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Modern and Information Services of an Academic Library: An Overview

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Abstract

Academic libraries are considered a confidence centre of educational establishments and their Services assist numerous academic programs, including teaching and research. In academic libraries, the application of the latest technology, particularly internet technology, has transformed traditional methods of providing library and information services. Introducing novel information via a variety of channels requires an extra need for information and a library system to include the latest users. As users of technology became more demanding, libraries grew or invented new services. Information methods and techniques are constantly being developed by the internet for libraries to use to provide their services. Some research achieved one-of-a-kind elements of the sector that have underlined the significance and relevance of libraries in the modern world. The modern library is characterized by a networked, automatic environment in which each operation is performed with the assistance of one or more communication or information tools. This paper explains the Purpose and Functions of an Academic Library, the Need for Modern Academic Library Services, Modern and Information Services of the Academic Library, and Emerging Trends in Library and Information Services. In addition, this article is designed to help research scholars learn about these fields.

Keywords: Academic Library, Modern Library, Information Services, Library Web Portals, Subject Gateways, Website Archiving Service

1 Introduction

Education objectives are to disseminate knowledge and create the right people. Information is stored in libraries, which also serve as a fundamental measure for education. The nature of libraries has undergone a major change from the perspective of computers. In libraries, computers are used to process, store, retrieve, and distribute information. Today's libraries are digital institutions. Nowadays, networked information is highly involved in libraries which are connected to a tremendous of services based on the internet. Additionally, the growth of digital information relevant to the professions is astounding. **(Mahajan, P. (2005).**

The technology of information is transformed the whole world into a world village with an international economic system that is becoming more and more reliant on the creative management and dissemination of records. The age of knowledge and information is now well underway in the twenty-first century. Invisible knowledge and information now serve as major driving forces across all institutions. Innovative minds become the economic system's leaders in a society that values knowledge and information, and knowledge workers are in high demand. Libraries experience the influence of the most modern innovation in every way. Information technologies such as computing, communication, and mass storage are forever changing how Information can be accessed, retrieved, stored, managed, and distributed through libraries.

In place of extension otherwise adjunct, academic libraries have always been an important factor of institutions for higher learning. Additionally, academic libraries use contemporary ICTs to automate centre operations, build effective networks for resource sharing and library collaboration, apply management information systems (MIS), and expand institutional repositories (IR) for electronic internal contents and Digitalized libraries. **(Onuoha, J. A., & Obialor, D. C. (2015).** This paper focuses on researching the need for modern libraries and the information services provided by academic libraries because these institutions have established themselves as essential to the pursuit of learning.

2. Academic Library

In the larger scheme of libraries, which also includes national, public, and special libraries, academic libraries constitute a distinct category. A university's or a college's ability to function depends heavily on its library. Academic libraries' function in providing equal entry to

information is essential. This statement was emphasized in the academic libraries, Radhakrishnan Commission Report (RCR) as well as the Kothari Commission Report (KCR); UGC in India places a grand deal of significance on development of library services in the higher education institutions as well as on the effective management of those facilities. School, college, university, and research libraries are all considered academic libraries. All of these support academic networks' requirements for enhancing the institution's study and research programs and assisting in the preservation and dissemination of information. Even though these academic libraries provide some features in common, their worth and content are very different from each other. Academic libraries assist the objectives of the educational system to which they belong, rather than existing in and of themselves. Any academic institution's major objectives are:

- ❖ Knowledge preservation and maintenance;
- ❖ Thinking expansion and diffusion made possible through explanation, study, and publication, and
- ❖ Spreading of information through academic services.

Libraries in academic institutions assist them to attain their goals. The fundamental elements of academic libraries are a selection of informational resources, services, users, and personnel ([file:///S:/Unit-1%20\(2\).pdf](#))

3 Purpose and Functions of an Academic Library

Libraries have some purposes and functions for understanding the requirements. The library's primary purpose is to serve through human thoughts of records, ideas, and expressions that are created and available to all. The library's functions are listed below:

- ❖ To acquire library resources and materials and provide to help the users for thinking and acting personally. Through these functions, they may able to improve their make and critical abilities and energetic reception.
- ❖ To grow and improve the awareness of information, education, and civilization.
- ❖ To give facilities for formal and informal lifetime self-education to all users.
- ❖ To maintain human literature and culture for future generations as sources of inspiration for lifestyle and research;

- ❖ To provide reliable information for all users, whatever their age, caste, creed, colour, religion, sex, etc.
- ❖ To put it briefly, the capabilities of a library cited above may be widely grouped into 4 concrete functions.

(a) Education

Education reduces the gap between the individual and recorded information and provides a means for self-improvement of the person groups at various levels of education. By maintaining an adequate supply of books and other study materials and making them available to all user groups, the library, as an academic centre, must promote and encourage all forms of education (formal, non-formal, adult, and life-long).

(b) Information

We must provide accurate information to an individual or group quickly and adequately, especially regarding topics that are current and of interest to them. The information service's range has been expanded to include data on many socioeconomic aspirations of society. For specialized information resources, a library must serve as an information or referral centre. Opportunities for employment, public application services, and social awareness campaigns are seen as important informational areas that can be gathered and maintained for distribution to all users.

(c) Culture

The library serves as the main centre of cultural activity and promotes enthusiastic involvement, enjoyment, and admiration of all the arts. There are two sides to how culture develops. First of all, analysis and questioning help people become more creative and broaden their horizons of knowledge. Second, through monitoring extracurricular activities including lectures, seminars, symposiums, book fairs, and cultural events, the library may help society's cultural development.

(d) Recreation

Libraries contribute to promoting the high-quality use of entertainment by providing material for diversification and relaxation. A library must have space where people can occupy themselves in a healthy and high-quality way. Fictional books, magazines, newspapers, and other materials all encourage leisure reading. Films, television, radio, audio-video cassettes, and other visual media expand the use of a public library. Additionally, several performing forms will be made in the academic library for distribution to the local populace. (https://nios.ac.in/media/documents/vocational/CLS/Certificate_Course_in_Library_Science_english/M1_PDF/M1L1.pdf)

4 Need for Modern Academic Library Services

Users went to libraries to look for materials from a variety of records that matched their needs. Academic libraries' operations and environment have been significantly impacted over the past three decades by the emergence of Internet technology (IT), Modern Telecommunications (MT), and various related fields like management information systems (MIS), information retrieval systems (IRS), data processing (DP), etc. It has been thought which provide users with information when, how, and in the format they desire. The younger generation, often known as millennials or netizens, is very at ease working in internet environments. The user's expectations and needs have significantly improved. They need information services outside the physical library's four walls, thus they are no longer satisfied with the location-based library services. It is advantageous for libraries to change in accordance with the demands and expectations of their user base. Libraries can adopt new technology that can provide reduced information services that let them maintain their current patrons and draw in new ones. Libraries face going extinct if they don't adapt to provide new, contemporary services that meet the requirements and expectations of their patrons. We can sum up by saying that contemporary library services are essential for the reasons listed below:

- ❖ Information searching for user behaviour changes
- ❖ Users' expectations and needs have grown, and
- ❖ Technology is now available to support accessibility and availability.

4.1 Manual and Automated Services

Academic libraries have unique ways of providing services, which are typically divided into two classes: manual services and automated services. These are mentioned below.

4.1.1 Manual Services

The maintenance of numerous records, registers, and cards in the academic library are referred to as a manual system. These entail the manual execution of various tasks and processes without the aid of computers. The best housekeeping and routine tasks, which are cyclical in nature, are performed manually in many libraries. Additionally, manual services are defined as those that are provided or distributed without the use of a computer as a mediator. Computer systems are used as tools or mediators to provide computer services.

4.1.2 Automated Services

The use of computerized systems in academic libraries today allows them to maintain records of all actions and procedures. Its administrative tasks, such as acquisition categorization, circulation, and recording information about journal subscriptions, have been digitized. For carrying out a variety of library-related activities, it uses library management software (LMS). There are many modules in the software package for library tasks. The software program allows the library to quickly and effectively accomplish its ongoing tasks. Now, all housekeeping tasks are carried out by computerized devices. Users are also given access to computerize services via LMS. For instance, Token or registration systems are used in the circulating area to distribute books to users. A computerized circulation system does not require the library to create and manage borrower cards or tokens. Each member must have a single card with a distinct identification number in order for the program to access the member database (which includes a library membership number). Additionally, the software program manages various borrowing facilities.

Table 1 explains the distinctions between manual and automated services offered by academic libraries.

S.No.	Manual Services	Automated Services
01.	Users receive books through the circulation section by registering or using a card.	Each library user must have an ID card bearing a special identification number (which also includes their library membership number) that can be used to access their database through automation software. There are many borrowing facilities that control the software.
02.	Books cataloged through the technical section and preparing print or card catalogs and also preparing manual lists of new arrivals.	The Open Public Access Catalog (OPAC) is used by users to search for and locate library resources.
03.	As per the purpose of the needs of the users in research, libraries prepare bibliographies, abstracts, and indexes.	Commercial publishers are provided facilities of e-resources to the users such as online access to indexing, abstracting services, and full texts.
04.	Users who need current awareness services (CAS) can get them by making photocopies of the materials from the library.	Users are notified via mail alerts when new editions of books and periodical issues are available. The users are also shown how to sign up for TOC (Table of Content) alerts to receive RSS feeds or email notifications from publishers. To get a notification about the publication of a new journal, users must register on the publisher's website. It's always free to register.
05.	A face-to-face interview is used to provide the reference service..	The reference service is offered by email, chat, spontaneous messaging, etc.
06.	The staff supervises, monitors, and maintains security to prevent theft, property damage, and vandalism in the library.	To maintain the area and provide protection, CCTV cameras are placed.
07.	The shelf listing is compared with the stacked books to determine stock levels.	Utilizing RFID, stock verification is done.

Table 1: The distinctions between manual and automated services offered by academic libraries.

(<https://nios.ac.in/media/documents/SrSecLibrary/LCh-014.pdf>)

5. Modern and Information Services of Academic Library

Modern and information services of academic libraries were seriously hampered by the rapid development of technology for information and communication. The production of the most recent data was driven by the exponential growth of digital and electronic information, which, then called for services to new user. Development of the online into vast repository knowledge presented the challenges and opportunities for libraries and information centres. As more and more people throughout the world have access to the internet, web-based information services become more important. Because of the potential for brand-new users to switch the libraries and information centres can now access information in real-time and digitally from print sources are increasingly updating usual services by integrating using online resources or creating modern services entirely based on such technologies. Three categories can be used to categorize contemporary advancements of modern libraries and information services:

- ❖ Library and information services based on the web
- ❖ Access to digital resources services
- ❖ Access to internal digital resources

Following are functions of numerous rapidly growing library services (<https://lisstudymaterials.files.wordpress.com/2017/12/modern-library-services.pdf>).

5.1 Library and Information services based on the web

Online library activities mean that, with the use of library automation software, which given utilizing the web as an intermediary and the library's (**Madhusudhan and Nagabhushanam (2012)**). Due to the 24-hour availability of online information services and libraries, users can utilize them from their home computers rather than visiting to a physical location. Scholarly users of the academic library have access to a variety of internet resources for information and libraries. Within academic libraries, online reference services are commonly used by a considerable number of users, e-Journals, e-Books, web-opac, full-text online databases, and digital reference services. In order to rise the academic libraries usually have high-quality libraries and information services encourage the educational network to post suggestions and comments through emails or suggestion boxes.



Fig: 1 Diagram of categorizing contemporary advancements of modern libraries and information services

Additionally, Academic libraries constantly update their online library with information about their services, including housekeeping activities, an event calendar, staff information, laws and regulations of the library, etc. The services include instant messaging, digital databases, services for delivering documents, digital libraries, and OPAC. **Fig.1** explains the categorizing contemporary advancements of modern libraries and information services.

The Web 2.0 and Web 3.0 technology usage is becoming increasingly important in libraries today. With the use of these technologies, anyone may produce their own internet content and share it with others. Web 3.0 is referred to be a "Semantic" web, in which computers analyze web pages and provide users with specific information just like humans do. Web 3.0 technology presents people with personalized information by logically organizing the data on the internet. These resources can be used by libraries to correspond with faculty, and other members of the academic community. Technology is an effective way for students, researchers, professionals, and professors to interact and communicate with one another. Tagging, podcasting, micro blogging, social networking, wikis, blogs, and hosting services for content and other Web 2.0 programs are just a few examples. Facebook, YouTube, Twitter, Wikipedia, MySpace, Instagram, and more well-known websites are included here. Tools from web 2.0 and web 3.0 are used by library for a variety of purposes, including promotion, information distribution, user interaction, and professional development (**Ali, K. S., Shah(2018)**).

A few of the most significant libraries and information services on the web might be discussed in the sections that follow.

5.1.1 Library web portals

Special types of online-based services are available through the library's web portal. Researchers and library information professionals are interested in integrating the library web portal into their integrated online library information systems. An online gateway for libraries is required, one that can be easily created, implemented, and maintained by specialists in libraries and information. The library also requires a gateway since it needs to increase the productivity and effectiveness of every user. Through a few clicks, portals provide each user with all the digital information and services they typically need to function. In contrast, homepages provide people with the information they want to know, which is never enough.

Most portal users desire access to library data, including the catalogue, permitted databases, digital journals, the books they like to return, a map of the library's floor, an e-reserve, and occasionally even a list the most recent purchases that correspond to their profile. It might be quite advantageous to create a website for the library that utilizes its proprietary or paid software. Academic library must determine the finest software to use when creating a long-lasting online portal on a shoestring budget. It is necessary to employ free and open-source software tools and programs to develop an effective and strong online portal that integrates all types of library core services on a single platform and architecture. There is no one definition of what a portal is, however for a gateway to work; it must possess at least these five characteristics:

- ❖ Web based searching
- ❖ Information
- ❖ Reference resources
- ❖ Access to websites for online shopping, and
- ❖ a few chances for communication (i.e. email, chats)

Library web portals make it easier for users to consider several logins. The portal provides the library with a tool to help patrons to the materials they're looking for. It makes searching easier by directing users from full-text to bibliographic searches content choices.

(a) Components of library web portal

The online portals for libraries are evolving quickly, a number of significant components that should take into account when creating the library portal are as follows:

- ❖ Web interface that is intuitive and adaptable
- ❖ A search window
- ❖ Resource referencing
- ❖ Users Authentication
- ❖ Safety
- ❖ Presenting customized content
- ❖ Services that are interactive
- ❖ Information on the library's web portal **(Das, R. (2019)).**

(b) Online portal of the library's objectives

The primary objectives of a library's online portal are:

- ❖ To give users access to a flexible and integrated interface for many resources.
- ❖ To seek through many databases
- ❖ To organize specialized metadata searches using various formats like MARC and Dublin Core, as well as to produce outcomes with the best reply times.
- ❖ To do searches on content in unique formats, such as multimedia files and objects, full-text documents, graphics, and bibliographic information.
- ❖ To provide resource navigation and connection
- ❖ To provide comprehensive and detailed management data and utilization statistics.

(Letha, M. M. (2006).

(c) The major functions of the Library Portal

- ❖ If only the library could display the materials in a standardized, structured portal, searching might be much simpler for the user. This must be specially created for distinct groupings of users.
- ❖ Users may learn how to do more effective searches, if there is a single, entirely working, and each database has a search interface that is maintained by the library they wished to utilize.
- ❖ It must frequently be easy to access many databases from a single search field. This indicates the capability to query databases that apply unique metadata criteria in a single search, primarily in unique curatorial domains.
- ❖ The computer must be able to search image databases in particular and a wide range of multimedia formats, and it would be great to display thumbnails or previews with search results.
- ❖ The findings of spread-out searches must be provided to the person in a way that is understandable, preferably with reduplication and result sorting.
- ❖ The individual must be capable of producing comparable hits or searches, including reusing databases other than the one it was originally built for.

- ❖ Given that demands are increasing quickly to meet the needs of certain domains, the system ought to include fundamental management tools for dealing with various http-based query syntaxes

(https://www.academia.edu/11646879/Web_Portal_in_Libraries)

5.1.2 Web-based OPAC and Subsequent-Generation Catalogues

Web opac is OPAC (Online Public Access Catalogue) that is create online accessible. User has constant access to the library catalogue. To find out whether certain library holdings are available, the user can search the catalogue. The numerous web OPACs offer members online renewal and reservation possibilities, and there are simple and better search options accessible. The Subsequent-Generation Catalogue, is known as 2.0 catalogues, is one view in access to library's data. Data in this context mention to library sources. For this one-stop search, these newer catalogues make use of federated search engines. The users are guided to a single interface that connects both published and digital information.

Other features of the subsequent next-generation catalogs include a modern web interface that is user-friendly and aesthetically pleasing, enriched content (such include illustrations for CD packaging, reviews, tables of contents, and book summaries), faceted navigation (This allows users to focus their search by author, date, content type, subject, location, etc.), with a basic keyword search field (similar to well-known search engines like Google) as a preference, suggestions and related information (recommendations for similar goods), contributions from users search suggestions (spelling checks for search results and advice about different search queries) (reviews, ratings, feedback and user-generated tags) and RSS feeds (which provide information about new purchases and updates to your searches). VOYAGER ILS by Ex Libris, EBSCO Discovery Service (proprietary), Evergreen, Invenio, and Koha are a few examples of subsequent Generation OPACs (open source).

5.1.3 Bulletin Board Services and list Serves

In a "bulletin board," users can post messages without using each other's personal e-mail addresses, and anyone who visits the space can read them. The region can either be kept open or have access restricted via invitation. Newsgroups or forums are other names for bulletin boards. This area may be used to present information on special collections, library sources, events, etc.

These online message boards are connected to the library's web pages for both common users and particular organizations.

List services are online message boards that are topic- or subject-focused and where messages are sent via email. These are essentially forums that deal with topics of academic or professional relevance. Emails can be sent and received by those who subscribe to the list server; a program hosted by the parent company or other authorized party, for example, controls the procedure. Get to be a Studying Butterfly!

(<https://lisstudymaterials.files.wordpress.com/2017/12/modern-library-services.pdf>)

5.1.4 Subject Gateways

A collection of resources known as a subject gateway makes it simpler to access network-based information in a particular subject area. It is frequently employed in relation to network-based resource access. The best subject gateways are groups of websites that contain directories of resource connections. Some gateways offer an easy search function and index their lists of links. More sophisticated gateways offer a considerably greater carrier through a system like a resource database and numerous indexes, which may be searched and/or browsed through a Web-based interface.

A network-based useful resource, such as a web page, website, mailing list, or document, is described in detail for each item in the database. Entries are often made by a cataloguer manually selecting a relevant beneficial resource, describing it using a template, and then submitting the template to the database for indexing. Subject gateways of internet are involved each taking gain of the possibilities provided by the Internet, and additionally performing as one feasible solution to the problem of information retrieval and high-satisfactory control which will be extra powerful than other answers consisting of search engines (which lack discrimination), metadata (which could have to be delivered by authors), classification schemes, catalogue entries or the usage of Platform for Internet Content Selection (PICS) to set high-satisfactory selection criteria.

(a) Characteristics of a Subject Gateway

- ❖ A website or online resource that provides links to numerous other websites or online documents.
- ❖ Manual creation/intervention, regularly with the aid of using information and/or subject professionals.
- ❖ Selection of resources in accordance with the stated quality and breadth criteria.
- ❖ Descriptions of intellectually produced work that range in length from a quick note to a review.
- ❖ Search and browse access, and
- ❖ Collection management policy, supported with the aid of using renovation and updating procedures.

(b) Important of Initials Subject Gateways in Library Science

The Important of Initials Subject Gateways in Library Science is given below:

- ❖ American Library Association (ALA)
- ❖ Digital Library of India (DLI)
- ❖ Digital South Asia Library (DSA)
- ❖ National Library of India (NLI)
- ❖ Subject Information Gateway in Information Technology (SIGIT)
- ❖ The Universal Digital Library (UDL)
- ❖ World Digital Library (WDL)

The library science field's subject information gateway will meet the information needs of those working in fields directly or indirectly related to information technology. For scientists, academicians, researchers, authors, students, etc. who are involved in IT-based study/research activity, it would also be advantageous. We work tough to hold up to date the gateway resources and hold on to including new & revolutionary features (**Gajbhiye, R. S. (2020)**)

5.1.5 Web-based Current Awareness Service

For researchers and academics to stay current with the most recent discoveries and posted information, current awareness services are essential. The various sections types of CAS are given below:

- ❖ New arrivals of books
- ❖ Alerts for the table of contents
- ❖ Blogs
- ❖ Facebook and Twitter
- ❖ Social bookmarking
- ❖ Citation alerts
- ❖ Subject alerts
- ❖ Web page alerts

The purpose of the website notifications, as indicated, is to keep up with fresh internet content in your topic area. A few of the services that provide alerting services for new web postings include:

Google Alerts: Google Alerts is a search engine results monitoring service that tracks web pages listed by Google and notifies users through email when it discovers new content online.

The Scout Report: The Scout Report is a series of weekly reports that highlight recent and recently discovered digital resources that are relevant to academics and students.

Conferences: Finding papers presented at conferences can be challenging on occasion, yet they are usually the only source of important new research findings. Allconferences.com and Conference notifications are two websites that list conferences.

(<https://www.library.cornell.edu/research/current-awareness>)

5.1.6 Online Question and Answer Service

Due to the vast amount of easily accessible material on the internet, there was a significant expansion in the number of online question-answering systems. The department of QA systems known as community-based question-answering systems has shown excellent growth. The project's objective is to offer an automated response to a natural language question (Ojokoh, B., & Ayokunle, P. (2013). With a particular focus on answers to libraries cataloguing, metadata, and type of problem using RDA, AACR2, MARC21, DDC, LCC, LCSH, FRBR, FRAD, FRSAD, and BIBFRAME, the Quizzes about library and information science with questions and answers compilation includes FAQs (frequently asked questions) as well as tests on all facets of librarianship, information technology, and library science as they pertain to libraries and library management. Learn more about library and information science everywhere

you go, whether you're a researcher, a working professional, or a student. For researchers, LIS professionals, MLIS & Ph.D. students at the i-School, librarians, and catalogers. Free for everyone, always. To provide clear information on the issue, questions on related themes are placed together. Questions regarding the Classification by the Library of Congress (LCC), for instance might only appear in one location. Same topics, like LCC, have primary initially presented queries, and which may be seen in advanced-stage questions. In addition to serving as a question bank for information science and libraries, this collection of questions will help LIS professionals all over the world perform well in competitive exams (such as the Interviews and the UGC-NET in library and information science while staying current with fresh information.

Questions related to library and information science (LIS) may be classified into unique units. Questions are provided as links to weblog articles with possible answers that can be found there. The correct answer is then presented, along with details on the question's subject and references. The correct response to the questions has been presented with the utmost care. However, professionals are urged to contribute information on the subject of the study of libraries and information, any recommendations or submissions for further improvement. (<https://www.librarianshipstudies.com/2018/03/library-information-science-questions-answers-quizzes.html>)

5.1.7 Online Reference Services

The librarians' enthusiastic willingness to serve the information desires of their shoppers gave improved reference service. The online reference carrier (ORS) is growing to this servicing eagerness. Now as ORS is a common service supplied through college libraries to their library users (and visitors) it is essential to recognize in detail how they offer this service and how it proved beneficiary to those libraries and their users. The rapidly converting necessities of the patrons force librarians to offer proactive reference service inside the library as well as at the patron's preferred destination. The online (or virtual or digital) reference service is conscious of the patron's need for convenient access to resources with the growing significance of basic reference service, whether CDS or SDI. It has grown to be vital now that extra interest is needed to be paid for the realistic functioning of the online reference service. The key to achievement for the librarian is to guarantee the users approximately getting the desired information without problems from the library and ensure that they'll approach the library once more for similar

information. In a user-centric library that is the best position of the librarian above all of the different roles—is the reference service provider.

Virtual reference services are advanced as a method of offering help to find digital information and supply it through immediate messaging or electronic mail. The RUSA Guidelines of the American Library Association for ‘Implementing and Maintaining Virtual Reference Service’ genuinely state that digital reference is an extension of an institution’s present reference service. The models of the Library 2.0 and Library 3.0 assist to satisfy an efficient reference provider through customized library internet pages, chatting, mobile messaging, electronic mail, Twitter, blog, etc. separately or all bundled together. But this calls for educated staff. Making the library’s presence online past electronic mail could be very vital for digital reference providers, i.e. making a 24/7 available digital reference desk (**Dawar, V. A. (2013).**

5.1.8 Webcasting

The expansion of the Internet and its transition to Web 2.0 has created new opportunities for its application in the training industry. The advantages of streaming audio and video are becoming more and more apparent thanks to the expansion and enhancement of internet services, better and better infrastructure, and ever-improving content. Scientific conferences are increasingly being broadcast these days to enable those who lack the means and aptitude to physically attend to benefit from the event. In the field of distance learning, webcasting offers excellent capacity. It provides as a cost-effective and effective tool for delivering lectures on a global scale. Additionally, it permits the use of certain intelligence for the benefit of a much wider audience. Transmitting video and audio streams over the internet lets in occasions which include lectures, seminars, and webinars, to emerge as to be had by users in remote locations. There is significant capacity for its use in training which includes facilitating visitor lectures, classroom webcasting, library applications, training, reduced journey time, and fee-saving. Quality lectures and talks may be made available to staff in academic institutions to higher manage resources which include a library. Besides improving private improvement, webcasts also can show useful for organizations of learners permitting staff and faculty to find out about new services and technologies. Besides staff and improvement of the library capacity, faculty

participants also can study from webcasts to replace their competencies and expertise base in an ever-advancing world (Mishra, P., & Khan, M. L. (2009).

The first category gives digital libraries of audio-visual content as on-demand services. The important function of those services is that they take static web pages and construct multimedia skills into their service offerings through webcast technologies. This allows a person with a definitely prepared PC to download content on demand. For instance, a person would possibly download a valid video clip from a service that may be performed in 'actual time' as streaming media or for later playback. A number of start-up companies are exploring the ability to use this utility for digital commerce, together with the delivery of content to users.

(<https://www.oecd-library.org/docserver/236876806032.pdf?expires=1669206833&id=id&accname=guest&checksum=7C2F9BE51701A9AE0C3E52DE5FDD1866>)

5.2 Access to services for digital resources

Library digital resources make an outstanding effect on gaining knowledge of and scholar improvement in any organization of better learning. Without any doubt, digital information sources are important thing to the conclusion of the desires of the university library, in addition to the institutional outcomes, specifically on the subject of studies. In short, the significance of digital resources in university training cannot be overstressed. Library digital sources in this context talk over electronically supported information materials subscribed to, certified, or housed in the library or print library materials in digital formats. Advancements in technology and associated facilities have greater provision and availability of university-based digital resources or e-resources in educational institutions, specifically in the library in which a maximum of those digital sources are available and accessed Electronic sources in the universities are ordinarily located and available in the library. However, through the usage of the latest technology maximum of those resources might be accessed everywhere else due to the fact with a positive username and password a few library-based digital sources of a selected library might be accessed miles away. Major digital information access factors which make information retrieval less difficult for students include: mobile gaining knowledge of devices, libraries, ICT centres, cybercafé, dormitories, and classrooms (Okunlola, A. A. (2021).

The benefits gained from using the internet for academic and research purposes, together with the availability of free online journals, magazines, and other information sources,

are the driving forces behind this trend. According to one theory (the "technology attractiveness model"), the main factor contributing to the appeal of technical equipment and the internet is their perceived utility or potential applications. This setting offers opportunities for in-depth research of the attitudes and experiences of scholars about the use of digital sources for academic research and study. Therefore, it is important to look at how these students learn to online resources to support their academic work and get to know them. It is assumed that the results of this modern-day observation will make contributions to improving the empirical studies' consequences which might be useful for informing coaching and getting to know exercise in better education. This will even give students who live in this underserved area knowledge of the value and enjoyment of online resources. Tertiary establishments in growing nations need to construct efficient cybercafé, in addition, to offering internet facilities inside their premises and subscribing to digital medical databases. This will permit greater access past using cell phones in addition to using open access sources along with electronic journals, electronic conferences, electronic thesis, and dissertations. Academic institutions desire a digital library that will enable students to easily access medical articles from databases including Elsevier, Springer, Taylor & Francis, Wiley, and Emerald. The dependency on Google and Google Scholar will be reduced as a result. In addition, offer the manner to discover different associated medical papers so that you can enhance their learning and intellectual pursuits (Apuke, O. D., & Iyendo, T. O. (2018).

5.3 Access to services for internal digital resources

An institutional repository (IR) is a digital repository that allows for searches of the academic work created by a certain institution that is available for use at a later time. The following are the items deposited in IRs:

(a) Institutional Repositories

A digital archive known as an institutional repository (IR) is the scholarly output of a particular institution that has been kept in a searchable format and is accessible for use at a later time. The items deposited in IRs consist of:

- ❖ Theses and dissertations in electronic format
- ❖ Conference
- ❖ Proceedings and Papers

- ❖ Print versions of journal articles (Pre & Post)
- ❖ Research databases and books
- ❖ Working documents and Reports
- ❖ Education and Learning
- ❖ Objects and
- ❖ Multimedia archives

The most popular pieces of software for developing IRs are DSpace and E-Prints. The institutional outputs are made public by IRs.

(b) Internet-based exhibitions

A digital exhibition, online gallery, or online exhibition is a online service offered via information sources like Archives, museums, and libraries. (Photographs, works of art, papers, etc.) typically owned by the institution is carried out. Absolutely everyone, regardless of time or location, can think about or visit it. A web exhibition has several benefits over a physical one, including a broader audience reach, lower manufacturing costs, solutions to conservation and preservation issues, the creation of a lasting online record, and accessibility at any time and from anywhere. Examples include the Online Gallery of the British Library, Latin American Business History by the Harvard Library and the Columbia University Library's Online Exhibitions.

(c) Website Archiving Service

Website archiving services have gained popularity since, on many times, the internet has replaced all other forms of collaboration, sharing and communication between corporations and people. The most convenient location for the information may be when it is uploaded to a website. Websites should be maintained for future use and reference as they are now significant records for both corporations and individuals. Websites' active nature further justifies their preservation. Web archivists gather or scrape websites using computerized technologies (or internet crawler software). In order to copy and store the necessary data, web crawlers move over the internet and inside of websites. Users can browse these archived websites online after they have been prepared. Currently, many of the nation's libraries are collecting and preserving unique and important online content. Groups are using proprietary internet archiving software services to maintain their own online material for commercial, historical, governing or legal

reasons. The Internet Archive (<https://archive.org/>) is the largest non-profit provider of internet archiving services. Below are a few examples of library online archives:

❖ **Web Archive for Legal Deposit of the UK:**

The British Library created a UK web archive containing millions of web pages collected from a yearly archive in the whole UK domain. Such was made feasible through the non-print lawful deposit rules implemented by the UK government put place in 2013. Mostly machines under the library's control that are located on the grounds can access this archive internally.

❖ **British Open Online Archive:**

Here is a more condensed list in websites that have been chosen and archived by the British Library. With the owners' consent once more, certain websites will keep being added to this open-access collection. Online access is possible.

❖ **Government Web Archive of Australia:**

A project of the National Library of Australia to archive websites (formerly known as PANDORA).

❖ **The Library of Congress Web Archives (LCWA):**

Earlier LoCWeb document enhancement work became known as MINERVA.

(<https://lisstudymaterials.files.wordpress.com/2017/12/modern-library-ervices.pdf>)

6. Emerging Trends in Library and Information Services

Technology advancement occasionally has an additional impact on library user services. Technology's development has provided libraries with a number of solutions, and the last ten years have seen the introduction of cutting-edge technology in libraries. A version of future libraries and associated user services are created by imagining the technology trends of Library 4.0. New technology makes it easier to improve the fantastic services and goods provided by many libraries and library professionals. Today, libraries and library experts are constantly concerned with introducing generation-orientated services together with 3D printing, RFID generation, virtual storytelling, maker space, and synthetic intelligence to satisfy the desires of user diversity. Technology trends are a road for future libraries and help librarians and library professionals get ready for changes by giving them a clear picture of the unquestionably important things that are happening in the present. This awareness aids in solving real issues.

The most important thing is that the librarian starts thinking about current trends because trends don't exist in an isolation and each fashion might be a trend in the library. The following list of significant technology trends includes:

- ❖ Block chain
- ❖ Linked Toys
- ❖ Everywhere Data
- ❖ System of drones
- ❖ Recognition of facial
- ❖ Technology for the Haptic
- ❖ Network of Things
- ❖ Robotic systems
- ❖ Disconnected
- ❖ A virtual reality system
- ❖ Control of voice

The main objective of libraries is to deliver excellent library services and give everyone the same level of access to knowledge through the use of emerging technologies and digital media. The popularity of digital resources is growing, and people are accessing e-books and digital libraries that have replaced traditional libraries with facilities that offer computer and Wi-Fi access (Shashikumara, A. A., Manu, T. R., & Panna Chaudhary, V. A. (2019).

7 Conclusions

The most important characteristics of academic libraries that help users realize their goals were extensively discussed. An internet-based system needs wherein all services of present-day academic services are performed to give users are provided with online information from a single access point. The relevant information from the viewpoint of users is essential for the expansion of a library's internet portal system for all services. The professionals who are directly or indirectly connected with information technology as a topic or an activity will be served by the subject information gateway in library technology. For scientists, academicians, researchers, authors, students, etc. who are working on information technology-based study or research, it might also be helpful. We work difficult to keep updated the Gateway resources and preserve including new & modern features. After reading this paper, users should being able to

comprehend the type and extent of changes to where libraries and information services are located, as well as recognize modern library and information services. Gain knowledge of more recent ideas and developments in information services and libraries. Furthermore, emerging technology allows for the improvement of the good services and products for majority of libraries and library professionals. To introduce and implement modern-day trends in libraries and library professionals, understanding and information technology are more important.

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