Pedagogical Innovation in Interior Architecture Education: Integrating a User-Experience Learning Model for Spatial Service Design

Duangkamol Limwongse, King Mongkut's University of Technology Thonburi, Thailand
Purima Noiim, King Mongkut's University of Technology Thonburi, Thailand
Makoto Watanabe, Chiba University, Japan

The Asian Conference on Education 2025
Official Conference Proceedings

Abstract

This study presents the results of comparative classroom research exploring pedagogical innovation in interior architecture education through two approaches: the conventional design studio model and a user-experience-based learning model. The research examined how different instructional modes shape students' design processes, learning outcomes, and capacity for innovation in experiential architecture and new service design. In the conventional approach, students typically follow a linear process, beginning with site or user research, gathering requirements, and programming before developing design proposals. While effective for cultivating technical and creative skills, this process often privileges form and representation over the lived experiences of users. By contrast, the user-experience–based model required students to begin with experiential inquiry into user needs, unmet expectations, behaviors, and emotions. Reframing the design process around user insights encouraged students to move beyond conventional problem-solving toward empathetic and reflective design thinking. Both approaches produced aesthetically strong outcomes; however, the latter generated designs enriched with experiential architectural qualities, innovative spatial programming, and service-oriented solutions that integrated offline and online experiences. The research sample consisted of 18 third-year interior architecture students who engaged in both models through a flagship store design project. Their outcomes were compared in terms of technical skills, reflective insights, and the originality of their proposals. Findings suggest that while conventional pedagogy reinforces established competencies, user-experience–based learning represents a significant pedagogical innovation that cultivates empathy, adaptability, and leadership. These insights highlight the value of user-focused teaching models in advancing interior architecture curricula.

Keywords: user-experience-based learning, interior architecture education, experiential architecture, spatial service design

iafor
The International Academic Forum
www.iafor.org

Introduction

Interior architecture education has historically relied on studio-based pedagogy as its primary instructional model. This approach emphasizes spatial composition, functional organization, material articulation, and aesthetic resolution through iterative design exercises. Within conventional design studios, students typically engage in a linear design sequence beginning with site and contextual analysis, followed by user analysis, program development, conceptual exploration, schematic design, and final representation. This pedagogical structure has played a critical role in cultivating foundational design competencies and professional discipline among interior architecture students.

Despite its long-standing effectiveness, the conventional studio model has been increasingly critiqued for its limited engagement with the experiential dimensions of spatial use. Although users are introduced early in the design process, as a user analysis process, they are often represented through personas, functional requirements, or demographic profiles. Such representations tend to remain static throughout the design development, resulting in spatial proposals that prioritize formal coherence and aesthetic expression while underrepresenting how users actually experience, navigate, and inhabit interior environments over time. Consequently, students may complete design projects that are technically resolved yet insufficiently grounded in lived human experience. This pedagogical limitation has become more evident as the scope of interior architecture expands beyond the design of static physical environments toward the orchestration of complex experiential systems. Contemporary interior spaces—particularly within retail, hospitality, and public environments—are increasingly shaped by service design, digital interfaces, and hybrid online–offline interactions. These shifts require designers to consider not only spatial form and function, but also user journeys, emotional responses, and temporal patterns of use. As such, interior architecture education faces growing pressure to equip students with methodologies that support empathetic, adaptive, and experience-driven design thinking.

User-experience–based learning models have emerged as a promising pedagogical response to these challenges. Influenced by service design and human-centered design frameworks, these models reposition users as central agents within the design process. Through experiential research methods such as observation, user shadowing, journey mapping, and behavioral analysis, students are encouraged to investigate users' needs, emotions, and unmet expectations prior to formal design development. This shift reframes the design process from a primarily solution-driven activity toward an exploratory and iterative mode of inquiry grounded in lived experience. While the theoretical value of user-centered and experiential approaches has been widely discussed across design disciplines, empirical studies examining their pedagogical impact within interior architecture education remain limited. In particular, there is a lack of comparative classroom research that systematically evaluates how user-experience–based learning models influence students' design processes, learning outcomes, and capacity for experiential and service-oriented innovation when compared with conventional studio pedagogy.

This study addresses this gap by conducting a comparative classroom investigation involving the same cohort of interior architecture students engaged in identical design contexts under two distinct pedagogical frameworks. By analyzing quantitative and qualitative data derived from questionnaires, interviews, and student design work, the research examines how a user-experience–based learning model reshapes students' approaches to spatial design, enhances experiential architectural quality, and supports reflective learning. The findings aim to

contribute empirical evidence to ongoing discussions on pedagogical innovation and to inform the future development of interior architecture curricula aligned with contemporary design practice.

Research Objectives

The objectives of this study are as follows:

1. To compare the conventional design studio model with the user-experience–based learning model in interior architecture education.
2. To examine how the user-experience–based learning model influences students' design processes and their understanding of user needs.
3. To evaluate the impact of the user-experience–based learning model on students' learning outcomes, particularly in relation to reflective thinking and empathy.
4. To assess whether the user-experience–based learning model enhances students' ability to develop innovative and experiential spatial design solutions.

The expected outcome of this research is to contribute to the reframing of interior architecture teaching practices toward a more user-centered pedagogical approach. Through the application of a user-experience–based learning model, students are expected to demonstrate an enhanced ability to integrate users as active agents within the design process. This includes articulating users' spatial experiences, behaviors, and emotional responses, as well as constructing coherent user scenarios that inform spatial and service-oriented design decisions.

Literature Review

Conventional Design Studio

The conventional design studio model is a foundational learning approach in design education, in which students are assigned real-life problems and are expected to develop creative design solutions (Hettithanthri et al., 2023). Learning in this model occurs primarily through reflection-in-action, supported by critiques and feedback from design jurors and tutors (Schön, 1983). The design process in the conventional studio typically consists of four main phases: the programming phase, schematic design phase, design development phase, and construction documents phase (Soliman, 2017). In alignment with this framework, the course adopted a conventional studio structure beginning with the programming phase, during which students collected and analyzed data such as project background, site analysis, and user analysis. These data informed subsequent ideation, programming, space planning, and conceptual development, corresponding to the schematic design phase. During the design development phase, students frequently moved back and forth between stages as part of an iterative refinement process. However, once the design process was completed, the final design solutions were primarily critiqued by tutors based on research and documented data rather than direct engagement with real users or stakeholders. This approach may distance designers from human-centered concerns and lived social contexts (Hettithanthri et al., 2023). Similarly, Nicol and Pilling (2000) argue that traditional design studios often prioritize final outcomes and visual aesthetics over process-based learning and social engagement.

User Experience-Based Learning

User Experience (UX) design is a human-centered design process that begins with understanding users' needs, behaviors, emotions, and expectations through empathy-driven inquiry, and progresses through ideation, iterative prototyping, and usability testing (Töre Yargın et al., 2018). Rather than focusing solely on formal or aesthetic outcomes, UX design emphasizes how people interact with spaces, systems, and services over time. Norman (2013) argues that meaningful design emerges not from aesthetic refinement alone, but from a deep understanding of user interaction, perception, and experience. Within architectural and design education, human-centered approaches have been increasingly associated with innovation and critical thinking. Dorst (2011) connects empathy and reframing to the ability to address complex or "wicked" design problems, suggesting that designers must first reinterpret the problem space through the lens of user experience before proposing solutions. Together, these perspectives support a pedagogical shift away from linear, solution-driven design processes toward more reflective, iterative, and empathetic modes of design thinking, which are particularly relevant in contemporary interior architecture education.

User-Experience-Based Learning and Experiential Architecture Quality

User-experience-based learning refers to a design process that places humans at the center of inquiry, emphasizing users' needs, behaviors, emotions, and expectations as the foundation of design development. In contrast, experiential architecture quality refers to the creation of environments that engage users through multisensory and emotional interactions, enabling meaningful spatial journeys rather than focusing solely on aesthetic expression (Hartong, 2025). The relationship between user-experience-based design and experiential architecture quality is reflected in Bitner's (1992) *servicescape* framework, which considers both physical and non-physical environmental elements. Bitner identifies ambient conditions—such as temperature, sound, music, and odor—as factors that significantly influence user behavior and spatial experience. Extending this perspective, Stickdorn et al. (2018) incorporate digital touchpoints into user journeys, demonstrating how contemporary spaces increasingly integrate physical and virtual experiences. When interior architecture students adopt these frameworks, they are better equipped to design environments that support holistic user experiences, characterized by sensory richness, coherent behavioral flows, and emotional resonance.

Research Methodology

Research Design

This study employed a comparative classroom research design to examine the pedagogical impact of a conventional design studio model and a user-experience–based learning model in interior architecture education. The research was conducted across two consecutive semesters using the same cohort of students and project in order to control variations in student background, project complexity, and learning objectives. By applying two distinct pedagogical frameworks to an identical design brief, the study aimed to systematically compare differences in students' design processes, experiential architectural quality, and learning outcomes. The research adopted a mixed-methods approach, integrating quantitative data from structured questionnaires with qualitative data obtained through semi-structured interviews and analysis of student design work. This approach enabled both measurable comparison and in-depth interpretation of students' learning experiences.

Participants and Educational Context

The participants consisted of 18 third-year undergraduate students enrolled in the Interior Architecture program. All participants were required to complete a retail design project as part of their studio coursework. The same group of students participated in both phases of the study, allowing for direct comparison of learning outcomes under different instructional approaches. The research was conducted within two courses offered in the 2024 academic year. In the first semester, students undertook the retail design project under a conventional studio-based teaching model. In the second semester, the same project was revisited and redesigned using a user-experience-based learning model within the course INA 454: Cross-Disciplinary Study Experiential Architecture through Spatial Service Design. This structure ensured continuity in project scope while allowing pedagogical variation to be the primary variable under investigation.

Pedagogical Phases

The research was implemented in three main phases.

Phase 1: Conventional Studio Design Process

During the first semester, students followed a conventional studio-based design process. Instruction focused on site and contextual analysis, user analysis, programming, conceptual development, zoning, space planning, schematic design, design development and final design representation. The design outcomes emphasized spatial organization, functional resolution, and aesthetic coherence, reflecting established interior architecture studio pedagogy.

Phase 2: User-Experience–Based Learning Process

In the second semester, the same cohort of students revisited their retail design projects using a user-experience-based learning model. Students were introduced to a set of experiential and service-design tools. These tools were applied intensively during the initial two weeks of the course to support experiential inquiry and user-centered analysis. Following this preparatory phase, students revised their original design projects by incorporating user-experience data, developing new spatial programs, and exploring the integration of online and offline retail experiences. This phase emphasized iterative design thinking, reflective analysis, and the translation of experiential insights into spatial and service-oriented design strategies.

Phase 3-4: Data Collection and Analysis

Data collection was conducted during and after the completion of the second-semester design projects. Both quantitative and qualitative data were gathered to assess the pedagogical impact of the user-experience–based learning model.

Phase 5: Conclusion

Findings from both data sets were evaluated to determine the pedagogical impact of the user-experience–based learning model in comparison with the conventional studio approach.

Figure 1
Research Methodology

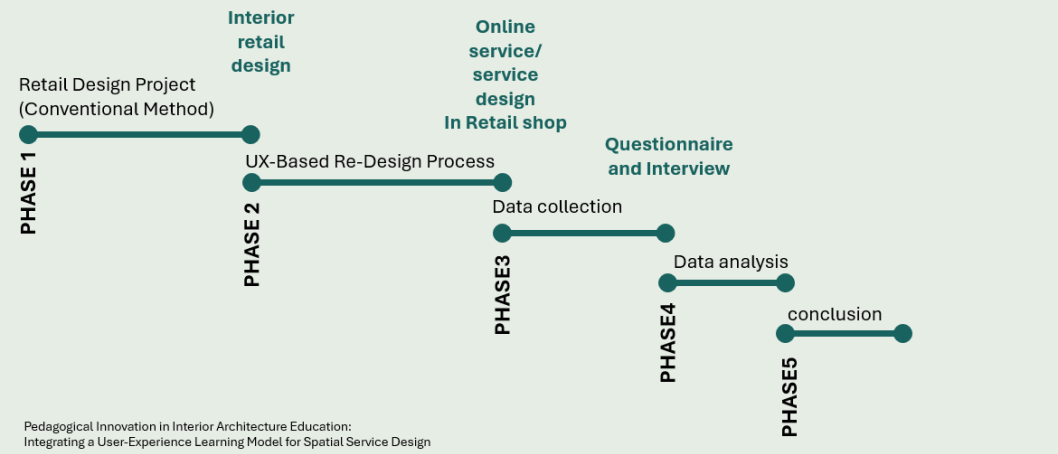
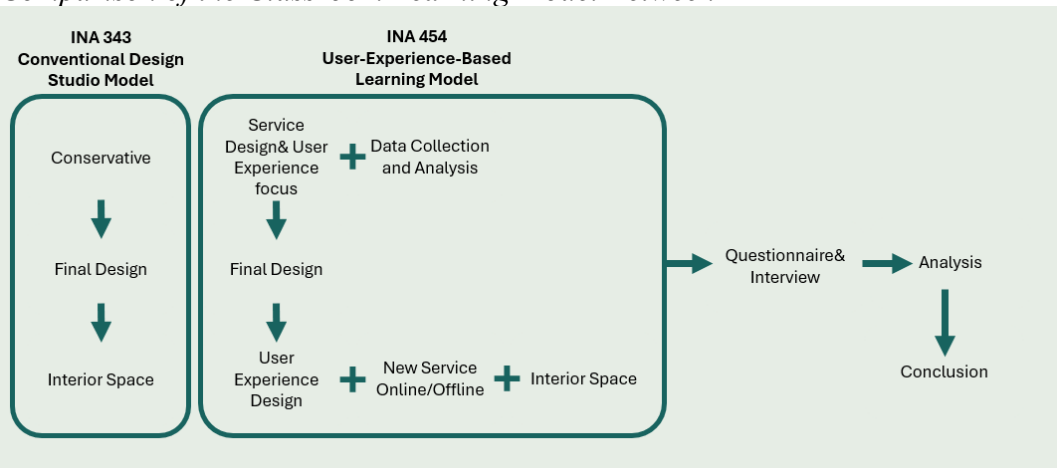


Figure 2
UX-Based Learning Model

Target Image	Insight
Shopping Mall Decision	User Image Definition
User Chasing -Role Casting	Tagger/User & Chaser/Observer
Mall Observation	Class, Size, Location and etc
User Chasing	2 Hours
Ethnography Review	
Photo Diary & Persona Creation	
CustomerJourney Map	
Service Planning	B to C Model Planning & UI Design
Service Prototyping	Paper Prototyping
Service Prototyping	Paper Prototyping
Shop Display Design	
Prototyping	Paper Mock-up
Prototyping	Paper Mock-up

Figure 3
Comparison of the Classroom Learning Model Between



Data Collection Methods

Data collection was conducted during the second phase of the study, following the implementation of the user-experience-based learning model. A mixed-methods approach

was adopted to capture both measurable learning outcomes and students' reflective insights into the design process. Quantitative data were gathered through a structured questionnaire, while qualitative data were obtained through semi-structured interviews and analysis of student design work. The use of multiple data sources enabled triangulation and enhanced the credibility of the findings.

Questionnaire Survey

A structured questionnaire was developed using a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) to evaluate students' perceptions of the user-experience-based learning model. The questionnaire was designed in alignment with the research objectives and focused on three key dimensions: (1) design process, (2) experiential architectural quality, and (3) learning outcomes. These dimensions reflect core aspects of user-centered and experiential design education, including the integration of user insights, the quality of experiential spatial outcomes, and the development of reflective and empathetic thinking. The questionnaire examined students' ability to understand users prior to initiating design decisions, integrate experiential data systematically into the design process, engage in iterative thinking, and articulate user journeys across both online and offline contexts. Additional items assessed perceived improvements in experiential innovation, reflective learning, and the ability to create meaningful spatial experiences beyond aesthetic considerations. The questionnaire was administered after students completed the revised design projects under the user-experience-based learning model to ensure that responses reflected the full learning experience. A total of fifteen students from the cohort of eighteen completed the questionnaire. Descriptive statistical analysis was used to identify overall trends and mean scores across the three evaluation dimensions, providing an overview of students perceived learning outcomes.

Semi-Structured Interviews

To complement the quantitative findings and gain deeper insight into students' learning experiences, semi-structured interviews were conducted with a purposive sample of five students. The interview participants were selected to represent a range of design approaches and levels of engagement observed during the studio process. This qualitative method allowed for a more nuanced understanding of how students interpreted and applied the user-experience-based learning model within their design work. The interview questions focused on identifying the most significant skills developed through the UX-based learning process, specific examples of design improvement resulting from user-experience methods, and changes in students' perceptions of users and spatial experience. Students were encouraged to reflect on their design decision-making processes, the role of experiential data, and the challenges encountered when integrating user insights into spatial and service-oriented design solutions. Interview responses were transcribed and analyzed thematically to identify recurring patterns related to user-centered thinking, experiential quality, and reflective learning.

Analysis of Student Design Work

In addition to questionnaires and interviews, students' design outputs were reviewed as part of the data collection process. The analysis focused on comparing design outcomes produced under the conventional studio model and those revised through the user-experience-based learning model. Particular attention was given to the articulation of user journeys, the

integration of online and offline experiences, spatial programming strategies, and the translation of experiential insights into architectural form and service elements. This qualitative examination provided contextual support for the questionnaire and interview findings and strengthened the overall interpretation of the pedagogical impact.

Research Result

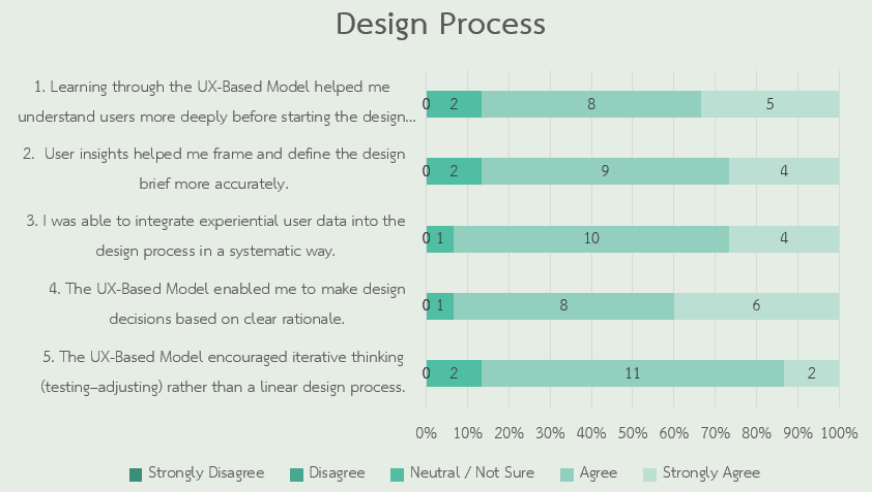
Questionnaire Survey

The research results demonstrate a consistently positive perception of the user-experience-based learning model across all evaluated dimensions. Analysis of the questionnaire responses indicates high levels of agreement regarding its impact on students' design processes, experiential architectural quality, learning outcomes, and overall perception of design improvement.

Design Process

The results reveal strong agreement that the user-experience-based learning model enhanced students' ability to engage with users before initiating design decisions. Most respondents indicated that experiential inquiry helped them develop a deeper understanding of user needs before beginning the design process. High levels of agreement were also observed in items related to framing and defining design briefs more accurately through user insights, as well as integrating experiential user data into the design process in a systematic manner. In addition, students reported that the User-experience–based learning models supported clearer design decision-making by providing explicit rationales derived from user research. The majority of respondents also agreed that the model encouraged iterative thinking, characterized by cycles of testing and adjustment, rather than a strictly linear design process. These findings suggest that the User-experience–based learning models effectively reshaped students' design workflows toward more reflective and user-centered approaches.

Figure 4
Questionnaire Results in Terms of the Design Process



Experiential Architectural Quality

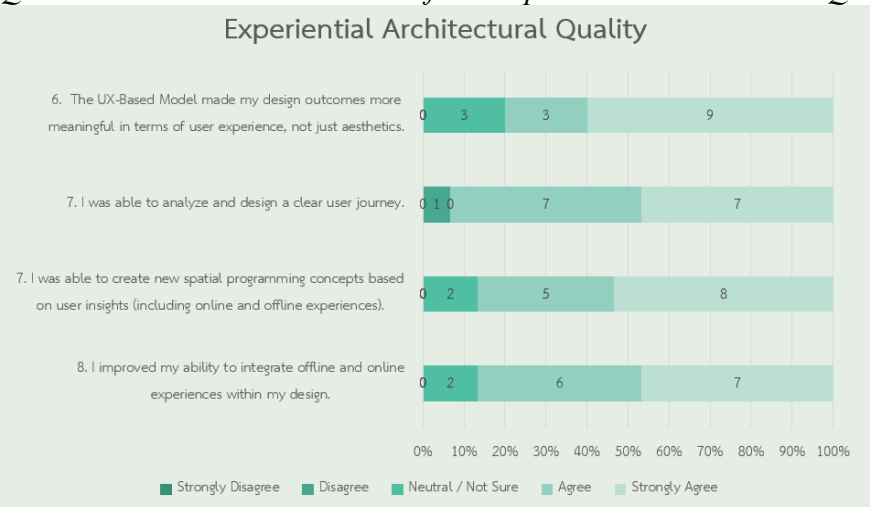
Responses related to experiential architectural quality showed strong positive outcomes. Students indicated that the user-experience–based learning model enabled them to design

spaces grounded in user experience across multiple temporal stages, resulting in more meaningful design outcomes beyond aesthetic concerns.

The findings also suggest that students developed a clearer understanding of user journeys and were able to translate these insights into spatial, programmatic, and online–offline integrated strategies, demonstrating the model's effectiveness in supporting experiential depth and service-oriented spatial thinking.

Figure 5

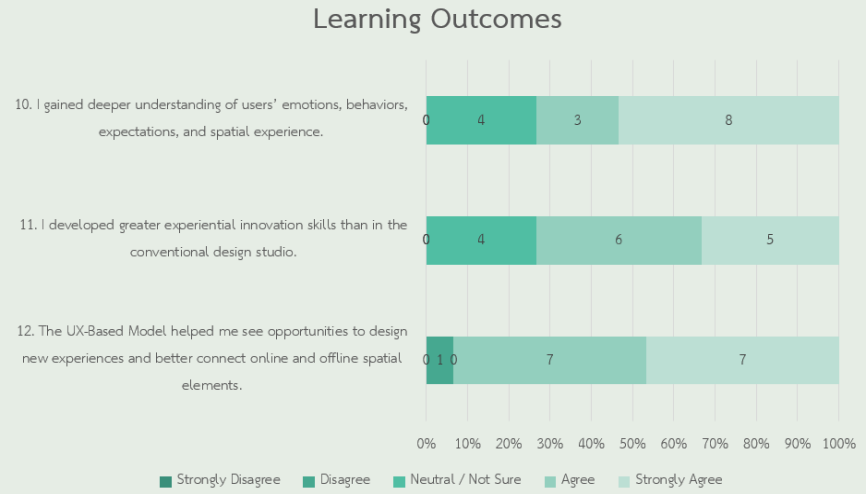
Questionnaire Results in Terms of the Experiential Architecture Quality



Learning Outcomes

The findings related to learning outcomes demonstrate that the user-experience-based learning model contributed positively to students' cognitive and affective development. Students reported enhanced reflective and critical thinking abilities, as well as a deeper understanding of users' emotions, behaviors, and expectations. The majority of respondents also perceived that their capacity for experiential innovation was greater than that achieved through the conventional design studio model. Moreover, students indicated that the User Experience-based approach helped them identify new opportunities for design intervention, particularly in connecting digital and physical experiences within interior environments. These results suggest that the model supports the development of competencies aligned with contemporary interior architecture practice, including empathy, adaptability, and experiential innovation.

Figure 6
Questionnaire Results in Terms of Learning Outcomes



Overall perception items reveal strong agreement that the User-experience–based learning modelsimproved students' ability to design user-centered interior spaces and enhanced the overall quality of their design work. The radar chart summary further reinforces these findings, with all evaluated categories demonstrating high mean scores, ranging approximately between 4.13 and 4.31 out of 5. Among the three primary dimensions, experiential architectural quality recorded the highest mean score, indicating the strongest perceived impact of the User Experience-based model.

Collectively, the results suggest that the user-experience-based learning model is highly effective in supporting user-centered design thinking, experiential architectural quality, and reflective learning outcomes. These findings provide empirical evidence that integrating user-experience methodologies into interior architecture education can significantly enhance students' readiness to address the experiential and service-oriented demands of contemporary design practice.

Figure 7
Questionnaire Results in Terms of Overall Perception

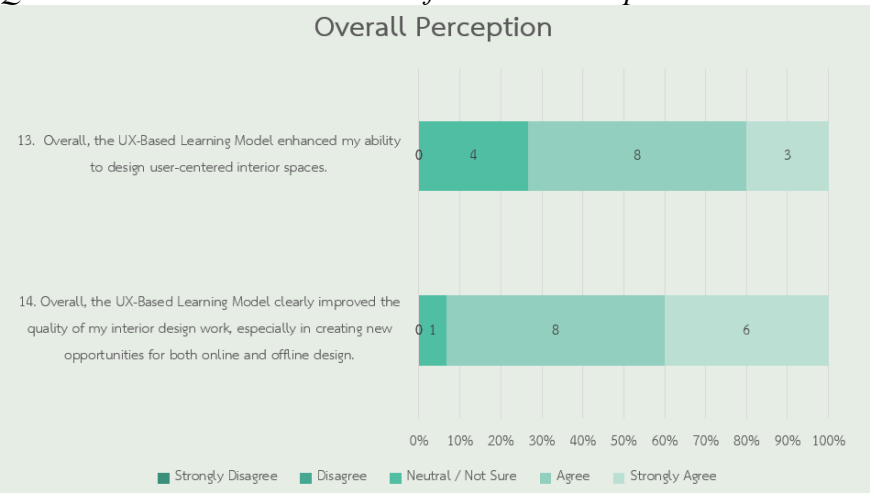
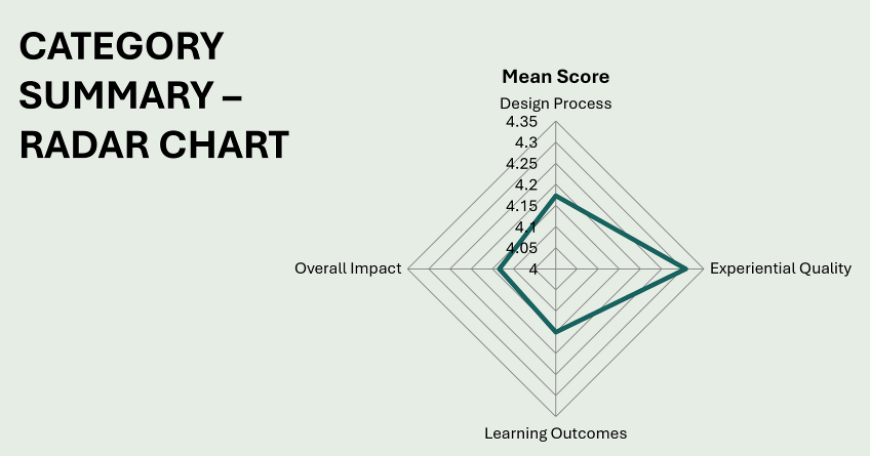


Figure 8
Category Summary Radar Chart



Interview Result

Qualitative analysis of the semi-structured interviews reveals consistent themes highlighting the pedagogical impact of the user-experience-based learning model on students' design thinking and practice. Three key themes emerged from the interview data: (1) a shift toward user-centered design perspectives, (2) the practical application of experiential methods to improve design outcomes, and (3) a transformed understanding of users as active participants in spatial experience.

Shift Toward User-Centered Design Thinking

Interview responses indicate that students developed a stronger user-centered perspective through the UX-based learning model. Participants reported moving away from an exclusive focus on aesthetics or personal design assumptions toward a more evidence-based approach grounded in users' needs, pain points, and behaviors. Several students emphasized that the most important skill they gained was the ability to evaluate user experiences systematically and translate those insights into informed design decisions. This shift reflects a deeper engagement with empathy and reflective thinking, aligning with the intended learning outcomes of the User Experience-based pedagogy.

Application of UX Methods in Design Improvement

The interviews further reveal that the use of experiential research methods contributed directly to improvements in students' design outcomes. Participants described applying techniques such as user shadowing and persona development to identify spatial issues that were not initially apparent in their original designs. These methods enabled students to recognize challenges related to circulation clarity, functional zoning, and spatial usability. By incorporating user feedback and experiential insights, students reported being able to revise spatial layouts in ways that improved navigability and comfort for occupants, demonstrating the practical value of the UX-based approach in interior architectural design.

Reframing the Concept of "Users" in Spatial Design

A prominent theme across the interviews was a fundamental change in how students conceptualized "users" within the design process. Participants reflected that, prior to

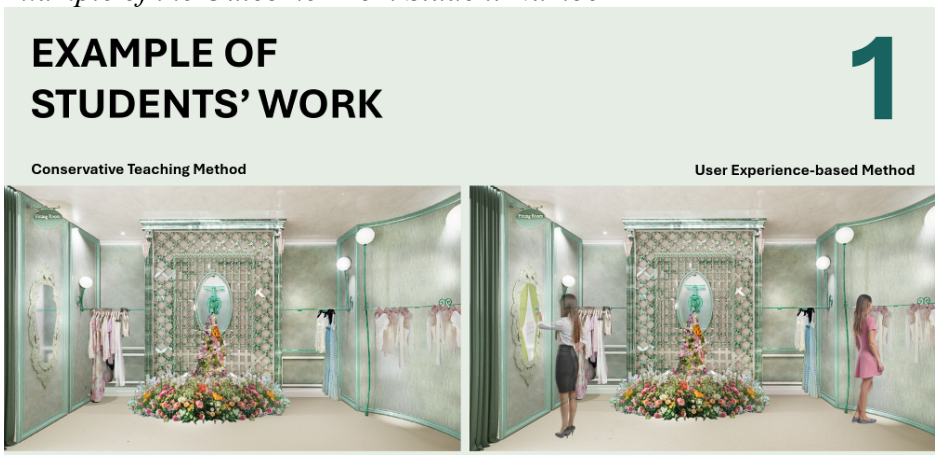
engaging with the UX-based learning model, users were often perceived as abstract target groups or design requirements. Through experiential inquiry, students began to understand users as real individuals with daily routines, emotions, frustrations, and lived experiences. This reframing prompted greater attention to subtle behavioral patterns and experiential details that influence how spaces are used over time. Such insights suggest that the User-experience–based learning modelssupports the development of empathy and experiential awareness, which are critical competencies in contemporary interior architecture practice.

Analysis of Student Design Work

Student Number 1

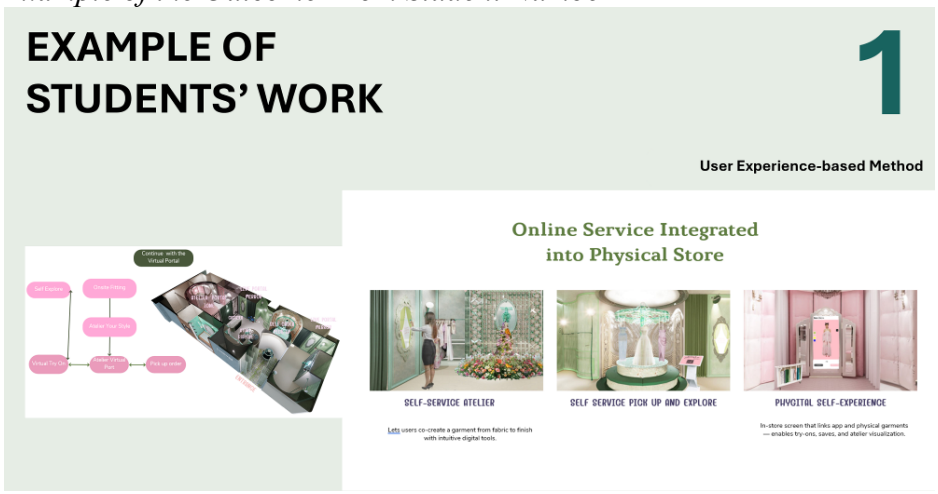
Pong designed a Landmeé retail shop, a Thai local clothing brand. In the conventional model, she proposed a "gift box" concept derived from brand research and user analysis to develop the interior space. In the user-experience–based model, she proposed a "Phygital Atelier Porta Retail" concept, which allows customers to customize products and connect services through online platforms.

Figure 9
Example of the Outcome From Student Number 1



Note. Landmeé retail shop designed and produced by Pong, 2024.

Figure 10
Example of the Outcome From Student Number 1



Note. Landmeé retail shop designed and produced by Pong, 2024.

Student Number 2

Parkes designed a Chaksarn retail shop, a Thai handbag brand made from handwoven water sedge and genuine leather. In the conventional model, Parkes proposed showcasing the richness of handcraft integrated into the retail space through the brand's narrative. In the user-experience–based model, Parkes added an online style companion that allows customers to match outfit pairings with the products, an on-site interactive wall where customers can record messages explaining their reasons for purchasing the product, and a post-purchase appreciation experience in which an online platform is used to share behind-the-scenes stories and care tips, thereby enhancing customers' emotional engagement and brand loyalty.

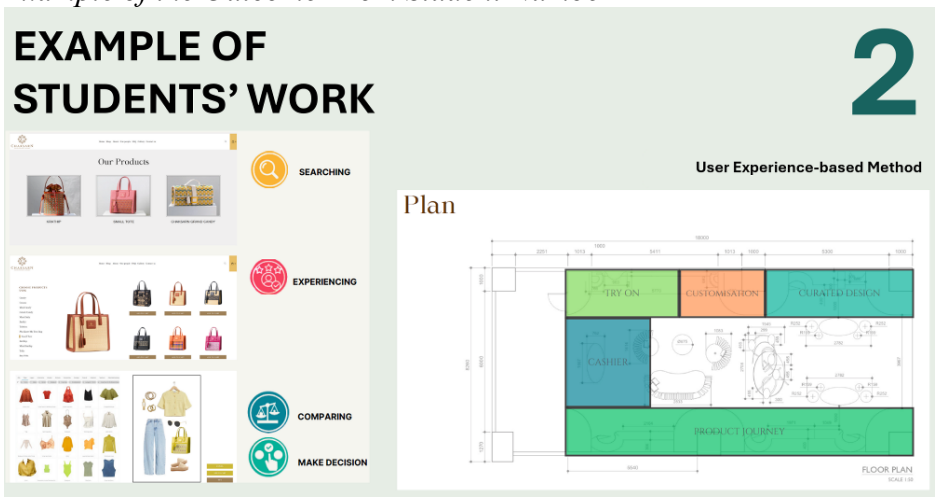
Figure 11

Example of the Outcome From Student Number 2

Note. Chaksarn retail shop designed and produced by Parkes, 2024.

Figure 12

Example of the Outcome From Student Number 2



Note. Chaksarn retail shop designed and produced by Parkes, 2024.

Student Number 3

Kiatthawornchai designed a Blackdog BKK retail shop, a Thai local clothing brand known for incorporating food illustrations into its clothing designs. In the conventional model, Kiatthawornchai analyzed the brand identity to inform the shop design. In the user-

experience–based model, the same brand identity was also applied to a virtual online try-on platform, allowing customers to save styling options online and scan them in-store to try the physical versions.

Figure 13

Example of the Outcome From Student Number 3

Note. Blackdog BKK retail designed and produced by Kiatthawornchai, 2024.

Figure 14

Example of the Outcome From Student Number 3

Note. Blackdog BKK retail designed and produced by Kiatthawornchai, 2024.

Research Finding

The findings of this study indicate a consistently high level of agreement across all evaluated categories, with mean scores ranging between 4.13 and 4.31 out of 5. These results suggest that the user-experience–based learning model had a strong positive impact on interior architecture students' design processes, experiential architectural quality, and learning outcomes. Among the three primary dimensions, experiential architectural quality achieved the highest mean score (approximately 4.31). This result indicates that the User-experience–based learning models was particularly effective in enhancing students' ability to design spaces grounded in user journeys and lived experiences. Students demonstrated an increased capacity to consider spatial experience across multiple temporal stages, including before, during, and after use, as well as to integrate online and offline experiences within a cohesive

design framework. The prominence of experiential quality underscores the pedagogical value of prioritizing user experience as a central driver of spatial and service-oriented design.

Design process and learning outcomes also recorded strong positive effects, reflecting the model's influence on students' design workflows and cognitive development. The findings suggest that the UX-based approach supported clearer design decision-making grounded in user insights and encouraged iterative, reflective processes rather than linear problem-solving. In addition, students reported enhanced reflective thinking, greater empathy toward users, and improved capacity for experiential innovation. These outcomes indicate that the model contributed not only to design output quality but also to deeper learning and skill development. Furthermore, overall impact scores confirm that students perceived the user-experience–based learning model as highly beneficial for developing user-centered interior design solutions. The convergence of high scores across all categories suggests that the model effectively aligns pedagogical objectives with contemporary professional demands, particularly in addressing experiential, service-oriented, and hybrid spatial environments. Collectively, these findings provide empirical support for the integration of user-experience–based learning models within interior architecture education as a means of enhancing both design quality and learning outcomes.

Discussion

The findings of this study provide empirical support for the pedagogical value of integrating a user experience–based learning model into interior architecture education. High levels of agreement across all evaluation dimensions indicate that positioning users at the center of the design process reshapes students' approaches to spatial design and learning.

First, the results related to the design process suggest that the user experience–based learning model effectively challenges the linear and form-driven tendencies of conventional studio pedagogy. While traditional studios remain effective in developing technical and aesthetic skills, they often rely on abstract representations of users. In contrast, the integration of experiential inquiry tools—such as user observation, journey mapping, and behavioral analysis—encouraged students to adopt more iterative and reflective design workflows, enabling them to justify design decisions through user-derived insights rather than intuition or aesthetic preference.

Second, experiential architectural quality emerged as the strongest outcome of the user experience–based learning model. Students demonstrated an enhanced ability to design for user journeys, temporal experience, and the integration of online and offline interactions. This reflects a shift from static spatial composition toward experiential orchestration, aligning interior architecture education with contemporary professional practice. The positive learning outcomes further indicate that user experience–based learning supports deeper reflective thinking, empathy, and experiential innovation. Students' responses suggest a transformed understanding of users—not as abstract design targets, but as individuals whose lived experiences shape spatial use. The convergence of quantitative and qualitative findings strengthens the validity of these results, as questionnaire data indicating high perceived effectiveness are reinforced by interview insights explaining how these outcomes emerged. This triangulation suggests that the observed impacts are embedded within students' design processes and outcomes.

Despite these positive outcomes, the findings also point to important pedagogical considerations. The user experience–based learning model was implemented as an intensive intervention within a limited time frame, suggesting that sustained integration across multiple studio levels may further enhance its effectiveness. Rather than replacing conventional studio pedagogy, the findings support the development of hybrid instructional models that combine traditional spatial training with user experience–based inquiry. Overall, the results underscore the relevance of user experience–based learning in preparing interior architecture students for experiential and service-oriented design challenges.

Conclusion

This study demonstrates that while conventional studio-based pedagogy in interior architecture education remains effective in developing students' technical skills, spatial organization, and aesthetic competence, it exhibits limitations in addressing user-centered and experiential dimensions of design. Traditional studio methods tend to emphasize formal resolution and functional clarity, often resulting in design outcomes that are technically proficient but insufficiently grounded in users' lived experiences.

The findings indicate that the integration of a user experience–based learning model significantly shifts students' design thinking toward a deeper consideration of experiential, emotional, and behavioral aspects of spatial use. By repositioning users as active agents within the design process, the model encourages students to move beyond linear, solution-driven workflows and engage in iterative and reflective design cycles informed by experiential inquiry. This shift enables students to justify design decisions based on user insights rather than relying primarily on aesthetic intuition or preconceived design assumptions. Moreover, the study reveals that the user experience–based learning model supports the development of competencies aligned with contemporary interior architecture practice. Students demonstrated enhanced capacity to design experiential architectural quality, articulate user journeys, and integrate online and offline spatial experiences within cohesive design frameworks. These outcomes reflect the increasing relevance of service-oriented and experience-driven approaches in modern interior environments, particularly within retail and public contexts.

Overall, the findings suggest that user experience–based pedagogy offers a valuable and effective framework for advancing pedagogical innovation in interior architecture education. Rather than replacing conventional studio pedagogy, the model complements and extends traditional approaches by enriching students' understanding of users, fostering empathy and reflective thinking, and preparing graduates to address the complex experiential demands of contemporary professional practice.

Further Suggestion

As interior architecture educators, future pedagogical development should focus on bridging conventional studio pedagogy with user-experience–based learning within a single semester. Integrating user experience design tools into early-stage data collection would enable students to translate user insights directly into design decisions from the outset.

Acknowledgements

This research was supported by the KMUTT Visiting Professor Program 2024. The authors would also like to thank the third-year students from the Interior Architecture Program (2024 cohort) for their participation.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

The author(s) declare that ChatGPT (OpenAI), an AI-assisted language model, was used solely for proofreading and refining the academic language and structure of this manuscript. The use of this tool was limited to improving clarity, coherence, and readability. All research design, data collection, analysis, interpretation of findings, and conclusions are the original work of the author(s). No AI technologies were used to generate research content, data, or results.

References

Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing, 56*(2), 57–71. https://doi.org/10.1177/002224299205600205

Crowther, P. (2013). Understanding the signature pedagogy of the design studio and the opportunities for its technological enhancement. *Journal of Learning Design, 6*(3), 18–28. https://doi.org/10.5204/jld.v6i3.155

Dorst, K. (2011). The core of "design thinking" and its application. *Design Studies, 32*(6), 521–532. https://doi.org/10.1016/j.destud.2011.07.006

Hartong, C. (2025, May 14). *An introduction to experiential design*. Vectorworks. https://www.vectorworks.net/en-US/newsroom/experiential-design

Hettithanthri, U., Hansen, P., & Munasinghe, H. (2023). Exploring the architectural design process assisted in conventional design studio: A systematic literature review. *International Journal of Technology and Design Education*, 33, 1835–1859. https://doi.org/10.1007/s10798-022-09792-9

Nicol, D., & Pilling, S. (2000). *Changing architectural education: Towards a new professionalism*. E & FN Spon.

Norman, D. A. (2013). *The design of everyday things* (Revised and expanded ed.). Basic Books.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Basic Books. https://www.academia.edu/36335079/Donald_A_Sch%C3%B6n_The_Reflective_Practitioner_How_Professionals_Think_In_Action_Basic_Books_1984_pdf

Soliman, A. M. (2017). Appropriate teaching and learning strategies for the architectural design process in pedagogic design studios. *Frontiers of Architectural Research, 6*(2), 204–217. https://doi.org/10.1016/j.foar.2017.03.002

Stickdorn, M., Hormess, M. E., Lawrence, A., & Schneider, J. (2018). *This is service design doing: Applying service design thinking in the real world*. O'Reilly Media.

Töre Yargın, G., Süner, S., & Günay, A. (2018). Modelling user experience: Integrating user experience research into design education. In *Proceedings of the International Conference on Engineering and Product Design Education (E&PDE)*.

Contact email: duangkamol.lim@kmutt.ac.th