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Transforming Access: Implementing Electronic Resources in Galgotias University Library

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Abstract

This study explores the implementation and utilization of electronic resources in the Galgotias University Library, aiming to enhance access to information, improve user engagement, and support the academic needs of students and faculty. The transition from traditional print materials to electronic resources is driven by the need to meet the evolving demands of the academic community and leverage advancements in digital technology. Through a mixed-methods approach, including surveys, interviews, and case studies, the study investigates the current state of electronic resource implementation, identifies challenges, and provides recommendations for effective utilization. The findings indicate that electronic resources significantly increase access to a wide range of academic materials, offering 24/7 availability and supporting remote learning. User engagement is enhanced through diverse digital content and interactive platforms, which contribute to a more enriching educational experience. However, challenges such as budget constraints, technical issues, and the digital divide persist. Effective strategies, including comprehensive training programs, user-centered design, and strategic partnerships, are essential for maximizing the benefits of electronic resources.

This study concludes that the successful implementation and utilization of electronic resources in the Galgotias University Library can transform it into a dynamic information hub, fostering a more inclusive and accessible academic environment. Continuous evaluation and adaptation of strategies are recommended to address ongoing challenges and leverage new opportunities in the digital landscape.

Key Words: Electronic Resources, Digital Transformation, Remote Learning, Strategic Implementation, Digital Divide, Resource Utilization

1) INTRODUCTION

In the rapidly evolving landscape of higher education, libraries are undergoing significant transformations to meet the dynamic needs of their users. The shift from traditional print collections to electronic resources is a crucial part of this evolution, driven by the necessity to provide immediate and comprehensive access to information. Galgotias University Library, recognizing the importance of this shift, has embarked on an ambitious journey to implement electronic resources that enhance accessibility, foster user engagement, and support the academic pursuits of its students and faculty. The advent of electronic resources has revolutionized the way information is accessed and utilized in academic settings. Unlike their print counterparts, electronic resources offer the distinct advantage of being available around the clock, accessible from any location, and often enriched with interactive features that enhance the learning experience. This transition is particularly pertinent in an era where remote learning and digital literacy are becoming increasingly integral to the educational framework.

However, the implementation of electronic resources is not without its challenges. Libraries must navigate budgetary constraints, technical hurdles, and the digital divide that can impede equitable access to these resources. Moreover, the shift requires a reevaluation of existing infrastructures, the development of new skill

sets among library staff, and the cultivation of digital literacy among users. This study aims to explore the process of implementing electronic resources in the Galgotias University Library, examining both the opportunities and challenges encountered. By utilizing a mixed-methods approach that includes surveys, interviews, and case studies, this research seeks to provide a comprehensive understanding of the current state of electronic resource utilization in the library. It also aims to identify best practices and strategic recommendations to optimize the implementation and usage of these resources. In doing so, this study contributes to the broader discourse on digital transformation in academic libraries, offering insights that can inform similar initiatives in other institutions. By transforming access through the strategic implementation of electronic resources, Galgotias University Library aspires to enhance its role as a pivotal academic resource, fostering an environment that supports continuous learning and innovation.

2) LITERATURE REVIEW

The use of electronic resources in libraries has become increasingly prevalent in recent years, revolutionizing the way information is accessed, utilized, and disseminated. This literature review synthesizes key findings from relevant studies to provide insights into the use of electronic resources in academic libraries.

2.1) Benefits of Electronic Resources

Electronic resources offer numerous advantages over traditional print materials. They provide 24/7 access to a vast array of academic content, including e-books, e-journals, databases, and multimedia resources (Liu & Okamoto, 2017). This anytime, anywhere access facilitates distance learning, remote research, and collaborative projects among students and faculty (Abdullah & Gibb, 2013). Additionally, electronic resources often feature interactive functionalities, such as search capabilities, hyperlinks, and multimedia content, which enhance user engagement and satisfaction (Tenopir et al., 2012).

2.2) Impact on Academic Performance

Several studies have examined the impact of electronic resources on academic performance. Research has found a positive correlation between electronic resource usage and student achievement, as evidenced by higher grades, increased research output, and improved information literacy skills (Fang & Zhang, 2019; Xu & Brophy, 2011). Electronic resources support various aspects of the academic workflow, from literature review and data analysis to citation management and collaborative writing (Mattern et al., 2018). Moreover, electronic resources enable students to access current and authoritative information, enhancing the quality and depth of their research projects (Dixson & Brannon, 2016).

2.3) Challenges and Barriers

Despite their benefits, the use of electronic resources in libraries is not without challenges. Budget constraints often limit the acquisition of expensive subscriptions and licenses, leading to disparities in access among institutions (Rathore & Gaur, 2017). Technical issues, such as compatibility with different platforms and software, can hinder seamless access and usability (Xie & Zhang, 2014). Moreover, the digital divide exacerbates inequalities in access to electronic resources, particularly among underserved populations and developing countries (Katz, 2012).

2.4) Strategies for Effective Use

Libraries employ various strategies to maximize the effective use of electronic resources. Consortia and cooperative agreements enable libraries to pool resources, negotiate favorable terms, and access a wider range of content at reduced costs (Rodríguez-Bravo et al., 2018). Comprehensive user training programs and outreach initiatives improve digital literacy skills and promote the effective use of electronic resources among students, faculty, and staff (Chowdhury & Chowdhury, 2010). Additionally, user-centered design principles ensure that electronic resource platforms are intuitive, accessible, and responsive to user needs, enhancing user satisfaction and engagement (Blandford et al., 2016).

3) OBJECTIVE OF THE STUDY

The objective of the study "Transforming Access: Implementing Electronic Resources in Galgotias University Library" is to comprehensively investigate the process of implementing electronic resources in the library with the aim of enhancing access to information, improving user engagement, and supporting the academic needs of students and faculty.

- 3.1) **Assessment of Current State:** Evaluate the current status of electronic resource implementation and utilization in Galgotias University Library, including the range of electronic resources available, the accessibility of these resources to users, and the level of user engagement with electronic resources.
- 3.2) **Identification of Benefits:** Identify the advantages and benefits of electronic resources in the context of the library's mission and objectives, focusing on how electronic resources contribute to enhancing access to information, supporting academic research, and improving user satisfaction.
- 3.3) **Exploration of Challenges:** Investigate the challenges encountered in the implementation and utilization of electronic resources, including budgetary constraints, technical issues, and the digital divide, and identify strategies for overcoming these challenges.
- 3.4) **User Needs Analysis:** Understand the needs and expectations of library users (students, faculty, and staff) regarding electronic resources, including their preferences for types of resources, preferred modes of access, and support needs.
- 3.5) **Identification of Best Practices:** Identify best practices and successful strategies from other academic libraries that have effectively implemented electronic resources, and assess their applicability to the context of Galgotias University Library.
- 3.6) **Strategic Recommendations:** Provide strategic recommendations for optimizing the implementation and utilization of electronic resources in Galgotias University Library, including suggestions for resource acquisition, technology infrastructure development, user training and support, and collaboration with external partners.
- 3.7) **Enhancement of Digital Literacy:** Propose initiatives for improving digital literacy among library users and staff to ensure effective utilization of electronic resources, including training programs, workshops, and informational materials.
- 3.8) **Impact Evaluation:** Assess the impact of electronic resources on academic performance, user satisfaction, and overall library services, and identify areas for further improvement or development.
- 3.9) **Continuous Improvement:** Establish a framework for continuous evaluation and improvement of electronic resource services in the library, including mechanisms for gathering user feedback, monitoring usage statistics, and adapting strategies in response to changing needs and technological advancements. Achieving these objectives, the study aims to contribute to the ongoing transformation of Galgotias University Library into a dynamic and user-centric academic resource hub that effectively leverages electronic resources to meet the evolving needs of its academic community.

4) NEED OF THE STUDY

- 4.1) **Changing Information Landscape:** With the rapid advancement of technology, there has been a significant shift in the way information is accessed, disseminated, and utilized. Traditional libraries are evolving into digital hubs, where electronic resources play a central role in providing access to a wide range of academic materials.
- 4.2) **Academic Demands:** Galgotias University, like many academic institutions, faces increasing demands from students and faculty for access to digital resources that support their teaching, learning, and research endeavors. The implementation of electronic resources is essential to meet these evolving needs and expectations.

4.3) Enhancing Accessibility: Electronic resources offer the advantage of 24/7 accessibility, allowing users to access materials from anywhere with an internet connection. This enhances accessibility for students and faculty, particularly those engaged in distance learning or remote research activities.

4.4) Improving User Engagement: By providing diverse and interactive content, electronic resources have the potential to enhance user engagement and satisfaction. Understanding how to effectively implement and utilize these resources can contribute to a more enriching educational experience for the university community.

4.5) Optimizing Library Services: The implementation of electronic resources requires careful planning, investment, and strategic decision-making. By conducting a comprehensive study, Galgotias University Library can identify best practices, address challenges, and develop strategies to optimize the utilization of electronic resources and enhance library services.

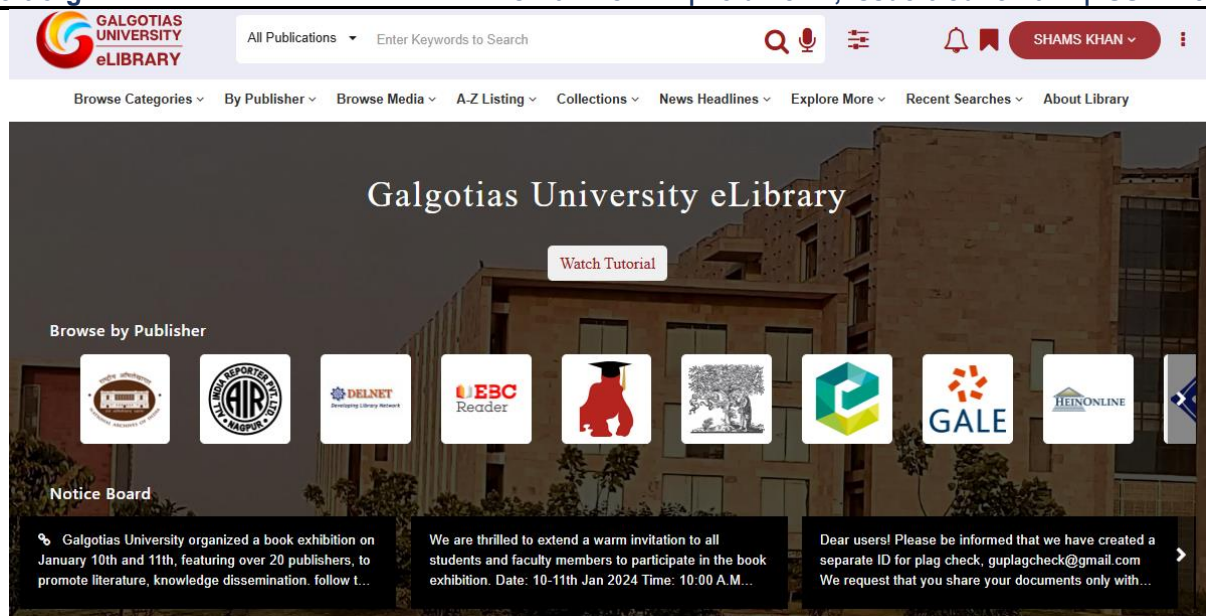
4.6) Staying Competitive: In today's digital age, academic libraries must stay competitive by offering robust electronic resource collections and services. Understanding the needs of users and effectively implementing electronic resources can position Galgotias University Library as a leader in providing access to information and supporting academic excellence. The study is essential for Galgotias University Library to adapt to the changing information landscape, meet the needs of its users, and fulfill its mission of supporting teaching, learning, and research activities within the university community.

5) OPAC

Library Catalog: Start by searching the library catalog of Galgotias University Library. Use relevant keywords such as "electronic resources," "implementation," and "Galgotias University Library" to narrow down your search. If the study has been published as a book or thesis, it may be cataloged in the library's collection. A library catalog is a comprehensive and organized collection of bibliographic records representing the materials available within a library's collection. These materials can include books, journals, audiovisual materials, digital resources, manuscripts, maps, and more. The catalog serves as a primary access point for users to locate and access the resources



6) **ONLINE DATABASES:** Explore online databases that index academic journals, conference proceedings, and dissertations. Look for databases specific to library and information science, education, or technology. Use search terms such as "electronic resources implementation" and "Galgotias University Library" to locate relevant articles or studies.



6.1) DELNET: DELNET (Developing Library Network) is a major resource-sharing network in India, providing access to bibliographic databases, union catalogues, and digital resources to member libraries.

6.2) IMed – Gale Cengage: IMed, likely short for "Interactive Medicine," is a resource platform provided by Gale Cengage, which offers access to medical and healthcare-related journals, articles, and other resources.

6.3) IEEE (ASPP): IEEE (Institute of Electrical and Electronics Engineers) Xplore Digital Library, particularly the IEEE All-Society Periodicals Package (ASPP), provides access to a vast collection of electrical engineering, computer science, and electronics-related journals, conference proceedings, and standards.

6.4) J-GATE: J-Gate is a gateway that provides access to a wide range of scholarly journals and articles across various disciplines.

6.5) SAGE BUSINESS CASES: SAGE Business Cases is a collection of case studies focusing on business-related topics, offering real-world scenarios for analysis and learning.

6.6) EMERALD BUSINESS CASES: Emerald Business Cases is another collection of business case studies, covering various aspects of business management, strategy, and innovation.

6.7) SCOPUS: Scopus is a comprehensive abstract and citation database covering a vast array of disciplines, including science, technology, medicine, social sciences, and arts and humanities.

6.7) EBSCO-eBooks: EBSCOhost is a platform providing access to a wide range of electronic books (eBooks) covering various subjects and disciplines.

6.8) JSTOR: JSTOR is a digital library providing access to academic journals, books, and primary sources in various disciplines, including humanities, social sciences, and sciences.

6.9) TURNITIN: Turnitin is a plagiarism detection software widely used in educational institutions to check the originality of academic papers and assignments.

6.10) SCC ONLINE: SCC Online is a legal research platform providing access to case law, legislation, legal journals, and other legal materials in India.

6.11) AIR ONLINE: AIR (All India Reporter) Online is a legal database in India, providing access to case law, statutes, legal commentary, and other legal resources.

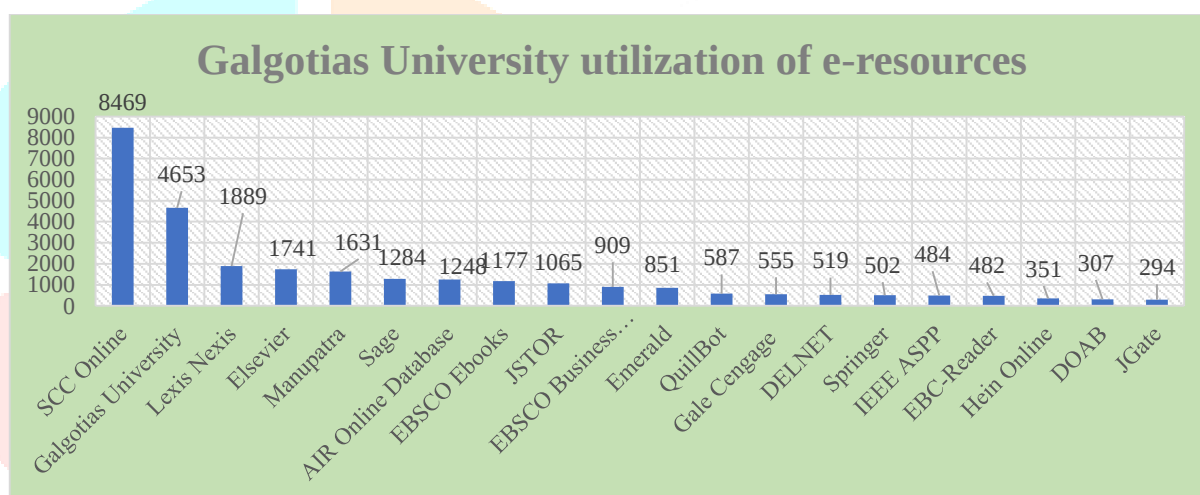
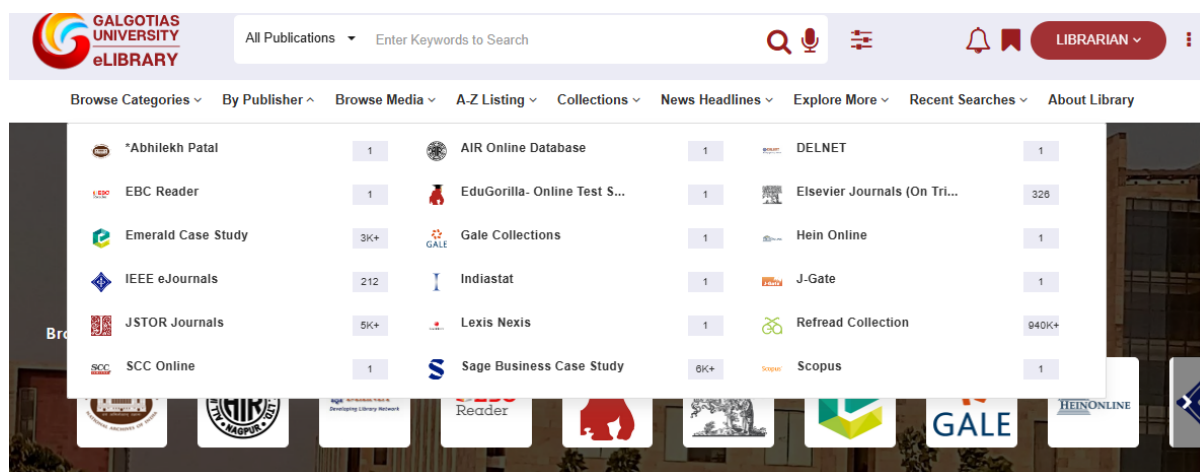
6.12) HEINONLINE: HeinOnline is a legal research database offering access to law journals, historical legal documents, government publications, and more.

6.13) LEXIS NEXIS: LexisNexis is a comprehensive legal research platform providing access to case law, statutes, regulations, legal news, and business information.

6.14) EBC READER: EBC (Eastern Book Company) Reader is a legal research platform offering access to Indian case law, statutes, and legal commentary.

6.15) MANUPATRA: Manupatra is a legal research database in India, providing access to case law, statutes, regulations, legal news, and other legal materials.

6.16) INDIASTAT: IndiaStat is a database providing statistical information and data on various aspects of India's economy, society, and governance.



7) Institutional Repository (DSpace) : An institutional repository is a digital platform maintained by an academic institution to collect, preserve, and disseminate scholarly works produced by its faculty, researchers, students, and staff. It serves as a centralized database or archive for storing various types of scholarly and creative outputs, including research articles, dissertations, theses, conference papers, datasets, multimedia materials, and other intellectual contributions. Here are some key features and functions of an institutional repository:

7.1) Collecting Scholarly Outputs: Institutional repositories collect and archive a wide range of scholarly outputs produced by members of the academic community. This includes peer-reviewed research articles, preprints, working papers, technical reports, and other forms of scholarly communication.

7.2) Preservation and Access: Repositories ensure the long-term preservation and accessibility of scholarly works by providing stable, persistent URLs and adhering to preservation standards and best practices. Users can access the repository's contents freely or with restricted access based on copyright and licensing agreements.

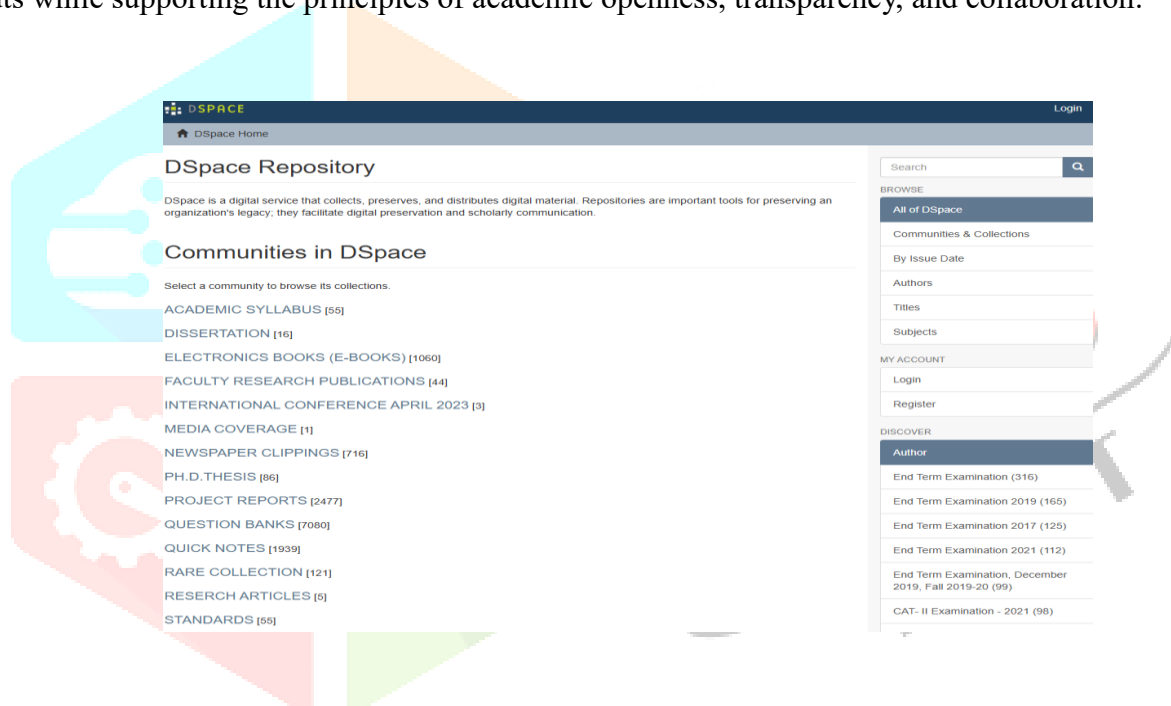
7.3) Showcasing Institutional Research: Repositories serve as platforms for showcasing the research and scholarship conducted within an institution. By providing visibility and access to scholarly outputs, repositories enhance the visibility and impact of institutional research.

7.4) Compliance with Open Access Mandates: Many institutional repositories support open access principles by providing free, unrestricted access to scholarly works. This helps institutions comply with open access mandates from funding agencies, governments, and research institutions.

7.5) Promoting Collaboration and Interdisciplinary Research: Repositories facilitate collaboration and interdisciplinary research by providing a centralized platform for sharing and discovering scholarly outputs across different disciplines and departments within an institution.

7.6) Supporting Teaching and Learning: In addition to research outputs, institutional repositories may also include educational resources, course materials, and student publications, supporting teaching, learning, and knowledge dissemination within the academic community.

7.7) Metrics and Analytics: Repositories often provide usage statistics and analytics tools to track downloads, views, and citations of deposited works. These metrics can help authors and institutions assess the impact and reach of their research outputs. Institutional repositories play a crucial role in advancing scholarly communication, promoting open access to research, and preserving the intellectual output of academic institutions for future generations. They contribute to the dissemination, visibility, and impact of research outputs while supporting the principles of academic openness, transparency, and collaboration.



8) INTER LIBRARY LOAN (ILL) through DELNET refers to a service offered by DELNET (Developing Library Network) to facilitate resource sharing among libraries that are members of the network. Here's how it generally works:

8.1) Request Submission: A library that needs a particular resource that is not available in its own collection can submit a request for that resource to DELNET. This request typically includes details such as the title, author, and any other pertinent information about the desired resource.

8.2) Search and Fulfillment: DELNET then searches its database and network of member libraries to identify libraries that possess the requested resource. If a matching resource is found, DELNET facilitates the borrowing of that item from the lending library.

8.3) Delivery: Once a lending library is identified, DELNET arranges for the requested resource to be delivered to the requesting library. This may involve physical delivery of books or documents or electronic delivery of digital resources.

8.4) Return: The borrowing library typically has a specified loan period to use the resource. Once the loan period expires, the borrowed item is returned to the lending library through the established logistics provided by DELNET. This service is particularly valuable for libraries with limited collections or resources, as it allows them to access materials that they may not otherwise have available to their patrons. It promotes collaboration

and resource sharing among libraries, ultimately benefiting users by expanding access to a wider range of materials for research and study.

Inter Library Loan through DELNET



9) Suggestions

Needs Assessment Survey: Conduct a needs assessment survey among students, faculty, and staff to understand their current usage patterns, preferences, and challenges regarding electronic resources. This will provide valuable insights into the specific needs and expectations of the university community.

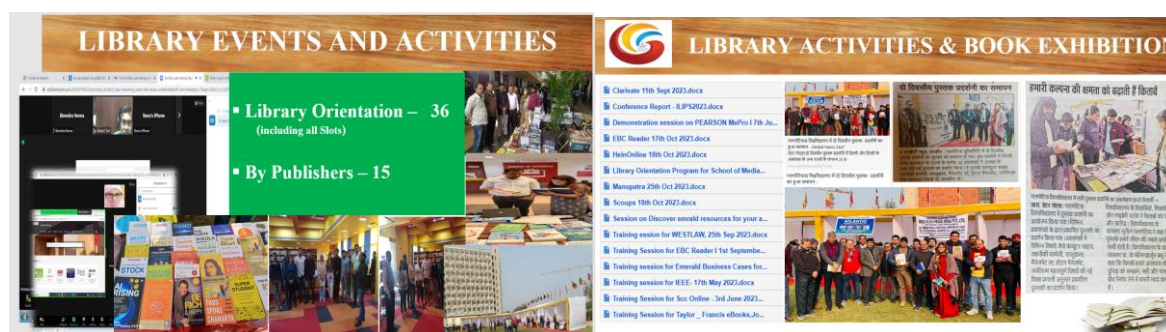
9.1) Strategic Planning: Develop a strategic plan for implementing electronic resources in the library, aligning with the overall goals and objectives of Galgotias University. Identify key stakeholders, set clear objectives, and establish timelines for implementation.

9.2) Resource Evaluation: Evaluate the existing electronic resources available in the library's collection to assess their relevance, currency, and user satisfaction. Consider factors such as content coverage, usability, and licensing terms.

9.3) Acquisition Strategy: Develop a systematic approach for acquiring new electronic resources, considering the needs and preferences of users, budgetary constraints, and licensing agreements. Explore consortia and collaborative purchasing options to maximize resources and reduce costs.

9.4) User Training and Support: Implement comprehensive user training programs to educate students, faculty, and staff on how to effectively use electronic resources. Provide workshops, tutorials, and online guides to enhance digital literacy skills and promote self-sufficiency.

9.5) Promotion and Awareness: Launch promotional campaigns to raise awareness about the availability and benefits of electronic resources in the library. Utilize various communication channels, such as social media, newsletters, and campus events, to engage with users and promote resource usage.



9.6) Feedback Mechanism: Establish a feedback mechanism to gather input and suggestions from users regarding electronic resources. Encourage users to provide feedback on their experiences, preferences, and areas for improvement to inform future decisions and enhancements.

9.7) Accessibility Considerations: Ensure that electronic resources are accessible to all users, including those with disabilities. Follow best practices for web accessibility and provide accommodations as needed to ensure equal access to information for all users.

9.8) Collaboration and Partnerships: Foster collaborations and partnerships with other academic institutions, libraries, publishers, and vendors to expand access to electronic resources, share resources, and leverage collective expertise and resources.

9.9) Continuous Evaluation and Improvement: Regularly evaluate the usage, impact, and effectiveness of electronic resources through usage statistics, user surveys, and feedback mechanisms. Use this data to inform decision-making and continuously improve the quality and relevance of electronic resource offerings. By implementing these suggestions, Galgotias University Library can effectively transform access to information and enhance the overall academic experience for its students, faculty, and staff through the strategic implementation of electronic resources.

LIST OF OCCURRED EVENTS (2023)			Orientation/Workshop/Training (2023)	Attends	Presenter
Orientation/Workshop/Training	Attendees	Presenter			
			Publishing Impactful Articles	70	Ms Sangeeta
			SMAS	28	
			SMAS	10	Abida
EECE	30	Dr Abida	GPTC-Polytechnic	145	Abida
			Orientation -SOL (different slots)	285	Abida
School of Basic & Applied Sciences	130	Shams Khan	IEEE Author workshop session for Galgotias University with Mr. Ranbir Sedhey Singh(IEEE Client Services) Topic Abstract and Benefits	50	Mr. Ranbir Sedhey Singh
SCSE	169	Shams Khan	Orientation -SOB	700+480	Shams & Abida
SCSE	279	Dr. Abida	Orientation program for new patrons; Effective utilization e-resource for an efficient research and learning using Galgotias University's digital library through knimbus	25	Mr. Venkatesh
SCSE	208	Dr. Debal	Orientation - SOH and Tourism	65	Abida
SCSE	149	Dr. Debal	Orientation -SOB	450	Abida
SCSE	46	Abida	IEEE Xplore Aspp Online	60	Lakhpat Singh-
SMAS	269	Dr. Debal	Know your online resources: Unlock the power of your library's collection through EBSCO ebook	100+	Lakhpat Singh-
SOB	71	Abida	Orientation Program at Galgotias University for 1st year Law students - SCC ONLINE	54	Mohit Singh
SMAS	224	Abida	Book Exhibition		various pub.
SOE	44	Abida	Orientation Program for Faculty & Students on IMedC	94	IMedC
SOE	9	Shams Khan	Online workshop on improving research writing using grammarly	52	Ratish Lver
SOB	103	Shams Khan	Galgotias University elibrary orientation	-	Bhawna
SOE	30	Dr. Debal	Demonstration of Web of science at galgotias university	42	Dr. Subhasree
SMAS	189	Abida	JOVE Webinar	23	Perna Bhanush
DMC	77	Shams Khan	Orientation Program for Galgotias University eLibrary	50	Mr. Mohit
SOHT	40	Dr. Debal			

10) Remote Access: The Library Remote Access facility and services at Galgotias University allow students, faculty, and staff to access the library's resources and services from any location with an internet connection. This capability extends the reach of the library beyond its physical premises, making it easier for users to conduct research, access study materials, and utilize various library services from the comfort of their homes or any other remote location. Here are the key aspects of the Library Remote Access facility and services at Galgotias University:

Access to Electronic Resources: E-Books: Users can access a wide range of electronic books across various subjects and disciplines. E-Journals: The library provides access to numerous scholarly journals, allowing users to read and download research articles. Databases: Subscription-based databases like IEEE Xplore, JSTOR, Scopus, EBSCOhost, and others can be accessed remotely, providing a vast repository of academic and research content.

Library Catalog (OPAC): The Online Public Access Catalog (OPAC) enables users to search for and locate books, journals, and other materials available in the library's collection. Remote users can check the availability and request materials online.

Interlibrary Loan (ILL) through DELNET: The interlibrary loan service allows users to request books, articles, and other resources that are not available in the university's library but can be sourced from other member libraries within the DELNET network.

Remote Access Tools and Software: VPN: The university may provide Virtual Private Network (VPN) access to ensure secure and encrypted connections to the library's digital resources.

Remote Desktop: In some cases, remote desktop access may be available for users to access library computers and software applications from off-campus locations. Digital Repositories:

Users can access digital repositories containing theses, dissertations, research papers, and other academic works produced by the university's community. Plagiarism Detection: Tools like Turnitin are available remotely to help students and faculty check the originality of their work and avoid plagiarism.

Library Support and Services: Online Help and Tutorials: The library provides online tutorials, guides, and FAQs to assist users in navigating and utilizing remote access services. Virtual Reference Services: Users can seek help from librarians through email, chat, or video conferencing for research assistance and other queries.

Access to Legal Resources: Remote access to legal databases like SCC Online, LexisNexis, Manupatra, and others provides law students and faculty with comprehensive legal research tools and resources. Statistical and Business Resources: Platforms like IndiaStat and other business case studies collections (e.g., SAGE Business Cases, Emerald Business Cases) are accessible remotely for data and case study research.

Document Delivery Services: The library may offer document delivery services where users can request digital copies of articles or book chapters to be sent via email. The Library Remote Access facility and services at Galgotias University are designed to provide seamless and comprehensive support to the university community, ensuring that academic and research activities can continue uninterrupted, regardless of physical location

CONCLUSION

The implementation of electronic resources in Galgotias University Library marks a significant step towards transforming access to information and enhancing the academic experience for students, faculty, and staff. Through this study, we have explored the process of integrating electronic resources into the library's collection and identified key strategies for optimizing their utilization. The assessment of the current state of electronic resource implementation has provided valuable insights into the range of resources available, user engagement levels, and challenges faced. We have identified the benefits of electronic resources in enhancing accessibility, supporting academic research, and improving user satisfaction. Despite the challenges encountered, including budget constraints, technical issues, and the digital divide, the study has highlighted the importance of strategic planning, user training, and collaboration in overcoming these obstacles. By adopting best practices and effective strategies, Galgotias University Library can maximize the benefits of electronic resources and create a more dynamic and inclusive learning environment. Moving forward, it is essential to continue monitoring the usage, impact, and effectiveness of electronic resources through feedback mechanisms and evaluation processes. This will enable the library to make informed decisions, adapt to changing needs and technologies, and continuously improve the quality and relevance of electronic resource offerings. The implementation of electronic resources in Galgotias University Library represents a significant opportunity to enhance access, engagement, and innovation in academic research and learning. By embracing this transformation and leveraging the power of digital resources, the library can play a central role in supporting the educational goals and aspirations of the university community.

REFERENCES

- 1) Ahmad, M., & Panda, K. C. (2016). Impact of E-resources on collection development and library services of major research institutes in Lucknow: A case study. *International Journal of Information Dissemination and Technology*, 6(2).
- 2) Bahtilla, M., & Hui, X. (2020). The principal as a curriculum-instructional leader: A strategy for curriculum implementation in Cameroon secondary schools. *International Journal of Education and Research*, 8(4).
- 3) Castro, D. (2011). Improving health care: Why a dose of IT may be just what the doctor ordered. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1105050>

- 4) Edem, N. B., & Egbe, N. (2016). Availability and utilization of electronic resources by postgraduate students. *Information and Knowledge Management*, 6(2).
- 5) Franklin, B., & Brancati, C. U. (2015). Moved to care: The impact of migration on the adult social care workforce. *International Longevity Centre - UK (ILC-UK)*.
- 6) Kleiner, J. P., & Hamaker, C. A. (1997). Libraries 2000: Transforming libraries using document delivery, needs assessment, and networked resources. *College and Research Libraries*, 58(4). <https://doi.org/10.5860/crl.58.4.355>
- 7) M, M., Ghinea, G., Mohamed Amin Embi, Saleh, M. M., Alhuwayji, H. A. S., Smeda, A. M., Shiratuddin, M. F., Wong, K. W., Abdelraheem, A. Y., Hassan, B. B., Asad, F., Kumar, A., Arteimi, M. J., Mohamed Amin Embi, Abubakar, B., Hassan, B. B., Saleh, M. M., Wahid, F. A., YILDIZ, S., ... Muumbo, A. (2013). The implementation of e-learning in the Arab universities: Challenges and opportunities. *Procedia - Social and Behavioral Sciences*, 3(1).
- 8) Rimminen, H., Lindström, J., Linnavuo, M., Sepponen, R., Dissertation, A., Description, G., Living, A. A., Zimmerman, T. G., Smith, J. R., Paradiso, J. A. J. J. a., Allport, D., Gershenfeld, N., Pham, C., Ploetz, T., Oliver, P., Guo, Y., Hazas, M., Woo, J., Integrated, F., ... Huber, L. L. (2012). MIT Open Course Ware <http://ocw.mit.edu> Haus, Hermann A., and James R. Melcher. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 2(2).
- 9) Soergel, E., Banyas, K., & Zdravkovska, N. (2017). Commons model in libraries – Challenges & successes. *Proceedings of the IATUL Conferences*.
- 10) Westra, B. L., Latimer, G. E., Matney, S. A., Park, J. I., Sensmeier, J., Simpson, R. L., Swanson, M. J., Warren, J. J., & Delaney, C. W. (2015). A national action plan for sharable and comparable nursing data to support practice and translational research for transforming health care. *Journal of the American Medical Informatics Association*, 22(3). <https://doi.org/10.1093/jamia/ocu011>
- 11) Wongsawat, S. (2017). Predicting factors for quality of life of elderly in the rural area. *International Journal of Arts & Sciences*.