Coworking Spaces for Strengthening Academic Libraries Role (A New Trend in the Digital Age)

Kardi
Institut Agama Islam Negeri Ponorogo, Indonesia
Email: kardi@iainponorogo.ac.id

Siti Nurhayati
Institut Agama Islam Negeri Kediri, Indonesia
Email: esitinurhayatikdr@iainkediri.ac.id

Muhammad Fawaizur Rahman
Universitas Islam Indonesia, Yogyakarta, Indonesia
Email: fawaizur_rh@gmail.com

Abstract: This research aims to encourage the role of libraries as learning resource centers. The rise of coffee shops is a challenge for library service developers. The paradigm shift and the pattern of user habits in obtaining information have had an impact on the decrease in the number of library visitors. The coffee shop offers a free space with a wide selection of food and soft drinks to meet and discuss with colleagues. The problem that arises then is how libraries can answer the challenge of changing user behavior in spreading information. This article tries to explain one of the efforts to provide a user-based service. This study uses a qualitative descriptive approach to describe the strategic role of libraries in the reality of changing people's information behavior. Secondary data from the previous article were collected and then analyzed descriptively and systematically. The validity of the supporting data is sufficient if it can answer this research problem. The results of this study provide an overview of the urgency of *café-style co-working* in libraries. *Coworking spaces* can be designed to resemble coffee shops with a variety of offerings while discussing collaboratively

Corresponding Author:
Kardi
Institut Agama Islam Negeri Ponorogo, Indonesia; kardi@iainponorogo.ac.id

with visitors. Of course, the space is equipped with convenient supporting devices, such as an electricity connection, internet, adequate lighting, music, air conditioning, and flexible service hours. *The coworking space* in the library also provides access to services for journals and *e-books.* The library must also be ready to help users who have difficulties using electronic services.
Keywords: *co-working, coffee shop, digital transformation, information seeker behavior, library, collaborative learning*

Abstrak: Penelitian ini bertujuan mendorong peran perpustakaan sebagai pusat sumber belajar. Maraknya kedai kopi menjadi tantangan bagi pengembang layanan perpustakaan. Pergeseran paradigma dan pola kebiasaan pemustaka dalam memperoleh informasi berdampak pada penurunan jumlah pengunjung perpustakaan. Kedai kopi menawarkan ruang bebas dengan beragam pilihan menu makanan dan minuman ringan untuk bertemu dan berdiskusi dengan kolega. Permasalahan yang muncul kemudian adalah bagaimana perpustakaan dapat menjawab tantangan perubahan perilaku pemustaka dalam memperloeh informasi. Artikel ini mencoba menjelaskan salah satu upaya untuk menyediakan layanan berbasis pengguna. Penelitian ini menggunakan pendekatan deskriptif kualitatif untuk menggambarkan peran strategis perpustakaan dengan adanya realitas perubahan perilaku informasi masyarakat. Data skunder dari artikel sebelumnya dikumpulkan kemudian dianalisis secara deskriptip dan sistematis. Validitas data pendukung diras cukup jika sudah mampu menjawab persoalan peneltian ini. Hasil penelitian ini memberikan gambaran urgensi *co-working* ala kafe di perpustakaan. Ruang kerja bersama (*coworking space*) dapat dirancang menyerupai kedai kopi dengan beragam sajian, sambil berdiskusi secara kolaboratif bagi para pengunjung. Tentunya, ruang tersebut dilengkapi dengan perangkat pendukung yang nyaman, seperti koneksi listrik, internet, pencahayaan yang memadai, musik, pendingin ruangan, dan jam layanan yang fleksibel. *Coworking space* di perpustakaan juga menyediakan layanan akses jurnal dan *e-book.* Pustawakan juga harus siap membantu pemustaka yang mengalami kesulitan dalam mengoperasikan layanan elektronik.
Kata Kunci: *co-working, coffee shop*, transformasi digital, *information seeker behaviour*, perpustakaan, pembelajaran kolaboratif

INTRODUCTION

Libraries have an increasing problem in adapting and expanding to meet the ever-changing needs of their users.[1] Information technology's introduction and adoption have changed how academics and students access and use information resources. Libraries now need to adapt to new information and learning technologies and their parent organizations' values, purposes, and objectives. To be current and productive, academic libraries must embrace the opportunities presented by the digital transformation and rethink their physical locations to support interactive and collaborative learning practices.

Integrating coworking spaces is a viable option that academic libraries should consider investigating.[2] Coworking spaces can strengthen the Library's position as the campus intellectual center by providing a particular combination of the communal workplace, facilities, and shared workspace. Libraries may encourage community and togetherness by introducing coworking components, which can facilitate and enhance learning and discovery across disciplines. This study examines how coworking spaces might help university libraries play a more prominent role in the digital era.

University libraries must adapt to the latest developments in information technology (IT) by taking into account the typical ways that users seek information, simple questionnaires covering topics such as frequently utilized locations and information types. To enhance the quality of library services, the management of libraries should regularly change the habits of their patrons. This type of library management is sometimes referred to as user-based. Such an activity model aligns with management focused on achieving the Sustainable Development Goals (SDGs).[3] In this context, the researcher will identify several issues about higher education institutions' ability to satisfy consumers' information needs and go against the shift in how users seek scientific knowledge

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[1] Dini Ratnasari dan Hendriyani Hendriyani, "What Makes People Use Digital Library?: A Study of iJakarta Users," *Jurnal Komunikasi Indonesia*, 14 Januari 2019, 258-268–268, https://doi.org/10.7454/jki.v7i3.9698.

[2] Araf Aliwijaya dan Dwi Retno Syahfitri, "Coffee Shop VS Library: Concept of Learning Spaces for New Library Users," *JPUA: Jurnal Perpustakaan Universitas Airlangga: Media Informasi dan Komunikasi Kepustakawanan* 13, no. 2 (4 Desember 2023): 123–30, https://doi.org/10.20473/jpua.v13i2.2023.123-130.

[3] Omwoyo Bosire Onyancha, "Library and Information Science (LIS) in the Sustainable Development Goals (SDGs) Research from 2012–2021: An Informetric Perspective," dalam *Information, Knowledge, and Technology for Teaching and Research in Africa: Data and Knowledge Management*, ed. oleh Dennis Ocholla, Omwoyo Bosire Onyancha, dan Aderonke Olaitan Adesina (Cham: Springer Nature Switzerland, 2024), 65–83, https://doi.org/10.1007/978-3-031-59053-5_4.

following the COVID-19 epidemic, which necessitates information service development on the part of library management.[4]

The trend of digital libraries has changed user behavior in obtaining information. Users can access library service information from anywhere and at any time. This has an impact on decreasing the number of library visitors. Information behavior during the COVID-19 pandemic contributed to the decline in library activities. There was a fluctuation in the number of visitors to the UNISSULA Library from 2014 to 2018. There was an increase, but from 2019 to 2021, there was a decrease due to the implementation of Community Activity Restrictions (PPKM), so library services were temporarily closed.[5] As a result, all activities can now be carried out remotely using information technology tools. Currently, users tend to access installed information sources. The rate of decline in library visitors must be immediately addressed to find a robust solution. So, it requires creativity from the management of Islamic university libraries, especially in restoring the role of libraries as information centers and even as research centers.[6]

Some of the previous studies that raised the issue of coworking in higher education include an article written by Sukirno and Junandi.[7] Universitas Gadjah Mada (UGM) Yogyakarta is one of the universities providing library discussion room services.[8] The room with comfortable facilities is the result of collaboration with Pegadaian. So, library convenience is the essential thing that user look for in good spaces to be successful in their career. An essential point in the discussion was how to implement the idea of coworking in the Library of the Faculty of Medicine, Gadjah Mada University, Yogyakarta. Some of the things that need to be prepared include how the design, concept, principles, and service system are.

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[4] Raras Inggita Arcci Citra Canta, Novita Erma Kristanti, dan Henry Yuliando, "Consumers' Perception Analysis on Service Quality of Coffee Shops and Coworking Spaces in Yogyakarta, Indonesia," *agriTECH* 44, no. 2 (t.t.): 128–36.

[5] Ainun Nurul Latieffah dan Muh Ahlis Ahwan, "Strategi Meningkatkan Minat Kunjung Pasca Pandemi di Perpustakaan Universitas Islam Sultan Agung Semarang," *Maktabatuna* 6, no. 1 (18 Juli 2024): 157–84, https://doi.org/10.15548/mj.v6i1.8429.

[6] Adzra Athira Arief et al., "Distribution in Coworking Space: Exploring Brand Experience and Brand Image on Brand Equity through Brand Loyalty," *Journal of Distribution Science* 22, no. 7 (2024): 13–22.

[7] Sukirno Sukirno and Sri Junandi, "Implementation of Coworking Space as Library Facilities Development of the Faculty of Medicine–Public Health and Nursing, Gadjah Mada University," *Librarian Media* 28, no. 3 (2021): 180–89.

[8] Muhammad Halim, "Coworking Space Unik di Perpustakaan UGM Bikin Belajar Semakin Asyik – Aksaramaya," diakses 17 Desember 2023, https://aksaramaya.com/coworking-space-unik-di-perpustakaan-ugm-bikin-belajar-semakin-asyik/.

In essence, the FK UGM library intends to provide a comfortable, collaborative work service for work.

On the other hand, research on coworking is being drawn into the business world. The article written by Windy Rezki Kurnia tries to explore the opportunities and challenges of the Coworking space industry in Pekanbaru by using a SWOT analysis.[9] The integration of science becomes interesting again when the issue is captured from social theories written by Eni Nur Aeni and Tri Murniati. Coworking space and Social space, according to Gramschi, Paul Du Ga, and John Fiske.[10]

A study on coworking space as a room for lecture or office assignments. This phenomenon uses a qualitative approach with a literature research method. Through the concept of hegemony from Antonio Gramsci, then Paul Du Gay's cultural circuit, combined with two concepts of Economics by John Fiske, became the theoretical basis for answering the formulation of problems. The hegemony of the new trend in the millennial era, in addition to that, also examines the urgency of using this facility in carrying out the duties of companies or agencies.[11] This article also discusses the difference between cafes and coworking. Both are terms that have a closeness between the two. Cafes usually provide a place to have a casual conversation, but also provide food and drinks. But if coworking is known as a place to relax, relax with a new atmosphere, but like an office, it is also to discuss projects. Intense competition makes coffee shop entrepreneurs try to offer certain facilities as a differentiator, one of which is through the concept of a coffee shop as a co-working space. This phenomenon does not only occur in big cities.[12] The co-working phenomenon has become a new trend in the development of university libraries lately. Among them is the construction of a new IAIN Ponorogo library building, presenting co-working as a distinction from the previous building. As shown in the following mockup.
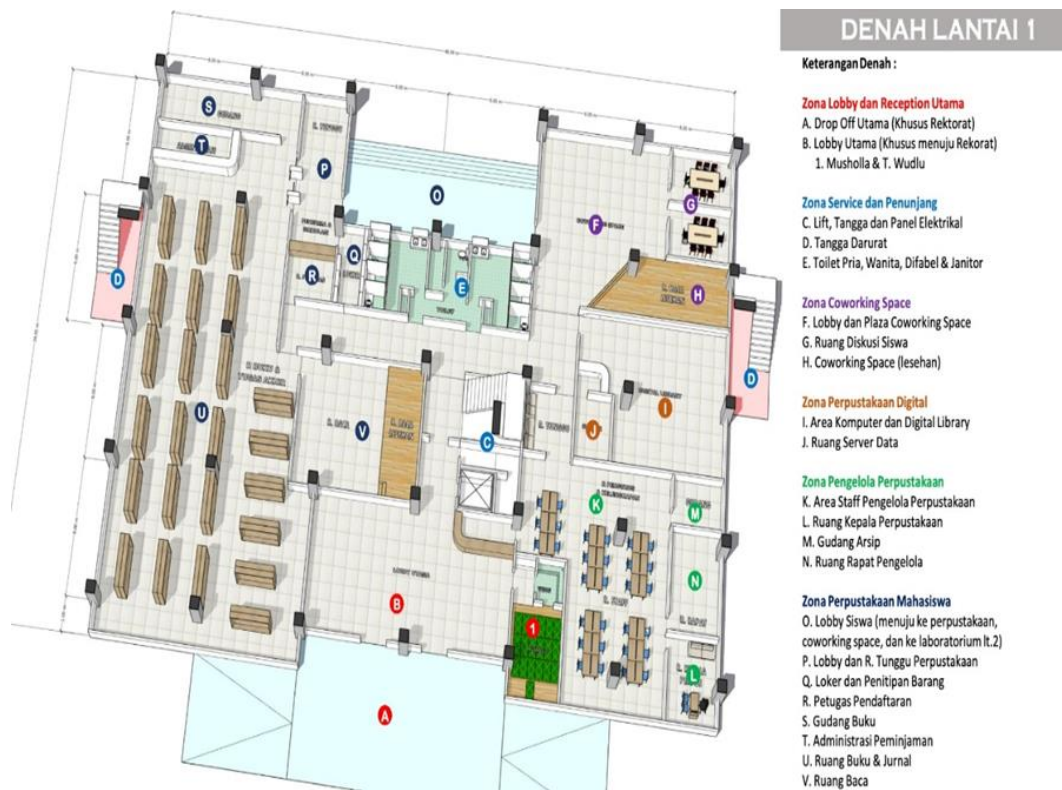
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[9] Windy Rezki Kurnia et al., "Analysis of Opportunities and Challenges in the Co-working Space Industry Case Study: Meetup Co-Working Space Pekanbaru," *Research in Accounting Journal (RAJ)* 1, no. 3 (2021): 370–75.

[10] Eni Nur Aeni dan Tri Murniati, "Coworking Space, Social Space Articulated as Working Zone in Millennial Era," dalam *International Conference on Cultural Studies (ICCUS 2023)* (Atlantis Press, 2024), 108–17, https://www.atlantis-press.com/proceedings/iccus-23/125997883.

[11] Ibid.

[12] Dyah Widi Astuti dan Deka Jordy Rakasiwi, "Perubahan Tuntutan Ruang Pasca Pandemi Covid-19: Studi Kasus Penyesuaian Layout Interior pada Coffee Shop Berkonsep Co-Working Space di Surakarta," *Sinektika: Jurnal Arsitektur* 20, no. 1 (28 Januari 2023): 99–106, https://doi.org/10.23917/sinektika.v20i1.21030.

Figure 1. Construction of a New IAIN Ponorogo Library Building

Sources: IAIN Ponorogo's Documents

Users today tend to go to cafes to complete their college assignments.[13] If this lasts for a long time, the Library will be increasingly abandoned and empty of visitors. Therefore, how can university libraries attract students' interest in visiting the Library? What's wrong with the café so that users are more comfortable doing activities in the café than in the Library? This must be a reflection for Islamic university library stakeholders to meet the scientific information needs of their users.

This research is essential to contribute to developing educational devices or strengthening facilities in higher education to be the focus of sustainable development. This is important because the development of information technology can change users' behavior patterns in obtaining information.

RESEARCH METHOD

The research uses a qualitative descriptive approach. Data were obtained through documentation techniques from journal-related academic libraries and

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[13] Canta, Kristanti, dan Yuliando, "Consumers' Perception Analysis on Service Quality of Coffee Shops and Coworking Spaces in Yogyakarta, Indonesia."

co-working space trends. The paper's data sources are written works that are relevant to the selected theme. The primary data sources for this research are written materials, including print and electronic pieces about the phenomenon of using coworking spaces as a workplace. Then, secondary data sources in the form of community and cultural reference books—particularly those about Gramsci's concept of cultural hegemony and Paul Du Gay et al.'s cultural series—support this information source. The concepts of hegemony and contemporary cultural ideology are also discussed in journal articles that serve as supplementary sources of information and comparisons for this paper. Some university libraries have implemented a coworking model in the Library. The university libraries in Indonesia that are pilots are the libraries of FK UGM Yogyakarta [14] and Atmajaya University. [15] Data analysis uses the Miles and Huberman data triangulation model[16], starting from collecting data, reducing, displaying, and drawing conclusions. Additionally, validity in qualitative research refers to how accurately the research findings reflect the reality or truth of the studied phenomenon. Employing rigorous data collection techniques and maintaining a reflexive approach throughout the research process can also help ensure the validity of the findings.

RESULTS AND DISCUSSION

Coworking Spaces for Strengthening Academic Libraries' Role in the Digital Era

Digital transformation in university libraries affects the way information is searched behavior. Previous users used traditional ways to obtain information. This is because the source of information is still in a monograph or printed format. The presence of information technology and content digitization increases users' ease in obtaining access to information. Readers do not need to go to the Library to obtain complete information because we can download and read the library collection at home. Lessons were evident, providing background information and tying into the main concepts of environmental literacy:

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[14] Sukirno Sukirno dan Sri Junandi, "Implementasi Coworking Space sebagai Pengembangan Fasilitas Perpustakaan Fakultas Kedokteran – Kesehatan Masyarakat dan Keperawatan Universitas Gadjah Mada," *Media Pustakawan* 28, no. 3 (21 Desember 2021): 180–89, https://doi.org/10.37014/medpus.v28i3.1468.

[15] Anton Hermawan, "Penerapan Konsep Coworking Space Pada Digital Library Universitas Atmajaya Yogyakarta" 6 (2022).

[16] Matthew B. Miles, A. M. Huberman, dan Johnny Saldaña, *Qualitative data analysis: a methods sourcebook*, Third edition (Thousand Oaks, Califorinia: SAGE Publications, Inc, 2014).

understanding knowledge (facts), attitudes (feelings toward an issue), and behaviors. Research has supported the effectiveness of environmental education and literacy, including works by Farwati et al. In line with Agwu and Yusuf (2017) and Yusuf (2021), the curriculum sought to give a holistic appreciation of environmental challenges, especially waste.[17] The curriculum took a cognitive approach to environmental literacy, focusing on waste management processes, the principle of zero-waste, and information about what happens with our waste (cognitive domain). We also incorporated practical features to create green attitudes and behavioral characteristics in our students that can be applied directly to the practical levels of handling waste at home.

Changes in user information behavior in obtaining information in university libraries are a challenge for library managers. Especially in making creative breakthroughs so that users are more interested in visiting the Library. Suppose these challenges are not responded to immediately. In that case, users will visit cafes more often than cafes rather than cafes rather than libraries. Changes in information behavior have become inevitable in any case. These changes are in line with the development of information technology, which is so massive. The library collection can be accessed from home.

Strengthening the Higher Education Library Role with Coworking Space and Collaborative Learning

Libraries are an essential part of higher education. The role of the Library and the librarian in recent eras has changed due to the technologically driven world. The Library is considered "the heart" of a university or an institute offering higher education. The Library becomes a learning resource center for users in universities. College libraries require creative information service innovation. Digital transformation affects users who are active in college libraries. Coworking is an alternative user discussion space in the Library.

Moreover, the concept of coworking spaces within libraries is gaining traction, as evidenced by research conducted by Kolja Oswald and Xiaokang Zhao.[18] These spaces offer opportunities for collaborative learning and individual work performance, catering to the diverse needs of library users. By fostering a

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[17] Endang Fatmawati, Wening Udasmoro, dan Ratna Noviani, "Representation of Library Spaceas Pragmatic Space and Ideological Contestation," *Libraria: Jurnal Ilmu Perpustakaan dan Informasi*, 2017, 13–28.

[18] Kolja Oswald dan Xiaokang Zhao, "Collaborative Learning and Individual Work Performance in Coworking Spaces," *Journal of Business Economics and Management* 23, no. 1 (14 Desember 2021): 162–79, https://doi.org/10.3846/jbem.2021.15692.

sense of community and collaboration, coworking spaces enhance the overall learning experience within the library environment.

In recent years, particularly since the emergence of modern technology, the functions of libraries in higher education are arguably the most advanced they have ever been. Every library is equipped with an extensive collection of materials, including textbooks, computer terminals, books, and other resources, which facilitate learning intuition and aid students. Narmina Abuduleyer's report on the libraries of universities of Azerbaijan sheds light on such transformations and underscores the role of libraries in achieving educational success alongside interdisciplinary education. [19] Libraries have transformed in today's high-tech world and now serve various functions at the same time. They are an educational resource for students and teachers, and provide facilities such as access to digitally published materials, online databases, and other electronic materials alongside a collection of printed works.

College libraries in the contemporary era of rapid digitization and technological evolution require chronic innovation in their information services systems. Embracing digital transformation, accessibility of online materials, and the restructuring of physical spaces actively used by students as Focused Learning Areas are critical for the continued efficacy of the libraries to support higher education. The design of the library room is still monotonous. User rules are more often than not informal and overly strict. Libraries have not adapted to changes in user behavior. Digital library transformation alters the behavior of the information within the library ecosystem. The Library has not set aside space for limited discussion. The statement sheds light upon the necessity of contemporary users, which includes students of different ages and their evolving school-centered behaviors. In simple words, the design and decor of the library space is not effective or functional and tends to fit a specific, noncreative box where frameworks do not easily bend, making them quite inflexible. In simpler terms, adolescent users expect to be treated as willing to take advice straightforwardly without having to clash with the blurring boundaries in transforming vital technologies into their daily lives.

Moreover, devoid of a setting for the discussion purposes of activities indicates insufficient collection meant for taught concepts of hands-on learning

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[19] Narmina Abdullayeva, "The Role of Libraries in Academic Achievement: Case Study of Azerbaijan University Libraries," *Library Management*, 17 November 2023, https://doi.org/10.1108/LM-06-2023-0056.

and blank engagement with other learners, considered an essential supplement for practical and fruitful work and study principles. The objective of designing the spatial experience of collaboration areas in the university library is to maximize user satisfaction and user engagement with that environment. The satisfaction goals can be aided through the application of ambient factors, spatial arrangement and use, spatial and graphic signage, and other symbols and artifacts processes.

A vision for the spatial experience can be formulated using service design thinking, and critical experiential elements can be identified. These factors can therefore be integrated into the refurbishment as a space that aims to facilitate students' interaction and achieve the desired placeness. Changing the library space into a learning commons is designed to support a variety of learning activities and capture a wider range of users. Users' spatial and place needs have been adequately addressed in the refurbishments of the libraries, and have come to appreciate libraries as places to spend time and work on tasks. However, the spaces in the library are required to serve different categories of users and their distinct types of activities[20]. The information commons as a group work area is expected to keep changing and improving to meet new demands as well as artistic and technological possibilities[21].The phenomenon of spatial cognition in readers of university libraries has a considerable impact on their behavior. This is modifiable through stimuli and visualization.

Experience-based design principles, advocated by Guido Makransky and Gustav Bøg Petersen, can be successfully applied to the collaborative spaces of university libraries and enhance their usage and satisfaction.[22] The vision of learners' spatial experiences and their use of learning technologies in libraries can be designed by service design thinking concerning the development of the library's learning environment. Such an approach fosters the incorporation of several sensory and functional parameters into the remodeling process to make

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[20] Purwani Istiana, "Public Space Dan Private Space - Posisi Strategis Perpustakaan Dalam Mendukung Pembelajaran Kolaboratif," *Jurnal Pustaka Ilmiah* 1, no. 1 (2015): 39–45, https://doi.org/10.20961/jpi.v1i1.33104.

[21] Erica DeFrain dan Miyoung Hong, "Interiors, Affect, and Use: How Does an Academic Library's Learning Commons Support Students' Needs?," *Evidence Based Library and Information Practice* 15, no. 2 (15 Juni 2020): 42–68, https://doi.org/10.18438/eblip29677.

[22] Guido Makransky dan Gustav Bøg Petersen, "The Theory of Immersive Collaborative Learning (TICOL)," *Educational Psychology Review* 35, no. 4 (Desember 2023): 103, https://doi.org/10.1007/s10648-023-09822-5.

the spaces more like places where students would want to engage in place-based activities.

Transformative learning relying on integration of various learning activities in multimodal forms and utilizing learners' stimuli by peer interactions is best supported, as well as the broadened scope of learners, by the change of the library's learning e-commons. Library-driven segmentation users are more targeted and catered for through strategically designed spatial concepts, through targeted user profiling design by accommodating targeted and tailored spaces with various defined patterns of library use. That is, discussion rooms in coworking spaces enable collaboration work without interruption, while the rest of the spatial allocation guarantees focused study free from other stimuli. Understanding spatial notions of spatial thinking gives ways of highly organized frameworks for which organized systems of concepts, perceptions, images, and symbols, accompanied by a variety of spatial environments, can best serve to design appropriate library spaces.

For instance, providing dedicated discussion rooms within coworking spaces can address the need for collaborative work while ensuring a quiet environment for focused study. Moreover, understanding the spatial cognition of university library users is crucial in designing adequate library spaces.[23] Sensory experiences and mental imagery play a significant role in shaping user behavior within these spaces, highlighting the importance of creating functional and engaging environments. [24]

In conclusion, the urgency of research in this area underscores the importance of encouraging college libraries to be more innovative in their approach to information services. By addressing the evolving needs of users and adapting library spaces to accommodate new behaviors and technologies, libraries can continue to serve as valuable resources for higher education institutions.

The Librarian's Evolving Role of Academic Libraries from Collecting to Connecting

Academic librarians envision a "social future" Schlak, Corrall, & Bracke as a link that connects, then connects ideas and knowledge in the scientific

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[23] Jagmohan Meena, "Library Spaces and Architecture: Designing for the Future," *ShodhKosh: Journal of Visual and Performing Arts* 4, no. 2 (31 Desember 2023): 1102–9, https://doi.org/10.29121/shodhkosh.v4.i2.2023.2192.

[24] Seung Hyun Cha dan Tae Wan Kim, "The Role of Space Attributes in Space-Choice Behaviour and Satisfaction in an Academic Library," *Journal of Librarianship and Information Science* 52, no. 2 (1 Juni 2020): 399–409, https://doi.org/10.1177/0961000618794257.

community. As outward-looking players, "take advantage of opportunities to connect at the local, national, and international levels." Collaboration emerged as the main theme in the discourse of academic libraries. The COVID-19 pandemic has pushed the digital shift to the forefront. The pandemic has given a commitment to "digital first" as a new urgency. Today, digital transformation is diverting attention from the equally important task of developing the capacity to collaborate and instilling a collaborative relational culture in the profession.25

The traditional view of the academic Library as an information repository quickly dissolves. Today, they are understood to be "places" and "third spaces" that provide a hub of collaborative learning, social activities, and intellectual engagement. This shift in the conceptual basis of academic library design reflects the changing needs and preferences of students, faculty, and researchers.

As the Library reinvents itself as less of an information warehouse and more of a dynamic learning commons, the Library must also recommit to new pedagogies and technologies that keep it relevant and effective. The Library should serve as the central building on campus where the intellectual community can feel and take advantage of the centrality of the institution. It is therefore essential to ensure that the management of electronic services and seamless information architecture and knowledge organization structures allow the access and subsequent use of digital resources to be effortless.26

The integration of coworking spaces within academic libraries can offer a range of benefits for strengthening the role of Islamic university libraries in the digital age. A positive community, creativity, and innovation are cultivated by flexible and collaborative environments granted by coworking spaces. As it stands, libraries can incorporate coworking elements to change their physical spaces to be more adaptive towards meeting the requirements of students, faculty, and researchers. In academic libraries, coworking spaces can function as interdisciplinary collaboration hubs where people with diverse backgrounds can actively share ideas, work on tasks, and participate in social activities.

This assists in fostering the intellectual community and cultivating the feeling of belonging among library users, which greatly impacts learning and

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25 Sheila Corrall, "Alignment, Collaboration and the Social Turn: Our Agenda for the Relational Library," *New Review of Academic Librarianship*, 2 Januari 2023, https://www.tandfonline.com/doi/abs/10.1080/13614533.2023.2196277.
26 K. T. Anuradha, "Design and development of institutional repositories: A case study," *The international information & library review* 37, no. 3 (2005): 169–78.

discovery. Besides that, academic libraries undergo a digital transformation, which is supported by coworking spaces due to providing critical infrastructure and amenities. The ability to high high-speed internet, advanced technologies, and adjustable workstations grants users the ability to merge digital tools into their research and learning processes.

While integrating coworking spaces in academic libraries offers many potential benefits, some challenges and considerations must be addressed.[27] One key challenge is the need to balance the traditional library functions with the new collaborative spaces. Libraries must ensure that they continue providing access to physical collections, quiet study areas, and other core services that users expect, while also incorporating coworking spaces' dynamic and flexible nature.

Another consideration is the need for effective collaboration and cooperation beyond individual libraries and campuses. Transformation cannot occur in isolation, and libraries must work with commercial and academic partners to ensure that the integration of coworking spaces aligns with the broader goals and strategies of the institution.

Library User Habits in the Digital Transformation

In the age of the digital revolution, the behaviors of library patrons have undergone significant changes, reflecting the rapid advancements in technology and shifting user preferences. One of the most notable changes is the transition from traditional bookshelf searches to online information retrieval. Rather than physically browsing shelves, patrons now prefer to access journal articles, e-books, and other digital resources through search engines and electronic databases, embracing the convenience of digital tools.[28]

One of the more important changes is the use of remote access to library materials. Digital libraries allow users instant access to materials from anywhere in the world, which no longer requires the user to step into a library. This not only improves convenience but also helps promote the now common phenomenon of remote learning, thus making information accessible to the user irrespective of their geographical location.[29]

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[27] Donna Ellen Frederick, "Challenges for libraries and librarians at the nexus of the digital age and the dawn of the Fourth Industrial Revolution," *Library Hi Tech News* 41, no. 6 (1 Januari 2024): 6–12, https://doi.org/10.1108/LHTN-05-2024-0081.

[28] Rexwhite Tega Enakrire dkk., "Paperless Libraries: The Trending Way to Go in the Fifth Industrial Revolution," *Business Information Review* 41, no. 4 (1 Desember 2024): 164–73, https://doi.org/10.1177/02663821241289793.

[29] Martin Elihaki Kanyika dkk., "User Perspectives on Library Digitization and Its Impact on Research Capabilities," *Information Development*, 10 November 2024, 02666669241294053, https://doi.org/10.1177/02666669241294053.

Moreover, the use of technology has redefined how students learn collaboratively. Library users take part in collaborative learning through the internet using discussion and even virtual study groups. These forums allow users to come together, share different perspectives, and discuss the various learning materials, thereby enhancing the sense of belonging and collective knowledge creation. The rapid growth of mobile devices also changed how patrons obtain information. Devices such as smartphones and tablets have emerged as vital library resources, enabling users to browse, read, and learn while on the go. The integration of technology into everyday life shows that both libraries and users are evolving to meet the needs of the digital era. Resources are now accessible from anywhere as long as one has internet connectivity.

Use of Social Media for Library Information: Libraries increasingly use social media to communicate with users, promote library services and events, and share related resources and information. Then Use of Augmented Reality (AR) and Virtual Reality (VR) Technology: Some libraries are adopting AR and VR technologies to improve the user experience accessing and using library collections, for example, virtual tours through library collections or digital exhibitions using this technology. These changes show that libraries must continue adapting to technological developments and user habits to remain relevant and effective in providing information services.

The trend and transformation of information in college libraries continue to evolve along with the development of technology and changes in user needs.[30] Some of the evolving trends are as follows: a) Managing Collections Digitally: College libraries are now emphasizing more on acquiring digital collections. They are increasing their ebooks, electronic journals, online databases, and other digital resources to fulfill users' information needs in a more digital form; b) Learning through the Internet: Libraries play an integral role in supporting and supplementing education through the Internet or remote education. They provide complete access to electronic resources, online courses, and the internet for communication and collaboration so that students and lecturers can access information, collaborate, and share easily and effectively; c) Application of Modern Technology for Teaching and Learning: The Library applies modern search and retrieval systems that aid users in retrieving relevant information to enable them access to quality information. They use a proprietary library

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[30] Igor Pihir, Katarina Tomičić-Pupek, dan Martina Tomičić Furjan, "Digital Transformation Insights and Trends," dalam *Central European Conference on Information and Intelligent Systems* (Faculty of Organization and Informatics Varazdin, 2018), 141–49.

search engine and data mining tools to enhance information retrieval and accessibility.

Development of Digital Services: The Library continues to develop innovative digital services, such as ebook lending services, online reference services, and online literature search consultations. They also provide access to interactive learning resources and multimedia content to support diverse learning. Institutional Collaboration and Partnerships: Libraries work closely with other institutions and partner with publishers, information technology service providers, and other organizations to improve access and availability of information. They are involved in collaborative projects to develop a shared information platform and infrastructure. Use of Data Analytics: Libraries utilize data analytics to understand user needs, identify usage trends, and improve the effectiveness of information services. They use electronic resource usage data and user feedback to optimize library collections and services.

These trends and transformations show that university libraries strive to become a dynamic and responsive information center to user needs in the digital era. By adopting new technologies and developing innovative services, libraries can remain relevant and effective in supporting universities' educational and research missions.

CoWorking Space and Collaborative Learning Space in the Library

Coworking and collaborative learning spaces in libraries aim to create an environment that supports cooperation, interaction, and collaborative learning among library users.[31] To encourage higher education libraries to be more creative in providing information services for users. The Library's coworking spaces provide limited discussion room services. This research aims to provide opportunities for users to discuss in the Library. The points you've raised highlight the necessity for college libraries to evolve and adapt to users' changing needs and behaviors in this digital age. While libraries have made strides in embracing digital transformation, there are still areas where improvements can be made, particularly in the design of library spaces and the accommodation of evolving user behaviors.

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[31] Meyriana Kesuma dan Nur Mawaddah, "Coworking space: Trend & opportunity as a workspace in future," dalam *AIP Conference Proceedings*, vol. 2680 (AIP Publishing, 2023), https://pubs.aip.org/aip/acp/article-abstract/2680/1/020140/2928555.

Here are some of the distinctive features and benefits of these two types of spaces:

Table 1. The Distinctive Features and Benefits of Coworking Space and Collaborative Learning Space

Category	Description
Coworking Space	a. Designed to support individual or small group work in an open and flexible atmosphere. b. Equipped with comfortable desks, chairs, electrical and WiFi connections, and areas for relaxation and collaboration. c. Provides opportunities for students, lecturers, and researchers to collaborate and exchange ideas. d. Encourages networking and information exchange.
Collaborative Learning Space	a. Designed to support collaboration-based learning between students and lecturers. b. Equipped with flexible desks and technology like interactive touch screens or projectors for sharing learning materials. c. Encourages active participation, knowledge sharing, and group problem-solving. d. Facilitates project- or problem-based learning approaches.

Sources: Writer Synthesis (2024)

The benefits of coworking spaces and collaborative learning spaces in libraries include increased collaboration and engagement between library users in work and learning contexts. And then creating an environment that supports innovation, creativity, and the exchange of ideas among individuals and groups. Facilitates active and project-based learning, which helps students develop collaborative and problem-solving skills. Providing an alternative to traditional classrooms, where learning can be more relaxed and interactive. Encourage the use of library space as a place to work, study, and collaborate, increasing the added value and relevance of libraries in the university community.

Thus, coworking spaces and collaborative learning spaces are essential assets in the Library's efforts to meet the needs and expectations of users in the changing and evolving era of education. Coworking Space, as a collaborative space for users to communicate scientifically, requires the support of comfortable facilities. Collaboration room facilities like this have become a trend in the university library environment.

CONCLUSION

The coworking trend is not new in the world of libraries. However, there is a different development from previous times regarding the selection of interior design, service concepts, and properties used. This difference departs from a shift in library user habits that dominantly use digital and electronic collections. This is done to optimize university library services. Thus, the Library is not abandoned by users who turn to cafes because the Library is not comfortable for collaboration.

The integration of coworking spaces within academic libraries presents a promising opportunity to strengthen the role of Islamic university libraries in the digital age. By embracing coworking spaces' collaborative and flexible nature, libraries can transform their physical spaces to better meet the evolving needs of students, faculty, and researchers. This can foster a sense of community, promote interdisciplinary collaboration, and support the digital transformation of academic libraries. While challenges and considerations must be addressed, the potential benefits of coworking spaces for academic libraries are significant.

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