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Determinant Factors of E-Learning Adoption in Higher Education: A Systematic Review and Contextual Study of PEGASUS at Palembang Tourism Polytechnic

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Abstract

The rapid digitalization of higher education has increased the importance of understanding the factors that influence e-learning adoption, particularly within vocational and tourism-oriented institutions. This study aims to identify and synthesize the key determinants of e-learning adoption in higher education and to contextualize these findings for the implementation of the PEGASUS platform at Palembang Tourism Polytechnic. A Systematic Literature Review (SLR) was conducted following the PRISMA 2020 guidelines. Relevant studies published between 2015 and 2025 were retrieved from major academic databases, including Scopus, Web of Science, ERIC, Google Scholar, and ScienceDirect. A total of 47 eligible studies were selected and analyzed using thematic synthesis. The findings reveal that e-learning adoption is influenced by four interconnected dimensions: technological, individual, social, and organizational factors. Individual factors emerged as the most influential determinants, with performance expectancy and effort expectancy identified as the strongest predictors of adoption. Technological infrastructure, accessibility, and system quality were found to be essential enabling conditions, while social influence and institutional support significantly shaped users' acceptance and continued use of e-learning systems. The review also highlights the unique challenges faced by tourism education institutions, where practical training, experiential learning, and interpersonal skill development limit the effectiveness of fully online learning environments. Consequently, blended learning is identified as the most suitable approach for tourism higher education. The study concludes that successful e-learning adoption requires not only technological readiness but also organizational capability, strategic leadership, and continuous capacity building. These findings provide practical insights for strengthening digital transformation initiatives and optimizing the implementation of PEGASUS at Palembang Tourism Polytechnic.

Introduction

The rapid advancement of digital technologies has fundamentally transformed the landscape of higher education worldwide. Digital transformation has reshaped not only the methods through which educational content is delivered but also the strategic role of higher education institutions in preparing graduates for increasingly technology-driven workplaces (Bui & Nguyen, 2023; Qolamani & Mohammed, 2023). In this context, e-learning has evolved from a

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supplementary instructional tool into a core component of educational systems, enabling flexible, accessible, and technology-enhanced learning experiences (Awan et al., 2021; Shard et al., 2024). The integration of digital technologies into teaching and learning processes has been associated with improvements in learning accessibility, student engagement, knowledge sharing, and educational efficiency (Feng et al., 2025; Abdelfattah et al., 2023).

The global outbreak of COVID-19 in early 2020 significantly accelerated the adoption of e-learning across all levels of education. Educational institutions worldwide were forced to suspend face-to-face instruction and rapidly transition to online learning environments, often within a matter of weeks (Fida et al., 2020; Abdelfattah et al., 2023). This unprecedented disruption highlighted both the opportunities and challenges associated with digital learning technologies. While many institutions successfully maintained educational continuity through online platforms, the emergency transition also exposed weaknesses related to technological infrastructure, digital literacy, pedagogical readiness, and learner engagement (Dwi & Riatun, 2024; Oulamine et al., 2025). Consequently, the post-pandemic era has shifted scholarly attention from emergency remote teaching toward the long-term sustainability and effectiveness of e-learning adoption in higher education.

In Indonesia, the adoption of e-learning presents unique challenges due to significant disparities in technological infrastructure, internet accessibility, and digital readiness across regions. Prior to the pandemic, the implementation of e-learning in Indonesian higher education remained relatively limited and was often used as a complementary learning tool rather than a primary instructional approach (Dwi & Riatun, 2024). The pandemic accelerated the digitalization of higher education institutions throughout the country; however, many universities implemented online learning without sufficient preparation in terms of infrastructure, instructional design, and human resource capacity (Mutafarida, 2025). Although most institutions have since adopted blended or hybrid learning models, challenges related to learning effectiveness, student adaptation, system integration, and technology acceptance continue to influence the success of digital learning initiatives (Munsharif et al., 2024; Dwi & Riatun, 2024).

Given these challenges, understanding the factors that influence e-learning adoption has become an important area of research. Previous studies have consistently identified several determinants of successful e-learning adoption, including perceived usefulness, perceived ease of use, performance expectancy, effort expectancy, digital self-efficacy, facilitating conditions, and social influence (Awan et al., 2021; Shard et al., 2024; Feng et al., 2025). Research conducted in Indonesian higher education similarly highlights the importance of performance expectancy, ease of use, social support, and technical infrastructure in shaping students' intentions to adopt e-learning systems (Mutafarida, 2025; Munsharif et al., 2024). Despite these findings, existing studies have predominantly focused on general higher education contexts, often overlooking the specific characteristics of vocational and practice-oriented educational institutions.

Vocational higher education differs substantially from conventional academic education because it emphasizes competency development, practical training, and industry-oriented learning outcomes. These characteristics create unique challenges for the implementation of e-learning. Unlike theoretical disciplines, vocational programs require students to acquire hands-on skills, engage in practical simulations, and develop professional competencies that often depend on direct interaction and experiential learning. Consequently, factors influencing e-learning adoption in vocational institutions may differ from those observed in traditional academic settings (Budiasa et al., 2022; Zhang et al., 2023).

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The tourism sector represents a particularly important context for examining e-learning adoption. Tourism education is highly practice-oriented and emphasizes interpersonal communication, service quality, customer interaction, and experiential learning. As a high-touch profession, tourism relies heavily on human interaction and practical experience, making the integration of digital learning technologies more complex than in many other disciplines (Babu & George, 2016). While e-learning can effectively support theoretical knowledge acquisition, concerns remain regarding its ability to facilitate practical skill development, service simulations, and real-world industry exposure (Pang, 2021; Zuraida & P, 2022). Consequently, tourism education institutions face the challenge of balancing digital innovation with the practical learning requirements that characterize the tourism industry.

Although studies on educational technology adoption have expanded significantly in recent years, several important gaps remain. Existing systematic reviews have identified key determinants of e-learning adoption across higher education contexts, including technological, individual, social, and organizational factors (Shard et al., 2024; Feng et al., 2025; Oulamine et al., 2025). However, these reviews generally provide broad perspectives and do not specifically address the contextual realities of tourism-focused vocational institutions. Furthermore, the majority of studies have been conducted in general university settings, limiting the applicability of their findings to tourism education environments where practical learning and industry engagement play central roles (Babu & George, 2016; Zhang et al., 2023).

Within Indonesia, research specifically examining e-learning adoption in tourism education remains limited. Previous studies have explored hybrid learning implementation in tourism departments at Bali State Polytechnic and investigated tourism students' perceptions of online practical learning at Bali Tourism Polytechnic (Budiasa et al., 2022; Adi & Suprastayasa, 2022). While these studies provide valuable insights, they focus primarily on individual institutions and do not comprehensively synthesize the broader body of evidence regarding e-learning adoption factors within tourism higher education. Moreover, limited attention has been given to understanding how findings from the wider e-learning literature can be contextualized for tourism polytechnics operating within Indonesia's diverse educational and technological landscape.

One institution that represents this context is Palembang Tourism Polytechnic (Poltekpar Palembang), a vocational higher education institution under the Ministry of Tourism and Creative Economy. As the only tourism polytechnic serving Southern Sumatra, the institution plays a strategic role in preparing human resources for the tourism and hospitality industries (Fidiani & Kristina, 2024). To support digital transformation initiatives, the institution introduced the PEGASUS (Poltekpar Palembang Digital Universe System) platform in 2020, providing various online learning facilities such as teleconferencing, digital learning resources, assessments, and interactive learning features (Perdana, 2020). However, the existence of a digital platform alone does not guarantee successful adoption. The effectiveness of e-learning depends on a combination of technological readiness, user acceptance, institutional support, and contextual learning requirements (Abdekhoda & Dehnad, 2023; Abdelfattah et al., 2023).

Given the limited evidence regarding e-learning adoption within tourism polytechnics and the unique characteristics of tourism education, there is a need for a comprehensive synthesis of the factors that influence e-learning adoption in higher education while considering their relevance to vocational tourism institutions. Such an analysis can contribute to a deeper understanding of how technological, individual, social, and organizational factors interact

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within tourism education environments and provide evidence-based insights for strengthening digital learning initiatives in institutions such as Palembang Tourism Polytechnic.

Method

Research Design

This study employed a Systematic Literature Review (SLR) to identify, evaluate, and synthesize empirical evidence regarding factors influencing e-learning adoption in higher education. The SLR approach was selected because it provides a rigorous, transparent, and replicable method for consolidating findings from diverse studies and generating comprehensive conclusions based on existing knowledge. Unlike traditional narrative reviews, systematic reviews follow predefined procedures that minimize researcher bias during article selection, screening, and analysis. This approach is particularly appropriate for examining e-learning adoption because previous studies have produced fragmented findings across different countries, educational settings, and theoretical perspectives. By systematically integrating these findings, the review provides a broader understanding of the factors that influence e-learning adoption and offers evidence-based implications for tourism higher education institutions, particularly Palembang Tourism Polytechnic.

The review process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines developed by Page et al. (2021). PRISMA provides internationally recognized standards for conducting and reporting systematic reviews, ensuring methodological transparency, consistency, and reproducibility. The framework was adopted to guide the identification, screening, eligibility assessment, and inclusion of relevant studies. The use of PRISMA has become increasingly common in educational technology research because it enhances the reliability and credibility of literature synthesis.

Search Strategy and Information Sources

The literature search was conducted across several major academic databases that are widely recognized for indexing high-quality research in education, technology, and social sciences. These databases included Scopus, Web of Science (WoS), ERIC (Education Resources Information Center), Google Scholar, and SAGE Journals. To improve coverage and reduce publication bias, supplementary searches were also performed using ScienceDirect and the Directory of Open Access Journals (DOAJ).

The search strategy was developed using the PICOC (Population, Intervention, Comparison, Outcome, Context) framework to ensure systematic identification of relevant studies. Search terms were constructed by combining keywords related to e-learning adoption, educational technology acceptance, online learning systems, higher education, tourism education, and vocational education. Boolean operators such as AND and OR were used to refine the search process and maximize retrieval of relevant publications. Examples of search strings included combinations such as “e-learning adoption AND higher education,” “technology acceptance AND online learning,” “learning management system adoption,” “e-learning acceptance AND university students,” and “educational technology adoption AND tourism education.” Search strategies were adjusted according to the indexing structure and search requirements of each database.

The literature search focused on studies published between January 2015 and March 2025. This period was selected because it captures contemporary developments in educational technology, including the substantial acceleration of e-learning adoption during and after the COVID-19

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pandemic. Restricting the review to the most recent decade ensured that the synthesized findings remained relevant to current technological and educational contexts.

Eligibility Criteria

To ensure consistency and relevance, explicit inclusion and exclusion criteria were established prior to the screening process. Studies were included if they met the following criteria: (1) published in English or Indonesian; (2) published between 2015 and 2025; (3) reported empirical findings using quantitative, qualitative, or mixed-method approaches, or were systematic reviews directly related to e-learning adoption; (4) focused on factors influencing e-learning adoption, acceptance, usage intention, or continuance intention in higher education settings; and (5) were available in full-text format.

Studies were excluded if they consisted of editorials, opinion papers, conference abstracts without full manuscripts, commentaries, or non-peer-reviewed publications. Studies focusing exclusively on corporate training, workplace learning, or non-academic educational settings were also excluded because they fell outside the scope of higher education. In addition, articles that discussed e-learning implementation without examining adoption-related factors were removed. Duplicate records retrieved from multiple databases were identified and eliminated during the screening process. To enhance the generalizability of the review findings, highly localized case studies lacking theoretical or conceptual contributions were excluded.

Study Selection Process

The study selection process followed the four stages recommended by the PRISMA 2020 framework: identification, screening, eligibility assessment, and final inclusion.

During the identification stage, all records retrieved from the selected databases were imported into reference management software, specifically Mendeley and Zotero. Duplicate records were automatically identified and manually verified before removal. Following duplicate removal, the remaining studies entered the screening stage.

In the screening stage, two independent reviewers examined article titles and abstracts against the predetermined inclusion and exclusion criteria. Articles clearly unrelated to e-learning adoption in higher education were excluded. Any disagreements between reviewers were discussed until consensus was achieved. Where necessary, a third review was conducted to resolve ambiguities.

Articles that passed the initial screening proceeded to the eligibility stage. Full-text versions of the selected articles were retrieved and assessed in detail to determine whether they satisfied all inclusion criteria. Reasons for exclusion at this stage were documented to ensure transparency and auditability of the review process.

Finally, studies that met all eligibility requirements were included in the qualitative synthesis. The final set of articles formed the basis for data extraction, thematic analysis, and synthesis of findings.

Data Extraction Procedure

A standardized data extraction form was developed to ensure consistency in collecting information from the included studies. The extraction process captured key bibliographic information, including authors, publication year, title, journal, and country of study. In addition, methodological characteristics such as research design, sample size, participant characteristics, and data collection instruments were recorded.

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The extraction process also documented the theoretical models employed in each study, including Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT), UTAUT2, Diffusion of Innovation (DOI), Task-Technology Fit (TTF), and Information Systems Success Models. Variables examined within each study, including independent variables, dependent variables, moderating factors, and reported relationships, were systematically recorded. Particular attention was given to factors related to technological, individual, social, and organizational dimensions of e-learning adoption.

To improve reliability, a double-extraction procedure was performed on a randomly selected subset representing approximately 20% of the included studies. The extracted data were compared to identify inconsistencies, which were subsequently discussed and resolved through consensus.

Quality Assessment

The methodological quality of the included studies was assessed to evaluate the strength and reliability of the evidence. Different appraisal tools were employed according to the methodological design of each study. Quantitative studies were assessed using relevant Critical Appraisal Skills Programme (CASP) criteria for survey and observational research. Qualitative studies were evaluated using the CASP Qualitative Checklist, while systematic reviews were assessed based on adherence to PRISMA reporting standards and methodological transparency.

Each study was evaluated across several criteria, including research design appropriateness, sampling adequacy, data collection procedures, validity and reliability of instruments, transparency of analysis, and clarity of conclusions. Studies were categorized into high, moderate, or low methodological quality. Rather than excluding lower-quality studies entirely, the review assigned greater interpretive weight to findings derived from higher-quality evidence during the synthesis stage.

Data Analysis and Synthesis

Data analysis was conducted using thematic synthesis, a method widely used in systematic reviews to integrate findings from studies employing diverse methodologies. Thematic synthesis enables researchers to identify recurring concepts, organize related findings, and generate higher-level analytical interpretations.

The analysis was conducted in three sequential stages. First, an initial coding process was performed in which findings and discussion sections from each article were reviewed line by line to identify concepts related to e-learning adoption. Codes representing similar ideas were assigned and organized systematically.

Second, related codes were grouped into descriptive themes that reflected recurring patterns across studies. These themes captured specific determinants, barriers, facilitators, and contextual factors influencing e-learning adoption.

Third, descriptive themes were synthesized into broader analytical themes. Through iterative comparison and interpretation, the identified themes were consolidated into four overarching dimensions: technological factors, individual factors, social factors, and organizational factors. These dimensions emerged consistently across the reviewed studies and provided a comprehensive framework for understanding e-learning adoption in higher education.

The final synthesis integrated evidence from all included studies to identify dominant factors, recurring relationships, contextual variations, and implications for vocational tourism education. Particular attention was given to findings relevant to practical learning environments

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and the unique characteristics of tourism education institutions, thereby providing contextual insights applicable to Palembang Tourism Polytechnic.

Result and Discussion

The results of this systematic review are presented to provide a comprehensive overview of the factors influencing e-learning adoption in higher education. A total of 47 studies that met the inclusion criteria were analysed and synthesized using thematic analysis. The findings are organized into four major dimensions technological, individual, social, and organizational factors that consistently emerged across the reviewed literature. In addition, the review identifies specific challenges associated with e-learning implementation in tourism education and discusses their implications for the adoption and development of the PEGASUS platform at Palembang Tourism Polytechnic.

Table 1. Characteristics of Selected Studies (n = 47)

Category	Subcategory	Frequency (n)	Percentage (%)
Publication Year	2015–2019	4	8.5
	2020–2022	28	59.6
	2023–2025	15	31.9
Research Region	Asia	29	62.0
	Europe	9	19.0
	North America	5	11.0
	Africa	3	6.0
	Others	1	2.0
Research Design	Quantitative	34	72.0
	Systematic Literature Review	7	15.0
	Qualitative	4	9.0
	Mixed Methods	2	4.0

The results indicate a substantial increase in e-learning adoption research during and after the COVID-19 pandemic. Nearly 60% of the reviewed studies were published between 2020 and 2022, highlighting the rapid expansion of digital learning initiatives during this period. Although the pandemic has ended, research activity remains high, with 31.9% of studies published between 2023 and 2025. This trend suggests that e-learning has evolved from an emergency response into a strategic component of higher education systems. Geographically, Asia dominated the literature, accounting for 62% of the reviewed studies. This finding reflects the rapid digital transformation occurring across Asian higher education institutions, particularly in developing countries. Indonesia alone contributed 17% of the studies, demonstrating growing scholarly interest in understanding factors influencing e-learning adoption within the Indonesian context. In terms of methodology, quantitative studies accounted for 72% of the reviewed literature, indicating that researchers primarily focus on examining causal relationships among variables within technology adoption models. In contrast, qualitative and mixed-method studies remain limited, suggesting opportunities for future research to provide deeper insights into users' experiences and perceptions.

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Table 2. Dominant Theoretical Models Used in E-Learning Adoption Research

Model	Frequency (n)	Percentage (%)
UTAUT	20	42
TAM	16	34
TAM/UTAUT Integration	7	15
Other Models (DOI, TTF, IS Success Model)	4	9
Total	47	100

UTAUT emerged as the most frequently applied framework, accounting for 42% of the reviewed studies, followed by TAM at 34%. Combined, these two models represent 76% of all studies analyzed. This dominance indicates that researchers continue to rely on established technology acceptance theories to explain e-learning adoption behavior. The widespread application of UTAUT suggests that factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions remain central determinants of technology adoption. Similarly, the continued use of TAM highlights the importance of perceived usefulness and perceived ease of use in shaping users' acceptance of e-learning systems. These findings demonstrate a strong theoretical consensus regarding the key drivers of e-learning adoption in higher education.

Table 3. Factors Influencing E-Learning Adoption in Higher Education

Dimension	Factor	Frequency (%)
Technological	Technological Infrastructure	82
	Accessibility	74
	Internet Connectivity	71
	System Quality	68
	Content Quality	55
Individual	Performance Expectancy / Perceived Usefulness	91
	Effort Expectancy / Perceived Ease of Use	88
	Digital Self-Efficacy	67
	Attitude Toward Technology	61
	Prior Experience	48
	Motivation	44
Social	Social Influence	71
	Peer Support	52
	Lecturer Support	48
	Subjective Norm	39
Organizational	Institutional Support	76
	Resource Allocation	63
	Institutional Policy and Strategy	58
	Change Management	51
	Professional Development	47

The findings reveal that individual factors are the most influential determinants of e-learning adoption. Performance expectancy was reported in 91% of studies, making it the strongest predictor identified in the review. This suggests that students and lecturers are more likely to adopt e-learning technologies when they perceive tangible benefits for learning performance and academic achievement. Effort expectancy followed closely at 88%, indicating that ease of use remains a critical consideration during the adoption process. Among technological factors,

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infrastructure emerged as the most important factor, appearing in 82% of studies. This finding highlights the necessity of reliable internet access, adequate hardware, and stable learning platforms as prerequisites for successful e-learning implementation. Without sufficient technological readiness, positive perceptions toward e-learning may not translate into actual usage. Institutional support was identified as the most significant organizational factor (76%), emphasizing the importance of leadership commitment, policy development, resource allocation, and staff training. The high prevalence of this factor indicates that successful e-learning adoption requires not only individual willingness but also strong institutional support mechanisms.

Social influence was reported in 71% of studies, demonstrating that adoption decisions are often shaped by peers, lecturers, and the broader academic environment. This finding is particularly relevant in collectivist societies such as Indonesia, where social norms and community expectations frequently influence individual behavior. Overall, the results suggest that e-learning adoption is driven by the interaction between users' perceptions, technological readiness, social encouragement, and organizational commitment. Therefore, higher education institutions should adopt a holistic approach that addresses all four dimensions simultaneously.

Table 4. Challenges of E-Learning Adoption in Tourism Education

Challenge	Interpretation
Practice-oriented curriculum	Practical skills are difficult to develop through fully online learning environments.
High-touch industry characteristics	Virtual learning may not adequately develop interpersonal and customer service competencies.
Preference for experiential learning	Students prefer interactive and activity-based learning rather than passive online content.
Infrastructure disparities	Unequal internet access may create differences in learning experiences and outcomes.

The findings indicate that tourism education faces distinctive challenges compared with other academic disciplines. The practical nature of tourism programs, where approximately 70% of learning activities involve hands-on training, limits the effectiveness of fully online instruction. Skills related to culinary operations, housekeeping management, and guest services require direct practice and real-world interaction that cannot be completely replicated through digital platforms. Furthermore, tourism is a high-touch industry that relies heavily on interpersonal communication, empathy, and customer service skills. Excessive dependence on virtual learning may reduce opportunities for students to develop these competencies. Consequently, the evidence suggests that blended learning, which combines online instruction with face-to-face practical training, represents the most suitable approach for tourism higher education institutions.

Managing E-Learning Adoption as an Organizational Capability in Tourism Higher Education

The central contribution of this review lies not in identifying individual determinants of e-learning adoption, but in demonstrating that adoption in tourism higher education should be understood as a managerial capability-building process rather than a purely technological implementation process. Much of the existing literature continues to approach e-learning adoption through the lens of technology acceptance, emphasizing users' perceptions of usefulness and ease of use (Awan et al., 2021). While such explanations remain valuable, they

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are insufficient for explaining sustainable adoption within tourism education institutions. The synthesis presented in this study suggests that technology acceptance is merely the entry point. Long-term adoption depends on an institution's ability to align technological resources, organizational structures, human capabilities, and educational objectives into a coherent strategic system. This observation resonates with the broader management literature, which argues that organizational performance is not created by technological assets alone but by the institution's capacity to combine resources and capabilities in ways that generate value. Consequently, e-learning adoption should be reframed as a strategic management challenge rather than an information technology issue.

This perspective is particularly important because the dominant theoretical models identified in the literature UTAUT and TAM primarily explain individual-level behavioral intentions. These frameworks have significantly advanced understanding of why users accept technology. However, they offer limited explanations regarding how institutions sustain technology-enabled transformation over time. The findings of this review indicate that adoption decisions are embedded within broader organizational contexts characterized by leadership commitment, policy consistency, resource allocation, and institutional culture. Similar concerns have been raised by Abdekhoda & Dehnad (2023), Shard et al. (2024), Feng et al. (2025), and Bui & Nguyen (2023), who argue that organizational readiness increasingly determines whether digital initiatives produce lasting outcomes. Therefore, future research should move beyond individual acceptance models and incorporate perspectives from strategic management, organizational change, and dynamic capabilities theory. Understanding how institutions continuously adapt their structures and competencies to technological change may provide a more comprehensive explanation of e-learning success than technology acceptance models alone.

The findings also challenge the common assumption that technological infrastructure is the primary barrier to e-learning adoption. Infrastructure remains necessary, but it is no longer sufficient. Across many higher education institutions, investments in learning management systems, cloud platforms, and digital content have become increasingly common (Qolamani & Mohammed, 2023; Shard et al., 2024; Zheng et al., 2025). Implementation outcomes continue to vary substantially. This variation suggests that competitive advantage in educational digitalization no longer stems from technology ownership but from managerial capability. In management terms, technology has become a relatively accessible resource, whereas the ability to organize, integrate, and leverage that resource effectively remains scarce (Hsiao, 2024; Willie, 2025; Yordanova & Shotarov, 2025). This argument aligns with the resource-based view, which emphasizes that organizational capabilities, rather than resources themselves, constitute the primary source of sustainable advantage. For tourism higher education institutions, the strategic question is therefore not whether to invest in e-learning technologies, but how to create organizational mechanisms that enable those technologies to improve educational outcomes.

A particularly significant implication concerns the role of digital self-efficacy. Existing studies often treat digital competence as an individual characteristic that influences technology adoption (Adi & Suprastayasa, 2022). Such a perspective is useful but incomplete. The evidence synthesized in this review suggests that self-efficacy should also be understood as an organizational asset. Institutions that systematically invest in digital literacy training, mentoring systems, and professional development programs are effectively building collective capability. From a management perspective, this shifts attention from isolated user behavior to organizational learning processes (Giannakos et al., 2022; Inthavong et al., 2023; Jarrahi et al.,

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2023). E-learning adoption therefore becomes inseparable from knowledge management. Universities that fail to develop organizational learning mechanisms may achieve initial adoption but are unlikely to sustain innovation over time.

Another important insight emerging from this review concerns the persistent influence of social factors. Technology adoption research frequently treats social influence as a supporting variable, secondary to perceived usefulness or ease of use. However, the findings suggest that within collectivist contexts such as Indonesia, social influence performs a far more strategic function. Adoption behavior is shaped not only by rational assessments of technological benefits but also by social legitimacy (Dong et al., 2024; Rana et al., 2024; Song et al., 2025). Individuals are more willing to engage with new systems when those systems are endorsed by respected peers, supervisors, and institutional leaders. This observation is consistent with institutional theory, which argues that organizational behavior is strongly influenced by social expectations, norms, and legitimacy pressures. Consequently, managers seeking to increase e-learning adoption should focus not only on technical implementation but also on cultivating social endorsement and organizational commitment. Technology initiatives that lack legitimacy within academic communities often encounter resistance regardless of their technical quality.

The tourism education context further reveals the limitations of technology-centered approaches to educational transformation (Yan et al., 2026; Tilwani et al., 2026; Mandagi et al., 2026). Tourism is fundamentally a service industry characterized by interpersonal interaction, emotional labor, and experiential value creation. These characteristics distinguish tourism education from many other academic disciplines. The objective of tourism programs extends beyond knowledge acquisition to include the development of communication skills, customer orientation, cultural sensitivity, and professional behavior. Such competencies are difficult to cultivate exclusively through digital environments. The challenge, therefore, is not how to digitize tourism education completely but how to strategically integrate digital and experiential learning. This finding supports previous arguments by Babu & George (2016), Pang (2021), Zhang et al. (2023), and Zuraida & P (2022), who emphasize that tourism education requires a balanced approach combining technological innovation with direct practical engagement.

From a management perspective, this issue should be viewed through the lens of service capability development. Hospitality and tourism organizations compete primarily through service quality and customer experience rather than technological sophistication alone (Fida et al., 2020). Consequently, tourism education institutions must ensure that digital learning strategies contribute to, rather than replace, the development of service competencies. The growing enthusiasm surrounding digital transformation sometimes encourages institutions to equate modernization with virtualization. Such an assumption is problematic. Educational innovation should be evaluated according to its contribution to graduate readiness and industry relevance rather than its level of technological sophistication. The strategic objective is not maximum digitalization but optimal educational value creation.

These observations have important implications for the management of Palembang Tourism Polytechnic. The institution has already demonstrated commitment to digital transformation through the introduction of the PEGASUS platform. However, the findings suggest that platform implementation should be regarded as the beginning of a broader transformation journey rather than its final outcome. Sustainable success will depend on leadership's ability to institutionalize digital learning practices through governance structures, performance

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management systems, faculty development programs, and industry collaboration mechanisms (Mollah et al., 2023; Pu et al., 2025; Rohayati, 2025). Research on digital transformation consistently shows that organizations fail not because technology is unavailable but because organizational change is inadequately managed. For this reason, digital transformation strategies within tourism higher education must be managed as long-term organizational change initiatives rather than short-term technology projects.

Suggest that the future of e-learning adoption in tourism higher education will be determined by institutions' ability to balance digital efficiency with experiential authenticity. Educational institutions face increasing pressure to modernize, improve accessibility, and enhance operational efficiency through technology. At the same time, they must preserve the experiential and interpersonal dimensions that define tourism education itself. Institutions capable of achieving this balance are likely to gain significant strategic advantages in student satisfaction, graduate employability, and educational quality. Those that pursue digitalization without considering pedagogical and industry realities risk creating technologically advanced systems that fail to produce graduates equipped for professional practice. The future of tourism education therefore lies not in replacing human-centered learning with technology, but in designing organizational systems where technology enhances, supports, and amplifies the development of human capabilities.

Conclusion

This study concludes that e-learning adoption in higher education is influenced by the interaction of technological, individual, social, and organizational factors, with performance expectancy, ease of use, technological infrastructure, and institutional support emerging as the most significant determinants. The findings further indicate that successful adoption extends beyond technology acceptance and depends on an institution's ability to develop organizational capabilities, digital competencies, and supportive learning environments. In the context of tourism higher education, fully online learning cannot adequately replace practical and experiential training; therefore, a blended learning approach is the most appropriate strategy. For Palembang Tourism Polytechnic, the PEGASUS platform can effectively support digital transformation when accompanied by strong leadership, continuous capacity building, and the integration of digital learning with industry-oriented practical experiences.

References

Abdekhoda, M., & Dehnad, A. (2023). Effective organizational factors in adopting e-Learning in education: extracting determinants and frameworks. *Journal of E-Learning and Knowledge Society*, *19*(4). https://doi.org/10.20368/1971-8829/1135669

Abdelfattah, F., Al Alawi, A. M., Dahleez, K. A., & El Saleh, A. (2023). Reviewing the critical challenges that influence the adoption of the e-learning system in higher educational institutions in the era of the COVID-19 pandemic. *Online Information Review*, *47*(7). https://doi.org/10.1108/OIR-02-2022-0085

Adi, I. A. S. P., & Suprastayasa, I. G. N. A. (2022). PERSEPSI MAHASISWA PARIWISATA TERHADAP PERKULIAHAN PRAKTIK SECARA DARING: STUDI KASUS PROGRAM MANAJEMEN DIVISI KAMAR, POLITEKNIK PARIWISATA BALI. *Jurnal Kepariwisataan*, *21*(1). https://doi.org/10.52352/jpar.v21i1.718

Awan, R. K., Afshan, G., & Memon, A. B. (2021). Adoption of E-Learning at Higher Education

DOI: https://doi.org/10.71435/737531

Institutions: A Systematic Literature Review. *Multidisciplinary Journal for Education, Social and Technological Sciences*, *8*(2). https://doi.org/10.4995/muse.2021.15813

Babu, P., & George, B. P. (2016). E-Learning Adoption in Hospitality Education: an Analysis With Special Focus on Singapore. *Journal of Tourism Research*, *15*(1).

Budiasa, I. M., Suparta, I. K., & Nadra, N. M. (2022). *Determinants That Influence The Behavior of Using Hybrid Learning in Tourism Department of Politeknik Negeri Bali*. https://doi.org/10.2991/978-2-494069-83-1_91

Bui, T. T., & Nguyen, T. S. (2023). The Survey of Digital Transformation in Education: A Systematic Review. *International Journal of TESOL & Education*, *3*(4). https://doi.org/10.54855/ijte.23343

Dong, Q., Wu, Y., Lin, H., Sun, Z., & Liang, R. (2024). Fostering green innovation for corporate competitive advantages in big data era: The role of institutional benefits. *Technology Analysis & Strategic Management*, *36*(2), 181-194. https://doi.org/10.1080/09537325.2022.2026321

Dwi Lestari, E., & Riatun, R. (2024). Unveiling key factors for the continuation of E-learning adoption in blended learning environments within Indonesian higher education during the era of the 'new normal.' *Cogent Education*, *11*(1). https://doi.org/10.1080/2331186X.2024.2428871

Feng, J., Yu, B., Tan, W. H., Dai, Z., & Li, Z. (2025). Key factors influencing educational technology adoption in higher education: A systematic review. *PLOS Digital Health*, *4*(4). https://doi.org/10.1371/journal.pdig.0000764

Fida, B. A., Ahmed, U., Al-Balushi, Y., & Singh, D. (2020). Impact of Service Quality on Customer Loyalty and Customer Satisfaction in Islamic Banks in the Sultanate of Oman. *SAGE Open*, *10*(2). https://doi.org/10.1177/2158244020919517

Fidiani, & Kristina. (2024). *Politeknik Pariwisata Palembang, Satu-Satunya Poltekpar di Sumatera Bagian Selatan dengan Fokus Pariwisata*. HarianBanyuasin. https://harianbanyuasin.disway.id/pendidikan/read/647397/politeknik-

Giannakos, M. N., Mikalef, P., & Pappas, I. O. (2022). Systematic literature review of e-learning capabilities to enhance organizational learning. *Information Systems Frontiers*, *24*(2), 619-635. https://doi.org/10.1007/s10796-020-10097-2

Hsiao, M. H. (2024). Resource integration and firm performance through organizational capabilities for digital transformation. *Digital Transformation and Society*. https://doi.org/10.1108/DTS-07-2023-0050

Inthavong, P., Rehman, K. U., Masood, K., Shaukat, Z., Hnydiuk-Stefan, A., & Ray, S. (2023). Impact of organizational learning on sustainable firm performance: Intervening effect of organizational networking and innovation. *Heliyon*, *9*(5).

Jarrahi, M. H., Kenyon, S., Brown, A., Donahue, C., & Wicher, C. (2023). Artificial intelligence: A strategy to harness its power through organizational learning. *Journal of Business Strategy*, *44*(3), 126-135. https://doi.org/10.1108/JBS-11-2021-0182

DOI: https://doi.org/10.71435/737531

Mandagi, D. W., Rantung, D. I., & Aseng, A. C. (2026). Sustainable digital marketing in tourism: state of the art and future research agenda. *Journal of Hospitality and Tourism Insights*, 1-19. https://doi.org/10.1108/JHTI-11-2025-1368

Mollah, M. A., Choi, J. H., Hwang, S. J., & Shin, J. K. (2023). Exploring a pathway to sustainable organizational performance of South Korea in the digital age: The effect of digital leadership on IT capabilities and organizational learning. *Sustainability*, *15*(10), 7875. https://doi.org/10.3390/su15107875

Munsharif, A., Pramana, E., & Zaman, L. (2024). Adopsi Blended Learning untuk Mahasiswa Perguruan Tinggi dengan Menggunakan Pendekatan Extended UTAUT. *Rekayasa*, *17*(1). https://doi.org/10.21107/rekayasa.v17i1.25869

Mutafarida. (2025). *Adopsi E-Learning: Memahami Peran Pengaruh Sosial dan Kondisi Pendukung* -. Ptik.Umsida.Ac.Id.

Oulamine, A., Chakra, R., Ziky, R., Bahida, H., Gareh, F. El, Oubihi, I., & Massiki, A. (2025). A Systematic Literature Review of Barriers Affecting e-Learning in Higher Education. In *Educational Process: International Journal* (Vol. 17). https://doi.org/10.22521/edupij.2025.17.396

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. In *BMJ* (Vol. 372). https://doi.org/10.1136/bmj.n71

Pang, J. M. (2021). An exploratory study on Singapore Polytechnic Hospitality and Tourism students' perception toward the use of virtual learning environments (E-learning). In *Promoting Creative Tourism: Current Issues in Tourism Research*. https://doi.org/10.1201/9781003095484-58

Perdana, W. (2020). Jadi Pionir, Poltekpar Palembang Launching Hospitality e-Learning Paltform - Halaman all - Tribunsumsel.com. *TribunSumsel*.

Pu, R., Dong, R. K., & Jiang, S. (2025). Toward the Education for Sustainable Development (ESD): Digital leadership and knowledge-sharing behavior on the higher education institutional change. *Education and Information Technologies*, *30*(8), 10567-10589. https://doi.org/10.1007/s10639-024-13247-0

Qolamani, K. I. B., & Mohammed, M. M. (2023). The Digital Revolution in Higher Education: Transforming Teaching and Learning. *QALAMUNA: Jurnal Pendidikan, Sosial, Dan Agama*, *15*(2). https://doi.org/10.37680/qalamuna.v15i2.3905

Rana, M. M., Siddiqee, M. S., Sakib, M. N., & Ahamed, M. R. (2024). Assessing AI adoption in developing country academia: A trust and privacy-augmented UTAUT framework. *Heliyon*, *10*(18).

Rohayati, T. (2025). Performance Leadership in the Digital Era: Transforming Strategies for Sustainable Organization Excellence in Higher Education Institutions. *AL-ISHLAH: Jurnal Pendidikan*, *17*(4). https://doi.org/10.35445/alishlah.v17i4.8523

DOI: https://doi.org/10.71435/737531

Shard, Kumar, D., & Koul, S. (2024). Digital transformation in higher education: A comprehensive review of e-learning adoption. In *Human Systems Management* (Vol. 43, Issue 4). https://doi.org/10.3233/HSM-230190

Song, Y., Qiu, X., & Liu, J. (2025). The impact of artificial intelligence adoption on organizational decision-making: An empirical study based on the technology acceptance model in business management. *Systems*, *13*(8), 683. https://doi.org/10.3390/systems13080683

Tilwani, S. A., Assefa, Y., Alhur, A. A., Spahiu, I., Tadesse, B., Moges, S. E., & Majeed, H. (2026). Harnessing generative artificial intelligence for personalized learning and transformative skill development in higher education in developing-country contexts. *Discover Artificial Intelligence*.

Willie, M. (2025). Leveraging digital resources: a resource-based view perspective. *Golden Ratio of Human Resource Management*, *5*(1), 01-14. https://doi.org/10.52970/grhrm.v5i1.415

Yan, R., Zhang, S., Zhang, H., & Qiu, H. (2026). To engage or not to engage? A qualitative investigation into educators' and learners' perspectives on AI in tourism higher education. *Journal of Hospitality and Tourism Technology*, 1-23. https://doi.org/10.1108/JHTT-06-2025-0498

Yordanova, Z., & Shotarov, A. (2025). From Resource Scarcity to Digital Leverage: A Framework for Sustainable Technology and Circular-Economy-Oriented Social Entrepreneurship. *Sustainable Technology and Entrepreneurship*, 100127. https://doi.org/10.1016/j.stae.2025.100127

Zhang, S. N., Jiang, G. X., Ruan, W. Q., & Li, Y. Q. (2023). Technology External Cause or Individual Internal Cause? Multiple Ways to Improve the Online Learning Effectiveness of Tourism and Hospitality Management Students. *SAGE Open*, *13*(3). https://doi.org/10.1177/21582440231193473

Zheng, H., Han, F., Huang, Y., Wu, Y., & Wu, X. (2025). Factors influencing behavioral intention to use e-learning in higher education during the COVID-19 pandemic: A meta-analytic review based on the UTAUT2 model. *Education and Information Technologies*, *30*(9). https://doi.org/10.1007/s10639-024-13299-2

Zuraida, L., & P, I. W. D. (2022). Strategi Pengembangan Metode Pengajaran melalui Platform Daring di POLTEKPAR Bali. *LACULTOUR: Journal of Language and Cultural Tourism*, *1*(1). https://doi.org/10.52352/lacultour.v1i1.784

DOI: https://doi.org/10.71435/737531