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Practice-based teaching using an AI platform to strengthen faculty competency

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ABSTRACT

This research aimed to i) analyze faculty members' knowledge, understanding, and skills in using AI for practice-based teaching enhancement, ii) evaluate factors affecting faculty readiness in integrating AI into teaching processes, and iii) design and develop an AI platform to enhance faculty competency in practice-based teaching. The questionnaire, validated by five experts, was administered to 200 respondents divided into two groups: 100 faculty members from public universities and 100 from private universities. Comparative analysis revealed that public university faculty and private university faculty statistically significant differences in challenges and concerns at the 05 level, with public university faculty expressing higher concerns. Significant differences were found in AI experience and skills, attitudes toward AI use, and challenges and concerns. However, no significant differences were observed in three other areas: AI knowledge and understanding, AI readiness, and belief in AI's effectiveness for practice-based learning enhancement. Data from both groups were utilized in designing and developing the AI platform to enhance practice-based teaching competency in higher education. Expert evaluation of the platform's suitability showed high levels of demand for the AI platform and high appropriateness of the technology used in platform development.

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1. INTRODUCTION

Technological advancement and development have improved human living conditions. One of the technologies being utilized is artificial intelligence (AI) [1]. The transformation of Thailand's education system in the 4.0 era is a result of the 20-year National Strategy (2017-2036), which connects with the 12th Development Plan. The goal is for the country to achieve stability, prosperity, and sustainability as a developed nation through development based on the Sufficiency Economy Philosophy. Thailand 4.0 represents a commitment to transform the economic structure towards an innovation-driven economy. The National Education Plan and learning standards and indicators recognize that digital technology for education is involved in daily life and teaching. It is predicted that the use of artificial intelligence in educational activities will increase by 48% until 2021. The positive impacts of AI will be visible from kindergarten to higher education. Learning tools will be created that can be adapted to individual learners. AI has been implemented in developing educational applications, helping teachers and learners communicate more easily and conveniently, and can be adapted to learners' needs [2]. It also enhances teaching by promoting creativity and facilitating self-assessment, promoting co-assessment, allowing educators to reflect on creative processes and outcomes in educational environments [3]. AI helps enhance teaching through personalized learning and improves student skills, but concerns arise about ethical impacts [4]. AI technology enhances practical teaching by providing personalized learning experiences, but raises concerns about reduced critical thinking, creativity, and emotional interactions among students, necessitating careful implementation to balance benefits and potential drawbacks [5]. AI enhances practical teaching by improving cognitive levels, promoting innovative capabilities, increasing learning resource utilization, and supporting educational application development, demonstrating AI's transformative role in education [6]. AI technology enhances practical teaching by integrating classroom experiences and practice, using algorithms for assessment and customization. This approach improves students' engineering practice capabilities, innovation, and overall quality, leading to higher satisfaction and effectiveness in educational outcomes [7]. Interactive language practice tools like ChatGPT and Grammarly help improve engagement and skill development, making the learning process more efficient and tailored to individual student needs [8].

Artificial intelligence enhances university teaching through intelligent resource management, personalized learning, and innovative tools. It strengthens content and improves engagement through interactive tools and optimizes educational processes [9]. It also enhances teaching by promoting creativity, facilitating self-assessment, and encouraging collaboration, allowing students to appropriately review processes and outcomes while helping create learning experiences and improve learner skills [10]. This enables instructors to provide consultation and engage with learners, resulting in more effective learning outcomes [11]. Artificial intelligence can be used to tailor educational resources and experiences to meet the individual needs and unique characteristics of each learner. It has made great progress and achievements in the teaching process of universities, but there are also some shortcomings [12].

Action learning is a learning approach where learners learn from problems arising from their own experiences or practices. Action learning enables learners to develop their knowledge and abilities while providing opportunities for them to solve problems systematically by themselves. McGill and Brockbank [10] and McGill and Beaty [11] defined action learning, which can be summarized as a learning process and reflection supported by group dynamics, involving collaborative learning based on the relationship between reflection and action, utilizing both previous and new experiences to find appropriate new approaches. In summary Boonruangrat [13] and Tumthong and Songsangyos [14] action learning is a process where individuals work and learn simultaneously. It is a learning approach that encourages learners to combine their previous experiences with newly created knowledge through systematic steps of action learning. Concepts and Theories of Practical Teaching Practical teaching in higher education has been continuously developed and adapted according to social contexts and technological advancement. From John Dewey's concept of "Learning by Doing," practical teaching has evolved into a complex and diverse teaching science, focusing on connecting theory and practice to develop learners with both knowledge and skills necessary for working in today's world [9]. Experiential learning based on Kolb's concept is recognized as the cornerstone of practical teaching. Martinez and Lee [8] explained that the learning cycle, which begins with concrete experience, moves through reflection and analysis, to concept formation and active experimentation, is a process that helps learners achieve deep and sustainable learning. Therefore, practical teaching requires designing activities and learning processes that promote analytical thinking and self-constructed knowledge.

In an era where technology plays a crucial role in education, practical teaching has been modernized through technological applications. Chen *et al.* [15] found that virtual technology and online learning platforms increase learning and practice opportunities for students, especially in situations where real-environment learning has limitations. Assessment in practical teaching is another crucial aspect that requires careful consideration. Suggest that assessment should reflect the authentic conditions of practice and cover both process and outcomes [6], [16]. Using diverse assessment methods helps gather comprehensive information about learners' development and capabilities. Current practical teaching involves maintaining a balance between developing professional skills and social skills. Beyond specialized knowledge and skills, learners must develop teamwork, communication, problem-solving, and lifelong learning skills. Therefore, practical teaching must be designed. Instructor development is another crucial factor affecting the success of practical teaching. Future trends in practical teaching, as analyzed by Mitchell *et al.* [17], the use of artificial intelligence technology in analyzing and supporting learning, and the development of flexible teaching models that respond to individual learner needs. Therefore, the development of practical teaching must consider these changes and prepare in terms of personnel, infrastructure, and various support systems. In the past decade, AI technology, especially the development of Generative AI during 2022-2024, has significantly impacted higher education systems worldwide. This transformation not only affects how learners learn but also challenges the roles and capabilities of instructors in managing effective teaching and learning, particularly in practice-oriented curricula that require balanced integration between theory and practice. At the organizational level, Brown *et al.* [16] indicates that AI policies and vision, resource support, innovation-embracing organizational culture, and personnel development systems are crucial factors affecting faculty readiness in using AI. This aligns with Mitchell *et al.* [17] 's proposal of an integrated professional development model, which includes practical training, individual coaching, learning through professional communities, and classroom implementation. The development of conceptual frameworks for AI implementation has shown capabilities in accurate and reliable outcome prediction. However, there are limitations as research results have not been systematically recorded and collected because most research has been conducted in developing countries [18].

The need for future research is to focus more on the potential of AI in the development of the teacher profession and to study how AI technology can be applied in education [19]. The adoption of AI has also helped automate routine processes, allowing teachers to focus on their creative and analytical of their work. This will reduce education costs and increase efficiency [20]. Schleiss *et al.* [21] proposed combining OERs and PBL to teach applied skills in the context of engineering, focusing on the example of AI competencies in engineering. The study combines the open format of the project with a curated format of on-demand open educational content. The current investigation has found that the impact of GAI tools lies in benefits such as time savings, efficiency, and creativity in the production of different types of digital content. It was suggested that the GAI tool could be used as a starting point to create content, and then students would add their own creativity to it [22]. Based on deep learning theory, the study of Liu and Qiao [23] explores an AI-driven instruction model for high school English reading from five dimensions: theoretical foundation, implementation conditions, teaching objectives, operational procedures, and teaching assessment, it seeks to support students' in-depth thinking and core competencies.

From the above literature review, regarding Artificial Intelligence technology, studies have found that most higher education instructors still lack readiness in using AI to support teaching and learning, particularly in areas of basic understanding, application, and quality assessment of outcomes. Factors affecting faculty readiness include teaching experience, digital skills, attitudes toward technology, and self-development motivation. Additionally, there are important organizational factors, including AI policies and vision. This demonstrates the necessity for a platform to develop faculty AI competency in managing practice-oriented teaching and learning in higher education institutions, to achieve maximum efficiency in practice-oriented instruction.

2. RESEARCH METHOD

Figure 1, the conceptual framework for developing faculty AI competency in practice-oriented teaching and learning management consists of 8 modules: module 1: AI fundamentals - essential foundation for developing AI usage skills. Module 2: AI practice and simulation - skill development through simulated AI use in teaching and learning, providing hands-on AI experience. This module requires skills from module 1 and supports module 3 in AI competency assessment. Module 3: AI competency assessment - evaluates faculty progress and AI competency levels for effective skill development, using assessments from modules 1 and 2 to provide information for module 6. Module 4: knowledge exchange and development support - promotes exchange of AI usage concepts and experiences among faculty to enhance collective knowledge and AI development. Provides a space for support and knowledge exchange among faculty related to modules 1 and 7. Module 5: continuous skill development support - provides ongoing technical consultation and support to enhance AI skill development in modules 1-3. Module 6: content customization based on skill level - adapts learning content according to individual faculty's competency and needs, using assessment data from module 3 to adjust module 1 content to match faculty skill levels. Module 7: appropriate AI connection and implementation - provides capabilities and tools aligned with practical teaching, supporting practice in module 2 and skill development in module 5. Module 8: rewards and development motivation - implements reward systems and recognition to stimulate and motivate AI teaching skill development, developed from modules 1-3 and supporting participation in module 4. Figure 2. Development of an AI platform to increase the practical teaching competencies of higher education teachers as follows.

a) User interface serves two main user groups: teaching faculty and system administrators.
b) Platform consists of 8 modules: 2.1 basic training and AI knowledge: provides AI fundamentals, key AI principles and concepts, AI applications in education 2.2 practice and AI training: training with various AI tools, AI experimentation in simulated situations, problem-solving practice and real applications 2.3 AI competency assessment: Knowledge and skills assessment system, progress monitoring, analysis of strengths and areas for development 2.4 knowledge exchange, support and AI development: experience sharing space, learning communities, sharing of best practices 2.5 continuous AI development support: progress tracking system, consultation and assistance 2.6 content customization based on ai skill level: content adjustment according to ability level, presenting appropriate content for learners, adjusting exercise difficulty 2.7 AI tool connection and implementation: connecting to various AI platforms, using

AI tools, and integrating AI with teaching and learning 2.8 AI rewards and encouragement: motivation system and rewards, capability certification and development inspiration.

c) Technologies used: E-learning, simulation, AR, VR, real-time analytics.

d) Database/cloud storage: database management and cloud storage, data backup and security.

The researcher applied the concept in analyzing the AI competency development platform for faculty in practical learning management in higher education institutions. The platform efficiency was evaluated with 200 respondents, divided into i) 100 faculty members from public universities, and ii) 100 faculty members from private universities, to analyze the AI competency development platform for faculty in practice-oriented teaching and learning management in higher education institutions. A questionnaire was used as a tool for needs assessment, which was validated for consistency by experts. The statistics used for data analysis included mean and standard deviation, using the following criteria: The 5-level rating scale questionnaire, based on likert scale principles [24]: (i) 4.51 - 5.00 means highest, (ii) 3.51 - 4.50 means high, (iii) 2.51 - 3.50 means moderate, (iv) 1.51 - 2.50 means low, and (v) 1.00 - 1.50 means lowest.

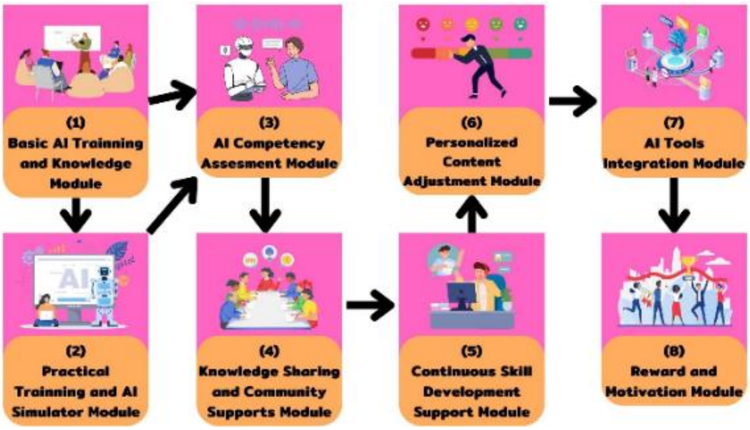

Figure 1. Conceptual framework for AI platform development to enhance practical teaching competency of higher education faculty

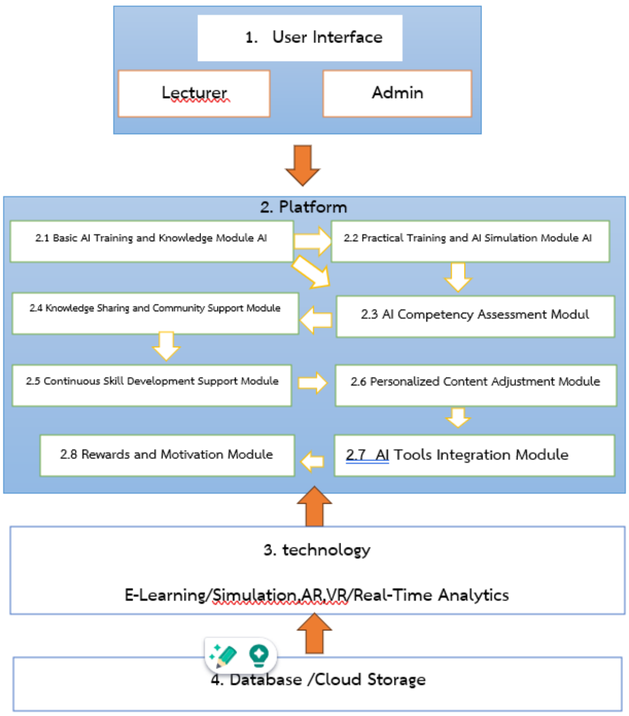

Figure 2. The architecture of MPLS network

3. RESULTS AND DISCUSSION

The statistical analysis of AI assessment criteria between government and private university professors revealed several noteworthy patterns. Faculty members from both sectors demonstrated comparable moderate levels of AI knowledge and understanding (government: M = 3.11, SD = 0.57; private: M = 3.14, SD = 0.40; t = -0.42, p = 0.675). However, significant differences emerged in three critical areas. Private university professors reported higher levels of AI experience and skills (M = 3.20, SD = 0.45) compared to their government university counterparts (M = 2.95, SD = 0.59). Conversely, government university professors exhibited more positive attitudes toward AI integration in teaching (M = 4.37, SD = 0.73) than private university faculty (M = 4.16, SD = 0.66) The most pronounced difference appeared in challenges and concerns, where government university professors expressed significantly higher levels of concern (M = 4.58, SD = 0.64, "Highest" level) compared to private university faculty (M = 4.22, SD = 0.75). Both groups showed similarly high levels of AI readiness (government: M = 4.47, SD = 0.78; private: M = 4.49, SD = 0.58) and agreement on AI's potential to enhance practical learning (government: M = 4.18, SD = 0.63; private: M = 4.21, SD = 0.69). These findings suggest that while institutional differences exist in experience levels and attitudes, faculty across both sectors recognize the importance of AI integration in higher education, albeit with varying levels of concern about implementation challenges. The comparison results of assessing AI platform needs for enhancing faculty compe-tency in practical teaching were collected in two parts, as shown in Table 1 and Figure 3.

Table 1. Compares the assessment of the need for using AI platforms for enhancing teachers' competency in practical teaching

Assessment criteria	Affiliated professor from government university			Affiliated professor from private university			t-test	P-value
	$\bar{X}$	S.D.	Meaning	$\bar{X}$	S.D.	Meaning		
1. Level of knowledge and understanding about AI.	3.11	0.57	Moderate	3.14	0.40	Moderate	-0.42	0.675
.2 Experiences and skills in using AI.	2.95	0.59	Moderate	3.20	0.45	Moderate	-3.38	0.001*
.3 Attitude toward using AI in teaching and learning.	4.37	0.73	High	4.16	0.66	High	2.18	0.030*
.4 Readiness to use AI.	4.47	0.78	High	4.49	0.58	High	-0.21	0.834
.5 Agreement on the ability of AI in enhancing students' practical learning.	4.18	0.63	High	4.21	0.69	High	-0.33	0.742
.6 There are challenges and concerns in using AI.	4.58	0.64	Highest	4.22	0.75	High	3.75	< 0.001*

*Statistical significant at $p < 0.05$

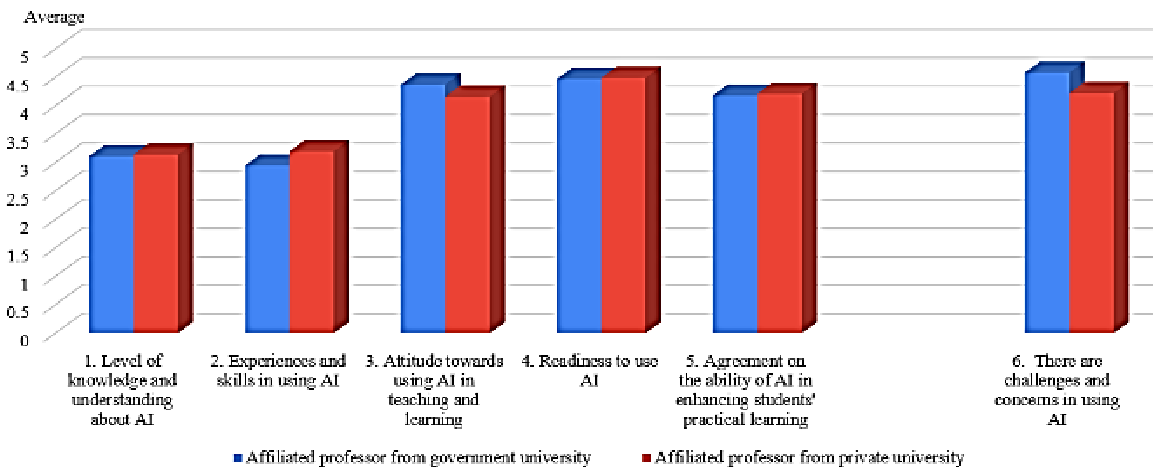

Figure 3. Graph comparing the assessment of AI platform needs for enhancing practical teaching competency between public and private university faculty

Results of the study are as follows: 1) Regarding knowledge and understanding of AI, both government university faculty ($\bar{x}$ = 3.11) and private university faculty ($\bar{x}$ = 3.14) showed moderate levels of knowledge and understanding. 2) In terms of AI experience and skills, both government university faculty ($\bar{x}$ = 2.95) and private university faculty ($\bar{x}$ = 3.20) demonstrated moderate levels. 3) Regarding attitudes toward using AI in teaching and learning, both government university faculty (x̄ = 4.37) and private university faculty (x̄ = 4.16) showed high levels of positive attitude. 4) Concerning AI readiness, both government university faculty (x̄ = 4.47) and private university faculty (x̄ = 4.49) demonstrated high levels of readiness. 5) Regarding belief in AI's ability to enhance students' practical learning, government university faculty (x̄ = 4.18) and private university faculty (x̄ = 4.21) showed high levels of confidence. 6) Concerning challenges and concerns, government university faculty (x̄ = 4.58) showed the highest level of concern, while private university faculty showed high levels. 7) Regarding the need for AI platform use, government university faculty (x̄ = 4.66) showed the highest level of need, while private university faculty showed high levels. 8) Concerning the appropriateness of platform development technology, government university faculty (x̄ = 4.65) rated it at the highest level, while private university faculty rated it at a high level.

The comparison results showed that government university faculty (x̄ = 4.58) and private university faculty (x̄ = 4.22) had statistically significant differences in challenges and concerns at the .05 level, with government university faculty showing higher levels. Significant differences were found in three areas: experience and skills in using AI, attitudes toward AI, and challenges and concerns. No significant differences were found in three areas: knowledge and understanding about AI, readiness to use AI, and belief that AI will enhance practical learning efficiency. The data from both groups can be used in designing and developing an AI platform to enhance practical teaching competency of higher education faculty as shown in Table 2.

Table 2. Assessment results of AI platform needs for enhancing faculty competency in practical teaching and learning

Assessment criteria	$\bar{X}$	S.D.	Meaning
1. The need for AI platform to enhance faculty competency in practical teaching and learning	4.24	0.07	High
1.1 Basic AI training and knowledge module AI	4.53	0.42	Highest
1.2 Practical training and AI simulation module AI	4.60	0.32	Highest
1.3 AI competency assessment module	4.20	0.52	High
1.4 Knowledge sharing and community support module	4.33	0.53	High
1.5 Continuous skill development support module	4.07	0.52	High
1.6 Personalized content adjustment module	4.13	0.48	High
1.7 AI tools integration module	4.20	0.52	High
1.8 Rewards and motivation module	3.87	0.53	High
2. The appropriateness of technology used in platform development	4.23	0.10	High
2.1 E-learning	4.60	0.32	Highest
2.2 Simulation, AR, VR	4.33	0.48	High
2.3 Real –time analytics	4.47	0.48	High
2.4 Collaborative learning	4.33	0.32	High
2.5 AI, virtual support	4.20	0.52	High
2.6 AI-driven content recommendation	4.13	0.32	High
2.7 API Integration เช่น Google AI, IBM Watson	3.93	0.48	High
2.8 Achievement tracking	3.87	0.53	High

The assessment of AI platform needs for enhancing faculty competency in practical teaching demonstrated consistently high to highest ratings across all evaluation criteria. In the platform modules category, the AI Training and Knowledge Module received the highest rating (x̄ = 4.45, SD = 0.42). Regarding technological appropriateness, E-Learning systems scored highest (x̄ = 4.40, SD = 0.52). These findings indicate strong faculty support for comprehensive AI platform implementation in higher education, with particular emphasis on training, knowledge sharing, and advanced technological integration.

4. CONCLUSION

The research findings show that faculty readiness in using AI to support teaching and learning in practice-oriented programs, both in public and private universities, is still needs significant strengthening. This aligns with research by Kim, *et al.* [25], which proposes guidelines for faculty development in AI for the future, especially in developing necessary competencies for teaching management in the digital era. The need for an AI platform to enhance faculty competency in practical teaching, based on expert questionnaires, showed a high level of demand. The appropriateness of technology used in platform development was also at a high level. There is a necessity to develop a platform for enhancing faculty AI competency, particularly in fundamental knowledge, application skills, and practice-oriented teaching management, to elevate higher education quality in alignment with current technological changes.

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Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Angsana Phonsuk	✓	✓			✓	✓		✓	✓	✓	✓		✓	
Phakharach Plirdpring		✓				✓				✓	✓			

C : **C**onceptualization
M : **M**ethodology
So : **So**ftware
Va : **Va**lidation
Fo : **Fo**rmal analysis
I : **I**nvestigation
R : **R**esources
D : **D**ata Curation
O : Writing - **O**riginal Draft
E : Writing - Review & **E**diting
Vi : **Vi**sualization
Su : **Su**pervision
P : **P**roject administration
Fu : **Fu**nding acquisition

CONFLICT OF INTEREST STATEMENT

Authors state no conflict of interest.

DATA AVAILABILITY

Data generated and analyzed during this study are available from the corresponding author upon reasonable request. Due to potential privacy concerns or proprietary agreements, certain datasets may require further ethical or legal considerations before dissemination. Requests should be directed to the corresponding author's contact details.

REFERENCES

[1] D. M. Hutton, "The quest for artificial intelligence: a history of ideas and achievements," *Kybernetes*, vol. 40, no. 9/10, pp. 1553–1569, 2011, doi: 10.1108/03684921111169585.

[2] G. Phoonsawat, P. Thongchai, S. Kraicharoen, and W. Sutthirat, "Artificial intelligent and science teaching [in Thai]," *Journal of Industrial Education*, vol. 21, no. 1, pp. C1–C8, 2022.

[3] I. Pont-Niclòs, Y. Echegoyen-Sanz, P. Orozco-Gómez, and A. Martín-Ezpeleta, "Creativity and artificial intelligence: a study with prospective teachers," *Digital Education Review*, no. 45, pp. 91–97, Jun. 2024, doi: 10.1344/der.2024.45.91-97.

[4] S. A. Karroum, N.-E. M. Elshaiekh, and K. Al-Hijji, "Exploring the role of artificial intelligence in education: assessing advantages and disadvantages for learning outcomes and pedagogical practices," *International Journal of Innovative Research in Engineering and Multidisciplinary Physical Sciences*, vol. 12, no. 4, pp. 1–14, Jul.–Aug. 2024, doi: 10.37082/IJIRMPS.v12.i4.231000.

[5] J. J. Gibson, *The Ecological Approach to Visual Perception: Classic Edition*. New York, NY, USA: Psychology Press, 2015, doi: 10.4324/9781315740218.

[6] J. R. Anderson, *Cognitive Psychology and Its Implications*, 9th ed. New York, NY, USA: Worth Publishers, 2020.

[7] R. L. Gregory, *Eye and Brain: The Psychology of Seeing*, 5th ed. Princeton, NJ, USA: Princeton University Press, 1998, doi: 10.1515/9781400866861.

[8] R. Martinez and S. Lee, "Understanding human perception: a comprehensive review," *Psychological Review*, vol. 130, no. 4, pp. 555–580, 2023.

[9] J. Anderson and K. Wilson, *Practical Teaching in Higher Education: Principles and Practices*. London, UK: Routledge, 2023.

[10] I. McGill and A. Brockbank, *The Action Learning Handbook: Powerful Techniques for Education, Professional Development and Training*. London, UK: RoutledgeFalmer, 2004.

[11] I. McGill and L. Beaty, *Action Learning: A Practitioner's Guide*, 2nd ed. London, UK: Kogan Page, 2001.

[12] Z. Jin and A. Kamsin, "Personalized learning model based on machine learning algorithms," *International Journal of Informatics and Communication Technology (IJ-ICT)*, vol. 13, no. 3, pp. 470–475, Dec. 2024, doi: 10.11591/ijict.v13i3.pp470-475.

[13] S. Boonruangrat, "Action learning," in *Encyclopedia of Education*. Bangkok, Thailand: Srinakharinwirot University, 2015, pp. 57–59.

[14] S. Tumthong and P. Songsangyos, "Implementation and evaluation of knowledge management system in RMUTSB," *International Journal of Applied Computer Technology and Information Systems*, vol. 2, no. 2, pp. 56–59, Apr. 2013.

[15] Y. Chen, M. Zhao, W. Sun, and T. Liu, "The impact of AI on learning outcomes in higher education," *Education Sciences*, vol. 13, no. 2, pp. 1–14, 2023, doi: 10.3390/educsci13020123.

[16] M. Brown, K. Maguire, S. Martin, and L. Stevenson, "Institutional support for AI integration in higher education," *European Journal of Teacher Education*, vol. 46, no. 4, pp. 589–605, 2023, doi: 10.1080/02619768.2023.2256789.

[17] P. Mitchell, R. Harper, L. Stone, and C. Douglas, "Technology integration in practical teaching: Opportunities and challenges," *Journal of Educational Technology*, vol. 45, no. 3, pp. 178–195, 2023.

[18] S. Mohapatra and A. Kumar, "Developing a framework for adopting artificial intelligence," *International Journal of Computer Theory and Engineering (IJCTE)*, vol. 11, no. 2, pp. 19–22, Apr. 2019, doi: 10.7763/IJCTE.2019.V11.1234.

[19] X. Tan, J. Wang, Y. Zhou, and M. Li, "Artificial intelligence in teaching and teacher professional development: a systematic review," *Computers and Education: Artificial Intelligence*, vol. 8, pp. 1–19, 2025, doi: 10.1016/j.caeai.2024.100355.

[20] D. Mo, "The impact of AI on the adaptation of educational materials and teaching methods to the needs of each student," *Latin American Journal of Artificial Intelligence (LatIA)*, vol. 3, pp. 1–8, 2025, doi: 10.62486/latia2025124.
[21] J. Schleiss, A. Ortiz, T. Müller, and K. Weber, "Teaching AI competencies in engineering using projects and open educational resources," in *Proc. 50th Annual Conference on Engineering Education*, Sept. 2022, pp. 1592–1600, doi: 10.5821/conference-9788412322262.1258.
[22] A. Abri, N. Al-Harthi, and S. Mahmoud, "Exploring the implications of generative-AI tools in teaching and learning practices," *Journal of Education and E-Learning Research*, vol. 12, no. 1, pp. 31–41, 2025, doi: 10.20448/jeelr.v12i1.6355.
[23] Y. Liu and C. Qiao, "Deep learning-based AI-driven teaching models in Chinese high school English class: a case study of reading lessons," *Frontiers in Education*, vol. 10, pp. 1–10, 2025, doi: 10.3389/feduc.2025.159139
[24] C. Wongrattana, *Statistics for Research Techniques*, 10th ed. Bangkok, Thailand: Thai Neramitkit Introgressive, 2007.
[25] H. Kim, D. Park, and S. Choi, "Future trends in faculty development for AI integration," *Journal of Educational Innovation*, vol. 8, no. 2, pp. 45–62, 2023.

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