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Digital Collections Development in Libraries in ICT ERA

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Abstract
The propensity of traditional libraries also evolved in the context of the quickly evolving information and communication technology. Information and communication technology (ICT) is now playing a significant role in the library collections. The conventional library system is rapidly evolving into a digital library. In today's scenario, digital library technology for archiving is essential. The paper explores the introduction of improved ICT-based user services, where the library can start providing those services to its users. Due to the variety of digital resources that are easily accessible via the internet in the digital age, collection development policy is constantly transforming. The present study makes an effort to emphasize collection development, internet-based collection, and difficulties in collection creation in the digital age. The study at hand also discusses trends and the necessity of collection development in the digital environment. A few decades ago, it was impossible to forecast how much ICT would affect library collections, organizations, and services. This concludes with the remark that LIS professionals need to find the best solutions for library services and information management after thoroughly analysing the current situations and future trends, continuously implementing necessary reform with all of their courage and intelligence, and doing so in a way that will lead to a better future. The robustness of the availability, accessibility, and use of library and information resources is a prerequisite for teaching, learning, and research quality. The use of ICT for collection development in academic libraries is covered in this paper. Finally, it was discovered that the use of ICTs facilitates timely delivery of information resources, increases time savings in collection development, and improves connection with book vendors and publishers. The study also revealed that inadequate infrastructure and a lack of power supply make it difficult to employ ICTs effectively for collection development. It was advised that university libraries should allocate sufficient funds for ICTs and the appropriate facilities, as well as recommend training to librarians and the use of online stocks as sources of acquisition.

Keywords: Information Communication Technology, Collection Development, Digital collections, Digital resources.

Introduction

The rapid growth and development of information and communication technologies have significantly altered the environment of libraries. ICT has significantly altered library collections, organizations, and services in ways that were virtually unthinkable just a few decades ago. The library environment has transformed from a manual library to a computerized library as a result of this evolution. As a result, experts in library and information science now play very different responsibilities. The qualifications, information, and abilities needed for library and information science professionals have also altered as a result of these changes. The use of contemporary ICT devices and technologies is the responsibility of LIS professionals in this evolving library environment. the factors that have changed how academic libraries develop their collections E - Environment Because of the social and technological advancements that have occurred over the past few decades, the environment for libraries and information science has undergone significant change. Because their key objective is to address every need of those they aim at, libraries work diligently to develop collections, resources, and services that satisfy their users' cultural, informational, educational, and recreational interests. Traditional research methods relied on having access to tangible items kept in a

library and using locally available library-provided tools to find these materials (such as books, journal articles, and manuscripts). Libraries cannot afford to limit their holdings to physical collections in the modern era given the wide range of alternate methods for finding information. Libraries now have to create access to content that is already available online as a result of this. Physical collections should be less of a focus on collection development than should access to various information sources be. If a library has access to internet databases despite having little physical resources, it can nevertheless provide useful information services. On the other hand, libraries have redefined their resources, operations, and services as a result of the development of information and communication technology and the changes in the requirements of users.

Users now days choose to use the internet for their information needs rather than going to the library. The traditional print collection of the academic library cannot compete with the new information technology. The academic library should create digital resources in addition to print materials to draw students and give its users better services. Even while the choice, purchase, and distribution of e-resources are comparable to those of printed materials, they actually differ from them. The selection of the collection's number and quality is a crucial and difficult task for a library. It encompasses the steps involved in choosing, ordering, and paying for informational materials. The development of a library collection involves a number of tasks, including the determination and coordination of a selection policy, the identification of user needs through user studies, the choice of informational materials, the organization of resource sharing, collection maintenance, and weeding. The traditional idea of a library has been replaced with a digital or virtual library as a result of the development of information and communication technology, information explosions, and the availability of a vast number of documents in electronic form. Librarians are gathering more and more electronic resources in the modern digital era in order to deliver the appropriate knowledge to the appropriate user at the appropriate moment. The evolution of the collection in the electronic environment has changed as a result of everything. Although the majority of libraries have not fully adopted ICT-based applications into their services, there has been a noticeable shift in library professionals' attitudes about these applications. Information and communication technology (ICT) is the study of how to handle and process information, particularly when it comes to computers that are used to facilitate knowledge transmission in the social, technical, and economic sciences.

According to UNESCO (2002) "Information and communication technology (ICT) has quickly evolved into one of the fundamental tenets of contemporary civilization. Understanding ICT and mastering its fundamental concepts and skills are now widely seen as being essential components of education, alongside reading, writing, and arithmetic".

Additionally, it is important to recognize the significant impact modern technologies have on every element of our society, from industry and commerce to health and entertainment. There is no doubt that the library is not an exception. The prevalence of ICT in the modern era's information gathering and distribution is explained by all the research on the influence and use of ICT. The adoption of modern technologies by libraries is crucial in the twenty-first century. ICT is being used in academic libraries for a number of reasons, including the mounting pressure on these institutions to provide their patrons with information services. The university libraries' collections must be in good form in order to efficiently handle the demand. Academic libraries no longer have the resources to develop collections using the old methods, which is why ICT integration is necessary. Academic libraries must integrate ICT in order to conduct collection development in order to meet the needs of library users in a world controlled by technology.

Review of Literature

Any institution of learning's pulse and soul is its library. The robustness of the availability, accessibility, and use of library and information resources is a prerequisite for teaching, learning, and research quality. Only collection development allows for these informational resources to enter the library. As a result, the collections' quality determines how good the library is. The type and scope of the collections the library will retain are determined by its objectives. Naik, M.M. and Yadagiri, S. (2017) critically analysed the changing role of LIS Professionals in academic library environments and find optimum solutions in the library services and information management of collection development. Scholarly use of information services has undergone a significant transformation in recent years, according to Guthrie and House Wright (2011). Disciplines appear to differ in the ways that research methodologies and instructional strategies are

changing and evolving. The most significant drivers of these changes have been the availability of new network-level services, including digital content resources, various new types of discovery tools, new services for information organization and use, and tools for scholarly and pedagogical interaction and collaboration.Heidorn (2011) asserts that the m ethods for gathering, storing, processing, and dis seminating information have undergone a revol ution thanks to computers and telecommunicati ons.Therefore, it is crucial that Librarians at aca demic libraries get beyond the standard rules fo r collection development. Aiyebelehin, James A. (2011) Analysed the survey based data from the study that poor power supply and inadequate infrastructure hinders the effective use of ICTs in Collection Development and recommended the adequate funding for ICTs in the University libraries. According to Jordan (2011), OCLC announced its plan to develop Web-scale services for libraries in 2009. The aim was to simultaneously reduce the overall cost of managing library collections while improving the library user's experience. The advantages of this strategy include generally better visibility and accessibility of collections for users, decreased duplication of effort from networked technical services and collection administration, streamlined Workflow, cooperative intelligence, and improved service levels. It is clear that the academic library would be able to expand access to the material needed by researchers and students by utilizing ICT in collection development. Behera and Singh (2011) pointed out that the use of ICT in collection development could lead to a variety of outcomes, such as: (a) Highly compact storage; (b) Ease of reproduction, multiplication, manipulation, and transmutation; (c) Contents can be easily detached from their media or containers; (d) Ease of migration of Contents from one medium to another; (e) Ease of transmission, communication, and storage; (f) Hypertext and Multimedia; The "Death of Distance" period will begin with the advent of (i) wellness libraries; (ii) technology convergence, which is becoming more potent every day; and (iii) the multimedia global virtual library (MGVL). ICT is utilized. According to Kavitha (2009), the library collection records the development of technology from clay tablets to papyrus sheets, paper documents, silicon chips, optical and magnetic discs, and more. Libraries have always employed cutting-edge technology to carry out collection development. ICT has evolved into a force that changed how work is carried out in the modern era. As a result, libraries everywhere must review their collection development processes to reflect the integration of ICT in collection development in order to meet the constantly evolving demands of information provision. Users' needs are changing in tandem with the current realities of ICT. In contrast to access in a print environment, which necessitates physically bringing the user and the book into the same room at the same time, with electronic access, the content can be located anywhere and all that is required of the user is a reading device and communication technology. Therefore, utilizing ICT makes such collaboration extremely successful, which results in a greater range of collections. Neal (2011) proposed that collaboration is ingrained in libraries' professional DNA. From the historical conditions of knowledge scarcity to the oppression of information and data overload in the context of today's and tomorrow's libraries, cooperation has been and will continue to be a constant for service, success, and survival.

Definition and Concept: Collection development is a methodical and crucial step in creating a library's collection in order to meet the demands of its intended users in terms of teaching, learning, and research. According to the needs of the users, it involves the selection, appraisal, and preservation of resources. It is the process of choosing library resources while taking into accounts both the immediate and long-term demands of users. It entails expanding the collection's functionality, maintaining it, organizing it, and making it user-accessible. Collection development is the process by which libraries offer high-quality print and non-print information resources and give users access to e-resources. This is on-going process, and librarians and library staff work on it with academic and student involvement. The process of determining which materials will best support the academic and research needs of its target users, including both staff and students, and choosing those materials. The process of developing a library collection entail utilizing both locally owned and outside-obtained information resources to quickly and affordably satisfy the information demands of the general public (a service population).

Collection development, in accordance with the International Federation of Library Associations and Institutions (IFLA), primarily focuses on methods for the acquisition of print and electronic materials. Increasing the amount of reading material for the pleasure of the library's target customers is a crucial step in the collection growth process.

Need of Digital Collections

The majority of resources are now available in electronic format as a result of technological advancements, and users favour using these resources because of their quick and simple search capabilities. The library staffs are comfortable using ICT, eager to explore its full potential, and more engaged and innovative while using it. Therefore, the following factors make digital collections in libraries necessary:

- Gathering information to identify information needs
- Establish a selection committee and material selection criteria. Purchase the collection's contents. CREW (Continuous Review, Evaluation and Weeding)
- It saves the time of the users and more stable
- It increases efficiency and Speedy and easy access of information
- It facilitates 24/7 access for users and assists in attracting new users.
- It allows access to an infinite variety of information from various sources.
- Quality of information sources and more recent information.

Development of Collections in a Digital Context

The traditional function of libraries as well as the conventional method of collection creation has both been altered by the ICT revolution. Due to the low cost of e-resources, 24-7 access to e-resources, quick and simple access, and the multifaceted needs of modern users, libraries are redefining their collection development plans in the digital age. In the digital age, resources include electronic copies of books, periodicals, encyclopaedias, and other materials like multimedia and e-books. The preservation and achievement of resources have been impacted by digitalization as well. The following are some of the factors that have changed how the collections process is conducted in the digital age:

- The development and spread of information technology
- Expanding the use of the internet and information technology technology in all fields of specialization.
- Trend oscillates in publishing and an information explosion.
- Financial limitations affecting libraries of all types.
- The popularity of online information items has increased dramatically.

Digital Transformation of Library Collections: Digitization: The process of transforming paper documents to electronic format is known as digitization. The conversion is done during the scanning process. Wherever there is infrastructure for sending and receiving, digital information can be sent and received. In order to implement digitization of the collection and services, the librarian must be well aware of the technical issues, potential issues involved, trained manpower available, the hardware needed, document management systems, and optical character reorganization (OCR) technology. As is well known, the idea of a digital library is spreading quickly throughout the world. The fact that a variety of organizations and professional associations are working to give libraries and librarians chances to improve and expand their professional knowledge of digital libraries is to be applauded. Numerous significant factors, including problems with digital libraries, architectural design, electronic publishing, collection development, information storage and organization, transmission, development of hypertext and hypermedia systems, networks and their effects, and personnel development, among others. Changing from a print-based to a digital society is something we are just beginning to do. Any medium that can represent the binary digits 0 and 1 can store digital information. Hyper books, CD-ROMs, and multimedia are some of the popular digital storage devices currently in use around the globe. New forms of media are continually being created.

There are many different types of electronic resources available in digital collections, but some of the most popular ones are:

- **E-books:** With the aid of the internet, you can access electronic versions of printed books at anytime, anywhere. E-books can be divided into two main categories: online (through Internet access) and offline (by CD-ROM, compact disk, etc.).
- **E-journals** are accessible online or offline electronically. The use and acceptance of electronic journals have expanded because to ICT. These are now the primary sources of scholarly information.
- **E-databases** are another significant digital resource that is accessible online and come in a variety of formats, including bibliographic databases, full-text databases, and reference databases.

- **E-consortia:** It offers easy access to tens of thousands of e-books, e-journals, and databases. It contributes to It contributes to the growth of the collection. UGC-Infonet, INDEST, the AICTE consortium, and FORCA are a few examples of e-consortia.

To meet the needs of its patrons, libraries are increasingly purchasing digital collections. Collection development in digital format is more difficult than with printed resources, though. The process of choosing from among the available e-resources is difficult; however, some selectors have provided the following criteria for evaluation:

- Appropriateness: This refers to ideas, the utility of information, titles, captions, etc. that are pertinent to the subject and suitability for the intended audience.
- Scope: In connection to the development of e-resources as determined by user satisfaction.
- Accessibility: Depending on the user's skill level, e-resource access should be quick and simple.
- When choosing the materials for the library, it is important to consider the quality of the e-publishers and e-resources.
- Format: It has to do with technical factors, such as tone integrity, clarity, size, packaging, durability, and simplicity of repair.
- Flexibility: E-resources should be adaptable enough to be used well and should support communication. These should be suggested as a selection tool while assessing the sources.
- Cost: Cost should be budgeted, with less expensive alternatives being average supplemental costs for replacement, repair, physical processing, and storage.

Process of Digital Collection Development

Traditional research methods rely on access to tangible materials held in a library and locally implemented library-provided tools for the discovery of these materials (e.g., books, journal articles, manuscripts). Only if the changes in traditional research methods are implemented will the collection development process in academic libraries survive in the modern era. Libraries cannot afford to limit their holdings to physical collections in the modern era given the wide range of alternate methods for finding information. Libraries now have to create access to content that is already available online as a result of this. Therefore, the expansion of the library's collection in the current day should go beyond the purchase of physical books and journals to include subscriptions to online databases like HINARI, EBSCOHOST, DOAJ, OARE, JSTOR, AGORA, Science Direct, BIOONE, etc. ICTs are used to manage collections, especially online collections, as well as in the process of developing collections. It is known that as the world becomes more digital, abundance is taking the place of scarcity and that physical locality is being replaced by digital ubiquity. The knowledge, perspective, and abilities of the librarians may be a major factor in determining how much ICT is used during collection development. Collection development is a process of meeting the information needs of users in timely and economic manner using information resources locally as well as from other organizations. It includes a number of activities as:

Changes in the Environment of Libraries

a) Online databases are becoming increasingly popular among users due to their added benefits over print journals. These databases often comprise a number of journals on one or several related themes. Numerous affordable online databases, including IEL online, ASME, ASCE, Science Direct, Emeralds, ProQuest, etc., are offered on the market.
b) Journals to Online Journals: As electronic journals on external storage devices like CDs and DVDs take the place of print journals, online journals are now being included as a supplementary resource.
c) The transition of patents from print to online: Many patents can now be accessed online via INPADOC or the issuing bodies, like the US Patent House, House, IBM Patent Office, etc.
d) Standards from print to CD: Several standards, including ASTM, ASME, and IEC standards, are now available on stand-alone or networked CDs, as well as online.
e) Research papers from Print to Online: Previously printed research papers are now available online. CERN, KEK, DESY, and other organizations are examples of online reporting of this type.
f) The transition from print to electronic books: Electronic books are steadily taking up more space in library

collections. Many publishers, including Springer, Wiley, Elsevier, and Cambridge University Press, produce a lot of popular e-books.

Library Services Based on ICT

The following services are provided for information-by-information technology.

- The efficient and cost-effective storage of massive amounts of data.
- Information structuring to make it possible to quickly retrieve what is needed.
- Information analysis to assist in decision-making.
- Sharing knowledge among geographically scattered individuals and rapid information transmission over great distances.

How to give the correct information to the right user at the right time is currently a library's key challenge. There are few user groups in academic libraries, and patrons come to the library on their own to get the information they need. However, because public library patrons are dispersed, their information needs differ from those of academic patrons. A library's ability to meet user expectations depends heavily on its ability to deploy effective current ICT tools:

Modifications of Library Services with ICT:

Over the past few years, library services have changed along with changes in library collections, organizations, and user expectations. The fundamental services that are currently typically offered by modern libraries consist of:

- Automated document issuing and return through library software, RFID, etc. Online Public Access Catalogue (OPAC) and Web OPAC
- Online interlibrary lending tools allow users from outside the library to access e-books and online journals as guest users. Document delivery services through email, fax, etc.
- Electronic resource access via the internet
- Online libraries services
- Utilize library portals and electronic resources registry databases to link to pertinent Web resources (both paid and unpaid).
- Manual to automatic translation services Photocopying to digital photocopying to network printing
- Web of Science Citation Analysis
- Web-based CAS, conference announcement, and newspaper clipping services
- Reference assistance to "Ask a librarian online"
- Digital archiving of journal articles, research papers, theses, project reports, and other
- Internal publications made available through institutional repositories

Findings and Challenges:

Behera and Singh (2011) highlighted a number of obstacles that prevent academic libraries from effectively using ICTs for collection creation. These difficulties include a lack of ICT expertise, financial limitations, the issue of managing with constant upgrades, etc. These issues take varied forms in various academic libraries. Despite all of these obstacles, ICT in collection development is still a crucial tool for successfully competing in the current information management era. According to the study, it emerged that:

- ICTs have a huge range of applications for collection development. Computers, the internet, printers, phones, spine labelling machines, and other ICTs are some that are easily accessible. The library uses these ICTs to carry out various collections development tasks.
- The majority of collection development tasks, including ordering, producing lists of books to be ordered, examining publisher catalogues, and interaction with suppliers, are completed using ICTs. ICTs were discovered to be used for tracking books on order, keeping track of acquisition records, and purchasing electronic resources.
- The collection development process is greatly impacted by the usage of ICT in this area. It was discovered that ICT reduces the amount of time needed for acquisition, provides information materials quickly, improves the standard of library services, and encourages the purchase of recent materials.
- Covenant University did not experience most of the difficulties mentioned in the research, such as inadequate finance, a lack of skills, and access issues. This demonstrates the seriousness with which the Covenant University Library approached the use of ICT for collection development. The employment of ICT in collection development, it was

discovered, is significantly impacted by sporadic power supply issues.

- Additional issues exist. Delivery delays, currency exchange issues, inadequate bibliographic control, shipping issues, supplier attitudes, etc. are just a few of these issues. The results of this study show that, with the use of ICT in collection development, the purchase of library materials would no longer be a source of anxiety for librarians.

Recommendations:

To survive the current information demand, libraries must aggressively incorporate ICT into their daily operations, it must be underlined. Because a library would be no different from a town hall without information materials, collection development is still a key aspect in assessing the efficiency of the library system. Academic libraries must alter the way they obtain information as the output of knowledge from sources other than the traditional book form rises. It is crucial that academic libraries incorporate ICT into the process of developing their collections. The following suggestions have been put out for thought:

1. Libraries have to put a strategy in place for acquiring and maintaining ICT.
2. To efficiently participate in the acquisition and distribution of information sources, libraries must strengthen the funding of ICT in collection development.
3. Proper training should be provided to librarians on how to use ICT for collection development. In order to encourage the use of ICTs, it is not enough for the library to purchase ICT; sufficient training must be provided to the librarians in charge of collection development.
4. Academic libraries should make the most of online booksellers like amazon.com. In addition to rapid acquisition and delivery, this lowers the cost of materials purchased. Additionally, it results in the purchase of current informational materials.
5. The libraries should offer the necessary ICT infrastructure. For instance, it is essential for the library management to plan for a standby power generator due to frequent power failures.

Conclusion

Digital resources have risen to prominence in today's information and communication technological environment and are significantly influencing the collection development policies of academic libraries. Libraries now have no choice but to employ these digital resources to suit the multifaceted needs of their target consumers. As a result, the libraries are updating their collection development policies for resource selection, acquisition, preservation, and distribution. Libraries must take the initiative in a digital world to deliver the appropriate information to the appropriate user at the appropriate time. However, in order to achieve its goal of offering its users the greatest services and resources available, libraries must maintain the required infrastructure for collecting digital resources if they wish to thrive in the digital age. Irrespective of its origins, size, etc., the library environment is already changing, and this process will continue in the future. In this situation, library and information science professionals must accept the changes and adapt to the shifting library environment in order to better serve the user population. The capacity to effectively communicate, a working grasp of library technology, and computer and network literacy will soon be essential skills for LIS practitioners. Traditional libraries and information centres have been significantly impacted by information communication and networking technology. In fact, technology has transformed the fundamental essence of libraries and librarians, and it continues to have an important effect on the strategic direction that libraries are taking in a world where users want rapid access to information. Documents have been digitally preserved as a result, and they are now kept in multimedia management systems that borrowers can access. Libraries all over the world are experiencing a big problem in providing for users' increased expectations for mobility in order to access these educational resources owing to the growing importance of rich media content in educational institutions.

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