



# Why Cafés Matter: Rethinking Formal Learning Spaces in Indonesian Higher Education

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## ARTICLE INFO

### Article history:

Received : 05 Desember 2025

Revised : 18 Desember 2025

Accepted : 31 Desember 2025

## ABSTRACT

The growing use of cafés as learning spaces among university students reflects broader shifts in how learning is organised beyond formal academic environments. While research on informal learning spaces has expanded, empirical evidence from developing higher education contexts remains limited. This study examines why Indonesian university students prefer cafés over libraries as learning spaces and identifies the perceived learning affordances of both environments. Using a quantitative cross-sectional survey, data were collected from 355 undergraduate students across disciplines and levels of study. Descriptive statistics and chi-square cross-tabulations were utilised to analyse associations between space preferences and perceived productivity, motivation, collaboration, creativity, and spatial design. Results show that cafés are significantly associated with collaborative learning ( $p < .05$ ), creative idea exchange, and higher learning motivation, whereas libraries remain central for focus-intensive and individual academic tasks. Rather than functioning as competing spaces, cafés and libraries operate as complementary components within students' broader learning ecology. The findings highlight a mismatch between institutional learning space design and contemporary learning practices, suggesting the need to develop hybrid, multi-zone learning environments that integrate both functional and motivational affordances.

### How to Cite:

Irwan, D. (2025). Why Cafés Matter: Rethinking Formal Learning Spaces in Indonesian Higher Education. *Tut Wuri Handayani : Jurnal Keguruan Dan Ilmu Pendidikan*, 4(4), 249–263. Retrieved from <https://jurnal.risetilmiah.ac.id/index.php/jkip/article/view/1272>

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## Introduction

Learning spaces have become a central concern in higher education as universities respond to changing student learning practices, digitalisation, and the growing demand for flexible and engaging learning environments. Traditionally, academic learning has been closely associated with formal institutional spaces such as classrooms and libraries, which are designed to support structured, individual, and discipline-oriented study (Oblinger, 2006; Temple, 2008). However, contemporary student learning increasingly extends beyond these formal settings, incorporating informal and semi-formal environments that better accommodate diverse learning needs (Beckers et al., 2016a). From the perspective of Learning Ecology and Third Place Theory, students construct learning pathways across multiple environments, selecting spaces that afford productivity, social interaction, and comfort rather than merely institutional legitimacy.

One visible manifestation of this shift is the growing use of cafés as learning spaces among university students. Surveys and observational studies show that cafés are frequently utilised for reading, writing, collaborative tasks, and project discussions due to their accessibility, comfort, ambient noise, and socially permissive atmosphere (Deng & May, 2019; Zhou, 2022). In many urban

areas, cafés have effectively become semi-formal learning hubs. Data from commercial analytics in Southeast Asia indicate that student café use spikes during examination periods and assignment deadlines, suggesting that café-based learning is not merely incidental but structurally embedded in student learning routines. These patterns challenge the assumption that effective academic work should occur exclusively within institutional settings and raise questions about the extent to which formal learning environments adequately support contemporary learning practices (Cunningham & Walton, 2016).

Despite increased scholarly attention to informal learning spaces, existing research remains heavily concentrated in Western contexts, where university infrastructure, cultural norms, and spatial provision differ substantially from developing systems (Temple, 2008; Leijon et al., 2024). Systematic reviews underscore a lack of empirical evidence from Asia, particularly Southeast Asia, where higher education participation is rapidly expanding. As a result, little is known about how informal learning spaces function within students' everyday learning ecologies in such contexts.

Indonesia represents a particularly relevant case. As universities accommodate rising enrolments, they face increasing pressure to design learning environments that support diverse academic activities and learning preferences. Yet, many formal institutional spaces—especially libraries—continue to prioritise quiet, individual study and restrictive behavioural norms, limiting their suitability for collaborative and socially oriented learning practices (Oblinger, 2006; Valtonen et al., 2021). When institutional environments do not meet students' needs, students may seek alternative spaces off campus, including commercial cafés (Beckers et al., 2016b). However, little is known about how Indonesian students evaluate the affordances of cafés relative to libraries and how these choices reflect broader learning practices.

Understanding why students choose cafés over libraries, and how they perceive the learning affordances of both environments, is therefore essential for informing future learning space design and higher education policy. Prior studies suggest that students select learning environments based on functional affordances rather than institutional labels, matching specific academic tasks with spaces that best support them (Damşa et al., 2019; Beckers et al., 2016a). Yet empirical evidence examining these dynamics in Indonesia remains scarce.

Accordingly, this study investigates why Indonesian university students choose cafés as learning spaces and examines the perceived affordances associated with cafés and libraries. Specifically, the study aims to: (1) examine students' learning space preferences; (2) analyse the perceived roles of cafés and libraries in supporting productivity, motivation, collaboration, and creativity; and (3) discuss the implications of emerging learning space practices for rethinking formal institutional learning environments. By providing empirical data from an underrepresented context, this study contributes to ongoing learning space scholarship and supports the design of more responsive and inclusive learning environments in Indonesian higher education (Christou et al., 2023; Damşa et al., 2019).

## Literature Review

### Learning Spaces in Higher Education

Learning spaces have become an increasingly important focus in higher education research as universities seek to respond to changing student learning practices, technological developments, and evolving pedagogical approaches. Traditionally, learning in higher education has been strongly associated with formal institutional spaces such as classrooms and libraries, which are designed to support structured, individual, and discipline-oriented academic activities (Oblinger, 2006; Temple, 2008). These spaces have historically prioritised quietness, order, and individual concentration, reflecting dominant assumptions about how academic learning should occur.

However, a growing body of research indicates that contemporary students increasingly engage in learning beyond these formal settings, utilising a wide range of informal and semi-formal environments to support their academic work. Studies suggest that students' learning space choices are shaped not only by institutional provision but also by the functional suitability of spaces for particular learning tasks (Beckers et al., 2016a; Beckers et al., 2016b). This shift has prompted scholars to reconsider the role of informal learning environments within higher education systems.

## Informal Learning Spaces and the Emergence of Cafés as Learning Environments

Among informal learning environments, cafés have emerged as prominent learning spaces for university students. Empirical studies, primarily conducted in Western contexts, report that cafés offer a combination of comfort, accessibility, social permissiveness, and technological support that aligns with students' needs for collaboration, creativity, and sustained engagement (Deng & May, 2019; Zhou, 2022). Rather than serving purely social or recreational functions, cafés are increasingly recognised as sites where academic activities such as reading, writing, group discussion, and project development take place.

Research on informal learning spaces highlights that cafés often provide atmospheres that reduce psychological barriers to learning, enabling students to engage in academic work in more relaxed and socially interactive settings (Cunningham & Walton, 2016; DeFrain et al., 2022). These findings challenge conventional assumptions about the separation between academic and non-academic spaces and suggest that learning may be more fluid and context-dependent than traditionally assumed.

## Learning Spaces, Affordances, and Learning Ecology

Recent theoretical perspectives conceptualise learning spaces not merely as static physical locations, but as socio-material environments that provide dynamic affordances for learning activities. Contemporary interpretations of affordance emphasise that opportunities for action emerge through the interaction between learners' goals, perceptions, and contextual conditions, rather than being inherent properties of physical space alone (Jorba, 2024). Within higher education research, learning spaces are therefore understood as environments that invite, enable, or constrain particular forms of engagement, collaboration, and self-regulation.

Supporting this view, systematic reviews indicate that learning environments are increasingly analysed in terms of functional affordances—such as flexibility, interaction potential, technological support, and social permissiveness—which shape how students enact learning across formal, informal, and hybrid settings (Christou et al., 2023). Research further shows that students tend to select learning spaces based on functional suitability rather than institutional labels, matching tasks that require deep concentration with quiet environments and collaborative or creative tasks with more socially permissive spaces (Beckers et al., 2016a; Beckers et al., 2016b).

Complementing affordance-based perspectives, the concept of learning ecology highlights that learning is distributed across multiple interconnected contexts rather than confined to a single formal space (Barron, 2006). Students actively construct their own learning ecologies by navigating between classrooms, libraries, informal campus areas, cafés, and digital environments. Within such ecologies, formal and informal learning spaces are not mutually exclusive, but serve distinct and complementary roles in supporting different dimensions of learning (Damşa et al., 2019).

## Cafés as Third Places for Learning

The growing role of cafés in students' academic lives can also be understood through Third Place Theory, which conceptualises cafés, coffee shops, and similar venues as socially neutral spaces that foster informal interaction, emotional comfort, and routine participation (Oldenburg, 1989). While originally developed to explain community and social life, this framework has increasingly been applied to educational contexts to explain why students gravitate toward informal spaces that support both social and academic engagement (Lee, 2022).

Empirical studies applying Third Place Theory in higher education contexts suggest that such environments can facilitate collaborative learning, creativity, and idea exchange, particularly for group-based and socially mediated academic tasks. These findings further reinforce the view that cafés function as socially permissive learning spaces rather than as substitutes for formal academic environments.

## Gaps in the Literature and the Indonesian Context

Despite the growing body of research on informal learning spaces and cafés as learning environments, the existing literature remains heavily concentrated in Western higher education systems. Systematic reviews have highlighted the need for more empirical evidence from non-Western and developing contexts, where institutional structures, spatial resources, and student learning cultures may differ substantially (Temple, 2008; Leijon et al., 2024). Consequently, there is limited understanding of how informal learning spaces function within the learning ecologies of students in countries such as Indonesia.

In the Indonesian context, higher education institutions continue to face challenges related to space availability, flexibility, and the accommodation of diverse learning practices. Formal learning

spaces, particularly libraries, often prioritise quiet, individual study, which may limit their suitability for collaborative and socially oriented learning activities. When these needs are insufficiently addressed within institutional settings, students may increasingly rely on external spaces such as cafés to support their academic work. However, empirical research examining this phenomenon in Indonesia remains scarce.

## Research Methodology

### Research Design

This study adopted a quantitative cross-sectional survey design to examine students' learning space preferences and their perceived learning affordances in both informal (cafés) and formal (libraries) learning environments within Indonesian higher education. A survey-based approach is appropriate for capturing students' perceptions, motivations, and self-reported behaviours across a relatively large population and has been widely used in learning space and higher education research (Creswell & Creswell, 2018; Beckers et al., 2016a).

The analytical focus of the study was relational rather than causal, aiming to identify patterns of association between learning space choice, learning activities, productivity, creativity, and motivation. This design aligns with previous research on informal learning spaces that emphasises understanding usage patterns and perceived affordances across different learning contexts (Montgomery, 2014; Temple, 2008).

### Participants and Research Context

The participants consisted of 355 undergraduate students from Indonesian higher education institutions. The sample was predominantly female (76.62%), with male students comprising 22.82% and 0.56% identifying as other or not reporting gender. Students represented all years of study, with the largest proportion in the third year (43.10%), followed by the second (20.28%), fourth (17.75%), and first year (16.62%); 2.25% did not report their year. Participants came from diverse academic disciplines, with English Education representing the largest group (37.75%) and Accounting the smallest (4.51%), alongside smaller proportions from other programs. All respondents were active students, and participation was voluntary and anonymous. Although not intended to be statistically representative, the sample's size and disciplinary diversity provide a robust basis for examining learning space preferences and perceived learning affordances in Indonesian higher education.

Indonesia constitutes a particularly relevant context for this study given the rapid expansion of its higher education sector, increasing digital connectivity, and the growing prominence of informal learning spaces in urban areas. In response to the strong Western bias identified in existing learning space research (Temple, 2008; Leijon et al., 2024), this study contributes contextually grounded evidence from Indonesian higher education.

### Data Collection Instrument

Data were collected using a structured self-administered online questionnaire developed based on established literature on learning spaces, informal learning environments, and student engagement (Oblinger, 2006; Harrop & Turpin, 2013; Beckers et al., 2016b). The instrument comprised four sections: learning space preferences and underlying reasons (e.g., comfort, flexibility, quietness, and social atmosphere); perceived learning affordances related to focus, productivity, collaboration, and creativity (Gibson, 1979; Montgomery, 2014); the influence of spatial design features—such as layout, lighting, seating comfort, and ambience—on learning motivation (Brooks, 2011; Valtonen et al., 2021); and learning activities and usage patterns in cafés and libraries, including individual study, exam preparation, group discussion, and assignment work (Beckers et al., 2016a; Harrop & Turpin, 2013). Prior to administration, the questionnaire was reviewed for clarity and contextual relevance, with minor revisions made to ensure alignment with Indonesian higher education terminology.

### Data Collection Procedure

The survey was administered during a single academic term to reduce temporal variation in learning behaviours. Respondents accessed the questionnaire via a secure online platform and provided informed consent before participation. No personally identifiable information was collected. Online survey administration is widely used in higher education research due to its efficiency, accessibility, and suitability for capturing student perceptions at scale (Creswell & Creswell, 2018).

## Data Analysis

Data analysis involved descriptive and inferential procedures. Descriptive statistics (frequencies and percentages) were used to summarise learning space preferences, perceived affordances, and learning activity patterns (Field, 2018). Associations between categorical variables—including learning space preference and perceived productivity, learning activities, perceived support for creativity and collaboration, and the influence of spatial design on learning motivation—were examined using cross-tabulation and chi-square ( $\chi^2$ ) tests of independence (Agresti, 2018; Field, 2018). Statistical significance was set at  $p < .05$ , with stronger associations reported at  $p < .001$ . This approach aligns with prior learning space research that focuses on identifying relational patterns rather than causal effects (Beckers et al., 2016a; Montgomery, 2014).

## Rigor, Trustworthiness, and Ethical Considerations

Several measures were implemented to ensure the rigor and trustworthiness of the study. The sample size ( $N = 355$ ) provided adequate statistical power for cross-tabulation and chi-square analyses, while transparent reporting of percentage distributions and significance levels reduced the risk of misinterpretation. Although the study relied on self-reported data, this approach is well established in learning space and higher education research, particularly for examining perceptions, motivation, and spatial experiences (Temple, 2008; Leijon et al., 2024). Findings were interpreted cautiously, emphasising theoretical coherence and empirical consistency rather than causal claims. The study adhered to standard ethical principles for social science research, with voluntary participation, informed consent, and assured anonymity. All data were used exclusively for research purposes and handled securely, in line with established ethical guidelines in educational research (Creswell & Creswell, 2018).

## Research Findings

This section begins by presenting a visual summary of the principal findings derived from the data analysis. Figure 1 consolidates key results related to students' learning space preferences, types of learning activities conducted in cafés and libraries, perceptions of creativity and idea exchange, and the motivational influence of spatial design. The visual overview is intended to highlight the dominant patterns and statistically significant associations observed across the dataset, providing a concise representation of the results prior to the detailed reporting of individual analyses presented in the subsequent subsections.

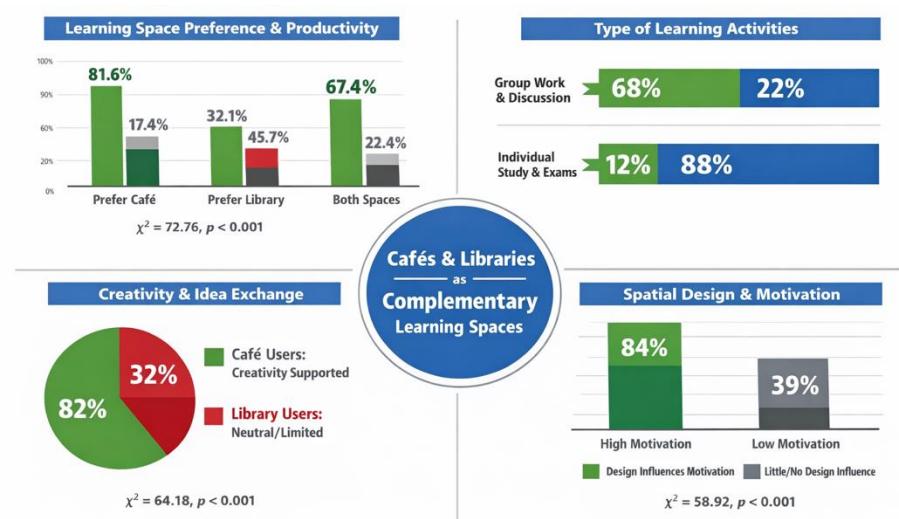
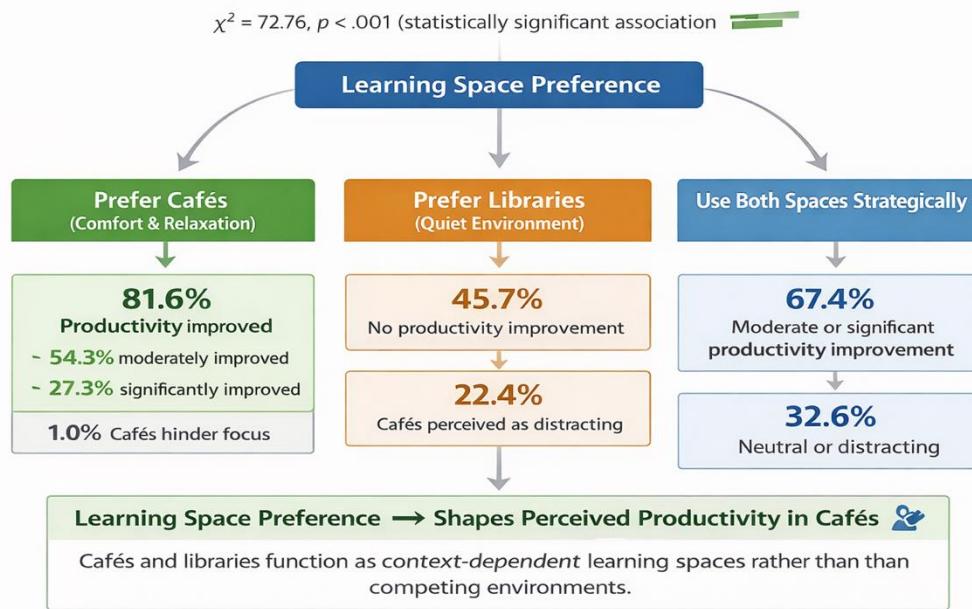


Figure 1. Key Finding Highlights

## Students' Preference for Learning Spaces and Perceived Productivity

To move beyond descriptive comparisons, a cross-tabulation analysis was conducted to examine the relationship between students' preferred learning space and their perceived productivity when studying in cafés, as presented in Figure 2.



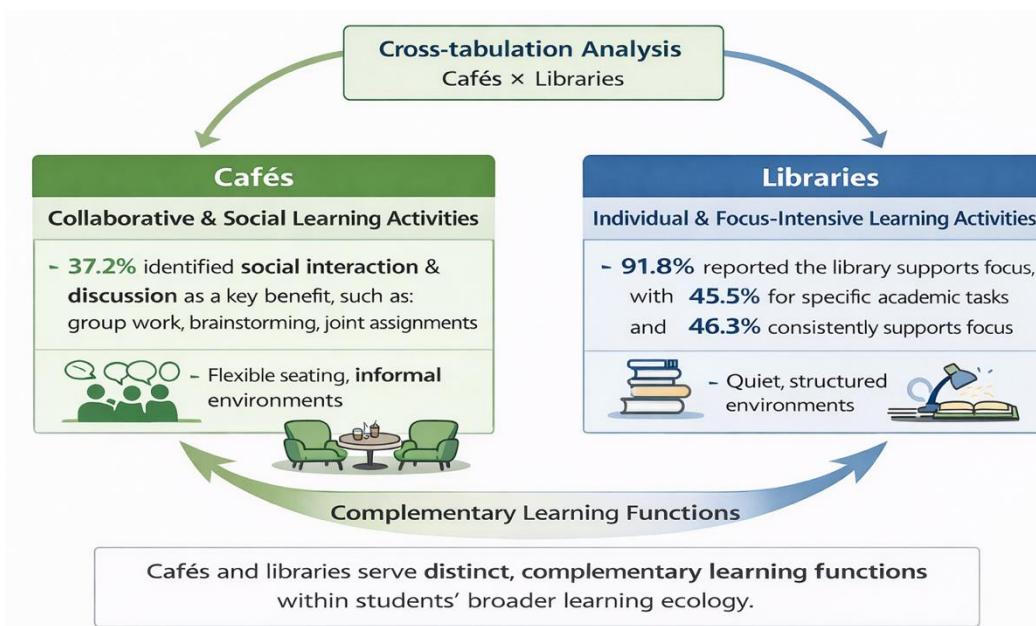
**Figure 2. Cross-Tabulation Analysis on Learning Space Preferences vs Perceived Productivity in Cafés**

The results reveal a statistically significant association between learning space preference and perceived productivity in cafés ( $\chi^2 = 72.76, p < .001$ ). Students who expressed a clear preference for cafés reported substantially higher productivity gains compared to those who preferred libraries. Among students who preferred cafés due to comfort and relaxation, 81.6% reported that studying in cafés improved their productivity either moderately (54.3%) or significantly (27.3%). Only 1.0% of this group perceived cafés as actively hindering focus. In contrast, students who preferred libraries due to their quiet environment were less likely to perceive cafés as productive spaces. Within this group, 45.7% reported no improvement in productivity, and 22.4% perceived cafés as distracting.

Students who reported using both cafés and libraries strategically showed a more balanced pattern. Approximately 67.4% of this group reported moderate or significant productivity improvements in cafés, while 32.6% perceived cafés as neutral or distracting. These findings indicate that cafés are not universally effective learning spaces but are functionally aligned with specific learner preferences and self-regulation strategies, reinforcing the importance of contextualised learning environments.

## Learning Space Choice and Type of Learning Activity

Cross-tabulation analysis, as presented on Figure 3, reveals a clear functional differentiation between cafés and libraries in relation to students' learning activities.



**Figure 3. Cross-Tabulation Analysis on Café vs Libraries**

Data indicate that cafés are strongly associated with collaborative and socially interactive learning activities. Specifically, 37.22% of respondents explicitly identified social interaction and discussion opportunities as key advantages of studying in cafés. In addition, café-related learning was frequently linked to brainstorming, informal discussion, and joint assignment work, often accompanied by flexible seating and relaxed atmospheres.

In contrast, libraries were predominantly associated with individual and focus-intensive learning activities. When asked about focus and concentration in library settings, 91.81% of students reported that libraries supported their focus either consistently (46.33%) or for specific academic tasks (45.48%). Only 8.19% indicated that libraries did not support their focus or were less effective than informal environments.

These contrasting patterns demonstrate that cafés and libraries serve distinct but complementary learning functions. Cafés primarily support collaborative engagement, creativity, and social learning processes, whereas libraries remain central for individual, concentration-driven academic tasks such as reading and exam preparation. This functional separation supports the interpretation of cafés and libraries as complementary components within students' broader learning ecology, rather than as competing learning environments.

#### Cafés as Socially Enabling Spaces for Collaboration and Creativity

Cross-tabulation analysis demonstrates a strong association between students' learning space preference and their perceived support for creativity and idea exchange. Among students who preferred cafés for social and emotional reasons, a substantial majority (82.47%) reported that cafés supported creativity and collaborative thinking, including 51.08% who indicated a strong positive effect and 31.39% who reported a moderate effect. Only 17.53% of this group perceived cafés as neutral or minimally supportive of creativity.

In contrast, students who preferred libraries for their quiet and formal learning environment showed a markedly different pattern. Within this group, only 38.92% reported that cafés supported creativity, while a majority (61.08%) perceived cafés as offering neutral (44.11%) or limited (16.97%) creative support. A chi-square test confirmed that this association was statistically significant ( $\chi^2 = 64.18$ ,  $p < .001$ ), indicating that perceptions of creativity support are strongly linked to students' preferred learning spaces.

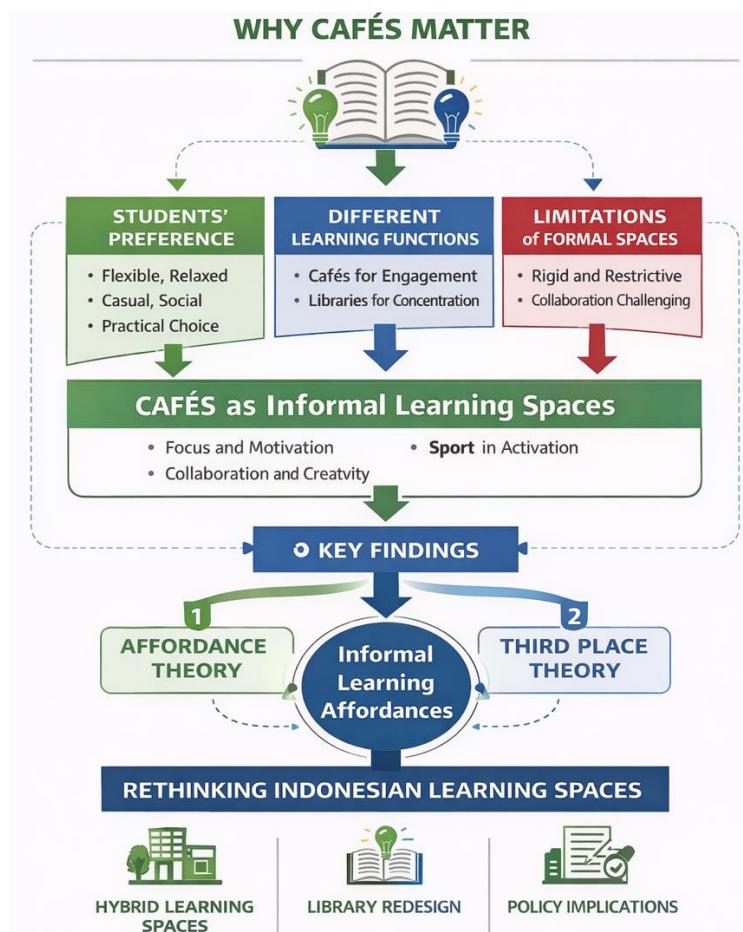
These findings underscore the role of cafés as socially permissive learning spaces, where interaction, dialogue, and informal exchange are perceived as legitimate and productive components of learning. Conversely, libraries are more strongly associated with structured, individual, and focus-oriented academic practices, highlighting the differentiated yet complementary functions of formal and informal learning environments within higher education.

### **Learning Space Design and Motivation**

A cross-tabulation analysis between students' perceptions of learning space design and their reported motivation levels reveals a statistically significant relationship between these variables. Among students who perceived learning space design as having a strong influence on their learning motivation, a substantial majority (84.36%) reported high or moderately high motivation when studying in cafés. This group included 52.11% who reported a high level of motivation and 32.25% who reported a moderate increase in motivation. Only 15.64% of students in this category reported low or no motivational impact.

In contrast, among students who perceived learning space design as having little or no influence on their learning, only 39.78% reported increased motivation when studying in cafés, while a majority (60.22%) reported neutral or low motivation. A chi-square test confirmed that the association between perceived spatial design influence and learning motivation was statistically significant ( $\chi^2 = 58.92$ ,  $p < .001$ ). Further cross-tabulation indicates behavioural consequences of this relationship. Students who reported strong motivational effects of spatial design were significantly more likely to engage in prolonged study sessions, with 71.44% indicating that they tended to study longer in cafés compared to formal academic spaces. Additionally, 68.19% of this group reported engaging in voluntary learning activities (e.g., self-initiated reading or assignment refinement) outside formal academic requirements.

These findings reinforce the critical role of physical and aesthetic dimensions of learning spaces in shaping students' motivation and engagement, particularly within informal learning environments such as cafés. Taken together, the findings presented above point to a critical tension between students' contemporary learning practices and the design and regulation of formal learning spaces in Indonesian higher education. While libraries remain effective for concentration-oriented tasks, the consistent associations between cafés and higher levels of motivation, collaboration, creativity, and sustained engagement suggest that current formal learning spaces do not fully accommodate the diverse ways in which students learn. These patterns indicate that students' reliance on cafés is not incidental, but rather a response to the limited flexibility, social permissiveness, and experiential support available within institutional settings. Consequently, the findings raise an important question regarding the adequacy of existing formal learning spaces and highlight the need to rethink how such spaces are conceptualised and designed. To synthesise these empirical insights and to illustrate how students' preferences, functional learning affordances, and institutional limitations converge to justify a rethinking of Indonesian formal learning spaces, Figure 4 presents a conceptual framework that integrates the key findings of this study.



**Figure 4. Rethinking Indonesian Formal Learning Space; Insight from Research findings**

Figure 4 illustrates the conceptual flow through which the empirical findings of this study lead to a rethinking of student learning spaces in Indonesian higher education. The framework begins with students' learning space preferences, which highlight a strong inclination toward environments that are flexible, relaxed, and socially accommodating. These preferences are not merely matters of convenience but reflect students' adaptive responses to their academic and emotional learning needs. As shown in the diagram, such preferences intersect with distinct learning functions, where cafés are associated with engagement, collaboration, creativity, and motivational support, while libraries continue to serve as spaces for concentration and individual study.

At the same time, the framework incorporates students' perceptions of the limitations of formal learning spaces, particularly the rigidity of rules and the challenges they pose for collaborative learning. These constraints help explain why cafés emerge as significant informal learning spaces rather than simple substitutes for libraries. The convergence of students' preferences differentiated learning functions, and institutional limitations positions cafés as environments that offer specific learning affordances—supporting focus through moderate stimulation, facilitating social interaction, and enhancing motivation through spatial design.

Drawing on these findings, the framework situates cafés within the broader notion of informal learning affordances, which are further interpreted through the lenses of Affordance Theory and Third Place Theory. This integration highlights how cafés function as socially permissive and psychologically supportive spaces that legitimize interaction, dialogue, and idea exchange as integral components of learning. Ultimately, the diagram leads to the central implication of the study: the need to rethink Indonesian learning spaces not by replacing libraries, but by reimaging learning environments as hybrid ecosystems. Such ecosystems combine formal and informal spaces to better align with contemporary student learning practices, informing future directions in library redesign, hybrid learning space development, and higher education policy.

## Discussion

This study provides empirical evidence that cafés function as meaningful informal learning spaces for Indonesian university students, not as a replacement for formal learning spaces such as libraries, but as a complementary component within a broader learning ecology. The findings demonstrate that students' preference for cafés is closely linked to perceived learning affordances related to collaboration, creativity, motivation, and sustained engagement, while libraries continue to be valued for focus-intensive and individual learning activities. This nuanced pattern underscores the need to rethink Indonesian formal learning spaces in ways that better align with contemporary student learning practices.

### Cafés as Third Places for Academic Learning

The findings strongly resonate with Third Place Theory, which conceptualises cafés as socially neutral, welcoming environments that facilitate informal interaction, routine participation, and a sense of belonging (Oldenburg, 1989). In the present study, cafés emerged as spaces where learning activities such as group discussion, brainstorming, and collaborative assignment work were perceived as legitimate and productive. This supports previous research suggesting that cafés and similar venues serve not only social but also cognitive and affective functions for students, particularly by reducing psychological barriers to learning and supporting sustained academic engagement (Lee, 2022; Deng & May, 2019).

In the Indonesian higher education context, where formal learning spaces are often governed by rigid behavioural norms, cafés appear to offer an alternative environment that supports social interaction without academic stigma. This finding extends the third place literature by demonstrating how cafés operate as functional third places for learning in a developing higher education system, contributing contextual evidence to a literature largely dominated by Western university settings (Temple, 2008; Valtonen et al., 2021).

### Affordance Theory and Functional Differentiation of Learning Spaces

Interpreted through Affordance Theory, the findings suggest that students' learning space choices are driven less by the formal designation of spaces and more by the opportunities for action that these environments provide (Gibson, 1979). Libraries were overwhelmingly associated with affordances supporting deep concentration and individual study, confirming their continued relevance for focus-oriented academic tasks. In contrast, cafés were associated with affordances that support collaboration, creativity, and motivational engagement, including flexible seating, moderate background noise, access to food and beverages, and socially permissive norms.

This functional differentiation aligns with previous studies showing that students select learning spaces based on task demands, desired levels of interaction, and comfort rather than institutional boundaries (Beckers et al., 2016a; Beckers et al., 2016b). The present findings reinforce the argument that learning spaces should be understood as bundles of affordances, each suited to particular learning activities, rather than as universally optimal or suboptimal environments.

### Learning Ecology and Hybrid Learning Practices

The results further support the concept of Learning Ecology, which views learning as distributed across multiple interconnected contexts rather than confined to a single physical location (Barron, 2006). Most students in this study reported using cafés and libraries strategically, depending on the nature of their academic tasks. This hybrid pattern reflects an adaptive learning ecology in which students actively construct their learning environments by navigating between formal and informal spaces.

Such behaviour mirrors findings from international research demonstrating that students increasingly rely on diverse learning spaces, including learning commons, informal campus areas, cafés, and digital environments, to support different dimensions of learning (Damşa et al., 2019; DeFrain et al., 2022). By providing empirical evidence from Indonesia, this study contributes to a more globally inclusive understanding of how learning ecologies operate across different higher education systems.

### Rethinking Indonesian Formal Learning Spaces

The increasing reliance on cafés as learning spaces highlights a critical mismatch between students' evolving learning practices and the design of formal learning environments. While libraries remain effective for concentration-oriented activities, the findings suggest that they are perceived as

less supportive of collaboration, creativity, and motivation. As a result, students seek alternative spaces outside the campus to fulfil these needs.

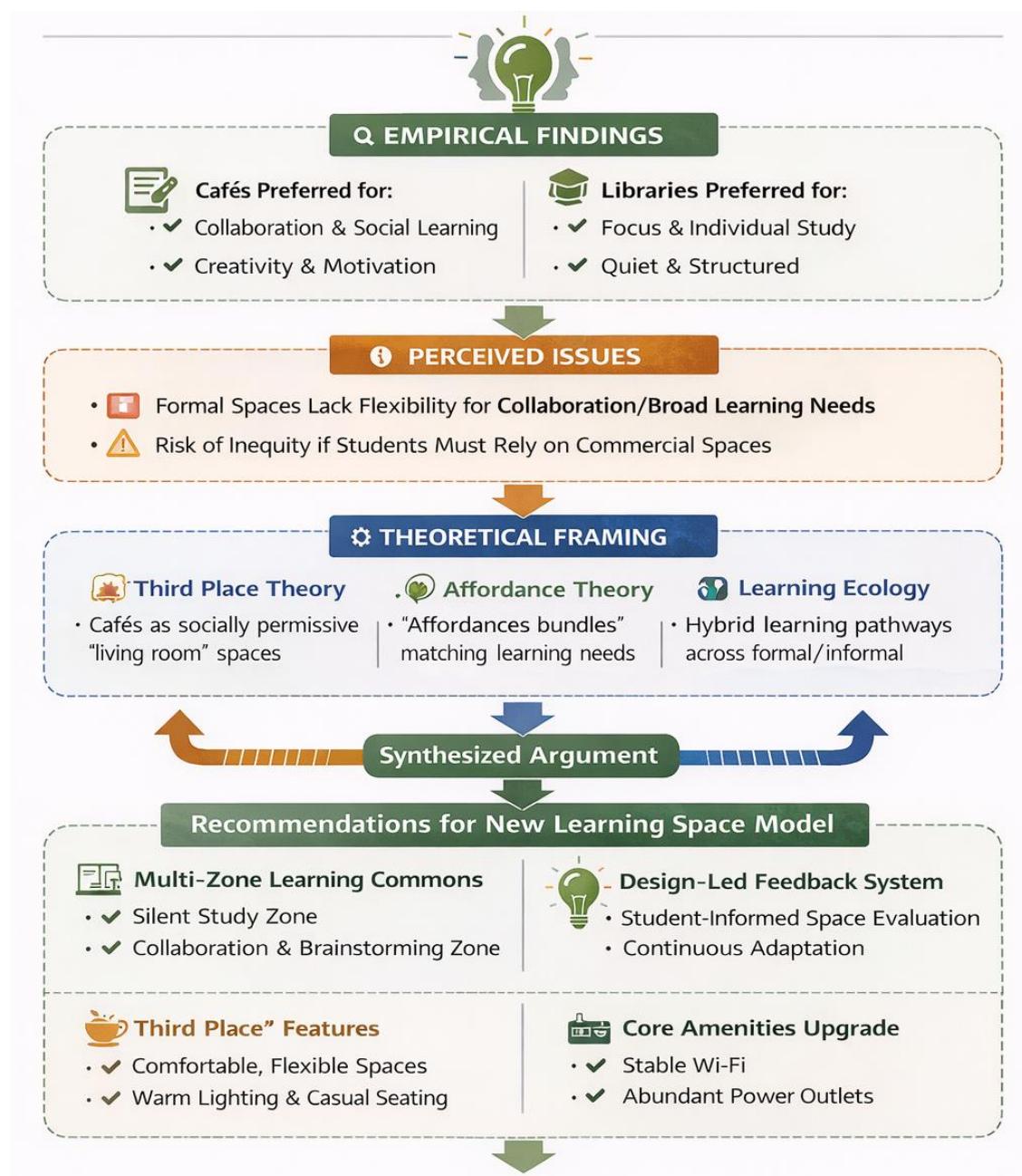
This trend raises important concerns regarding equity and institutional responsibility. When learning-supportive environments are predominantly located in commercial spaces, access becomes contingent on students' financial capacity, potentially exacerbating social inequalities. Prior studies have warned that academic libraries and campus learning spaces must redefine their roles within an increasingly crowded informal learning ecosystem (DeFrain et al., 2022; Montgomery, 2014). The present findings reinforce this argument by demonstrating that students' turn toward cafés signals unmet learning needs rather than disengagement from formal academic spaces.

### **Implications for Redesigning Formal Learning Spaces**

Based on the findings and their theoretical interpretation, several evidence-based recommendations can be proposed for rethinking Indonesian formal learning spaces. First, higher education institutions should adopt multi-zone learning space designs that explicitly accommodate diverse learning activities, including silent study, collaborative discussion, and creative brainstorming. Such zoning approaches have been shown to support varied learning behaviours without undermining the traditional academic functions of libraries (Bennett, 2008; Sullivan, 2010).

Second, third-place characteristics should be integrated into formal learning environments. Comfortable seating, flexible layouts, warm lighting, and designated social learning areas can enhance motivation and engagement while maintaining academic legitimacy (Oldenburg, 1989; Deng & May, 2019). Third, institutions should prioritise core amenities that strongly influence students' learning space choices, such as reliable Wi-Fi, abundant power outlets, and ergonomic furniture. These features are consistently identified in learning space research as critical enablers of engagement and productivity (Wu & Kou, 2021; Montgomery, 2014).

Fourth, institutional policies should shift from rigid behavioural regulation toward design-led governance, using spatial configuration to guide appropriate learning behaviours rather than relying solely on prohibitive rules (Chism, 2006). Finally, student-informed evaluation mechanisms should be institutionalised to ensure that learning spaces remain responsive to changing needs. Continuous assessment of space usage and student feedback has been recommended as a best practice in learning space development and evaluation (Cunningham & Walton, 2016; Zheng et al., 2024).



**Figure 5. Rethinking Indonesian Higher Education Formal Learning Space Flow of Thinking Synthesis**

Overall, as can be learnt from Figure 5, this study demonstrates that cafés function as meaningful informal learning spaces because they provide specific affordances that support collaboration, creativity, and motivation. By situating these findings within Third Place Theory, Affordance Theory, and Learning Ecology, the study offers a coherent explanation for why students increasingly rely on cafés and why Indonesian formal learning spaces must be rethought. Rather than viewing cafés as competitors to libraries, higher education institutions should recognise them as indicators of unmet learning needs and as inspiration for developing more inclusive, flexible, and learner-centred formal learning environments.

## Conclusion

This study examined why cafés have emerged as prominent informal learning spaces among Indonesian university students and what this phenomenon implies for the future of formal learning spaces in higher education. Drawing on survey data and cross-tabulation analyses, the findings demonstrate that students' use of cafés is not merely driven by convenience or lifestyle preferences, but by the specific learning affordances these spaces provide. Cafés were consistently associated with collaboration, creativity, motivation, and sustained engagement, while libraries remained central for focus-intensive and individual academic tasks. These patterns indicate that students navigate learning spaces strategically, selecting environments that best align with their learning activities and personal needs.

By situating these findings within Third Place Theory, Affordance Theory, and Learning Ecology, this study contributes to a more nuanced understanding of learning space use in higher education. Cafés function as socially permissive third places that legitimise interaction and dialogue as part of learning, while libraries provide structured environments that support concentration and academic discipline. Rather than competing with one another, these spaces operate as complementary components within students' broader learning ecology. This conceptualisation moves beyond binary comparisons of "formal versus informal" spaces and highlights the importance of understanding learning environments as interconnected systems of affordances.

Importantly, the findings signal a critical need to rethink Indonesian formal learning spaces. Students' reliance on cafés reflects gaps in the flexibility, social affordances, and motivational support offered by existing institutional environments. When such needs are unmet within the campus, students seek alternatives in commercial spaces, raising concerns related to equity, accessibility, and the long-term role of higher education institutions in supporting learning beyond the classroom. The study therefore argues that the growing significance of cafés should be interpreted not as a challenge to libraries, but as an indicator of unmet learning needs that formal spaces must address.

Based on the empirical evidence, this study proposes a reorientation of formal learning spaces toward a hybrid learning space model. Such a model emphasises multi-zone learning commons, integration of third-place characteristics within academic settings, enhancement of core learning amenities, and design-led governance that supports diverse learning activities. By aligning space design, institutional policy, and student learning practices, higher education institutions can create environments that better support contemporary modes of learning while maintaining their academic mission.

While this study provides contextually grounded insights into learning space use in Indonesian higher education, it is not without limitations. The reliance on self-reported data limits causal interpretation, and future research could incorporate observational or experimental approaches to examine how specific spatial features influence learning behaviours and outcomes. Further studies across different institutional types and regions would also strengthen the generalisability of the findings.

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