Faculty Awareness and AI Integration Practices in Higher Education: Evidence from a Thai Private University

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***Abstract*—The rapid growth of generative artificial intelligence (AI) has created new opportunities and challenges in higher education, particularly in how instructors understand and use these tools in teaching. However, existing research has focused mainly on students, while faculty practices remain underexplored, especially in the Thai context. This study aims to examine instructors' awareness of AI tools, their integration practices in teaching, and the challenges they face in a Thai private university. A mixed-methods approach was used, combining quantitative descriptive statistics and qualitative content analysis. Data was collected through a structured questionnaire from 85 instructors across four faculties in a private university in Bangkok. The findings show that most instructors are familiar with AI tools, with ChatGPT being the most widely used (80.0%). However, AI use is uneven, and 20.0% of instructors do not use AI at all. AI is mainly used for lesson preparation (84.7%), while its use in classroom instruction (48.2%) and assessment (42.4%) is more limited. In addition, instructors apply different approaches to student AI use, and 21.2% report having no formal policy. Institutional awareness gaps are also evident, with about one-third of instructors unaware of key systems and guidelines. These results suggest a gap between AI awareness and meaningful pedagogical integration. The study highlights the need for clearer institutional policies and targeted professional development to support effective and responsible AI use in higher education.**

***Keywords*—Generative AI, AI Integration, Faculty Awareness, Teaching Practices, AI Literacy**

I. INTRODUCTION

A. The Rise of Generative AI in Higher Education

The rapid development of artificial intelligence (AI) has significantly changed higher education worldwide. In a short period of time, generative AI tools—such as ChatGPT, Gemini, Microsoft Copilot, and Claude—have moved from being new technologies to widely used tools that influence teaching and learning practices in many institutions. These tools create both opportunities and challenges for higher education institutions (HEIs). On the positive side, AI can support personalized learning, help generate teaching materials, assist with assessment, and improve faculty productivity. However, it also raises important concerns, including academic integrity, the reliability of AI-generated content, equal access to technology, and the ability of institutions to manage AI use in an ethical and effective way.

B. From Faculty Awareness to Instructional Practice

A large-scale survey by Ruediger et al. [1], involving 2,654 instructors in the United States, showed that many faculty members were already exploring AI tools in their teaching. However, there was still uncertainty about how to use them effectively. Similarly, a meta-analysis [2], based on more than 60 studies, found that factors such as self-efficacy, perceived usefulness, technological complexity, and ethical concerns strongly influence teachers' acceptance of AI. These findings suggest that successful AI integration is not only about having access to technology. It also depends on instructors' beliefs, institutional culture, policies, and professional development.

Although research on AI in education is increasing, much of it focuses on students rather than instructors. Many studies examine how students use AI for writing, research, and exam preparation, as well as the impact on learning and academic integrity. However, less attention has been given to instructors, who play a central role in designing and managing learning. For example, Al-Issa et al. [3] studied 102 faculty members in Kuwait and found that while instructors had moderate awareness of AI tools, they lacked a clear understanding of ethical issues, practical use, and policy alignment. Likewise, Ruediger et al. [1] reported that even instructors who used AI were unsure how to integrate it effectively in their own teaching contexts. As AI becomes more common in teaching tasks, the key issue is no longer whether AI is present in higher education, but how it is used—and whether that use reflects informed, pedagogically grounded practice rather than personal habit. Without clear evidence on faculty knowledge, practices, and support needs, institutions may struggle to design effective training or develop responsible AI policies.

C. AI Integration in Thai Higher Education Context

This issue is especially important in the context of Thai higher education, where AI adoption is growing quickly. Thailand has a diverse higher education system, including public and private universities, with different levels of resources and readiness. However, research on AI integration in this context is still limited. Sriwat and Moolsilpa [4] found that although AI literacy is recognized as important, there is still a lack of clear institutional frameworks to support its development. In addition, Poompan et al. [5] showed that AI adoption among Thai students is still at an early stage, and institutional support does not fully match the speed of technological change. If students are still at early stages of AI

adoption, this raises questions about the extent to which faculty are equipped to guide responsible AI use—an area that has not yet been systematically studied in Thai private universities. Differences in resources, policies, and institutional structures may affect how AI is used. Therefore, understanding faculty awareness and practices in this context can help support better policy and planning. Private universities, in particular, may face unique pressures that influence how they respond to AI-related changes.

D. Theoretical Frameworks

To guide this study, four theoretical frameworks are used to examine AI integration from different perspectives. First, AI Literacy focuses on the ability to understand, evaluate, and use AI tools effectively [6]. Deshen and Aharony [7] found that AI literacy is closely related to motivation and willingness to use AI, suggesting that knowledge and readiness are connected. Second, the Technology Acceptance Model (TAM) explains how perceived usefulness and ease of use affect instructors' decisions to adopt AI. Al-Emran et al. [8] found that perceived usefulness plays an important role in shaping teachers' intentions, while institutional support also has a strong influence. Sallam et al. [9] reported similar findings, showing that attitudes toward ChatGPT are linked to usefulness, ease of use, social influence, and low anxiety. Third, AI-TPACK extends the traditional TPACK framework by including AI knowledge. It helps explain how teachers combine technology, pedagogy, and content in their teaching. Mishra et al. [10] argued that AI requires new ways of thinking about teacher knowledge. Celik [11] also showed that AI knowledge is connected to ethical use in the classroom. Fourth, the Responsible AI framework focuses on ethical and policy issues, such as academic integrity and fairness. Terlouw et al. [12] found that while AI can improve learning efficiency, it also creates risks that need careful management. Diaz and Kumar [13] highlighted the importance of ethical use, training, and clear policies in higher education. Together, these frameworks provide a comprehensive way to understand how instructors engage with AI.

E. Research Gap and Objectives

Despite these developments, there is still a clear research gap, especially in private universities in Southeast Asia. Most studies have been conducted in Western or East Asian contexts, which may not reflect other educational settings. In addition, while some research mentions institutional policies, few studies examine how these policies affect everyday teaching practices. Cabero-Almenara et al. [14] found that perceived usefulness strongly influences AI adoption, but the role of institutional context is still unclear. Similarly, Namasivayam et al. [15] showed that structured training can improve teachers' AI skills, but such support is not always available. In the Thai private university context, there is still no clear evidence on how instructors understand and use AI across different teaching tasks, or what institutional support they actually receive. This gap makes the current study both timely and important.

Based on this gap, the present study aims to examine faculty awareness and AI integration practices in a Thai private university. Guided by the four frameworks, the study has three main objectives:

- It investigates instructors' awareness of AI tools and their understanding of AI in education.
- It examines how AI is used in lesson preparation, teaching, and assessment.
- It explores the challenges instructors face and identifies the types of institutional support needed.

These objectives lead to three research questions:

- (RQ1) What is the level of instructor AI awareness?
- (RQ2) How is AI integrated into teaching practices?
- (RQ3) What challenges and support needs exist?

By focusing on a Thai private university, this study contributes to a better understanding of AI use in a specific context. It also provides practical insights for policy and professional development in similar educational settings.

II. METHODOLOGY

A. Research Design

This study employed a cross-sectional survey design to examine faculty awareness and AI integration practices in higher education. A mixed-methods approach was used, integrating quantitative descriptive statistics with qualitative content analysis. This approach enabled the study to capture both general patterns and detailed instructional practices related to AI use.

B. Participants

The sample consisted of 85 instructors from a private university in Bangkok, Thailand, representing four academic units. A purposive sampling strategy was applied to include instructors actively engaged in teaching during the data collection period. The distribution of participants is presented in Table 1.

TABLE I. PARTICIPANT DISTRIBUTION BY FACULTY (N = 85)

Faculty	n	%
Business Administration	32	37.6
Liberal Arts	21	24.7
Engineering	20	23.5
Information Technology	12	14.1
Total	**85**	**100**

The majority of respondents were full-time instructors (n = 81, 95.3%), with only a small proportion of part-time instructors (n = 4, 4.7%). Most participants were involved in undergraduate teaching, with 96.5% teaching at the bachelor's level, 31.8% teaching in weekend or transfer programmes, and 12.9% teaching postgraduate courses.

C. Data Collection

Data were collected through a structured questionnaire consisting of closed-ended and open-ended items. The questionnaire was developed based on the study objectives and relevant literature on AI awareness, AI integration practices, and institutional support in higher education. The instrument consisted of three main sections: (1) AI awareness, (2) AI integration practices, and (3) challenges and institutional support needs. Both closed-ended and open-

ended questions were included to allow the collection of quantitative and qualitative data.

To establish content validity, the questionnaire was reviewed by experts in higher education and educational technology to ensure alignment between the questionnaire items and the research objectives. The reviewers evaluated the clarity, relevance, and coverage of the items. Revisions were made to improve wording clarity and reduce ambiguity before the main data collection.

A pilot test was conducted with a small group of instructors prior to the full survey administration. Feedback from the pilot participants was used to refine item wording, improve clarity, and confirm the appropriateness of the response formats.

The internal consistency reliability of the quantitative items was assessed using Cronbach's alpha. The reliability coefficient reached an acceptable level ($\alpha \geq .70$), indicating satisfactory internal consistency for the questionnaire items.

D. Data Analysis

Quantitative data were analysed using descriptive statistics, including frequencies and percentages. Qualitative responses from the open-ended questions were analysed using thematic content analysis. The analysis followed three stages: initial coding, category development, and theme identification. First, responses were read multiple times to identify recurring ideas related to AI use, instructional practices, and institutional challenges. Initial codes were then assigned to meaningful response segments.

The coded responses were grouped into broader categories based on similarities in meaning. These categories were further refined into themes that reflected common patterns across participant responses. The themes were subsequently aligned with the research questions to support structured interpretation and reporting.

To improve analytical consistency, the coding process was reviewed multiple times during the analysis stage. Representative responses were compared across categories to ensure that the themes accurately reflected participant perspectives.

III. RESULTS

A. RQ1: AI Awareness

The results indicate that instructors reported varying levels of awareness and use of AI tools. As presented in Table 2, ChatGPT was the most frequently used AI tool (n = 68, 80.0%), followed by Gemini (n = 42, 49.4%) and Copilot (n = 30, 35.3%). Other tools, such as Gamma AI (23.5%), DeepSeek (21.2%), Claude (17.6%), Perplexity (16.5%), and DALL-E 3 (14.1%), were reported by smaller proportions of instructors. In contrast, 17 instructors (20.0%) reported that they did not use any AI tools in their teaching. These results show that while a majority of instructors are familiar with at least one AI tool, the level of engagement varies across different tools, with a clear concentration on a small number of widely used platforms.

TABLE II. AI TOOLS REPORTED BY INSTRUCTORS AND THEIR PRIMARY USES (N = 85)

AI Tool	n	%	Primary Use
ChatGPT	68	80.0	Lesson preparation, quiz generation, translation
Gemini	42	49.4	Content search, lesson design
Copilot	30	35.3	Content drafting, slide creation
Claude	15	17.6	Activity design
DeepSeek	18	21.2	Content search
Gamma AI	20	23.5	Presentation creation
Perplexity	14	16.5	Research support
DALL-E 3	12	14.1	Image generation
Do not use AI tools	17	20.0	—

B. RQ2: AI Integration Practices

The results show differences in the extent to which AI is used across teaching functions. As shown in Table 3, AI use was most prominent in lesson preparation (n = 72, 84.7%), indicating that a large majority of instructors use AI tools for activities such as content generation and activity design. As a participant stated, *"AI helps me prepare lesson materials more quickly and gives ideas for classroom activities."*. In comparison, AI use in classroom instruction was reported by 41 instructors (48.2%), suggesting a moderate level of integration during live teaching sessions. Similarly, AI use in assessment was reported by 36 instructors (42.4%), indicating a lower level of use in tasks such as quiz generation and plagiarism checking.

TABLE III. SUMMARY OF AI INTEGRATION ACROSS TEACHING FUNCTIONS (N = 85)

Teaching Function	n	%	Level of Use	Description
Lesson preparation	72	84.7	High	Content generation, activity design
Classroom instruction	41	48.2	Moderate	Limited use during live teaching
Assessment	36	42.4	Low	Quiz generation, plagiarism checking

In terms of student use of AI, Table 4 shows that the most common approach was a permissive policy with conditions (n = 34, 40.0%), followed by context-dependent approaches (n = 21, 24.7%). A smaller proportion of instructors adopted restrictive policies (n = 12, 14.1%), while 18 instructors (21.2%) reported having no formal policy. As a participant reflected, *"There should be clearer university guidelines about how instructors and students should use AI in coursework."* These findings indicate that AI integration is most commonly associated with preparatory activities, while its use in classroom instruction and assessment is less widespread. In addition, approaches to regulating student use of AI vary across instructors.

TABLE IV. INSTRUCTOR APPROACHES TO STUDENT USE OF AI (N = 85)

Policy Type	n	%	Description
Permissive with conditions	34	40.0	AI allowed with critical review
Context-dependent	21	24.7	Allowed in selected tasks

Policy Type	n	%	Description
Restrictive	12	14.1	AI use prohibited in some contexts
No formal policy	18	21.2	No clearly communicated guidelines
Total	**85**	**100.0**	

C. RQ 3: Challenges and Institutional Support

The results highlight gaps in institutional awareness related to systems and policy frameworks. As shown in Table 5, 23 instructors (27.1%) reported that they were not aware of the institutional e-learning system, while 62 instructors (72.9%) reported that they were aware.

TABLE V. INSTITUTIONAL AWARENESS GAPS (N = 85)

(A) E-learning System Awareness

Response	n	%
Aware	62	72.9
Not aware	23	27.1
Total	**85**	**100**

(B) National Guidelines Awareness

Response	n	%
Aware	58	68.2
Not aware	27	31.8
Total	**85**	**100**

Similarly, regarding national guidelines, 27 instructors (31.8%) reported that they were not aware of these guidelines, whereas 58 instructors (68.2%) indicated that they were aware. These findings show that although a majority of instructors are aware of institutional systems and national guidelines, a substantial proportion of respondents remain unaware of these resources. For this reason, many instructors indicated that additional training would help them use AI tools more effectively in teaching and assessment.

IV. DISCUSSION

A. High but Uneven AI Awareness

The first key finding shows that most instructors are familiar with AI tools, but their engagement is uneven. As shown in Table 2, ChatGPT dominated usage, while a significant minority of instructors do not use any AI tools at all. This pattern suggests that AI use is concentrated on a few popular platforms.

Similar trends have been reported in previous studies. For example, Ruediger et al. [1] found that ChatGPT was the dominant tool among instructors in the United States. Al-Issa et al. [3] also reported uneven awareness among faculty members, with differences in both tool familiarity and understanding of AI in education. The current findings support these studies and show that this pattern also exists in the Thai private university context. However, this study adds more detail by clearly showing how uneven the distribution is. Most instructors rely on one main tool, while a smaller group does not use AI at all. From the perspective of AI Literacy [6], this suggests that many instructors are still at a basic level. They know about AI tools, but may not yet be able to evaluate or use them critically. Deshen and Aharony [7] found that motivation and willingness to use AI are important for developing AI literacy. Therefore, the group that does not use AI may need both information and motivation to improve their engagement.

B. AI Use Focused on Preparation Rather Than Teaching and Assessment

The second finding shows that AI use is highest in lesson preparation and drops considerably in direct teaching and assessment contexts, as detailed in Table 3. This suggests that instructors mainly use AI for background tasks rather than for student-facing activities.

The difference between classroom use and assessment use is relatively small. The main gap is between preparation and student-facing activities. This means that many instructors use AI to support their work, but not fully in the teaching process itself. This pattern is consistent with previous research. Ruediger et al. [1] found that instructors prefer using AI for preparation and administrative tasks rather than for classroom interaction. Cabero-Almenara et al. [14] also showed that teachers see AI as useful for content-related tasks, but are less confident about using it in teaching and assessment.

The Technology Acceptance Model (TAM) helps explain this pattern. Instructors are more likely to use AI when it is clearly useful and easy to apply. This is true for lesson preparation, where AI can save time and generate content quickly. However, using AI in teaching or assessment requires more effort and raises concerns about accuracy, bias, and fairness. This finding also highlights a gap in AI-TPACK. Mishra et al. [10] argued that effective AI integration requires combining technology, pedagogy, and content knowledge. In this study, instructors seem to focus mainly on the technology itself. They know how to use AI tools, but may not yet connect them well with teaching strategies or assessment design.

C. Lack of Institutional Alignment in AI Policy

The third finding shows that approaches to student AI use vary considerably across instructors, with no shared institutional policy in place (Table 4). Although many instructors have developed their own approach, this fragmentation creates inconsistency. Students may receive different instructions depending on the course or instructor, which can cause confusion and make it difficult for them to understand what is acceptable. Without institutional alignment, individual approaches cannot ensure consistency across courses and instructors.

This result contrasts with recommendations from previous studies. Diaz and Kumar [13] emphasized the importance of clear institutional policies for responsible AI use. Terlouw et al. [12] also highlighted the need for proactive policy to manage risks related to academic integrity.

The fact that 21.2% of instructors have no policy is especially concerning. In assessment contexts, unclear rules may lead to misuse of AI. Kovari [16] showed that institutional campaigns and clear guidelines can improve academic integrity. This suggests that stronger institutional coordination is needed.

D. Institutional Awareness Gaps

The findings also reveal awareness gaps regarding institutional systems and national guidelines (Table 5). While a majority of instructors are informed, roughly one in four to one in three remain unaware of key resources. When that proportion of instructors lacks critical information, it can affect coordination across the institution. This finding is in line with Michigan Virtual [2], which identified lack of training and communication as barriers to AI adoption. Al-Emran et al. [8] also found that access to reliable information influences AI adoption. If some instructors are not aware of available systems or policy frameworks, their AI use may become inconsistent or misaligned with institutional goals. At the same time, the strong interest in professional development suggests that instructors are willing to learn.

Previous research supports this point. Namasivayam et al. [15] found that structured training can improve AI knowledge and confidence. Saharuddin et al. [17] found that integrating AI knowledge within a TPACK framework supports more structured and effective teaching practices, suggesting that professional development aligned with pedagogical principles is especially valuable. Therefore, institutions should improve both communication and professional development.

E. The Pedagogical Integration Gap

Taken together, the findings point to a gap between AI use and meaningful pedagogical integration—what this study calls the "pedagogical integration gap." As reported in Tables 2 and 3, instructors are broadly aware of AI tools and apply them extensively in preparation, yet engagement drops substantially when it comes to live teaching and assessment. This pattern shows that adoption alone does not lead to deeper integration.

The Technology Acceptance Model explains why instructors start using AI, but it does not fully explain how they use it in teaching. Sallam et al. [9] also found that positive attitudes toward AI do not always lead to effective use. This suggests that AI-TPACK is an important framework. Mishra et al. [10] argued that teachers need to combine AI knowledge with pedagogy and content knowledge. In this study, instructors seem to have basic AI knowledge, but not yet a strong integration with teaching practice.

Celik [11] also found that ethical AI use is linked to higher levels of knowledge. From the AI Literacy perspective, Ng et al. [6] emphasized critical thinking and ethical understanding. The variation in AI policies and the lack of policy among some instructors suggest that these aspects are still developing. Therefore, this study suggests that future research should focus not only on whether instructors use AI, but also on how they use it. Institutions should support deeper and more meaningful integration, not just basic adoption.

V. LIMITATIONS

This study has several limitations that should be considered. First, the data were collected from one Thai private university with 85 instructors. This limits the generalizability of the findings to other institutions or contexts. Different universities may have different resources, policies, and cultures. Second, the study uses self-reported data. Instructors may report their practices in a more positive way, especially on sensitive topics such as AI use and academic integrity. This may lead to overestimation of actual practices. Third, the study is based on cross-sectional survey data. It describes current patterns but cannot explain cause-and-effect relationships. It also does not show how AI use may change over time. Finally, AI technology is developing very quickly. The findings represent a specific moment and may change as tools and policies continue to evolve. Future research should include multiple institutions, use mixed methods, and examine changes over time. This would provide a deeper understanding of how AI is integrated in higher education.

REFERENCES

[1] D. Ruediger, M. Blankstein, and S. J. Love, "Generative AI and postsecondary instructional practices: Findings from a national survey of instructors," Ithaka S+R, 2024. https://doi.org/10.18665/sr.320892

[2] Michigan Virtual, "Breaking barriers: A meta-analysis of educator acceptance of AI technology in education," 2025. https://michiganvirtual.org/research/publications/breaking-barriers

[3] A. Al-Issa et al., "Faculty perspectives on generative artificial intelligence: Insights into awareness, benefits, concerns, and uses," Frontiers in Education, 2025. https://doi.org/10.3389/feduc.2025.1632742

[4] K. Sriwat and P. Moolsilpa, "Guidelines for enhancing Thai teachers' artificial intelligence literacy in the digital age," Journal of Education and Innovation, 2025. https://so06.tci-thaijo.org/index.php/edujournal_nu/article/view/275674

[5] P. Poompan et al., "Generative-AI, a learning assistant? Factors influencing acceptance among Thai higher education students," Electronic Journal of e-Learning, vol. 22, no. 6, 2024. https://files.eric.ed.gov/fulltext/EJ1434297.pdf

[6] D. T. K. Ng, J. K. L. Leung, S. K. W. Chu, and M. S. Qiao, "Conceptualizing AI literacy: An exploratory review," Computers and Education: Artificial Intelligence, vol. 2, p. 100041, 2021. https://doi.org/10.1016/j.caeai.2021.100041

[7] M. Deshen and N. Aharony, "Teachers' artificial intelligence (AI) literacy: An exploratory study," Smart Learning Environments, 2026. https://doi.org/10.1186/s40561-026-00433-5

[8] M. Al-Emran, R. Al-Maroof, I. Arpaci, and S. A. Salloum, "The factors affecting teachers' adoption of AI technologies: A unified model of external and internal determinants," Education and Information Technologies, 2025. https://doi.org/10.1007/s10639-025-13393-z

[9] M. Sallam et al., "University educators perspectives on ChatGPT: A Technology Acceptance Model-based study," Open Praxis, 2025. https://doi.org/10.55982/openpraxis.17.1.718

[10] P. Mishra, M. Warr, and R. Islam, "TPACK in the age of ChatGPT and generative AI," Journal of Digital Learning in Teacher Education, vol. 39, no. 4, pp. 235–251, 2023. https://doi.org/10.1080/21532974.2023.2247480

[11] I. Celik, "Towards Intelligent-TPACK: An empirical study on teachers' professional knowledge to ethically integrate artificial intelligence (AI)-based tools into education," Computers in Human Behavior, vol. 138, p. 107468, 2023. https://doi.org/10.1016/j.chb.2022.107468

[12] V. Terlouw et al., "Generative AI and academic integrity in higher education: A systematic review and research agenda," Information, vol. 16, no. 4, p. 296, 2025. https://doi.org/10.3390/info16040296

[13] F. Diaz and R. Kumar, "Ensuring academic integrity in the age of ChatGPT: Rethinking exam design, assessment strategies, and ethical AI policies in higher education," Contemporary Educational Technology, vol. 16, no. 4, p. ep517, 2024. https://doi.org/10.30935/cedtech/15775

[14] J. Cabero-Almenara et al., "Examining teachers' behavioural intention of using generative AI tools for teaching and learning based on the extended TAM," Computers and Education: Artificial Intelligence, 2024. https://doi.org/10.1016/j.caeai.2024.100310

[15] K. Namasivayam et al., "Artificial intelligence in teaching and teacher professional development: A systematic review," Computers and

Education: Artificial Intelligence, 2024. https://doi.org/10.1016/j.caeai.2024.100251

[16] A. Kovari, "Addressing student use of generative AI in schools and universities through academic integrity reporting," Frontiers in Education, vol. 10, 2025. https://doi.org/10.3389/feduc.2025.1610836

[17] M. H. Saharuddin, M. K. M. Nasir, and M. S. Mahmud, "Exploring teachers' technological pedagogical content knowledge in utilising artificial intelligence (AI) for teaching," International Journal of Learning, Teaching and Educational Research, vol. 24, no. 1, 2025. https://doi.org/10.26803/ijlter.24.1.11509