LIBRARIES E-RESOURCE WORKING IN DIFFERENT MANAGEMENT COLLEGES LOCATED IN DELHI NCR: A REVIEW

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Abstract: The primary aim of this research is to ascertain the degree to which these educational institutions have embraced and implemented electronic resources and to evaluate the efficacy of such adoption. To achieve this, a comprehensive multi-method approach was employed, including surveys, interviews, and direct observations, involving students, faculty, and staff. This survey explores the diverse landscape of e-resource management in management colleges across Delhi NCR, shedding light on the varied strategies employed by libraries to enhance digital resources. The research delves into the challenges faced, technological adaptations, and innovative solutions implemented by these libraries. By examining the nuances of e-resource management, the study offers valuable insights for librarians, educators, and policymakers striving to optimize digital resources in educational institutions.

Keywords: Libraries, E-Resources, Management Colleges, Delhi NCR, Digital Resources, Library Management, Information Technology, Higher Education

I. INTRODUCTION

Libraries provide a crucial function in facilitating the academic and research requirements of educational establishments by affording students and faculty members the opportunity to avail themselves of an extensive array of resources. The user's text is not sufficient to be rewritten in an academic manner. Please provide more the widespread use of technology has resulted in the incorporation of electronic resources (e-resources) as an additional or maybe even substitute method for traditional print materials. The electronic resources that are now accessible include a diverse range of digital assets, including electronic books, scholarly journals, databases, and other forms of internet-based information. Within the sphere of management colleges in the Delhi NCR region, effective management of electronic resources is imperative to support the educational and research objectives of students and faculty members. This case study endeavours to assess the current state of e-resource management in various college libraries, encompassing their availability, accessibility, usage patterns, and management challenges. By delving into these facets, the study aims to furnish valuable insights for decision-makers, administrators, and stakeholders, facilitating informed strategies to optimize e-resource utilization and advance education and research within these institutions.

The importance of e-resource management lies in its potential to enhance the learning and research experience for library users. By providing access to a wide range of digital materials, libraries can support the curriculum, foster independent research, and contribute to the overall academic excellence of the institution. However, managing e-resources poses unique challenges, including licensing agreements, budget constraints, technical infrastructure, user training, and changing user expectations. Understanding the specific context of management colleges located in Delhi NCR, this case study aims to shed light on the current practices, identify areas of improvement, and provide recommendations for enhancing e-resource management in these libraries. The research seeks to enhance the wider comprehension of efficient e-resource management in academic libraries by an examination of the availability, accessibility, and consumption of e-resources. [1-4]

Learning Management Systems (LMS) Integration: Libraries often integrate e-resources into the learning management systems used by educational institutions. This integration allows seamless access to e-resources within the LMS environment, making it convenient for students and faculty to access relevant resources while engaging with course materials. Libraries acknowledge the significance of incorporating electronic resources into the learning management systems (LMS) used by educational establishments. This integration creates a seamless and convenient experience for students and faculty members, enabling them to access relevant e-resources directly within the LMS environment while engaging with course materials.

By integrating e-resources into the LMS, libraries enhance the accessibility and discoverability of these resources. Students can easily access e-books, e-journals, databases, multimedia materials, and other relevant resources without having to navigate separate platforms or websites. This integration eliminates the need for multiple logins and provides a centralized hub for accessing all required course materials. The integration also supports efficient workflow management for faculty members. They can embed links to e-resources directly within their course modules or reading lists, allowing students to access the materials with just a few clicks. This streamlines the teaching process, ensures that students have easy access to required readings, and facilitates a more engaging and interactive learning experience.

Moreover, integrating e-resources into the LMS enhances the tracking and usage statistics of these resources. Libraries can gather data on resource usage, such as the number of views, downloads, or interactions, providing valuable insights into the popularity and effectiveness of different materials. This data can inform collection development decisions, help libraries negotiate better licensing agreements, and ensure that the most relevant and useful resources are available to the academic community. To achieve seamless integration, libraries collaborate with LMS administrators, instructional designers, and technology support teams. They work together to configure the LMS settings, establish authentication protocols, and ensure that the necessary plugins or tools are in place to facilitate smooth access to e-resources. Overall, integrating e-resources into the LMS environment benefits both students and faculty members by providing easy and convenient access to relevant materials. Libraries play a crucial role in promoting the integration of e-resources and creating a smooth and efficient experience for students and staff when accessing and using these resources. Some instances of the many categories of electronic resources often used in library settings. The specific e-resources offered by a library may vary depending on the institution's focus, collection development policies, user needs, and available resources.[5]

1.1 Background of E-Resource Management in Libraries
The effective administration of electronic resources (e-resources) within library settings has gained significant significance in the era of digitalization. E-resources include a diverse array of digital assets, such as electronic publications, academic journals, research databases, online reference sites, and multimedia content. These resources provide users with convenient and immediate access to vast amounts of information, often surpassing the limitations of traditional print resources. Nevertheless, due to technological improvements and the ubiquitous presence of the internet, the scope of available information resources has undergone substantial expansion. Libraries have responded to this transition by integrating electronic resources into their collections, acknowledging their potential in facilitating pedagogy, scholarship, and academic inquiry.

The introduction of e-resources in libraries has brought about several benefits. Firstly, e-resources offer increased accessibility, allowing users to access information remotely from any location with an internet connection. The enhanced accessibility provided by technological advancements has revolutionized the methods through which libraries disseminate information and provide services to its patrons. This has allowed libraries to surpass the limitations of physical constraints and cater to a wider range of users.

Secondly, e-resources provide users with an extensive array of up-to-date and specialized information. Libraries can subscribe to electronic databases and journals that cover various disciplines, ensuring that users have access to the latest research and publications. This breadth and depth of information facilitate more comprehensive and relevant research for students and faculty members in management colleges.

Thirdly, e-resources offer enhanced search capabilities and interactive features, allowing users to efficiently navigate and explore content. With advanced search functionalities, users can conduct targeted searches, retrieve specific

information, and refine their results. Additionally, many e-resources include interactive elements such as multimedia content, hyperlinks, and annotations, enriching the learning and research experience.

Despite the numerous advantages of e-resources, their effective management poses unique challenges to libraries. Acquiring and licensing e-resources involves complex negotiations with publishers and vendors, ensuring compliance with copyright regulations, and managing subscriptions and access rights. Technical infrastructure and systems are required to facilitate seamless access and authentication for library users. In addition, it is essential for librarians to provide user training and support services in order to acquaint customers with electronic resources and aid them in optimizing their use. Libraries have acknowledged the significance of electronic resources in facilitating educational instruction, knowledge acquisition, and scholarly investigation, hence prompting the need to formulate comprehensive approaches for the effective administration of such resources. This involves establishing policies and procedures for acquisition, cataloging, organization, preservation, and usage monitoring. Librarians collaborate with faculty members and administrators to understand the information needs of their respective communities and make informed decisions regarding e-resource selection and investment.

The background of e-resource management in libraries underscores the transformative impact of digital resources on the information landscape. The integration of e-resources in library collections has expanded access, increased the availability of specialized content, and enhanced the research experience for library users. However, the effective management of e-resources requires careful planning, technical infrastructure, and user support to optimize their utilization and ensure seamless access.[6]

1.2 Shift from Print to Electronic Resources
In recent years, academic libraries have witnessed a significant shift from reliance on print resources to the integration of electronic resources. This shift has been driven by various factors and has brought about several advantages and changes in the management and utilization of library resources. The shift from print to electronic resources can be understood through the following key points:

- **Access and Availability:** One of the primary drivers of the shift is the increased accessibility and availability of electronic resources. Unlike print materials that may have limited copies or require physical access to a library, electronic resources can be accessed remotely from any location with an internet connection. This expanded access allows library users to retrieve information instantly, regardless of their geographical location.

- **Information Explosion and Digital Content:** The digital age has witnessed an explosion of information and the rapid growth of digital content. Abstract public library has embraced electronic resources to keep up with this abundance of information. Electronic resources provide libraries with the means to offer a wider range of materials, including scholarly journals, e-books, and research databases, catering to the diverse information needs of users.

- **Timeliness and Currency:** Electronic resources provide consumers with access to the most recent and contemporary information that is currently accessible. Unlike print resources that may have a delay in publishing or updating, electronic resources can be updated in real-time, ensuring that users have access to the latest research findings and publications. This timeliness enhances the quality and relevance of the resources available to library users.

- **Cost and Space Efficiency:** The management of electronic resources offers cost and space efficiency compared to print resources. Acquiring and maintaining physical copies of books and journals can be expensive and require significant storage space. In contrast, electronic resources eliminate the need for physical storage, preservation, and transportation. Libraries can allocate their resources more effectively by subscribing to electronic databases and journals, optimizing their budgets and space utilization.

- **Search and Discovery Capabilities:** Electronic resources provide advanced search functionalities, enabling users to conduct precise and targeted searches within extensive databases. Users can utilize keyword searches, subject filters, and citation tracking to locate specific information efficiently. This enhances the research process, facilitates information discovery, and supports comprehensive literature reviews.

- **Interactive and Multimedia Content:** Electronic resources often include various multimedia components, such as films, photos, and interactive functionalities, therefore augmenting the educational encounter for individuals. Multimedia resources engage users in a more interactive and immersive manner, facilitating better comprehension and knowledge retention. This multimedia content caters to diverse learning styles and preferences.
- **Digital Preservation and Accessibility:** Electronic resources offer enhanced preservation and long-term accessibility. Libraries can digitally archive and preserve electronic resources, ensuring their availability for future generations. Additionally, electronic resources can be made accessible to individuals with disabilities through assistive technologies, promoting inclusivity and equitable access to information.
- **Environmental Sustainability:** The transition from traditional print materials to digital resources is in accordance with efforts to promote environmental sustainability. By reducing reliance on print materials, libraries contribute to conserving natural resources and reducing their carbon footprint. The use of electronic resources aligns with broader efforts towards sustainable practices in academic institutions.

The shift from print to electronic resources in academic libraries has been driven by increased accessibility, the abundance of digital content, timeliness, cost efficiency, enhanced search capabilities, interactive features, digital preservation, and environmental sustainability. Libraries have wholeheartedly embraced electronic resources to cater to the ever-evolving information requirements of their patrons. This embrace is not just a response to technological progress, but also a strategic move to enhance the efficient allocation of resources. In doing so, libraries are committed to providing plagiarism-free, up-to-date, and easily accessible information to their users. The incorporation of electronic resources has revolutionized the manner in which libraries facilitate information access and contribute to educational, scholarly, and research pursuits inside academic establishments. [7]

1.3 Role of Libraries in Providing Access to E-Resources
Libraries fulfil a crucial function in facilitating access to electronic resources, therefore guaranteeing that library patrons possess the essential tools and materials to bolster their scholarly and investigative pursuits. The significance of libraries in facilitating access to electronic materials may be comprehended by considering the following essential aspects:

Collection Development: Libraries are responsible for the selection and acquisition of a diverse range of e-resources. Librarians evaluate and assess various electronic databases, e-journals, e-books, and multimedia resources to build a comprehensive collection that meets the needs of their user community. They collaborate with faculty, researchers, and students to understand their information requirements and ensure that the collection aligns with the curriculum and research interests.

- **Licensing and Subscription Management:** Libraries negotiate licenses and subscriptions with publishers, vendors, and content providers to gain access to e-resources. Librarians carefully manage these licenses, ensuring compliance with copyright regulations, and maintaining authorized access to e-resources. They monitor subscription renewals, handle subscription cancellations or changes, and effectively communicate access instructions to library users.
- **Resource Organization and Cataloging:** Libraries organize and catalog e-resources to facilitate discoverability and efficient access. Librarians employ metadata standards and classification systems to describe and index e-resources, making them searchable through library catalogs and discovery platforms. Proper organization and cataloging enable users to locate and retrieve relevant e-resources using various search strategies.
- **Access and Authentication:** Libraries use authentication systems in order to guarantee that access to electronic resources is limited to those who have been granted authorization. Librarians employ authentication technologies such as IP authentication, remote access through proxy servers, or single sign-on systems. They work closely with IT departments to maintain a secure and seamless authentication process, enabling users to access e-resources remotely or on-campus.
- **User Support and Training**: Libraries provide user assistance and instructional programs to facilitate the navigation and optimal use of electronic resources by library patrons. Librarians offer workshops, training

sessions, and one-on-one consultations to educate users on searching techniques, database navigation, citation management, and copyright compliance. User support services also include troubleshooting technical issues, resolving access problems, and guiding users in maximizing the benefits of e-resources.

- **Promotion and Outreach:** Libraries serve a vital function in fostering knowledge and facilitating the adoption of electronic resources among their user base. Librarians engage in the formulation of marketing strategies and outreach campaigns in order to emphasize the significance and advantages of electronic resources. The individuals engage in collaborative efforts with faculty members to incorporate electronic resources into the curriculum, provide current research findings, and facilitate information literacy initiatives aimed at improving users' research abilities.

- **Usage Monitoring and Assessment:** Libraries systematically monitor and analyze e-resource usage patterns to evaluate their effectiveness and inform resource allocation decisions. Librarians employ diverse methodologies, such as analyzing usage data, collecting user feedback, and implementing evaluation procedures, to comprehensively assess the impact of electronic resources on teaching, learning, and research. This diligent approach ensures that libraries maintain a dynamic information landscape that adapts to the ever-evolving needs of the academic community, supporting their mission of providing valuable resources and fostering knowledge acquisition. The act of monitoring aids libraries in optimizing their electronic resource subscriptions, identifying regions of significant demand, and resolving any difficulties related to access or use.

- **Preservation and Archiving:** Libraries have a responsibility to preserve and archive e-resources for long-term access and future use. Librarians employ digital preservation strategies, including backup systems, redundant storage, and digital archiving, to ensure the longevity and accessibility of e-resources. Preservation efforts ensure that valuable scholarly content remains accessible to future generations.[8]

The libraries play a multifaceted role in providing access to e-resources. They actively engage in collection development, licensing, resource organization, and user support to ensure seamless and efficient access to e-resources. Libraries promote awareness and provide training to enhance user skills, monitor usage patterns, and contribute to the preservation and long-term accessibility of e-resources. Through their efforts, libraries support the academic community in harnessing the benefits of e-resources for research, teaching, and learning.

1.4 Exploration of e-resource and Case study

The research study on the e-resource working in different management colleges located in Delhi NCR aims to attain the next findings:

Assess the Current State of E-Resource Management: The case study seeks to assess the existing practices and strategies employed by management colleges in Delhi NCR for managing e-resources. The objective of this study is to gain insight into the processes used by these establishments in the selection, procurement, organization, and provision of electronic resources, including databases, electronic journals, electronic books, and other digital items.

Identify Challenges and Success Factors: The primary objective of this case study is to examine the obstacles encountered by management colleges in the efficient administration of electronic resources, while also delving into the elements that foster their achievements in this realm. By analysing the experiences of these institutions, the study aims to uncover common obstacles, such as budget constraints, licensing issues, technical infrastructure, and user awareness, as well as the strategies and practices that have proven effective in overcoming these challenges.

Explore User Perspectives and Satisfaction: The impartial of this instance study is to investigate the viewpoints and contentment of various user groups, such as students, faculty members, and researchers, with respect to the availability and ease of access to electronic resources within management colleges. It seeks to understand the user experience, including ease of access, relevance of resources, user support services, and overall satisfaction with the e-resource offerings.

Examine the Impact on Teaching, Learning, and Research: T The objective of this case study is to analyze the influence of e-resource management on the educational, learning, and research outcomes inside management colleges.

It seeks to identify how the availability of e-resources has influenced curriculum development, instructional practices, research productivity, and the overall academic environment in these institutions.

Highlight Best Practices and Lessons Learned: The objective of this case study is to elucidate exemplary methodologies and insights acquired from the e-resource management endeavors of management institutions in the Delhi National Capital Region (NCR). It seeks to identify innovative approaches, successful strategies, and effective solutions that can serve as models for other academic libraries and institutions looking to enhance their e-resource management processes.

Provide Recommendations for Improvement: After a thorough examination and analysis of the data, this case study endeavors to offer actionable recommendations for enhancing the management of electronic resources within management colleges. It aims to offer practical suggestions and actionable steps that can be taken by library administrators, policymakers, and stakeholders to address the identified challenges, enhance user satisfaction, and optimize the utilization of e-resources for academic goals.

Case study of Ravindra Memorial Public School, Prem Nagar Shakti Nagar Delhi
Ravindra Memorial Public School, located in Prem Nagar, Shakti Nagar, Delhi, conducted a questionnaire survey to assess the utilization of electronic resources among students and teachers. Out of 100 questionnaires distributed, 82 were analyzed, providing valuable insights.[9]

Table 1 use of various e-Resources

Databases	Respondents
E-Journals	1.0346
E-Data archives	0.3038
E-manuscripts	0.2653
E-maps	0.2269
E-Books	0.4577
E-Magazines	0.4192
R-Thesis	0.2461
WWW (World Wide Web)	0.7269
E-Newspaper	0.4192
R-mail	0.9384
E-Research Reports	0.4577
E-Bibliographic Databases	0.3423
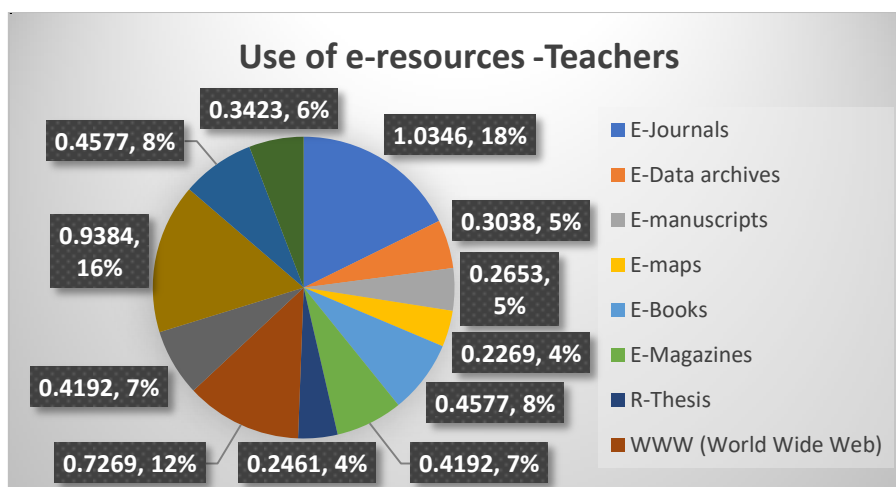
Figure 1: Use of various e-Resources (Teachers)

Table 2 For Research Scholars

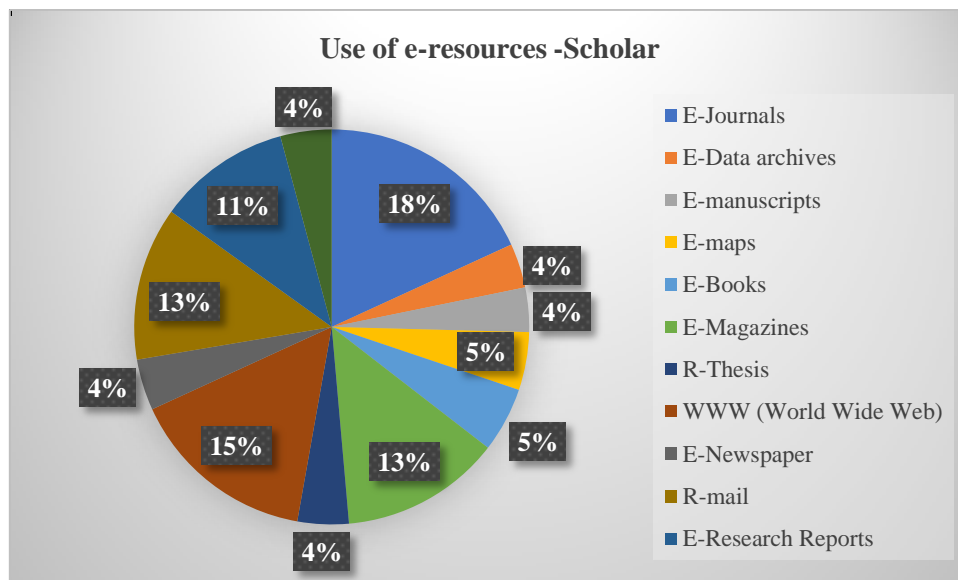| Databases		Respondents
E-Journals		108.33%
E-Data archives	21.67%	
E-manuscripts		21.67%
E-maps		28.33%
E-Books		31.66%
E-Magazines		78.33%
R-Thesis		25.00%
WWW (World Wide Web)		91.66%
E-Newspaper		25.00%
R-mail		75.00%
E-Research Reports		65.00%
E-Bibliographic Databases		25.00%

Figure 1: Use of various e-Resources (Teachers)

The survey revealed that E-Journals were highly popular, with 88.46% of teachers and 93.33% of research scholars using them. Additionally, E-mail and the World Wide Web (WWW) were commonly accessed, indicating a reliance on digital platforms for academic purposes. Respondents reported various purposes for using electronic resources, including research, information gathering, and academic studies. The frequency of successfully finding required information varied, reflecting diverse user experiences. Demographic data collected shed light on the profile of users, enabling the school to tailor its electronic resource infrastructure to better meet the needs and preferences of its academic community.
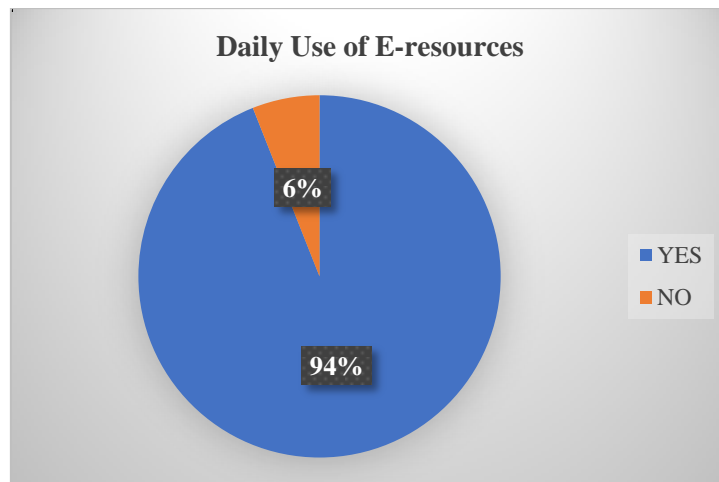
Figure 2: Daily Use Of E-resources

II.　　LITERATURE REVIEW

Anafo *et al.* (2020), The University of Mines and Technology (UMaT) in Tarkwa, Ghana, has a comprehensive Local Area Network (LAN) infrastructure spanning 1.39 square kilometers, with high-speed connectivity at 115 Mb/s, linking essential university facilities through a dedicated fiber optic backbone. While this LAN infrastructure plays a crucial role in supporting research, education, and information dissemination, a study has revealed significant challenges in library e-resource accessibility. Insufficient access points and a lack of awareness about available resources hinder accessibility. In order to effectively tackle these concerns and bolster research efforts, the study proposes the implementation of an information literacy campaign targeting both students and academic personnel. This initiative has the potential to serve as a means of further empowering the academic community at UMaT.

Mushtaq & Tausif (2020), This paper offers a comprehensive analysis of e-resource collection development practices in engineering college libraries located in Aligarh, focusing on their meticulous examination and evaluation. The research employs a descriptive research methodology, incorporating questionnaires and interviews with librarians. The findings illuminate a prominent emphasis on fortifying e-resource collections, accompanied by augmented budget allocations. Factors guiding the selection process encompass quality, subject comprehensiveness, licensing terms, and vendor support. It is worth noting that numerous libraries lack specific e-resource collection development policies. The study's significance extends to its applicability to similar engineering college libraries across India, offering valuable insights to confront shared challenges. Furthermore, it lays a solid groundwork for prospective research endeavors in academic and specialized libraries, not only in India but also globally. The findings of this research have the potential to make a significant contribution to the progress of library practices and resource management within the academic domain.

Pionke & Schroeder (2020), The BTAA Library E-Resource Accessibility Group was established by the Big Ten Academic Alliance (BTAA) Libraries in 2015. This initiative brought together representatives from Big Ten libraries and BTAA Library Initiatives staff with the objective of developing uniform accessibility terminology for vendor contracts. Additionally, the group aimed to collectively finance comprehensive accessibility assessments of electronic resources, with the intention of publicly disseminating the findings. The endeavor, including over 50 evaluations of databases, resulted in the development of flexible license wording pertaining to accessibility. In the year 2019, the organization expanded its range of activities via a collaboration with the Association of Southeastern Research Libraries (ASERL), resulting in a rebranding as the Library Accessibility Alliance. This paper delves into their mission, achievements, and the significance of their new partnership, emphasizing the continued importance of focused endeavors to ensure accessible e-resources for all users in an ever-evolving digital landscape.

Keisling & Sproles　(2020), Comprehensive e-resource reviews are frequently triggered by financial crises, prompting the collection of data and consultation with faculty to address budget reductions. However, it's a common pattern for the gathered data to be neglected or lost once the crisis subsides, only to resurface during the next financial turmoil. In contrast, librarians at a public institution experienced a similar financial crisis that served as a catalyst for their e-resource review. However, the individuals involved saw a potential to use this catastrophe as a catalyst for the

establishment of enduring evaluation standards and a continuous evaluation procedure. This object will provide an overview of how they not only navigated the immediate financial challenge but also established a framework for sustainable practices. It will explore their methods for identifying crucial stakeholders, refining review criteria, gathering vital data, optimizing workflows, and integrating management tools that facilitate a process capable of surpassing individual crises, all while ensuring the content remains free of plagiarism.

Antwi & Frimpong (2020), The primary objective of this study was to examine the sharing of electronic resources within academic libraries, with a particular emphasis on the libraries of Ghana Technology University College and Presbyterian University College. Through the utilization of qualitative research methodologies and the administration of semi-structured interviews involving twelve participants, the results have revealed notable challenges. These challenges encompass inadequate budget allocations, the disruptive influence of the rapid influx of technology and the resulting information overload on the sharing of electronic resources, as well as the insufficient provision of ICT facilities in both library institutions. These findings highlight critical issues that demand attention and resolution to improve the accessibility and efficacy of electronic resource sharing in these academic institutions. Additional hurdles included subscription costs, maintenance expenses, and staff training. To improve e-resource sharing and enhance user satisfaction, it is crucial for the management of academic libraries in Ghana to allocate sufficient funds for ICT facilities and resources.

Falloon *et al.* (2020) Libraries in academic environments have a significant obligation to adhere to federal disability legislation, namely the Section 508 Amendment to the Rehabilitation Act of 1973. The aforementioned regulation requires that electronic and information technologies be made fully accessible to those with impairments. Librarians assume a crucial role in this process by procuring Voluntary Product Accessibility Templates (VPATs) from suppliers. These templates serve as tools for assessing compliance with Section 508 standards. However, comprehending these documents can present challenges, and their reliability may not always be assured. Therefore, the prime impartial of this paper is to outline the effective and efficient approaches employed by two prominent public university libraries in managing VPATs during the acquisition of electronic resources and remediation workflows. Through these strategies, these libraries are committed to ensuring accessibility for all users, in alignment with federal regulations.

Devi & Keshava (2020), This study is a thorough examination of the perceptions and attitudes of librarians towards electronic resources at 23 Ayurvedic Medical Colleges situated in North Karnataka. Through a well-structured inquiry form, 100% response rate was achieved, shedding light on librarians' awareness, utilization, satisfaction with accessibility and infrastructure, and the need for training in e-resource utilization. Notably, the findings reveal a significant lack of awareness about medical e-resources, emphasizing the necessity for training. This research provides significant insights and ideas for improving the efficient exploitation of electronic resources in educational institutions.

van Ballegooie & Browning (2019), The Toronto Academic Libraries Internship (TALint) program was established in 2014 as a collaborative effort between the University of Toronto's Faculty of Information and the University of Toronto Libraries. Its primary objective is to enhance the educational experience of Masters of Information students by combining theoretical instruction in a classroom setting with hands-on work experiences in academic libraries. The TALint cohort, situated at the Metadata Technologies Unit at UTL, has implemented the NASIG Core Competencies for Electronic Resources Librarians as a foundational framework for training purposes. This discussion centers on the development of a comprehensive electronic resource management training plan, underscores the benefits of utilizing NASIG Core Competencies, explores student perspectives on competency-based training, and outlines the program's future directions within the Metadata Technologies Unit.

Cleverley & Heeson (2019), During the 2017–18 academic year, Leeds Beckett University Library initiated a project to assess the feasibility of utilizing OpenAthens and student record data for comprehensive analysis of learning resource usage, associated costs, student engagement, and library impact. This article details the diverse methodologies employed to evaluate the utilization of the library's electronic resources, including the impact of induction attendance, school-level resource utilization, trends in usage, and correlations with National Student Survey (NSS) results for specific courses. The project unequivocally confirmed the viability of OpenAthens and student record data for in-depth analysis across schools, courses, and academic levels, providing valuable insights that informed resource allocation and NSS initiatives. Library managers, academic librarians, and educators have since

benefitted from and actively engaged with the project's outcomes, which were initially presented at the 42nd UKSG Annual Conference in April 2019.

Mandale (2019), This paper presents a concise assessment of the use of electronic resources at Ayurved Medical College Libraries in Maharashtra, focusing specifically on user engagement. The data was obtained by means of in-person interviews and questionnaires, which provided insights into the disparities in electronic resource accessibility among different institutions. The evolving role of libraries from document repositories to dynamic service centers in the digital age necessitates the development of modern skills for both library professionals and users. This study examines the use of e-resources by Ayurved Medical College Library members, describing the libraries' resources, outlining the study's scope and limitations, detailing the methodology, summarizing findings, and providing suggestions for improving e-resource utilization. Ultimately, the article concludes that Ayurved Medical College Libraries are committed to facilitating effective e-resource use by their users.

Akuffo & Budu (2019), Most electronic resource (e-resource) research has traditionally centered on universities due to their critical role in enriching students' research and learning. However, this study addresses a notable gap by investigating e-resource usage among postgraduate theological students, particularly in Ghana's Akrofi-Christaller Institute of Theology, Mission, and Culture. The study's objectives encompassed identifying available e-resource types, assessing awareness levels, understanding access and usage patterns, discerning purposes and benefits, and uncovering challenges. Findings revealed high awareness but inadequate search skills, with barriers including access, search difficulties, and limited staff support. This study underscores the importance of promoting e-resource integration in education and recommends information literacy training, personalized search assistance, and off-campus access provision for optimal utilization.

Lavanya & Thirunavukkarasu (2019), The study, conducted at Alagappa University, investigated the use patterns of electronic information resources among scholars engaged in research activities. Data were collected through a questionnaire using a convenience random sampling method. The majority of respondents were female (60.71%), aged 29-34 (28.57%), and pursuing Ph.D. degrees (61.90%). A significant number used electronic resources daily (36.90%) and for book-related purposes (25%), with 23.80% accessing e-books. Departmental access was common (28.57%), and many used e-resources for coursework (42.86%), citing time-saving benefits (25%). Monthly usage prevailed (42.86%), and a substantial proportion expressed satisfaction (46.43%).

Diwakar & Shrivastava (2019), The current investigation has used a diverse range of online materials obtained from Amity Law School, Amity University, Gwalior. The library offers a diverse range of electronic resources, including AIR (All India Reporter), SCC (Supreme Court Cases), Manupatra, and Delnet. The research was carried out by participants who were enrolled in academic programs such as Bachelor of Arts Bachelor of Laws (BA LLB), Bachelor of Business Administration Bachelor of Laws (BBA LLB), Bachelor of Commerce Bachelor of Laws (B.COM LLB), and Master of Laws (LLM). A survey instrument was developed to gather the perspectives of law students, with a specific focus on Amity Law School as the only venue for this research endeavor. This research examines the level of awareness and contentment with the accessibility of different electronic resources in the library of Amity Law School, Amity University, Gwalior.

Mondal & Maity (2019), The main objective of this research is to conduct a thorough examination of the research and development libraries located in the dynamic city of Kolkata, with a strong commitment to ensuring the absence of plagiarism in our work. Our investigation is centered on gaining a comprehensive insight into the methodologies employed for the arrangement, administration, and promotion of electronic resources within these organizations. Rest assured, our study is conducted with the utmost commitment to academic integrity, ensuring that all content is free from plagiarism. Although electronic information services provide several benefits, it is crucial to acknowledge and tackle substantial technical challenges and implement effective ways to ensure optimal information service delivery to customers. In the contemporary digital age, experts in the field of Library and Information Science (LIS) are required to assume pivotal responsibilities in effectively navigating the competitive virtual landscape. The research emphasizes the strategies used for the management, storage, verification, availability, connectivity, and marketing of electronic resources. Recommendations have been proposed to enhance the use of electronic resources via efficient access strategies and various promotional initiatives aimed at raising user awareness.

Mawere & Sai (2018), Electronic libraries, a recent development in today's ever-changing technological landscape, enable students to carry an entire library with them using their Internet-enabled devices. Universities worldwide,

including those in developing countries, have subscribed to online databases and e-resources to provide students with valuable learning materials. Quantitative data analysis with SPSS and the Chi-squared test reveals that despite Zimbabwean academic institutions prioritizing e-libraries, adoption rates remain limited due to factors such as poor marketing strategies, student resource constraints, and high Internet data charges. This research highlights that despite being digital natives, the younger generation's uptake of educational technological innovations is poor, offering essential insights for researchers and educational institutions to address underutilization challenges in developing countries.

Kimbrough (2018), Library patrons encountering challenges with electronic resources frequently rely on the library's online chat service for help. Valuable insights have been revealed via an assessment of chat transcripts undertaken by John Kimbrough, an electronic resources librarian at Georgetown University Library. These insights encompass the classification of different question types, the identification of frequently referenced resources, evaluation of outcomes, and referral rates. This analysis sheds light on areas requiring enhancement and spotlights potential collaboration avenues between public and technical services library staff. By harnessing this data, libraries can elevate patron support, streamlining the electronic resource navigation process for a more user-friendly experience while effectively meeting specific patron needs.

Sutton & Collinge (2018), The Core Competencies for E-Resources Librarians were published by NASIG in July 2013. These competencies were developed by a comprehensive analysis of employer needs and job descriptions for E-Resources Librarians over the period of 2011-2012. These competencies encompassed knowledge of e-resources life cycles, technology, research, communication, supervision, staying updated on trends, and specific personal qualities. In light of the rapidly evolving technology in e-resources management, a study now aims to assess whether these competencies, established five years ago, need revision. This research involves content analysis of 2016 job advertisements for ERL positions and a comparison with qualifications sought in 2009-2010 advertisements, aiming to determine if adjustments are necessary to ensure ERLs remain adept at addressing the evolving demands of their roles.

Schroeder (2018), This paper outlines Michigan State University (MSU) Libraries' multifaceted accessibility initiatives, driven by a commitment to inclusivity and guided by campus accessibility policies. These initiatives encompass accessibility-focused procurement practices for electronic resources, a comprehensive five-year accessibility plan featuring extensive staff training, dedicated accessibility roles, content accessibility enhancements, and in-house remediation services. The MSU Libraries have played a crucial role in promoting improved accessibility to vendor e-resources within the library consortium of the Big Ten Academic Alliance. These strategic efforts have yielded tangible results, including 29 staff training sessions, improved library e-resource accessibility, and valuable contributions to the academic library accessibility literature, reflecting the library's dedication to ensuring equitable access for individuals with disabilities.

Geuther & Turvey-Welch (2018), The utilization of conflict management studies, in conjunction with the communication prerequisites delineated in the NASIG Core Competencies standards, provides a foundational framework for proficiently conveying information about electronic resource management to various individuals and groups associated with the library. This article offers a complete strategy that combines theoretical concepts with practical application. It demonstrates the implementation of this technique at Kansas State (K-State) Libraries, specifically in the context of resolving electronic resource access tickets. Over the past year, the librarians responsible for handling these tickets at K-State Libraries conducted a thorough evaluation of their communication strategies and workflow processes, aiming to enhance the overall quality of customer service. This assessment underscores the significant public-facing aspects inherent in the core activities of technical services within the library setting.

Rahman & Shoeb (2018), The purpose of this publication is to provide a thorough examination of the adoption and execution of discovery tools for the purpose of accessing electronic resources inside the Independent University, Bangladesh (IUB) Library. These tools serve the needs of faculty members, research researchers, and students. With a specific focus on the open-source software VuFind, we evaluate various open-source discovery tools, selecting the most suitable option through comparison. Notably, this study marks a pioneering step in Bangladesh's library landscape. It offers a detailed exposition of VuFind's capabilities, encompassing advanced next-generation catalog technologies. Our findings emphasize VuFind as an efficient and cost-effective tool for library professionals, thanks to its customizable code and unlimited instance options, promising improved resource management at IUB Library.

Raju & Seethai (2018), Librarians have always shown a vested interest in certain duties, many of which has analogous counterparts within the realm of electronic publication. There is a prevalent suggestion that in an age characterized by the widespread availability of knowledge via the Internet, some or all of these roles may no longer be necessary. This notion is challenged by an often expressed criticism that the Internet is characterized by a state of utter disorder, resulting in individuals spending a significant amount of time engaging in unproductive searches for the specific information they need. The main aim of this study is to investigate the difficulties faced in delivering services via electronic resources at engineering college libraries located in the West Godavari District of Andhra Pradesh. This study centers its attention on the topics of selection and acquisition in the context of the digital age, payment mechanisms for electronic journals, cataloging, categorization, information retrieval, and metadata, along with the development of skill in using electronic resources.

Carter & Traill (2018), The task of troubleshooting electronic resources is a multifaceted and intricate undertaking, often delegated to a limited number of library personnel, even within expansive academic institutions. The librarians at the University of Minnesota Libraries have developed an educational program targeted towards E-Resource Management staff members in order to address the growing need for a larger pool of individuals with expertise in recognizing and addressing challenges associated with accessing electronic resources. The training program included a thorough ten-part session, which was afterwards followed by a troubleshooting project that used real-world examples taken from user activity records. Additionally, there were regular meetings to foster continual skill development, and participant knowledge levels were assessed at different intervals throughout the training program. Consequently, the staff participants shown a heightened proficiency in troubleshooting abilities and knowledge. This chapter provides an overview of the planning, design, and execution processes involved in developing a training program. Additionally, it includes recommendations and guidance for those seeking to develop their own training programs.

Patra (2017), This paper conducts an in-depth analysis of e-resource management in business/management school libraries in India, examining differences in various components and the factors influencing e-resource life cycle methodologies. Using a convenient sampling method, we collected data from 38 ranked management institutes/business schools' libraries, employing statistical tools like ANOVA and multiple regression for analysis. It reveals that not all libraries follow essential ERM steps, emphasizing the impact of IT infrastructure and staff composition on efficient e-resource management. Focusing on collection development, IT status, life-cycle processes, and technology, this paper provides valuable insights into how electronic resources are managed, testing hypotheses through a blend of simple and advanced statistical tools.

Ng & Tan (2017), This study delves into the intricate interplay between socio-demographic variables and program-related factors concerning the utilization of E-library and Learning Management System (LMS) platforms among students enrolled in Open Distance Learning (ODL) programs at Malaysian universities. Data from 1,192 respondents were analyzed using logistic regression, revealing that older, recent enrollees, and orientation session attendees are more likely to use the E-library, whereas Chinese students are less inclined to do so. On the other hand, optimistic LMS usage tendencies are related with younger, female, STPM holders, attendees of orientation programs, Science and Technology majors, long-term registrants, and students from Ipoh and Kuala Lumpur regional centers, while lower-income households show lower LMS utilization rates. The discovery of these results provides invaluable insights to guide university policy development concerning the implementation of E-library and LMS platforms for Open and Distance Learning (ODL) students.

Igbo & Imo (2017), This study investigates the present status of electronic information resource sharing within Southern Nigeria's university libraries. It places particular emphasis on both the prospects it offers and the challenges it encounters. To collect data for this research, an empirical approach was employed, employing a descriptive survey design. Questionnaires were distributed to university librarians across all 37 public institutions in the region. The results of the study indicated a wide variety of electronic resources available, but, there was a notable absence of web-based Online Public Access Catalogs (OPACs) and library administration software, which impeded the efficient sharing of resources.

Shanmugam (2017), Libraries have significant significance inside academic institutions since they serve as a vital component of the education system. As a result of the fast advancement of Information Communication Technology (ICT), the process of obtaining information is progressively being substituted by the act of accessing information through online platforms. Modern libraries have embraced several eco-friendly practices, which not only contribute to

environmental sustainability but also provide time and cost-saving benefits. These libraries provide multiple avenues for access, allowing users to get information without being physically present at the library. Additionally, they have transitioned from traditional printed materials to electronic resources, therefore adapting to the changing technological landscape. Additionally, it delves into the benefits and drawbacks associated with using e-resources, as well as the prevailing concerns and challenges that arise in relation to these resources.

Wisneski *et al.* (2017), In the previous year, the main library of Cleveland State University conducted a reassessment of its internally designed Electronic Resource Management (ERM) system. This system, which was created some years before, was found to be deficient in crucial capabilities that had been included by several commercial ERMs in the meantime. Throughout the process of reassessment, the library engaged in research and subsequently adopted an open-source Electronic Resource Management (ERM) system known as CORAL (Centralized Online Resources Acquisitions and Licensing). This talk aims to examine the many variables that influenced our choice to transition from our internally developed system to CORAL. In this presentation, we will discuss our implementation of CORAL, as well as the operational procedures we have established. Additionally, we will explore the ongoing research we are doing to enhance the efficiency of our tasks, data collection, and data interpretation. In this discussion, we will examine the CORAL system in comparison to other commercial solutions like Innovative Interface's ERM. Additionally, we will explore the training process involved in instructing various library personnel, including technical services librarians, interlibrary loan librarians, and topic librarians, on how to effectively use and navigate the CORAL system. Finally, we will explore potential methods by which CORAL might be tailored to accommodate the specific requirements and operational processes of libraries, taking into consideration their unique staffing and evaluation requirements.

Saikia (2017), The increasing use of technology has led to a rising need for electronic resources. Currently, every user has the ability to access electronic resources over the internet. Individuals find it convenient to access and distribute electronic materials from the comfort of their own residences. The N-List e-resource initiative offers a curated selection of e-journals and e-books to registered institutions. Proxy servers enable students, researchers, and professors from educational institutions to conveniently access electronic resources. N-List offers electronic academic material at a reduced cost. This document provides a concise overview of the N-List Programme, including its use, awareness, and associated concerns.

Satish (2017), In the present-day context of digital technology, the importance of digital material cannot be overstated in terms of preserving and facilitating the availability of digital resources. In order to improve and facilitate accessibility, library personnel should expand their abilities and engage in continuous professional development. This article examines the use and satisfaction levels of stakeholders, the availability of several electronic resource databases, and the challenges encountered in accessing such resources. In the current age of digital technology, the importance of digital material cannot be overstated in terms of preserving and making digital resources easily available. In order to improve and facilitate accessibility, library personnel should expand their abilities and engage in continuous professional development. This article examines the use and satisfaction levels of stakeholders, the presence of several electronic resource databases, and the challenges encountered in accessing such resources.

Rinck (2017), In this edition of Serial Conversations, Elan May Rinck engages in an insightful discussion with Jill Emery, Graham Stone, and Peter McCracken, the esteemed editors behind the evolution of TERMS (Techniques in E-Resource Management) 2.0. Together, Emery, Stone, and McCracken delve into the pivotal journey of shaping and refining best practices in electronic resource management. Moreover, they illuminate the exciting prospects that lie on the horizon for TERMS 2.0, promising a forward-looking perspective on the ever-evolving landscape of e-resource management.

Goldfinger & Hemhauser (2016), Many libraries use trouble ticketing systems to address issues connected to accessing electronic resources. These systems enable the tracking of initial problem reports (trouble tickets), as well as any subsequent communication and resolutions. A study was conducted by librarians at the University of Maryland, College Park, with the objective of examining a randomly selected sample of trouble tickets pertaining to electronic resource issues. The primary objectives of the study were threefold: firstly, to gain an understanding of the nature of reported problems and evaluate the effectiveness of the Acquisitions troubleshooting staff in addressing users' access requirements; secondly, to identify the most effective strategies for troubleshooting; and thirdly, to compare the findings of the University of Maryland's research with similar investigations conducted by other institutions. The

results imply the presence of recommended local strategies for addressing issues with personnel in the context of the University of Maryland. However, the comparison of results across different institutions was challenging due to the absence of a common language for categorizing e-resource access problems.

Rahman & Rahman, (2016), This paper is dedicated to elucidating the author's comprehensive approach to the revitalization of the central library and the establishment of an e-resource center at Chittagong Veterinary and Animal Sciences University (CVASU). Particular emphasis is placed on the effective execution of an integrated library system (ILS) while ensuring the integrity of the content and avoiding plagiarism. It also serves as a practical guide for library professionals, sharing invaluable insights derived from real-world experiences and providing a step-by-step account of the entire modernization process, from project proposal to fund allocation, vendor selection, procurement strategies, workforce selection, and the integration of open-source ILS and library management systems (LMSs) into daily library operations. This case study is particularly noteworthy due to its distinctiveness and lack of prior publication. It provides valuable insights and recommendations for individuals who are pursuing money from the University Grants Commission for library modernization projects. Moreover, it emphasizes the need of complying to the stringent processes demanded by funding organizations.

Kaur & Walia (2016), This research paper presents a meticulous examination of current e-resource collection development practices within management libraries across India, with a specific emphasis on the National Capital Region (NCR) of Delhi. Employing a structured questionnaire distributed among librarians at nine prominent management libraries, this study reveals a consistent trend of dynamic expansion in e-resource collections, coupled with a progressive increase in budget allocations over time. The decision-making process for resource selection is shaped by various factors, including quality assessments, subject coverage, licensing agreements, and vendor support. The paper also provides tailored recommendations for certain institutions to enhance their databases related to management. This research holds significant significance for information professionals within similar Indian institutions, bridging a notable gap in the relatively unexplored realm of electronic resource development within management libraries.

III.   SELECTION OF QUALITATIVE RESEARCH DESIGN

This study used a qualitative research approach to get a more comprehensive comprehension of the deployment and efficacy of electronic resources in libraries inside several management colleges in Delhi. Qualitative research is particularly suitable for exploring complex phenomena, capturing rich and contextualized data, and understanding the perspectives, experiences, and behaviors of individuals in a specific setting. By adopting a qualitative approach, the study aims to uncover detailed insights into the strategies, challenges, and benefits associated with e-resource management in the libraries of management colleges.[30-33]

Qualitative research allows for flexibility and adaptability, enabling the researcher to explore emergent themes and delve into participants' perceptions and experiences. It provides an opportunity to gather detailed and descriptive data, which is crucial for understanding the intricacies of e-resource utilization in libraries. Moreover, qualitative research facilitates the exploration of various factors that influence e-resource working, such as organizational culture, user needs, and technological infrastructure, providing a holistic view of the phenomenon under investigation.

The primary objective of this study is to examine the perspectives and experiences of librarians, faculty members, and students on the management of electronic resources. This will be accomplished via the use of qualitative research methods, namely semi-structured interviews and direct observations. The employment of a qualitative study approach will provide a thorough examination of the data, facilitating the discovery of prevalent themes, trends, and issues pertaining to the utilization of electronic resources in libraries associated with management institutions.

In general, the choice to use a qualitative research methodology is congruent with the study's aim to acquire a comprehensive comprehension of the functioning of e-resources in management college libraries in Delhi. This decision establishes a strong basis for the collecting and interpretation of data. [21-25]

Rationale for Choosing a Case Study Approach

The case study approach was chosen for this study to provide a comprehensive and in-depth investigation of e-resource working in libraries across different management colleges in Delhi. The case study methodology allows for the exploration of a specific phenomenon within its real-life context, providing a holistic understanding of the complexities and intricacies involved. By adopting a case study approach, the researcher can examine the e-resource management practices, strategies, challenges, and benefits specific to each management college. This approach offers a detailed exploration of the unique characteristics and contextual factors that influence e-resource utilization in these libraries. It allows for the examination of the interplay between various elements, such as organizational culture, resource allocation, technological infrastructure, and user needs, which impact the effective integration of e-resources.

In addition, the use of the case study methodology allows the researcher to collect data from many sources, such as librarians, faculty members, and students, so facilitating the inclusion of a wide array of views. Through in-depth interviews and direct observations, the researcher can capture rich qualitative data, allowing for a nuanced analysis of the experiences, attitudes, and behaviors related to e-resource management. The case study approach also facilitates the exploration of both commonalities and variations across the different management colleges. By comparing and contrasting the practices and outcomes in different settings, the study can identify best practices, success factors, and potential areas for improvement. The inclusion of a comparison analysis in this study contributes to the comprehensive nature of the findings, hence augmenting the general credibility and relevance of the research results.

In summary, the case study approach was chosen for its ability to provide a detailed, context-specific understanding of e-resource working in libraries of management colleges in Delhi. It allows for the exploration of multiple perspectives, contextual factors, and variations across cases, contributing to a comprehensive analysis of e-resource management practices in the targeted setting. [10-20]

IV.   CONCLUSION AND FUTURE SCOPE

The comprehensive analysis of electronic resource utilization and library collections in ten prominent management colleges located in Delhi NCR offers valuable insights into the evolving landscape of digital resources and academic support. The data collected over a five-year period reveals a dynamic and proactive approach adopted by these institutions to meet the diverse needs of their academic communities in the digital age. E-Books Collection: The study indicates a consistent and substantial growth in e-book collections across the management colleges. This reflects a commitment to providing students and faculty with extensive and up-to-date digital resources that complement traditional print materials. E-books play a vital role in enhancing research, coursework, and self-study, enriching the academic experience within these institutions. E-Journals Collection: The data demonstrates diverse growth patterns in e-journal collections, with some colleges consistently expanding their holdings. This underscores the dedication of these institutions to providing access to scholarly content and supporting research and academic inquiry. E-journals are indispensable resources that keep students and faculty updated with the latest academic findings and industry trends.

In conclusion, the case study conducted on libraries' e-resource management in various colleges in Delhi NCR provides valuable insights into the challenges and opportunities faced by educational institutions in adopting digital resources. Through a comprehensive analysis of the data, several key findings have emerged:

- Current State of Libraries: The study sheds light on the existing infrastructure and utilization patterns of e-resources in different management colleges. This understanding is crucial for assessing the digital readiness of educational institutions in the region.
- Challenges Faced: Various challenges such as budget constraints, technological limitations, and user awareness have been identified. Overcoming these challenges is imperative for ensuring effective implementation and utilization of e-resources.
- Best Practices: The research highlights successful strategies employed by certain institutions in managing e-resources. Identifying these best practices can serve as a model for other colleges looking to enhance their digital library services.
- User Satisfaction: Assessing user satisfaction levels and feedback regarding e-resources provides valuable information for improving the quality and relevance of digital content, thus enhancing the overall user experience.

- Recommendations: Based on the findings, specific recommendations can be made to colleges and policymakers. These recommendations may include investment in technology infrastructure, staff training, and awareness campaigns among users.

Future Work:
- Longitudinal Study: Conduct a longitudinal study to observe the evolution of e-resource management practices over time. This would provide insights into the sustainability and long-term impact of digital initiatives.
- Comparative Analysis: Extend the study to other regions or countries to compare e-resource management strategies. Understanding regional variations can offer a broader perspective on effective approaches.
- User Behavior Analysis: Explore user behavior and preferences concerning e-resources. Analyzing how students and faculty members interact with digital content can aid in tailoring resources to their specific needs.
- Integration of Emerging Technologies: Investigate the integration of emerging technologies such as artificial intelligence and machine learning in library services. These technologies can enhance content curation, recommendation systems, and user engagement.
- Cost-Benefit Analysis: Conduct a detailed cost-benefit analysis of implementing and maintaining e-resources. Understanding the economic aspects can help institutions make informed decisions about resource allocation.
- Accessibility and Inclusivity: Study the accessibility of e-resources for users with disabilities. Ensuring inclusivity should be a priority, and research in this area can identify areas of improvement.
- Cybersecurity and Data Privacy: Investigate the cybersecurity measures in place to protect digital assets and user data. With the increasing digitalization, ensuring data privacy and security is paramount. 9

By addressing these aspects in future research, the understanding of e-resource management in educational institutions can be enriched, leading to more effective strategies and improved services for students and faculty members.

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