CHALLENGES AND OPPORTUNITIES IN DIGITAL BUSINESS EDUCATION AT A PRIVATE UNIVERSITY IN THAILAND*

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Abstract

This research article aimed to investigate the challenges and opportunities of digital business education in a private university in Thailand with emphasis on digital literacy, e-learning adoption, instructional practices, and the integration of artificial intelligence (AI). A qualitative design was employed, using semi-structured interviews with 15 faculty and students alongside documentary analysis of curricula and institutional policies.

The findings revealed that content analysis identified three interrelated themes. First, uneven levels of digital literacy were evident among both faculty and students, underscoring the need for targeted training and curriculum innovation. Second, while e-learning platforms offered flexibility and enhanced engagement, infrastructural constraints such as unstable connectivity, limited device access, and inconsistent platform use restricted effectiveness. Third, instructional practices revealed divergent attitudes, ranging from innovative approaches to resistance, particularly concerning AI integration. Despite these constraints, opportunities emerged in faculty professional development, partnerships with technology providers, cloud-based infrastructures, and AI-driven

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personalization. The findings extended discussions on higher education digital transformation by linking global debates on Education 5.0 and Society 5.0 to Thailand's private university context, highlighting the importance of aligning technological investment with pedagogical readiness and ethical frameworks.
Keywords: Digital Business Education; Digital Literacy; e-learning System; Artificial Intelligence in Teaching

บทคัดย่อ

บทความวิจัยนี้มุ่งสำรวจความท้าทายและโอกาสของการศึกษาธุรกิจดิจิทัลในมหาวิทยาลัยเอกชนแห่งหนึ่งในประเทศไทย โดยให้ความสำคัญกับการรู้เท่าทันดิจิทัล การยอมรับการเรียนการสอนผ่านระบบอิเล็กทรอนิกส์ (e-learning) แนวปฏิบัติทางการสอน และการบูรณาการปัญญาประดิษฐ์ (AI) การวิจัยใช้ระเบียบวิธีเชิงคุณภาพ ผ่านการสัมภาษณ์แบบกึ่งโครงสร้างกับคณาจารย์และนักศึกษาจำนวน 15 ท่าน ควบคู่กับการวิเคราะห์เอกสารหลักสูตรและนโยบายของสถาบัน

ผลการวิจัยพบว่า การวิเคราะห์เนื้อหาได้ระบุประเด็นสำคัญ 3 ประการที่เชื่อมโยงกัน ได้แก่ ประการแรก ระดับความรู้เท่าทันดิจิทัลที่ไม่สม่ำเสมอทั้งในกลุ่มคณาจารย์และนักศึกษา สะท้อนถึงความจำเป็นในการพัฒนาการฝึกอบรมที่ตรงประเด็นและนวัตกรรมด้านหลักสูตร ประการที่สอง แม้ว่าระบบ e-learning จะช่วยเพิ่มความยืดหยุ่นและการมีส่วนร่วม แต่ข้อจำกัดเชิงโครงสร้างพื้นฐาน เช่น การเชื่อมต่อที่ไม่เสถียร การเข้าถึงอุปกรณ์ที่จำกัด และการใช้แพลตฟอร์มที่ไม่สอดคล้องกัน ยังคงเป็นอุปสรรคต่อประสิทธิผล ประการที่สาม แนวปฏิบัติทางการสอนสะท้อนทัศนคติที่หลากหลาย ตั้งแต่วิธีการเชิงนวัตกรรมไปจนถึงความลังเล โดยเฉพาะในประเด็นการบูรณาการ AI แม้มีข้อจำกัดดังกล่าว แต่ก็พบโอกาสในด้านการพัฒนาวิชาชีพคณาจารย์ ความร่วมมือกับผู้ให้บริการเทคโนโลยี โครงสร้างพื้นฐานบนระบบคลาวด์ และการปรับการเรียนรู้ให้เป็นรายบุคคลด้วย AI ผลการวิจัยนี้ช่วยขยายการอภิปรายเรื่องการเปลี่ยนแปลงทางดิจิทัลในระดับอุดมศึกษา โดยเชื่อมโยงการถกเถียงระดับโลกเรื่อง Education 5.0 และ Society 5.0 เข้ากับบริบทของมหาวิทยาลัยเอกชนในประเทศไทย ตอกย้ำความสำคัญของการจัดให้การลงทุนทางเทคโนโลยีสอดคล้องกับความพร้อมทางการสอนและกรอบจริยธรรม
คำสำคัญ: การศึกษาธุรกิจดิจิทัล; ความรู้ด้านดิจิทัล; ระบบการเรียนรู้ออนไลน์; ปัญญาประดิษฐ์ในการสอน

Introduction

A private university is a higher education institution established and managed by the private sector. It plays a vital role in expanding educational opportunities and meeting the evolving needs of society and the labor market. Such institutions often have greater flexibility in designing curricula, implementing teaching methods, and investing in technology to respond to student expectations and global competition (Kajawo, 2020; Petchroj, 2021). Digital business education has become a strategic lever for economic growth and social development in the digital era. As global economies undergo rapid transformation, higher education institutions are expected to cultivate competencies that meet both local labor-market demands and international digital standards. Within this framework, digital literacy, e-learning adoption, and instructional practices represent foundational pillars of digital business education. Beyond technical proficiency, digital literacy encompasses the ability to leverage emerging technologies particularly artificial intelligence (AI) for innovation, entrepreneurship, and workforce readiness (Kayyali, 2024; Thelma et al., 2024).

At the same time, instructional practices determine how effectively digital tools are translated into learning outcomes. Blended learning, curriculum modernization, and faculty development have been widely recognized as essential strategies for bridging digital divides (Agyei, 2021; Jangjarat et al., 2023; Siripipatthanakul et al., 2025). While policy initiatives and capacity-building programs have accelerated technology integration, persistent challenges including limited faculty readiness and resistance to pedagogical change remain (Shohel et al., 2025).

Against this backdrop, the present study investigates the challenges and opportunities of digital business education in Thailand's private university sector. By situating global debates on Education 5.0 and Society 5.0 within a local institutional context, the research contributes to theoretical and practical discussions on how digital transformation in higher education can be strengthened for resilience, inclusivity, and competitiveness.

Research Objectives

1. Digital literacy gaps and capacity building,
2. E-learning adoption and technological infrastructure, and
3. Instructional practices with emphasis on AI integration.

Methodology

1. Research Design

This study adopted a qualitative research approach to investigate the challenges and opportunities in digital business education at a private university in Thailand. A qualitative design was chosen for its ability to capture participants' experiences and perspectives, offering insights into how digital education frameworks influence competency development, technology adoption, and workforce readiness.

2. Key Informants

Purposive sampling was employed to ensure the selection of participants directly involved in this field (Limna & Kraiwanit, 2024). The sample included faculty members engaged in curriculum design and instruction, and undergraduate students actively enrolled in digital business programs. In total, 15 participants were included, exceeding the minimum of 12 interviews recommended by Limna (2025) to achieve data saturation in qualitative research. This combination enabled the study to capture diverse perspectives from both educators and learners.

3. Research Instrument

Data were collected using in-depth, semi-structured interviews, complemented by documentary analysis of curriculum materials and institutional policies. The interview guide was designed to explore key aspects of digital business education, including digital literacy, e-learning adoption, instructional practices, and the integration of artificial intelligence. This instrument ensured consistency across interviews while allowing flexibility for participants to elaborate on their experiences.

4. Data Collection

Semi-structured interviews were conducted both face-to-face and online, depending on participants' availability. Each session followed the interview protocol while allowing the researcher to probe deeper into emerging issues.

Documentary analysis was performed to triangulate the interview findings and provide contextual depth regarding institutional strategies and policies. This combination of methods strengthened the credibility of the data. This study followed national and institutional ethical standards in social science research. Participation was voluntary, limited to individuals aged 18 or older, with informed consent obtained and the right to withdraw ensured. No medical, physical, or psychological risks were involved, and no vulnerable groups participated. Anonymity and confidentiality were strictly protected through pseudonymized and aggregated reporting. In line with Thailand Science Research and Innovation (TSRI) No. 3(3), the study qualified for ethical exemption but was conducted with full commitment to protecting participants' rights and research integrity (Phuangsuwan et al., 2024).

5. Data Analysis

The collected data were analyzed through content analysis, a widely recognized qualitative technique for systematically identifying, coding, and categorizing patterns within textual data (Limna, 2023). Interview transcripts were carefully coded to identify recurring themes, relationships, and insights. This process facilitated the extraction of both systemic challenges and enabling factors, contributing to a nuanced understanding of how digital business education can be enhanced to better align with the demands of the digital economy. After completing the data analysis, the GPT-4o model was employed during the writing process to assist with language refinement, clarity, and grammar checking. All content was subsequently reviewed and revised by the authors, who take full responsibility for the final version of this publication.

Results

Analysis of the interview data and supporting documents revealed three central themes:

1. Digital literacy gaps and capacity building: Both students and faculty demonstrated enthusiasm for digital technologies but lacked advanced competencies for business problem-solving and teaching integration. Opportunities include targeted professional development, industry partnerships, and embedding digital modules within curricula.

2. E-learning adoption and technological infrastructure: Blended learning improved engagement and flexibility; however, issues of unstable connectivity, limited device access, and inconsistent platform usage hindered effectiveness. Opportunities lie in scalable, cloud-based infrastructures and partnerships with technology providers.

3. Instructional practices and AI integration: Faculty exhibited varying pedagogical approaches, with some adopting innovative methods while others resisted change. Students viewed AI tools positively, whereas faculty expressed concerns regarding academic integrity. Opportunities include AI-driven personalization, streamlined assessment, and workplace preparation, contingent upon clear ethical and pedagogical guidelines.

Discussion

The findings illustrate the complex interplay between digital literacy, e-learning adoption, and instructional practices, reinforcing global debates on digital transformation in higher education. The identification of uneven digital literacy resonates with prior scholarship emphasizing its centrality to workforce readiness (Kayyali, 2024; Thelma et al., 2024). Consistent with Education 5.0 and Society 5.0 frameworks, digital literacy must extend beyond operational skills toward higher-order problem-solving and innovation competencies. The study further affirms that faculty preparedness is as critical as student capacity, aligning with global evidence that professional development determines the success of digital integration (Agyei, 2021; Shohel et al., 2025).

E-learning adoption highlights both structural challenges and transformative potential. The infrastructural constraints identified mirror earlier research during the COVID-19 pandemic (Shohel et al., 2025), yet the recognition of opportunities in cloud-based platforms aligns with emerging scholarship on resilient and scalable digital ecosystems (Zou et al., 2025). This duality reflects the tension between structural inequities and the promise of inclusive, technology-mediated education.

Instructional practices, particularly regarding AI integration, revealed both resistance and innovation. Faculty concerns about academic integrity echo Klayklung et al. (2023); Limna et al. (2023) and Shaengchart et al. (2025), while

student enthusiasm reflects global shifts toward AI-enabled learning. The study contributes theoretically by situating AI within the broader discourse on disruptive innovation in higher education, highlighting its dual role as both an enabler and a disruptor. This aligns with Limna (2025), who argues that generative AI transforms workforce efficiency while simultaneously raising questions of ethics and pedagogy. Thus, the study extends theoretical discussions of digital transformation by demonstrating how local institutional contexts mediate global technological trends.

Body of Knowledge

The body of knowledge in digital business education has been shaped by global debates on digital transformation and the integration of emerging technologies in higher education. Digital literacy is increasingly recognized as a multidimensional construct that extends beyond basic technical proficiency to include problem-solving, critical thinking, and the ability to leverage AI for entrepreneurial and professional contexts (Kayyali, 2024; Thelma et al., 2024). This aligns with the Education 5.0 and Society 5.0 paradigms, which emphasize human-centered innovation and the cultivation of digital competencies for sustainable growth (Husaini & Bakar, 2022; Rashid et al., 2021; Fukuda, 2020; Harayama, 2017).

E-learning adoption constitutes another major strand of the body of knowledge. Building on the Technology Acceptance Model (TAM) (Davis, 1989; Venkatesh & Davis, 2000) and the Diffusion of Innovation (DOI) theory (Rogers, 2003; Sahin, 2006), scholars have highlighted how technological infrastructure, institutional support, and faculty readiness shape adoption outcomes. Research further indicates that while e-learning enhances flexibility and inclusivity, it also amplifies digital inequalities in contexts with limited connectivity and resources.

Instructional practices, particularly regarding AI integration, represent an emerging frontier in the literature. The Technological Pedagogical Content Knowledge (TPACK) framework (Mishra & Koehler, 2006; Koehler & Mishra, 2009) underscores the interplay between technological, pedagogical, and content knowledge as critical for effective AI-enabled instruction. Recent scholarship positions AI both as a disruptive innovation and as a tool for personalization and efficiency (Limna & Shaengchart, 2025; Shaengchart et al., 2025). However,

concerns about academic integrity and ethical use remain unresolved, signaling the need for policy frameworks and capacity building.

This study contributes to the body of knowledge by contextualizing these global discourses within a Thai private university setting. Specifically, it addresses the knowledge gap between digital literacy development, infrastructural readiness, and pedagogical innovation, thereby extending theoretical and practical insights into how digital business education can advance resilience, inclusivity, and competitiveness in the digital economy.

Conclusion This research concludes that digital business education in Thailand's private university sector is shaped by simultaneous challenges and opportunities. Persistent gaps in digital literacy, infrastructural limitations, and pedagogical resistance coexist with promising pathways for capacity building, scalable e-learning, and strategic AI adoption. Theoretically, the study contributes to the discourse on digital transformation in higher education by integrating perspectives from Education 5.0 and Society 5.0, underscoring the need for systemic alignment between technological investment, faculty readiness, and ethical safeguards. Practically, the findings suggest that strengthening digital business education requires a multi-stakeholder approach: embedding structured digital literacy within curricula, investing in robust infrastructure, promoting pedagogical innovation, and developing institutional policies that govern the ethical use of AI. Such measures will not only address current challenges but also position Thai private universities to enhance graduate employability and competitiveness in the global digital economy.

Recommendations

Based on the findings, several strategic recommendations are proposed as follows:

1. Strengthen digital literacy: Embed structured digital skills training into curricula and provide continuous faculty professional development.

2. Enhance technological infrastructure: Invest in stable internet connectivity, broaden access to devices, and establish reliable technical support systems.

3. Promote pedagogical innovation: Encourage blended and flipped learning through targeted faculty training in modern instructional practices.

4. Institutionalize ethical AI integration: Develop clear guidelines for AI use in teaching and learning to balance innovation with academic integrity.

5. Limitations and future research: Future research should adopt mixed-methods approaches to combine qualitative richness with quantitative breadth. Comparative studies across public and private universities, as well as cross-national analyses, could further contextualize the findings. Additionally, longitudinal studies are recommended to examine the long-term effects of AI integration on learning outcomes, academic integrity, and employability within the digital economy.

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