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Library as Place: Assessment areas for the Academic Library in the context of Students' Services

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ABSTRACT

This study examines 82 scholarly articles retrieved from Google Scholar (2002–2025) to provide a comprehensive empirical review of the literature. The key themes on Library spaces have been reviewed for the analysis, with topics such as the library as a learning place, library redesign, assessment of user information-seeking behaviours, and verification of the technological impacts on library growth and development. The findings of this study reveal a shift from traditional libraries to technology-enhanced learning commons to support students' overall growth. The paper also highlighted the significant increase in collaborative design practices, evidence-based assessment, and hybrid learning spaces in the post-COVID context. Ultimately, to foster students' engagement and excellence, libraries need to redesign their library spaces as user-focused architecture.

KEYWORDS: learning commons; collaboration; learning space; technology-enriched environment; student engagement; evidence-based assessment; library architecture, design practices.

INTRODUCTION

Historically, libraries have transformed from physical stores of knowledge to digital, hybrid learning spaces. They have always been given substantial symbolic and experiential value to academic communities. The theorists defined the library as a 'place' for learning and collaboration, encompassing intellectual, social, and emotional values. Furthermore, theorists have identified three dimensions of the library environment (comfort, accessibility, and flexibility) that typify a sense of connection to library environments. The preceding statements have prompted further empirical studies to examine the modern library landscape of paradigm shifts from traditional to digital and hybrid environments, reflecting significant changes in library users' information-seeking behaviours. Therefore, the contemporary library framework needs essential technological support to increase the utilization of library resources and services. With these technological transformations, modern libraries are recognized as dynamic learning support

systems for academics and research, encouraging user engagement through comfort, accessibility, flexibility, and ambient environment (Bryant et al., 2009). The library is a collaborative learning hub and is an integral part of the education ecosystem, providing a multifaceted learning environment for users.

REVIEW OF LITERATURE FOR THE BACKGROUND OF THE LIBRARY

The study provides insight into the library as a learning place that offers utilization and services. The conceptualization of the above statements has been verified under the following sections discussed below;

Section I: Library as Place and Learning Environment (Conceptual Foundation)

This section emphasizes the theoretical view of the library not only as a mere storage place but also as a vibrant social, cultural, and recreational space.

Key references:

Powell (2002); Limberg (2003); Peterson (2005); Forrest & Hinchliffe (2005); McDonald (2006); Cohen (2009); Bryant et al. (2009); Aabø & Audunson (2012); Creelman (2012); Waxman et al. (2007).

Section II: Design, Planning, and Transformation of Library Learning Spaces

The following references have been reviewed in the library's architectural planning and design for learning commons, which involved implementing space-plan frameworks, participatory design, and changes to a learning commons platform.

Key references:

Beard & Dale (2010), Bailin (2011); Hunt (2008); Sinclair (2007); Choy & Goh (2016); Jamieson (2016); Ellison (2016); Somerville & Collins (2008); Storey (2015); Watson (2013); Head (2016).

Section III: User Behaviour, Perception, and Informal Learning Spaces

This section examines students' interactions with the library, emphasizing informal and social learning, preferences, satisfaction, and disciplinary differences.

Key references:

Harrop & Turpin (2013), Beatty (2017); Hunter & Cox (2014); Matthews et al. (2011); Oliveira (2016); Li et al. (2018); Deng et al. (2019); Ferria et al. (2017); Tanacković et al. (2014); Zhou et al. (2022).

Section IV: Technology-Enhanced, Assessment-Based, and Emerging Learning Spaces

This section addresses the effects of COVID-19 and the technological roles in libraries. The following literature focuses on student engagement, active learning in the classroom, the hybrid library concept, digital space, and assessment practices.

Key references:

Asher (2017); Corrall (2017, 2018); Kane & Mahoney (2020); Porterfield et al. (2020); DeFrain & Hong (2020); Christoffersen et al. (2021); Kim & Yang (2022); Zhu & Xie (2023); Shoaib et al. (2025).

Data collection:

Data was collected from Google Scholar on 27 January 2026. The phrase used was "Student Learning spaces in library" to collect data from Google Scholar. A total of 82 references were found. There was no specific time/year range for data collection; the default setting on Google Scholar was kept on.

OBJECTIVES OF THE STUDY

1. To examine the conceptual and design evolution of library spaces as learning environments, with reference to learning commons, flexibility, and user-centered planning approaches.
2. To analyze students' perceptions, behaviours, and patterns of use of library learning spaces, with a focus on informal learning, engagement, and satisfaction.
3. To assess the impact and effectiveness of library learning spaces on student learning, engagement, and educational success using evidence-based evaluation perspectives.

Scope of the Study

The present study is confined to the examination of library spaces as learning environments in higher education institutions. It examines conceptual perspectives, the design and planning of spaces, users' perceptions, and outcomes and/or engagement with libraries and other educational institutions' spaces. It encompasses formal and informal learning spaces (Learning Commons), technology-driven spaces, and recent trends in education and post-COVID-19 (i.e., trends breaking with historical perspectives).

Literature Coverage

Library space, learning commons, library design models (informal and formal learning), user experience or behaviour in library space, Tech-enabled library space, and library learning outcomes through assessment have been widely studied in the library literature. In addition to theoretical, empirical, and case studies of the various designs of educational spaces, research has also examined the design process.

Range of Literature

The range spans:

- Conceptual and theoretical works
- Evidence-based and assessment-driven studies
- Design, architectural, and interior planning perspectives
- User studies focusing on students, faculty, and librarians
- Emerging themes such as immersive technologies, cafes, well-being, and COVID-19 impacts

Methodologies:

Methodologies include qualitative, quantitative, mixed-methods, observational, survey, and action research.

Time Period Covered

The literature spans 2002–2025, showing:

- Early conceptual foundations (2002–2008)
- Expansion of learning commons and informal learning spaces (2009–2016)
- Evidence-based assessment and user-centered design (2017–2019)
- Post-pandemic, engagement-focused, and immersive space research (2020–2025)

This reflects both historical evolution and contemporary trends.

Geographical Coverage

The studies represent a global perspective, including:

- North America (USA, Canada)
- Europe (UK, Finland, Scandinavia)
- Asia (China, Japan, South Korea, Singapore, Philippines)
- Australia
- Africa (Nigeria, Kenya, South Africa)

It ensures cross-cultural and international relevance.

Understanding the significant concepts and the background studies relation

Section I. Library as Place & Conceptual Foundations of Learning Spaces:

This section provides a theoretical overview of libraries as places for learning, social interaction, and collaboration, laying the foundation for all theoretical perspectives on libraries.

References: 1, 11, 12, 16, 19, 21, 30, 32, 33, 38, 40, 49, 50, 51, 52, 54, 60, 62, 67, 76, 78

Section II: Design, Planning, and Transformation of Library Learning Spaces:

This section examines the transformation of library spaces, their redesign, and architectural aspects to facilitate learning, collaboration, and engagement.

References: 7, 8, 14, 15, 23, 28, 29, 34, 36, 37, 39, 42, 45, 55, 58, 59, 63, 64, 69, 70, 72, 74, 77

Section III: User Behavior, Perception, and Use of Library Learning Spaces:

This section examines the evidence-based assessment of user information-seeking behaviours, experiences, perceptions, and the utilization of library spaces and collections through observation, surveys, and behavioural studies.

References: 2, 3, 5, 9, 13, 17, 18, 22, 24, 25, 31, 35, 41, 43, 48, 53, 57, 73, 79, 80, 81, 82

Section IV: Assessment, Impact, and Learning Outcomes of Library Spaces. (Method of evaluation, engagement, student achievement, learning outcomes; analysis after the COVID event). This section discusses the evaluation of library space with respect to its ability to aid learning, increase engagement, and promote academic success, based on pre-COVID and post-COVID use data and analyses from studies conducted during these timeframes.

References: 4, 6, 10, 20, 26, 27, 44, 46, 47, 56, 61, 65, 66, 68, 71, 75

Infrastructure of Libraries & Learning Space Conceptual Foundations

Through various scholarly works, the study "understands that libraries have another common purpose: While their material and resources are a major reason for their existence, library is defined by its educational, social and intellectual functions as a supportive place for all activities related to education that occur in an informal setting." According to Oldenburg's concept of "third places," libraries serve as neutral spaces that facilitate informal learning and foster social interactions within a community (Waxman et al., 2007; Aabo & Audunson, 2012). Studies conducted by Matthews & Walton (2009), Cohen (2009), Creelman (2012), and Limberg (2003) provide support for the argument that libraries function as both educational and social environments, changing the physical designs to promote cooperation, reflective thought (self-directed learning), and experiential learning with peers.

McDonald (2006) notes that the main characteristics of accessibility, comfort, and environmental quality of an ideal library space are adaptability, which also forms the basis for many other models. Lin et al. (2010) further emphasize the intangible role of space in the learning process, noting that spatial comfort and organization, while indirect, can impact students' motivation and level of engagement in their own learning activities. Lippincott (2006) and Forrest and Hinchliffe (2005) go on to identify a need to integrate space design with learning outcomes, rather than focusing solely on aesthetics, and to advance that integration by merging learning space theory with assessment and institutional mission.

Design, Planning, and Transformation of Library Learning Spaces

The higher education sector experienced a shift in collaborative pedagogies, while student-centered library environments underwent functional transformations and design shifts. The initial design changes in the academic libraries, focusing on technology integration (Beard & Dale, 2010 and Bailin (2011), flexibility, and academic literacy support. Learning commons are multifunctional environments integrating collections, technology (Sinclair, 2007; Hunt, 2008; Jones & Grote, 2018), educational support, and collaborative spaces. Donkai et al. (2011) highlight the global adoption of this model, particularly in Asian academic libraries.

Christoffersen et al. (2021) and Choy and Goh (2016) propose that the academic library needs a structured framework to link institutional goals and objectives to students' needs and to the availability of library space. Learning space attributes, ranging from physical comfort to cognitive engagement, were further introduced, along with participatory and co-design approaches that later gained prominence. Learner-centered design, involving faculty and researchers in space-planning processes, roles of librarians, architects, and community stakeholders in co-creating effective learning environments (Tevaniemi et al., 2015; Somerville & Collins,2008; Storey,2015; Watson,2013).

User Behavior, Perception, and Use of Library Learning Spaces

Studies on users' behaviour have been done through various experiments to determine how students use library spaces for different learning activities. Factors such as furniture design, lighting (Webb, Schaller & Hunley, 2008; Cha & Kim, 2015), access to technology, and noise tolerance influence users' space preferences. Harrop and Turpin (2013) and Hunter and Cox (2014) discuss in their papers that students' informal learning preferences lean towards a combination of studying and social interaction at the same location. Cunningham and Walton (2016), Beatty (2017), Webb, Schaller & Hunley (2008), and Cha & Kim (2015) also demonstrated a significant relationship between spatial design and learning behaviour, especially in informal learning environments.

DeFrain and Hong (2020) investigated how space can evoke emotional responses that may impact emotional well-being and a sense of belonging. They demonstrated that students' emotions are profoundly and directly influenced by their interiors and atmospheres. Deng et al. (2019) and Zhou et al. (2022) gave this debate a new twist by referring to library cafes as hybrid learning spaces and, as such, went a step further in illustrating the disciplinary differences in how space is used. Ferria et al. (2017) and Tanackovi et al. (2014) conducted observational studies to document and analyze discrepancies between planned and actual use of space. Moreover, Zhu and Xie (2023), along with Li et al. (2018), pinpoint that the era of the power users of technology also extends to their expectations, as these two authors show that users expect this trend of highly immersive, technologically enhanced learning spaces to continue and go even further as their needs in relation to digital learning practices evolve.

Assessment, Impact, and Learning Outcomes of Library Spaces

Currently, research is focusing on how library learning spaces influence student academic success. While researchers have examined how to assess the use of library learning spaces, Corrall (2017, 2018) has provided guidance, recommending a mixed-methods approach that uses observation, surveys, and learning analytics. Librarians have been working together (Allinson et al., 2019; Kane & McMahon, 2020) to determine the best ways to assess and utilize library learning spaces and how changing the layout will impact the use of resources and the role of librarians in providing collections and services, while at the same time emphasizing the importance of planning for evidence to promote student academic success in the long term.

The active-learning library classrooms helped students become more engaged (Porterfield et al., 2020; Jarocki, 2019). Spencer and Watstein (2017) highlighted that libraries must prioritize students' health and happiness. After the pandemic, spatial use was discussed in a paper by Kim and Yang (2022). The latest findings of Shoaib et al. (2025) showed that libraries nowadays continue to have a positive effect on student engagement and motivation.

Conceptual–empirical approach:

As higher education moves toward providing more flexible, technologically enabled library learning spaces (via the evolution of the traditional space into a "learning commons"), the focus of designing those spaces is becoming increasingly participatory. Adaptability of the space and participatory design with users is essential. Research supports the idea that users' preferences are influenced by many variables, including furniture and lighting, as well as informal library spaces that encourage both academic and social interaction. In addition, recent research focused on determining users' satisfaction with library learning space(s) has promoted the use of mixed-methods (qualitative and quantitative). Ultimately, well-designed library spaces will improve students' learning experiences while also providing a venue for learners from diverse educational backgrounds.

RECENT TRENDS

Recent trends in academic library learning spaces are exciting. These trends are based on studies conducted after 2020. They match what we have already looked at in our own studies. Academic library learning spaces are. We need to know about these trends.

1. Hybrid and Flexible Learning Spaces: The libraries are developing spaces that combine physical and virtual learning. Hybrid and Flexible Learning Spaces are designed to support students who can easily move between in- and out-of-class learning to achieve their educational goals.
2. User-Centered and Participatory Space Design: Current trends in library design focus on co-creative designs that involve students and faculty in the redesign of library spaces, allowing them to adapt to changing student behaviour and expectations.
3. Technology-Enhanced and Immersive Environments: Libraries are transforming into modern spaces with the latest interactive technologies, such as VR, AR, large digital touch screens, and innovative furniture designs, to facilitate experiential, collaborative, and individualized learning.
4. Evidence-Based Space Assessment and Analytics: Current libraries are adopting a holistic approach to space assessment by employing different methods of space assessment, learning analytics, and usage data to determine the effectiveness of the spaces and thus contribute to design improvements

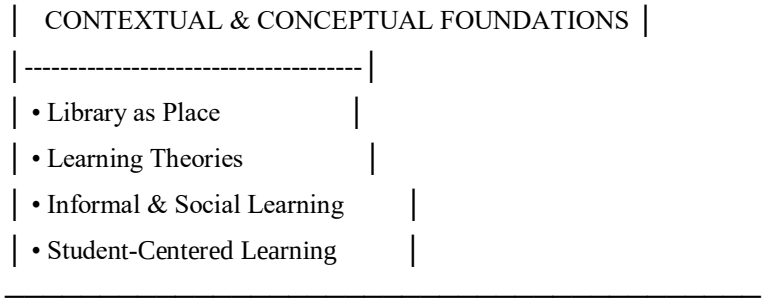
5. Well-Being, Inclusivity, and Affective Design: Library spaces provide students opportunities for engagement that support well-being, diversity, and inclusion, and create an atmosphere of emotional safety, thereby improving student engagement, retention, and academic success.

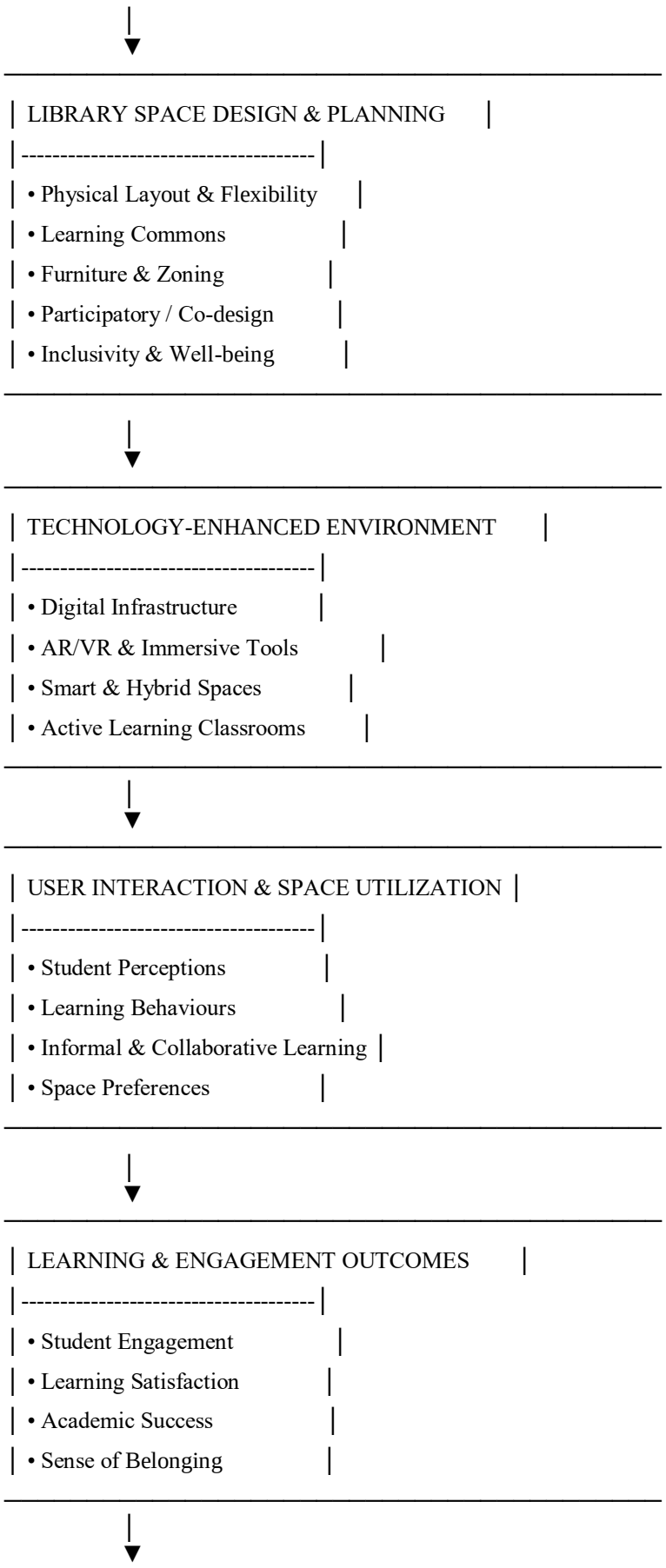
Table: Conceptual Segregation of Literature on Library Learning Spaces

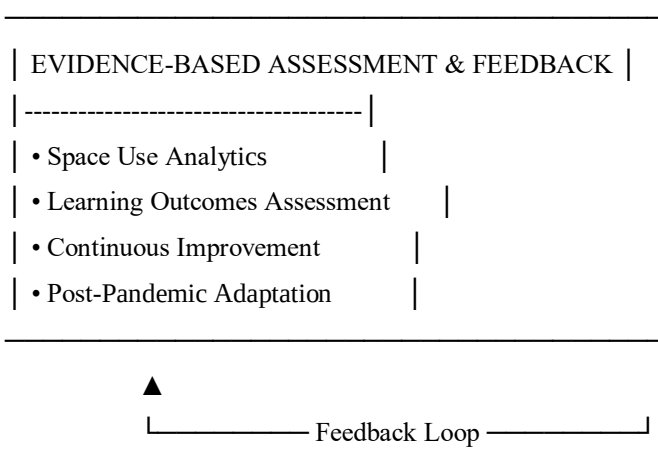
Theme / Concept	References	Minor Description
1. Library as Place & Social Learning Spaces	1, 7, 8, 12, 16, 19, 27, 31, 32, 33, 36, 37, 40, 43, 49, 50, 54, 60, 67, 78	Libraries are places for students to gather for many purposes, such as studying, collaborating, relaxing, and learning informally.
2. Formal & Informal Learning Spaces in Libraries	2, 3, 4, 5, 6, 9, 11, 13, 14, 15, 21, 22, 23, 24, 25, 28, 29, 30, 35, 38, 39, 41, 42, 44, 46, 47, 48, 51, 52, 53, 55, 56, 57, 58, 59, 61, 62, 63, 64, 65, 66, 71, 73, 74, 81, 82	The impact of library space on students' learning experiences, engagement, collaboration, and satisfaction with library services will be examined.
3. Library Space Planning, Design & Assessment	10, 17, 18, 20, 26, 34, 40, 44, 45, 46, 52, 54, 57, 58, 61, 62, 63, 64, 70, 75	The design of library spaces will be primarily based on improving user satisfaction and providing a more enjoyable experience.
4. Technology-Enhanced & Immersive Learning Spaces	47, 48, 65, 66, 71, 74, 81, 82	Providing a technology-rich digital environment to enhance support for the user. The result, in turn, leads to greater engagement and learning.

Overall, the literature recognizes that redesigning library spaces marks a profound shift from a collection-centric to a learning-centric approach, achieving the goal of adaptable, permeable, and inclusive environments.

Diagram: Conceptual Framework: Library Spaces as Learning Environments

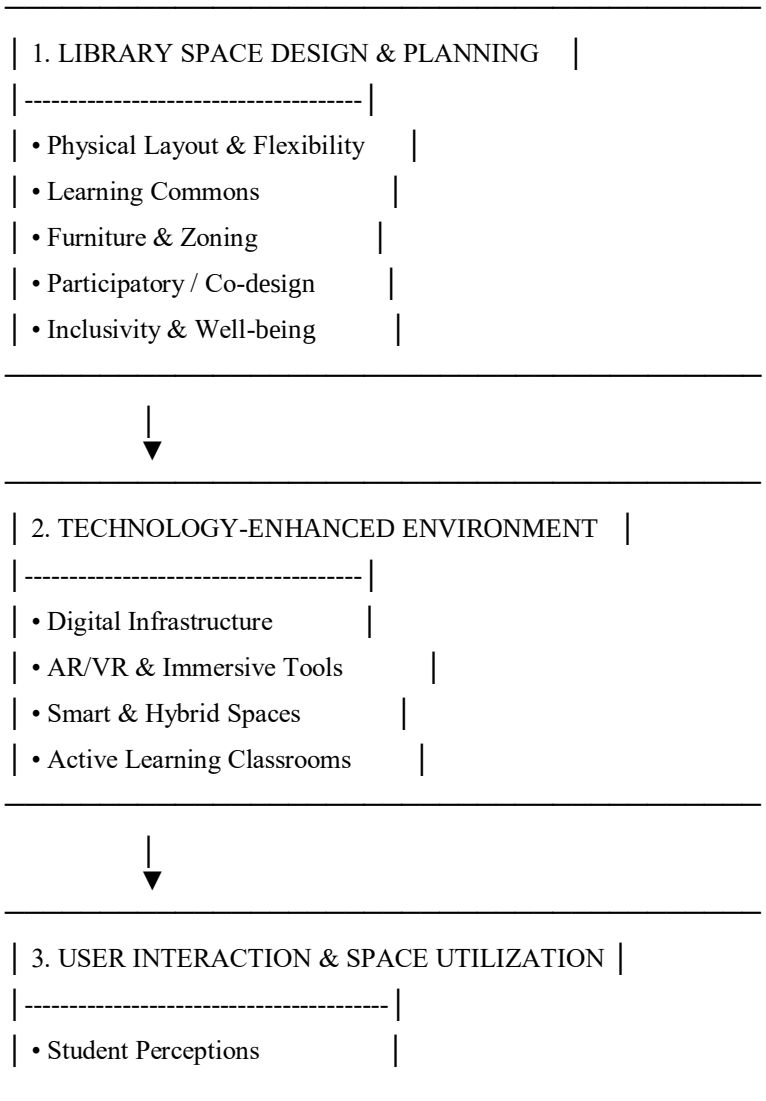


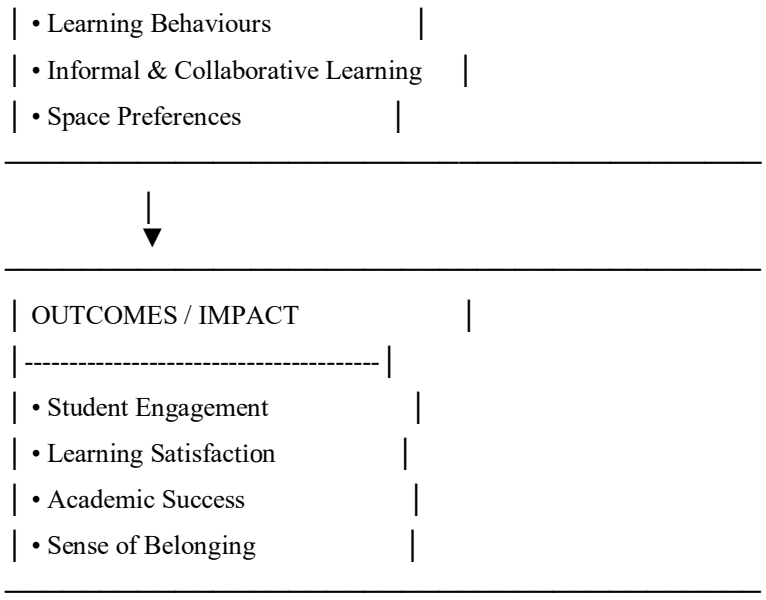




The framework examines the collective viewpoints of theorists, helping users identify and define roles within library spaces. It will impact user engagement in academic libraries and, ultimately, their outcomes. An ongoing assessment will allow for design modification; however, it will also encourage a collaborative relationship between library staff and faculty.

Diagram 2: Designing for User Satisfaction





a. Library Space Design & Planning – This refers to the impact of physical and participatory design on usability, comfort, and accessibility.

b. Environment-Technology-Enhanced – This refers to the integration of digital technologies, immersive environments, and smart infrastructure to enhance learning.

c. Space Utilization & User Interaction – This refers to the impact of student interaction and navigation of library spaces on collaborative, informal, and formal learning.

These three elements above interact to create a cycle of design, use, assessment, and improvement.

FINDINGS

- **Library as Place & Social Learning Spaces**: An examination of libraries provides an opportunity to see how space/design influences participation and comfort levels, as well as intellectual engagement with the library environment among those working together on online or collaborative projects at the library.
- **Formal & Informal Learning Spaces in Libraries** – Libraries have spaces that serve both formal and informal purposes; therefore, we evaluate these spaces based on how they support formal instructional activities (such as lectures or direct instruction) and informal group and individual study. For example, the use of Learning Commons, group study areas, and flexible furniture will improve student outcomes and engagement by how these spaces are used for learning.
- **Library Space Planning, Design & Assessment** – Planning, Design, and Evaluation of Library Spaces: Methods of planning, design, and assessment for effective and flexible library spaces. Focus on co-design and evidence-based design practices.
- **Technology-Enhanced & Immersive Learning Spaces** – Immersive learning facilitates a wide range of learning experiences, including virtual reality, interactive spaces, and digital learning. Also, various studies have shown that technology has a positive impact on student learning, making it more engaging and personalized.

RESEARCH COVERAGE AND CONCLUSION

The findings of this study illustrate the transformation landscape of contemporary library environments. Today, libraries are providing multifaceted support to students. The paper consistently shows that technology-rich spaces, flexible design, hybrid services, and collaboration shape students' engagement and learning perspectives. Also, research indicates that evidence-based assessment practices in library use drive academic success and encourage cohesive learning. Collectively, the research opens the way for both theoretical and practical decisions in shaping libraries' learning spaces for future developments.

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