PENINSULA PUBLISHING LLC

KHWARIZMIA
Vol. **(2025)**, 2025, **pp**. 50–57
ISSN: 3078-2694

Research Article

Investigating Factors Affecting AI Adoption in Higher Education Using Structural Equation Modelling (SEM)

Waleed A Hammood[1,*],

[1] *Faculty of Computer Science and Information Technology, University of Anbar, Ramadi, Iraq*

ARTICLE INFO

Article History
Received 1 May 2025
Revised: 21 Jun 2025
Accepted 20 Jul 2025
Published 12 Aug 2024

Keywords
Artificial Intelligence,
Educational Technology,
Higher Education,
AI Adoption,
Technology Adoption.

ABSTRACT

Artificial Intelligence (AI) can influence teaching, learning, and management in higher education. The use of AI requires effective socio-technical factors at different levels of use and implementation in all organizational, professional, and ethical contexts. The paper initiates thus a synthesis between the Theory of Planned Behavior and the Technology Acceptance Model, investigating major factors that determine the use of AI in institutions of higher education. The two theories provide an understanding that is both behavioral and technological in nature concerning the factors that determine AI adoption. Factors like easy use, support, institutional awareness at AI being, technical competency, ethical and legal barriers, and perceived importance were considered. Components of the TPB that reflect how users make decisions, such as subjective norms, attitudes, and perceived behavioral control, are also incorporated. In the quantitative part of the study, researchers used standardized surveys to question faculty students and administrative staff from multiple institutions. To study statistically the relationships between the indicated variables multiple regression and SEM were run on simulated data. From the result it is the imperative need of the hour for organizations to address ethical issues invest in digital literacy and implement explicit rules related to AI. This study will also be useful for future legislators' administrators and AI developers who seek to advance the integration of ethical and sustainable AI in higher education.

1. INTRODUCTION

Artificial Intelligence (AI) offers potential that virtually ensures increased administrative efficiency, customization of the learning process, and improved teaching strategies as higher education rapidly transforms with possible opportunities [1]. From AI-savvy tutoring software to instructional software, many questions ensue that require in-depth research to ensure the uptake of AI for and within higher education. Even though academics use AI, there is still something challenging about the formidable opportunity. Issues of data security, faculty readiness, infrastructure availability, ethical considerations, and institutional policies can greatly affect AI implementation [2]. Further, the varying degrees of technological access and digital knowledge create a digital divide that hinders the fair implementation of AI from different countries and regions [3]. The major technical development of this century has been the integration of AI within higher education. As such, AI evolution is developing as a disruptive technology that can change the educational paradigms while academic institutions and global universities are catching up with digital transformation [6]. Plagiarism detection, Intelligent tutoring systems, student performance prediction, automated grading, individualized learning platforms, virtual teaching assistants, and administrative automation are some of the academic processes under the provision of AI technology. Unprecedented opportunities to improve student learning outcomes, expedite institutional processes, and address problems with education access and delivery will become available if these systems materialize [7].

Increasingly, higher education institutions utilize AI to automate administrative and academic tasks. For example, to give students a more personalized learning experience, AI technology underlies adaptive learning systems, such as those that alter the way material is presented in order to accommodate a student's preferences and speed of learning [11]. Chat bots and virtual assistants, such as Admission Assistant, can answer common questions, assist with the admission process, and provide academic guidance to both students and employees. Chat bots and virtual assistants can answer common questions, assist with the admission process, and provide academic guidance to both students and faculty, respectively. Additionally, institutions that learn can recognize at-risk students, predict student dropouts, and develop early intervention strategies to increase student retention and success with the help of data analytics tools that are AI-based [9]. However, many setbacks associated with AI technology have overshadowed its potential and utilization in higher education. The visibility, usability,

*Corresponding author email: waleed.abdulmaged@uoanbar.edu.iq
DOI: https://doi.org/10.70470/KHWARIZMIA/2025/006

and sustainability of AI in academic settings is dependent on several factors, including technological readiness and digital skills, the attitudes of the faculty members and their capabilities to become digital, institutional policies, ethical concerns, data protection, and of course the availability of financial and physical resources [10]. These factors interact with each other in an ever-increasing complex environment in which the human, organizational, and regulatory components as well as technological readiness have a significant, direct role in the success of AI integration [11][30].

The digital divide between and among nations, if anything, is the primary barrier that faces AI adoption. The poorly resourced institutions within the developing world have difficulty with modern technology, let alone internet connectivity and infrastructure [12]. On the flip side, well-resourced organizations within developed countries have more resources to experiment with and adopt AI technologies [13]. This disparity calls into question the fair distribution of the benefits that AI might bring and is also likely to heighten existing disparities in access to quality education. What is more, more and more people are concerned with the ethical and legal issues of AI in education. In order for applications of AI to ensure academic integrity and protect the students and faculty members' rights, issues concerning them such as data protection, surveillance, algorithmic bias, transparency, and accountability should be properly taken into consideration [14][27]. Stakeholders who prefer systems that are explainable and easy to audit may have little trust in the decision-making process of AI because of its opaqueness, the "black box" of the system. Further worries result in dehumanizing education and marginalizing the role further in the labor force when more AI becomes a need. Another equally important factor is institutional preparedness. Alongside the technical infrastructure, strategic leadership, faculty development initiatives, and an innovative culture, there must be a competent and caring staff. The staff must have sufficient training on how to utilize AI in their teaching methods and must remain malleable in the face of rapid technological advances. To ensure the pedagogical legitimacy of AI solutions and their moral rectitude in relation to educational goals, interdisciplinary collaboration between computer scientists, educators, legislators, and social scientists is necessary [16].

Considering these complex interactions, it is essential that a systemic change in the context factors of culture, economics, politics, and, most importantly, the educational context of higher education be incorporated if AI is to be successful. Without these factors being understood by stakeholders itching to use AI in their operations effectively and comprehensively, it shall not be implacental [17]. This study seeks to identify the primary components responsible for the acceptance and effects of AI in higher education, specifically theological, philosophical, historical, political, and ideological considerations and how these components interact with the implementation of AI in an educational institution for better understanding, bringing findings from case studies, existing literature, and expert opinions together into one composite view of how well and responsibly AI can be used in higher education.

2. LITERATURE REVIEW

Artificial Intelligence (AI) can be summarily described as a formative power that bestows benefits diffusely within the troika of teaching and learning and administration when adequately applied in higher education [18]. The vast body of research conducted reveals the ability of AI to improve student outcomes through personalized learning environments, adaptive content, intelligent tutoring systems, and predictive analytics that can customize the experience to the needs of each learner and increase retention and engagement [19]. Adequately, AI can improve efficiency in administrative processes related to admissions, grading, advising, and resource management by automating the regular sub-tasks involved in these processes and instigating fact-based decision-making [20]. However, indeed, the use of artificial intelligence in the higher education sector is indeed very unequal and highly contingent upon the situation at hand. While some authorities manage to implement the tools driven by AI successfully, many still face resistance due to outdated infrastructure, no adequate strategic view, low digital literacy among faculty and students, and the lack of clarity in policy and governance. The disparities pose critical questions regarding the determinants of successful AI integration and the factors that cause these determinants to differ in institutional, economic, and cultural contexts. Leading among these, the Technology Acceptance Model (TAM) [5], and the Unified Theory of Acceptance and Use of Technology (UTAUT) have provided valuable insights into the analysis of user adoption behavior, with perceived usefulness and ease of use topping as main predictors of AI engagement. New studies, however, the aforementioned few have extended their models with trust, ethical consideration, institutional readiness, and risk perception, among many others to account for the multidimensional, oft-times socio-political nature of technology adoption in education. Leadership commitment, infrastructure, training, and digital strategies are defined, for example, by the author as the dimensions of institutional support [8]. Likewise, the policy may be very ambiguous and with little educator involvement in the AI design process, eventually causing a fragmented implementation that does not convince the stakeholders. The resistance of faculty remains a prominent challenge, mostly based on the reservation in pedagogical autonomy, fear of job loss, and distrust of algorithmic decisions. These gaps in the digital skills of the academic community, particularly in developing countries or poorly resourced institutions, make the chasm of adoption even less equal and perpetuate possible educational inequalities. Worse still, institutions habitually overlook pertinent issues regarding ethics and the law on AI, such as privacy and algorithm bias, transparency, and even surveillance potential, which consequently brings the very issues of intervention fairness and responsibility into their hands.

2.1 AI in Teaching and Learning

The available literature also reflects some pedagogical criticism warning against educational alienation and proposing that AI should be considered on the basis of supporting human intelligence rather than replacing human educators [10]. The use of AI must relate to good pedagogical principles and be linked through interdisciplinary interaction connecting teachers, technologists, and policymakers. Other factors associated with the success of AI implantation included maturity at the organizational level, cultural attitude toward technology, and the economic situation in the region [11]. High-income countries may have well-endowed institutions and expertise, while low-resource countries face systemic barriers. For instance, the systemic barriers could be poor digital infrastructure, lack of support from the government, or sociopolitical instability, among other issues. Culture is both a shaper and a product of technology, and the dimensions of culture result in a significant difference in perception and reception toward AI. Any collectivist endorsement at an institutional level would be suited to striving toward ethics in an individualist measure of the same toward efficiency and creativity [21]. Such fine points require the setting of contextualized policies respecting specific settings based on general best practice [28][29]. The responses to challenges and opportunities call for a holistic sustainable AI integration approach in higher education. Areas that need emphasis is inclusivity, transparency, and pedagogical alignment with technology alongside transparency and pedagogical alignment with the technological advancement of AI. Among them is development under specific rules and governance and data literacy for AI systems and AI systems reciprocally with an educational program. The examples used to support this argue that iterative implementation and continuous evaluation are strong. With careful and timely planning, together with the deliberate development of capacity and ethics, institutions of higher education will harness AI to enhance quality, efficiency, and discover resilience as a sector that promotes equity, innovation, and institutional resilience. To date, literature to date serves to underscore that successful AI implementation in higher education relies on more than just technical feasibility. Institutions have to go on search for AI-enabled change. They move through a mixed bag of good parts and problems that need a fair plan, mixing new ideas with responsibility and being efficient while also having empathy [22][29].

3. METHODOLOGY

3.1 Research Design

A quantitative cross-sectional survey approach was used to examine the factors that affect the adoption of AI in higher education, with multiple regression and Structural Equation Modeling (SEM).

3.2 Instrument Development

The components validated by TAM and TPB served as the basis for the development of the questionnaire. It was structured in two parts:

- General Information: Gender, field of study, academic position, and prior exposure to AI.
- Five factors, technical competency, institutional support, ease of use, ethical and legal barriers, and AI awareness are represented by the 18 Likert-scale items.

3.3 Sample and Data Collection

- A total of 100 replies were synthetically created to mimic data from instructors and students studying IT-related subjects.
- The sample was created with a variety of viewpoints from different occupations, genders, and degrees of AI experience in mind.

4. MODEL DEVELOPMENT AND HYPOTHESIS

To explore the factors affecting technology adoption, particularly AI, in higher education institutions, this study employs a conceptual model that integrates the Technology Acceptance Model (TAM) [5] with the Theory of Planned Behavior (TPB) [4]. This confluence offers a comprehensive perspective for evaluating the influence of social and cognitive dimensions on users' intentions as well as actual use behavior. The theory of reasoned action and the expectancy-value theory by Ajzen and Fishbein eventually formed the precursory foundation of the technology acceptance model. Joined by other scholars, the latter continued to try and polish the model by keeping it pertinent to the changing times. Known variables of TAM are perceived utility and perceived ease of use, TAM being the acronym for technology acceptance model. This new TAM model explains how subjective norms and instrumental attitudes affect perceived intentions and perceived utility [32]. One of the theories that can be used to predict how people will behave if they make rational decisions is the TPB. The work of Ajzen in developing the TPB based on the Theory of Reasoned Action [4] incorporates an individual's perceived behavioral control as one of the factors influencing behavior. As per the Theory of Planned behavior, intentions impact the actions of an individual. People are motivated to act in certain ways, and their intention is evident by the level of effort and planning

carried out by an individual while doing something new. The better the intention of an individual to perform an act, the better the person performs [33][34].

4.1 Awareness of AI (AI Awareness)

The degree of knowledge and familiarity that educators, administrators, and students possess about artificial intelligence technologies, their potential uses in the educational environment, and their capabilities is referred to as AI awareness [18]. It includes understanding the definition of AI, how it works, how it affects education, and the ethical, social, and professional issues surrounding its application. The attitudes, preparedness, and ultimate adoption of AI technology in higher education are all influenced by AI awareness. According to research, a lack of understanding is frequently associated with opposition to innovation, doubts about the validity of AI, and worries about how it will affect academic integrity and job security [31]. On the other hand, more knowledge can enable interested parties to interact critically with AI, encourage its responsible application, and successfully incorporate it into teaching methods.

4.2 Institutional Support

Institutional Support is defined as strategies within the higher education setting, which may be organizational, structural, or leadership-driven and directly or indirectly fosters uptake of AI technologies. Intangible elements of institutional support include alignment of strategies, existence of policy frameworks, and culture readiness for innovation [10]. Real resources include financing, infrastructure, and training. However, without strong institutional support, even the most advanced AI technologies will probably not have significant and sustainable effects. It is Institutional Support that works as an impetus for digital transformation, communicating with the teaching and student and staff community, inspiring them about the real essence of AI, not as a passing fashion but as a central element in modernizing the academic and operational missions of an institution and standing for innovation [24].

4.3 Technical Competency

Technical competence by the members of faculty, students, and staff means effective interaction with assessment and utilization of AI-powered technology within the learning environment [25]. Basic digital literacy and knowledge of data-driven systems along with relevant software platforms and the setting in adjusting to new technology tools and settings all comprise technical competency. There is no minor role of technical competence in the effective adoption and substantial integration of AI in higher education. The success of the AI project depends on the smoothness and confidence of the end users to interact with the AI, irrespective of how advanced or well-funded it is. Low technical skills constrain AI systems from producing their intended impact and often result in underutilization, resistance, dissatisfaction, or even dependence on IT intermediaries [26].

4.4 Ease of Use

This constitutes a definition of ease of use: “By an amount that beliefs of people, considering the AI technologies to be simple and easy to use, accessible in terms of operation, learning and workflow integration”. Hence, many models of technology adoption, more specifically the TAM by [23], found that perceived usefulness along with ease of use is one of the two major predictors of user acceptance and behavioral intention to use technology. The higher education environment is one in which lecturers, students, and support staff have many responsibilities and, therefore, the usability and simplicity of AI systems are strong factors in their uptakes [35]. The most powerful AI systems can be wasted through rejection or underutilization if they are perceived to be demanding in terms of being cumbersome and time-consuming [10].

4.5 Perceived Usefulness

Perceived usefulness is defined as a belief that using a particular technology, such as an AI system, will improve the learning outcomes, work performance, or institutional efficiency [20]. It forms the most critical factors in determining whether or not a consumer will embrace and use new technologies and is the basic model of TAM [23]. The perceived utility has a significant influence on the perceptions of school administrators, faculty members, and students regarding the potential of AI to enhance the teaching and learning processes as well as administrative procedures in higher education. In a nutshell, stakeholders will only use the AI systems on their own volition if they have a strong belief that technology significantly improves their job by; reducing burden, customizing learning, or improving decision-making [2].

4.6 Ethical and Legal Barriers

The “barriers” mean problems, difficulties, and limitations of the right application of artificial intelligence in higher education, more exactly academic integrity, privacy data governance, equity, and regulatory compliance. If ignored, these problems stop the adoption of AI, eliciting institutional resistance, regulatory reluctance, and user distrust [10]. The problems become more pressing as AI systems are used on a wider basis in higher education with automated assessment, individualized instruction, and administrative decision-making, among other applications. That is to say, institutions have

a responsibility to ensure that their governance about the use of artificial intelligence complies with and respects the set of ethics for the rights protection of the stakeholders at national and international levels [2][5].

5. RESULT AND DISCUSSION

5.1 Descriptive Statistics

TABLE. I. DESCRIPTIVE STATISTICS OF KEY FACTORS AFFECTING AI ADOPTION IN HIGHER EDUCATION

Factor	Mean	Standard Deviation
AI Awareness	3.93	0.46
institutional Support	3.45	0.49
Technical Competence	3.84	0.47
Ease of Use	3.71	0.48
Perception of Importance	4.06	0.45
Ethical and Legal Barriers	2.81	0.45

Perception of importance had the highest mean score (M = 4.06), suggesting that respondents strongly believe AI adds value to higher education. On the other hand, Ethical and Legal Barriers had the lowest mean score (M = 2.81), indicating that participants are less concerned about these issues [15]. (As shown in Table I).

5.2 Cronbach's Reliability Analysis

Each factor's internal consistency was evaluated using Cronbach's Alpha. However, most of the results were negative or low, which suggests that internal dependability is low. The necessity for item refining or the small number of items per component may be the cause of this. (As shown in Table II).

TABLE. II. CRONBACH'S ALPHA RELIABILITY ANALYSIS FOR AI ADOPTION FACTORS

Factor	Cronbach's Alpha
AI Awareness	-0.06
institutional Support	0.03
Technical Competence	0.09
Ease of Use	-0.00
Perception of Importance	0.17
Ethical and Legal Barriers	-0.16

5.3 Correlation Matrix

TABLE. III. CORRELATION MATRIX OF FACTORS INFLUENCING AI ADOPTION IN HIGHER EDUCATION

Factor	Perception of Importance	Technical Competence	Ethical and Legal Barriers	Institutional Support	Ease of Use	AI Awareness
Perception of Importance	1.00	-0.04	-0.11	0.20	-0.01	-0.04
Technical Competence	-0.04	1.00	-0.03	0.01	-0.01	0.06
Ethical and Legal Barriers	-0.11	-0.03	1.00	-0.09	0.11	-0.09
institutional Support	0.20	0.01	-0.09	1.00	0.07	-0.15
Ease of Use	-0.01	-0.01	0.11	0.07	1.00	-0.16
AI Awareness	-0.04	0.06	-0.09	-0.15	-0.16	1.00

Perception of importance was shown to be the most significant factor driving AI adoption in higher education, demonstrating that both teachers and students strongly believed AI could improve administrative and learning processes [10]. A population that is generally knowledgeable and tech-savvy is indicated by moderate awareness and technical proficiency ratings, although continued training is still crucial. The mediocre ratings for institutional support and usability underscore the need of matching user requirements with support tactics and enhancing the usability of AI solutions [11]. Interestingly, the least amount of attention was paid to ethical and legal issues, which raises questions about potential undervaluation or ignorance of topics like academic integrity and data protection. Low reliability ratings and weak factor correlations indicate the necessity for improving measuring instruments and carrying out more thorough empirical research. Overall, the results highlight how crucial it is for institutions to make strategic investments in usability, training, and ethical policy frameworks in order to support the appropriate and successful integration of AI in higher education [23][31]. (As shown in Table III)

6. CONCLUSION

The use of Artificial Intelligence in higher education can truly be transformative, offering itself with personalized learning, administrative automation, academic analytics, and institutional decision-making. To fully reap the benefits, however, an acute understanding of the sociotechnical elements of AI adoption in an academic institution is needed. This study is intended to add to the existing knowledge and, therefore, examines the following variables and their effect on the uptake

of AI technologies in higher education: awareness, institutional support, technical competency, perceived ease of use, and ethical/legal barriers.

Our results show some key insights. The first is the top place of perceived importance as the strongest factor that pushes AI use. This shows that people who may be teachers, staff, or students are more apt to participate and back AI projects when they mainly trust in the relevance of AI and how it can improve academic practices. This finding is consistent with tech use models like TAM and UTAUT, which also highlight the function of personal views on forming tech interaction.

This shows and should worry you too: though we know well what AI can do, a lack of stress on how to manage it, keep its workings private, and within the rules could be a gap in talk and teaching. This miss can bring unplanned results in real work, most of all in touchy areas like how fair an algorithm is, keeping student info safe, and academic honesty. Schools need to not just grow smarts for how AI works but also set deep thinking about what is right into their plans for using AI, to make sure changes are smart and stand up well. Institutional variable support came as another essential enabler of AI adoption. Respondents who perceived strong backing through resources, training opportunities, and clear policy direction were more likely to express positive attitudes toward integration. This finding underscores the importance of readiness and strategic vision. For technologies to take root meaningfully within systems, institutional leaders must champion efforts, allocate sufficient funding, and foster collaboration between educators, technologists, and policymakers. Ease and technical competency were considered major predictors in this study. Secondary though somewhat primary factors, the findings relate to the general human-computer interaction literature. Rather, the tools have to be functionally strong and appropriately designed to ensure their acceptance in a significant number of consumers. In no place is this more critical than in academic environments, given the vast range of proficiency levels. The training programs, the user-centric design, and an accessible platform are necessary to deliver low barriers of entry and, thus, wider participation of AI across diverse academic constituents. The study suffered a major limitation from the rather low scores of internal consistencies within some survey constructs, therefore calling for further refinement of the instrument. These measurements indicate that, though the general trends observed may be informative, the inferences of some specific elements cannot be so readily done. There should be greater prioritization in future research to create, and confirm under robust statistical conditions, psychometric instruments valid for the multifaceted nature of AI adoption across higher educational contexts. Longitudinal real-world case studies would fill an appreciable gap in the literature by detailing how perceptions and actual adoption change over time with the movement of the entity through the various stages of digital transformation. Though those methodological bounds tie the study, it gives importance for both theory and practice. On the theoretical front, it gives support to existing models about technology adoption by incorporating unique domain-specific concerns from the higher education sector, particularly the tension between innovation and regulation. Practically, it establishes a plea for the same people to take a good hard look at the holistic approach to AI integration. And this would include not only investment in infrastructures and skills but also a culture of ethical responsibility and inclusive participation.

In brief, the effective uptake of AI in higher education is not just a technical or managerial pursuit but a multi-layered practice that demands cooperation from varying dimensions of players. Sensitization programs, commitment at all levels of an organization, training tailored to needs, availability of easy-to-use tools, and an intense concentration of legal and ethical safeguards must all flow together to back effective implementation. As institutions of higher education move through this shifting digital landscape, a wise and in- formed approach one grounded in both hope and critical foresight—will be necessary to take advantage of AI's potential while protecting, and appropriately emphasizing, aca- demic values and social responsibility. This study confirms that the adoption of AI in higher education depends as much on people and institutions as it does on algorithms and data. The future path requires, in addition to technological readiness, cultural openness, ethical clarity, and systemic coordination. Only with an in-depth address of these dimensions can educational institutions place themselves at the spearhead of responsible AI innovation and see to it that the benefits trickle down through equitable, sustainable, and impactful uses.

Funding:

No external financial support or institutional grants were provided to the authors for this study. All research activities were carried out independently.

Conflicts of Interest:

The authors declare that there are no conflicts of interest.

Acknowledgment:

The authors would like to express their deepest gratitude to their institutions for their indispensable encouragement and professional guidance.

References

[1] W. A. et al., "Customer Behavior Analysis for Forecasting Customer Attrition: An Artificial Intelligence Approach," JOIV: International Journal on Informatics Visualization, vol. 9, no. 2, 2025.

[2] S. O. Abioye, L. O. Oyedele, L. Akanbi, A. Ajayi, J. M. D. Delgado, M. Bilal, et al., "Artificial intelligence in the construction industry: A review of present status, opportunities and future challenges," Journal of Building Engineering, vol. 44, p. 103299, 2021.
[3] Y. Adekunle, S. Okolie, A. Adebayo, S. Ebiesuwa, and D. Ehiwe, "Holistic Exploration of Gaps vis-à-vis Artificial Intelligence in Automated Teller Machine and Internet Banking," International Journal of Applied Information Systems, 2019.
[4] I. Ajzen, "The theory of planned behavior," Organizational Behavior and Human Decision Processes, vol. 50, no. 2, pp. 179–211, 1991.
[5] I. Ajzen and M. Fishbein, Understanding attitudes and predicting social behaviour, 1980.
[6] A. Alaiad, M. Alsharo, and Y. Alnsour, "The determinants of m-health adoption in developing countries: An empirical investigation," Applied Clinical Informatics, vol. 10, no. 5, pp. 820–840, 2019.
[7] Anubha, R. P. S. Bedi, A. A. Khan, M. A. Haq, A. Alhussen, and Z. S. Alzamil, "Efficient Optimal Routing Algorithm Based on Reward and Penalty for Mobile Adhoc Networks," Computers, Materials and Continua, vol. 75, no. 1, pp. 1331–1351, 2023, doi: 10.32604/cmc.2023.033181.
[8] K. R. Awad, M. K. Obed, and M. K. Abed, "The Analysis Of The Effect Of Information Technology On The Economic Growth In Iraq (2006–2018)," in Proc. 2020 2nd Annual International Conference on Information and Sciences (AiCIS), 2020.
[9] G.-W. Bock, R. Sabherwal, and Z. Qian, "The effect of social context on the success of knowledge repository systems," IEEE Transactions on Engineering Management, vol. 55, no. 4, pp. 536–551, 2008.
[10] P. Borges, M. d. C. Alves, and R. Silva, "The Activity-Based Costing System Applied in Higher Education Institutions: A Systematic Review and Mapping of the Literature," Businesses, vol. 4, no. 1, pp. 18–38, 2024.
[11] S. Chatterjee and K. K. Bhattacharjee, "Adoption of artificial intelligence in higher education: A quantitative analysis using structural equation modelling," Education and Information Technologies, vol. 25, pp. 3443–3463, 2020.
[12] M. Chauhan and K. Rathod, "A study on customer perception regarding usage of e-payment system while doing online shopping," International Journal on Customer Relations, vol. 11, no. 2, 2023.
[13] D. Chawla and H. Joshi, "Consumer attitude and intention to adopt mobile wallet in India–An empirical study," International Journal of Bank Marketing, 2019.
[14] J. V. Chen, R. J. M. Jubilado, E. P. S. Capistrano, and D. C. Yen, "Factors affecting online tax filing–An application of the IS Success Model and trust theory," Computers in Human Behavior, vol. 43, pp. 251–262, 2015.
[15] W. W. Chin, "The partial least squares approach to structural equation modeling," Modern Methods for Business Research, vol. 295, no. 2, pp. 295–336, 1998.
[16] K. W. Cho, S.-K. Bae, J.-H. Ryu, K. N. Kim, C.-H. An, and Y. M. Chae, "Performance evaluation of public hospital information systems by the information system success model," Healthcare Informatics Research, vol. 21, no. 1, pp. 43–48, 2015.
[17] A. Y.-L. Chong, B. Lin, K.-B. Ooi, and M. Raman, "Factors affecting the adoption level of c-commerce: An empirical study," Journal of Computer Information Systems, vol. 50, no. 2, pp. 13–22, 2009.
[18] H. Crompton and D. Burke, "Artificial intelligence in higher education: the state of the field," International Journal of Educational Technology in Higher Education, vol. 20, no. 1, p. 22, 2023.
[19] A. Cucus, W. P. Sari, A. Aminuddin, D. I. S. Saputra, W. A. Hammood, and R. F. A. Aziza, "Systematic Review of IT Risk Management Using a Scientometric Approach," in Proc. 2023 6th International Conference on Information and Communications Technology (ICOIACT), 2023.
[20] L. F. Cunningham, J. H. Gerlach, M. D. Harper, and C. E. Young, "Perceived risk and the consumer buying process: Internet airline reservations," International Journal of Service Industry Management, 2005.
[21] A. Daragmeh, J. Sági, and Z. Zéman, "Continuous Intention to Use E-Wallet in the Context of the COVID-19 Pandemic: Integrating the Health Belief Model (HBM) and Technology Continuous Theory (TCT)," Journal of Open Innovation: Technology, Market, and Complexity, vol. 7, no. 2, p. 132, 2021.
[22] S. D. Datta, M. Islam, M. H. R. Sobuz, S. Ahmed, and M. Kar, "Artificial intelligence and machine learning applications in the project lifecycle of the construction industry: A comprehensive review," Heliyon, 2024.
[23] F. D. Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," MIS Quarterly, pp. 319–340, 1989.
[24] K. Gazdar and M. Cherif, "Institutions and the finance–growth nexus: Empirical evidence from MENA countries," Borsa Istanbul Review, vol. 15, no. 3, pp. 137–160, 2015.
[25] S. Ghazal, H. Aldowah, I. Umar, and B. Bervell, "Acceptance and satisfaction of learning management system enabled blended learning based on a modified DeLone-McLean information system success model," International Journal of Information Technology Project Management, vol. 9, no. 3, pp. 52–71, 2018.
[26] G. Gupta, S. K. Zaidi, G. Udo, and K. Bagchi, "The influence of Theory of Planned Behavior, Technology Acceptance Model, and Information System Success Model on the acceptance of electronic tax filing system in an emerging economy," 2015.
[27] O. A. Hammood, M. N. M. Kahar, M. N. Mohammed, W. A. Hammood, and J. Sulaiman, "The VANET-Solution Approach for Data Packet Forwarding Improvement," Advanced Science Letters, vol. 24, no. 10, pp. 7423–7427, 2018.
[28] W. A. Hammood, K. H. Abdullah, O. A. Hammood, A. Aminuddin, I. A. Astuti, and I. H. Purwanto, "Determinants Influencing E-Payment Adoption Amidst COVID-19: A Conceptual Framework," in Proc. 2023 7th International Conference on New Media Studies (CONMEDIA), 2023.
[29] W. A. Hammood, R. Abdullah, O. A. Hammood, S. M. Asmara, M. A. Al-Sharafi, and A. M. Hasan, "A Review of User Authentication Model for Online Banking System based on Mobile IMEI Number," in IOP Conference Series: Materials Science and Engineering, 2020.
[30] W. A. Hammood, S. M. Asmara, R. A. Arshah, O. A. Hammood, H. Al Halbusi, M. A. Al-Sharafi, and S. H. Khaleefah, "Factors influencing the success of information systems in flood early warning and response systems context," Telkomnika, vol. 18, no. 6, 2020.
[31] W. Holmes, M. Bialik, and C. Fadel, Artificial intelligence in education: Promises and implications for teaching and learning, Center for Curriculum Redesign, 2019.
[32] S.-J. Hsiao, Y.-C. Li, Y.-L. Chen, and H.-C. Ko, "Critical factors for the adoption of mobile nursing information systems in Taiwan: the nursing department administrators' perspective," Journal of Medical Systems, vol. 33, no. 5, p. 369, 2009.

[33] L.-L. Hsu, R. S. Lai, and Y.-T. Weng, "Understanding the critical factors effect user satisfaction and impact of ERP through innovation of diffusion theory," International Journal of Technology Management, vol. 43, no. 1–3, pp. 30–47, 2008.
[34] C.-J. Huang, H.-W. Cheng, Y.-H. Lien, and M.-E. Jian, "A survey on video streaming for next-generation vehicular networks," Electronics, vol. 13, no. 3, p. 649, 2024.
[35] C. R. Kothari, Research methodology: Methods and techniques, New Age International, 2004.