced records are changing the essences of stack rooms and understanding regions. This extraordinary sort of material requirements exceptional hardware of various makes for their compelling use.

The join of PC and correspondence innovation presented a progression of changes are so significant as not to save any area of cycle in the library from them. The whole library is pretty much placed on examination for change to keep away from reiteration and overt repetitiveness, time log and postpone in the entire working of the library by new and novel mixes and linkage conceivable because of use of innovation. This ICT based period of library improvement has come about into not just expanding the entrance of library clients to the records widely yet in addition fast recovery of bibliographical and text based data. The recent ideas of capacity, different segments in light of the kinds of library material, specialized cycles and peruser's administrations, work process and staffing design also are justifying a new look. The library the executives is turning out to be more coordinated than previously. A 21st century scholarly library is the one which could acclimatize these progressions to the advantage of all thought the coordinators of the library, the clients of various types and the library staff.

Top Ten Trends In Academic Libraries:

The ACRL(Association of School and Exploration Libraries) research arranging and Survey Council is answerable for making and refreshing a nonstop and dynamic ecological sweep for the affiliation that creates patterns in scholastic librarianship, advanced education and more extensive conditions. The board likewise is answerable for recognizing the ACRL"Top Ten Patterns" for discharge at regular intervals. The main 10 patterns recorded in order.

Communication Value:

Scholastic libraries should demonstrate the worth they give to the scholarly undertaking. Administrators should have the option to change over the overall sensations of altruism towards the library to compelling correspondence to all partners that plainly expressive its worth to the scholarly local area. Late worth related research has examined the connection between's library material and library guidance with understudy grade point normal. Work additionally is in progress to show the ecological worth of scholarly libraries.

Data Curation:

Information curation challenges are expanding for a wide range of information keep on developing more storehouses, large numbers of them cloud based, will arise. Curator and other data laborers will team up with their exploration networks to work with this interaction. Information curation presents open doors for forthcoming better approaches to convey the worth of the abilities curators as of now process and in creating jobs that were already not related with custodians.

Digital Preservation:

A computerized assortment mature, concerns develop about the general absence of long haul anticipating their safeguarding, No essential administration to laying out engineering, strategy or principles for making, getting to and saving computerized contents is probably going to arise in the close to term.

Higher Education:

Advanced education guidelines are entering a time of motion and possibly even strife, Patterns to look for the ascent of online guidance and degree projects, globalization and an expanded doubt of the "returnon speculations" in an advanced education. Changes in the advanced education encompass will affect libraries as far as assumptions for improvements of assortments conveyance of assortments and administrations for both old and new crowd and as far as how libraries keep on exhibiting worth to parent's foundations.

Information Technology:

Innovation keeps on driving a significant part of the modern reasoning inside scholarly libraries. Innovation patterns well defined for libraries incorporate web-scale disclosure frameworks with upgrades, for example, discipline checked looking and tweaked gadgets, local area source - library the executives frameworks and candy machines to deal with advances of hardware.

Mobile Environments:

Cell phones are having an impact on how data is conveys and gotten to. A rising number of libraries offer types of assistance and content conveyance to cell phones. Industry pioneer EBSCO have has application for the iPhone, iPod contact and Android as well as versatile connection point. Numerous different merchants, including JSTOR, ELserver and Thomson Reuters have versatile point of interaction or applications. Sir - siDynix and creative point of interaction coordinated library frameworks offer versatile admittance to library OPACs while OCLC gives portable admittance to worldcalls. Self help elements, for example, reestablishing books setting holds and finding suggested titles are among the applications library clients need.

Patron Driven e-book Acquisition:

Benefactor Driven Procurement (PDA) of digital books is ready to turn into the standard for this to happen ,licensing choices and models for library loaning of digital books should turn out to be more feasible. A report on the eventual fate of scholarly libraries recognizes PDA as an ineritable pattern for libraries compelled to demonstrate their consumptions are in accordance with their worth.

Scholarly Communication:

New insightful correspondence and distributing models are creating at an always quicker pace, requiring librates to be effectively involved or be abandoned. New distributing models are being investigated for diaries, insightful monographs, course books and computerized materials as partners attempt to lay out supportable models. Improvements pertinent to diaries incorporate open admittance to verifiable substance, creator supported open admittance to new satisfied and vulnerability representing things to come of Serious deals. A few scholastic libraries play taken a functioning part in changing the academic correspondence climate by making or extending distributing administrations.

Staffing :

Scholastic libraries should foster the staff expected to address new difficulties through innovative ways to deal with employing new work force and conveying/retraining existing staff. Staff improvement and faculty are the top work place issues for scholarly libraries as indicated by 2011 ACRL study.

User behaviour and expectations:

Convenience influences all parts of data chasing - the determination, openness and utilization of sources. Libraries usually are not the main hotspot for tracking down data, when questioned, respondents depict the library as difficult to utilize the last report and inconvenient - convenience is a huge calculate both intellectual and day to day existence data looking for circumstance. With the far and wide utilization of the web and web search tools, for example, Google people have next to zero issue tracking down sources. Since libraries are now going after client consideration, the momentum challenge is to give prompt consistent admittance to sources and data to stay in the game.

Modern Technology Applications In Academic Libraries:

As data innovation is turning into the foundation of each and every association, it is acquiring extraordinary change associations design and the board and conveyance rehearses. Data and correspondence innovation (ICT) and advancement in present day innovation particularly in the field of electronic correspondence and software engineering and innovation impact the practice libraries. A few present day advances pertinent in scholarly libraries as follows –

i) Library Automation:

Library automation was first a giant step towards the utilization of ICT based items and administrations in libraries. It brings extraordinary upset and a tremendous season of clients and staff for gathering & disseminating data. Library mechanization alludes to utilization of PCs, related fringe media like S/W for robotization, attractive tapes, optical media and so on. Library robotization makes the arrangement to give the right data to the right user in a right structure in a right private way. It is the fundamental point of library. Library automation fulfills the above interest of libraries by giving the library exercises as actually, quickly, enough and financially. Hence the ICT made workable for robotization in libraries (Ahmad & Iqbal, 2009) For library computerization there are some open source programming accessible: Evergreen, CDSD Invenio, Koha, New Genlib, Prils, Php My Library, Open Biblio as well as numerous business programming: SOUL, Alice for windows, Netlib, Libsys, etc.

ii) RFID:

RFID (Radiofrequency ID) is the furthest down the line innovation to be utilized in library for book recognizable proof for self look at and for arranging and conveying of library books and furthermore for burglary recognition. The point of utilizing RFID innovation to build the effectiveness diminishes information section blunders and lets staff perform esteem added capabilities. RFID was presented in the mid 1980s for things following and access control applications, following of materials is finished utilizing radio recurrence based innovation joined with CPU innovation subsequently assigned RFID. The essential parts of any RFID framework incorporate Labels, Users, Executing RFID framework in libraries will help undertakings, and like dissemination, reshelving & robbery discovery and it is a few other significant benefits. The RFID the executives framework in libraries can be carried out in four ways.

iii) Library 2.0

The idea of library 2.0 got from web 2.0. The library 2.0 incorporates a scope of new and contemporary items and administrations of ICT that utilized for developing cooperative environment required for Library 2.0. Inferable from library administrations have focussing more on facilitation of data move and data literacy as opposed to giving controlled admittance to it. New items and administrations of ICT in types of library 2.0 are intuitive cooperative and sight and sound an electronic advancements to online library administrations and assortment. The library 2.0 is an inexactly characterized model for a modernized type of library benefits that mirrors a change inside the library World in the manner that administrations conveyed to clients. With library 2.0 library benefits continually refreshed and

reexamined best assistance library clients. The library 2.0 additionally endeavors to outfit the library clients in the plan and execution of library administrations by empowering criticism and support.

iv) Cloud Computing:

Distributed computing is getting a lot of consideration both distribution and among clients from people at home. However distributed computing isn't obviously characterized all of the time. It is membership based assistance where you can acquire organized extra room and PC assets. The cloud makes it workable for you to get to your data from anyplace to any time. While a conventional PC arrangement expect you to be in similar area as your information stockpiling gadget, the cloud removes that step. The cloud eliminates the requirement for you to be in the very actual area as the equipment that stores your information. There are various sorts of clouds that you can subscribe depending of your necessities. These sorts are Public cloud, Confidential cloud. Local area and Cross breed Cloud. Distributed computing can change how frameworks are assembled and benefits conveyed, furnishing libraries with an open door to extend their effect. The library local area can apply the idea of distributed computing to intensify the force of participation and to fabricate a critical , brought together presence on the web. This approach to figuring can assist libraries with setting aside time and cash while improving on work processes.

v) Mobile Technology Application:

The cutting edge period of data blast presents actually moves in giving the essential data to utilizes at the right. Versatile advancements have made correspondence and data access helpful and opportune to clients from the solace of their own homes and workplaces and from any place they are while on the more phone units or PDA(Personal Computerized Colleagues). Portable library administrations is any time, anyplace administration using cell phones and incorporates the ideas of versatile Web access. Numerous libraries are starting to offer versatile form of their administrations.

Vision of Future Academic Libraries - Challenges & Opportunities:

The vision representing things to come scholarly libraries and library experts should be to create a top notch Networked Worldwide library and data focuses to give online quality data administrations to clients in the time in the e-learning climate. The bookkeepers should change the library climate as pathway to top notch data in various electronic media and data sources. Library proficient must resource their developing jobs in additional favorable to dynamic ways, both with regards to their scholastic establishments and with regards to expanding competitive business sectors for data dissemination and recovery. The vision for the 21st century libraries should offer electronic instructing and learning both the aide and coax the library calling as schooling pioneers. They ought to shape the library program and act as a device for library media experts to use to shape the learning of understudies in the scholarly foundations. Library data experts have the potential chance to give worldwide reach to the native information. Comparatively we can gain admittance to world's information and data through the web gave we have the will, expertise and the fitting disposition. These amazing open doors and difficulties can be taken care of successfully by equipped library staff.

CHALLENGES

The managing of computerized resources carries new difficulties to the scholarly libraries while executing complex equipment and programming, digitization of library assets represents a lot of challenge to the significant partners, that is to say, the library the executives, representatives and library clients. Regardless of all that digitization can achieve, there are a few valid justifications bookkeepers and documenters in non-industrial nations might lament setting out on such undertaking. Not all that in the assortment genuinely deserve digitizing on the grounds that the possibility of a whole files or library being digitized is far process. Fruitful computerized project are the aftereffect of cautious preparation and

assessment of assortments and the digitization of just those things that will give the best advantages to the clients. The following are some of obstacles to digitization project for custodians in the electronic climate.

Lawful Viewpoints this is connected with copyright. A significant test for computerized libraries is consenting to copyright, licensed innovation freedoms and related issues like literary theft. Here custodians and analysts need to play it safe. There is a rising disquiet among individuals from the library local area that copyright changes will unfavorably influence the capacity of libraries to give advanced assortments and administrations. As a matter of fact, copyright could wind up keeping libraries from giving open admittance to the computerized data they gather. Inquiries of copyright should be overseen so computerized data can be made and disseminated all through computerized libraries in a way that is evenhanded for both in data makers and data clients. Copyright could turn into an unfavorable obstruction to the advancement of computerized assortments. Weakening of advanced media is answerable for the vanishing of, or detachment of computerized data over the long haul. This is on the grounds that media weakens or rots in the span of not many years after digitization. One more test is that computerized media get lost during catastrophe or infection assaults. The justification for why re-digitization is unavoidable is the probability that electronic assets made in earlier years utilizing more established advances may not be available or viable with the new advancements.

OPPORTUNITIES

Libraries will need to proceed with their double comfort of purpose assortment improvement arrangements in crossover measurements of purpose climate wherein printed and electronic assets are to be coordinated to address different issues of networks they are supposed to serve. Libraries will need to change and adjust to the new climate keeping the future requirements of clients in view. Appropriate model it is critical to consider the scope of procurement, evaluating models accessible and figure out which one addresses the issues of the library with regards to get to and recorded and an incentive for cash. Each library today needs to add e-assets alongside printed material which requires information on valuing arrangements and models of various distributors as well as degree, inclusion and convenience of information asset so that best decision is made in choice of e-assets. Consortia techniques, for example, consortia permitting which has been in need for various years can be most ideal choice. This methodology is to drop paper memberships to titles where libraries presently get the title in both paper and electronic arrangement. Next system is to drop Diaries utilized rarely and buy lower legs on request. Then, at that point, extremely durable assets chronicling and protected for people in the future. Neighborhood content furthermore, there are reasonable handfuls (or more) local frameworks that curators are utilizing to address complex administration subtleties. Indeed, even without a proper framework set up, notwithstanding, essentially every library is managing in its own particular manner with the securing, permit, title, joining, and use information data that go with computerized content. Online Inventory gives one means to getting to electronic assets. Through title looking and subject headings, clients can find any electronic archive the library buys into and go to that report through the connection gave. Normal OPAC for all sources gathering OPAC can give a plan to different libraries to know assets accessible in one another libraries, in light of that, libraries can choose deserving of a record. Nearby Programming giving PC produced administrations, utilization, log and download measurements, consistence to agreements of distributors, membership expiry and reestablishment, movement of information from library programming to Libraries can foster their own product to give answers for the board of these e-assets without industrially accessible programming Affiliations computerized Library Establishment (DLE) and NISO have stepped up and towards the board of e-assets with the interest of experts, individual libraries, merchants and consortia gatherings, and so on. It has been coordinating a few workshops/meets and shaping different gatherings/panels to wake out answers for the administration of e-assets. Its directing gathering created and presented a proposition to the Computerized Library League with its essential objective to cultivate the quick improvement of frameworks and instruments for overseeing electronic assets.

STATUS OF EMERGING TECHNOLOGIES IN THE LIBRARIES:

the situation with arising advances in the college libraries both at public and global levels. Lubanga and Mumba (2021) the unmistakable element for the presence of new administrations and items at UNILIA libraries is ICT i.e.; library 2.0, stages via online entertainment, messages, web and electronic and public indexes. Moreover, UNILIA libraries have been demonstrated to have the option to adjust to the rapidly changing climate and work on existing administrations and items while likewise exploiting the additional opportunities and patterns in library and data science by means of examination and imagination and development in innovation. Saibakumo (2021) by and by, amidst 18 new advancements, reception is staggering though, not many have status and familiarity with the cybrary, library site, WebOPAC, institutional store and virtual entertainment. The utility and character of learning conditions have been comprehensively utilized in advances like the Coordinated Library The board Framework, the Library Guide application, RFID and the web of things. Chingath (2020) uncovered that each of the advances in libraries have suitability, like the improvement of a scrambled data set, talking robots and flying books, and so on. The presentation of these advancements will add to a bigger improvement in library administrations. Moruf and Dangani (2020) the improvement of computerized content in the scholastic libraries will have a significant impact, with the contribution of arising library advancements, for example, educational framework plan programming, electrical copyright the board frameworks and bibliographic reference programming, coordinated search programming, library robotization programming, electronic asset the executives and homeroom the executives programming. Acharya, Hiremath and Lalasangi (2019) discussed the imaginative advances in their paper, for example, the extreme front line: Facial acknowledgment is transitioning, Refreshing media labs and creator spaces, Robots, Library compact applications, Augmented reality applications, 3D printers, Dynamic bikes in the library, Computerized describing, Book transport meander aimlessly, Advanced interface for printed books, Tablet applications, Cloud printing, duplicating and analyzing.

CONCLUSION:

The paper depends with the understanding that the order of scholarly library is unblemished. Just it's job has extended design has changed. With the effect of ICT's& present day innovation applications, we are having advanced libraries as well as library and data organizations. Scholarly libraires need to answer the developing and diversifying data needs of the end clients. Scholarly libraries should turn into a nearby passage to world's information and data. The greatest and basic issue is the way to oversee change in the scholastic libraries, what's in store is dubious yet brilliant. We should create an overall equilibrium between printed distributions and computerized records. Our future library should be a half and half library which should be client focused and master helped. Presently days it is a fundamental necessity for any scholastic libraries to foster e-asset. It is demonstrated from above concentrate on that scholastic libraries ought to consider different instruments and methods while choosing an e-asset. Choice in light of staff suggestion and subject pertinence can have an effect on library assortment advancement. Libraries can utilize various strategies and procedures to gain e-asset relying upon their requirements and client local area to be served. Anyway a consortium is the most widely recognized technique used to secure e-assets. One of the most troublesome parts of computerized curatorial administration is the obscuring of standard limits the scholastic libraries give in house preparing to the library staff to refresh their abilities. Curators should foster proficient abilities and capacities with use of right innovation so e-assets are overseen well for viable openness and use by larger part of clients around the world. The reason for the review is to look at writing accessible on the utilization of innovation in libraries. This writing survey helps library experts and custodians about the innovation utilized by libraries and furthermore the boundaries looked by them. Moreover, it brings issues to light of the difficulties these new advances presents both for clients and for libraries. This audit article analyzes library data administrations in this setting of the web climate. It offers an understanding into the new advances which are turning into the need of great importance of each and every person. Clients have now perceived the worth of innovation and thus as needs be their assumptions and

requests are developing. The examination of the writing grandstands that with the developing mediation of innovation, challenges connected with it additionally develops similarly. Subsequently, it is important for library assets and administrations to go in a state of harmony with the arising library advancements.

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