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Cormack Ye April 8th, 2025

An Investigation into Business School Students' AI Literacy with the Case of Emory University's Goizueta Business School-Measuring the Impacts of Students' AI Literacy on Intention to Use AI in Workplace and the Mediating Effects of Perceived Usefulness, Perceived Ease of Use, and Perceived Credibility

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Abstract

An Investigation into Business School Students' AI Literacy with the Case of Emory University's Goizueta Business School-Measuring the Impacts of Students' AI Literacy on Intention to Use AI in Workplace and the Mediating Effects of Perceived Usefulness, Perceived Ease of Use, and Perceived Credibility

By Cormack Ye

This thesis investigated the role of AI literacy in influencing business school students' intention to use AI technologies in their future workplaces by employing and extending the technology acceptance model (TAM) with the added mediating variable of perceived credibility. A convenience sampling method was used to gather 98 responses from students from Emory University's Goizueta Business School. SPSS and Amos were employed to conduct the statistical analysis. The research results showed that students' AI literacy positively influenced their intention to use AI technologies in their future works, and perceived usefulness, perceived ease of use, and perceived credibility positively played a mediating role in this process. This study will provide references to school administrators and teachers aiming to enhance students' employability and competitive advantages in the labor market and future workplaces that have growingly been penetrated by AI technologies.

Keywords: Business school students, AI literacy, Perceived usefulness, Perceived ease of use, Perceived credibility, Intention to use.

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1. Introduction

1.1 Background

The rapid advancement of computer technology, particularly in the realm of artificial intelligence (AI), has significantly changed the labor market.[1] AI is poised to fundamentally reshape human resource management by playing an increasingly crucial role in managerial decision-making.[2] World Bank Group reported that technological advancements applied at the level of repetitive tasks accounted for half of Europe's job growth between 1999 and 2016.[3] Additionally, International Labour Organisation highlights that 24% of office-related work is highly susceptible to technological changes, while 58% of them falls into the medium-risk category.[4] In the United States, approximately 47% of jobs face a high likelihood of automation.[5] Meanwhile, in Germany, although AI-driven robotisation has not substantially impacted overall employment levels, it has led to a decline in youth employment.[6] Therefore, for young people in this era, especially university students, how should they do to adapt to such changes in the labour market so as to maintain their competencies?

In response to these changes, the notion of preparation for AI has emerged in academic discussions, emphasizing an organization's ability to integrate AI effectively to generate added value through digital transformation. Companies that successfully implement and expand AI capabilities strengthen their competitive edge and develop

[1] Yuan Pan and Fabian J Froese, "An interdisciplinary review of AI and HRM: Challenges and future directions," *Human resource management review* 33, no. 1 (2023).
[2] Michael Leyer and Sabrina Schneider, "Decision augmentation and automation with artificial intelligence: threat or opportunity for managers?," *Business Horizons* 64, no. 5 (2021).
[3] World Bank Group, "The changing nature of work," (2019), https://www.worldbank.org/en/publication/wdr2019.
[4] International Labour Organisation, "Generative AI and Jobs: A global analysis of potential effects on job quantity and quality," (2023), https://www.ilo.org/global/publications/working-papers/WCMS_890761/lang--en/index.htm.
[5] Carl Benedikt Frey and Michael A Osborne, "The future of employment: How susceptible are jobs to computerisation?," *Technological forecasting and social change* 114 (2017).
[6] World Bank Group, "The changing nature of work."

advanced AI-driven competencies. Therefore, in the future labor market, employees' AI capabilities are expected to be emphasized by their employers. For higher education, one of their important tasks is to cultivate students' employability and prepare them to enter the workplace. As AI continues to evolve, more students will engage with sophisticated AI tools for learning, more employees will integrate AI into their work, and more individuals will incorporate AI into their everyday lives. To thrive in this AI-driven era, students must continuously assess their understanding of AI and keep pace with its developments. This aligns with UNESCO's recommendations on AI competency for educators and students, which emphasize the importance of acquiring the necessary knowledge, skills, and attitudes to interact with AI ethically and safely both in educational settings and workplaces.[7]However, Research by Qureshi, Khan, Raza, Imran and Ismail identifies a gap between currently available competencies and those required to meet the demands of AI technology.[8] Fareri, Fantoni, Chiarello, Coli and Binda underscore the importance of not only adapting existing competencies into professional models to meet Industry 4.0 requirements but also fostering new skill sets tailored to these technological trends.[9] OECD calls for collaboration among governments, businesses, and other stakeholders like universities to equip individuals with necessary AI-related competencies.[10] Meanwhile, UNESCO advocates for the development of tools and mechanisms to meet the current and future demands of AI-specific competencies so as to align educational curricula with evolving labor market demands.[11]

Digital competencies offer critical competitive advantages for both IT and non-IT occupations (e.g. business-related occupations).[12] A critical component of the higher

[7] UNESCO, "United Nations Educational, Scientific and Cultural Organization," (2019), https://unesdoc.unesco.org/ark:/48223/pf0000368303.
[8] Muhammad Imran Qureshi et al., "Digital technologies in education 4.0. Does it enhance the effectiveness of learning?," (2021).
[9] Silvia Fareri et al., "Estimating Industry 4.0 impact on job profiles and skills using text mining," *Computers in industry* 118 (2020).
[10] OECD, "Organisation for Economic Co-operation and Development, 2023. The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers," (2023), https://www.oecd.org/publications/the-impact-of-ai-on-the-workplacemain-findings-from-the-oecd-ai-surveys-of-employers-and-workers-ea0a0fe1-en.htm.
[11] UNESCO, "United Nations Educational, Scientific and Cultural Organization."
[12] Ni Chen, Zhi Li, and Bo Tang, "Can digital skill protect against job displacement risk caused by artificial intelligence? Empirical evidence from 701 detailed occupations," *PLoS One* 17, no. 11 (2022).

education institutions' mission for the society is the added value in terms of the skills demanded in the professional activities, especially for the graduates who are going to enter the labour market.[13] Furthermore, studies emphasized the role of collaboration between the business environment and universities to adopt new learning methodologies in the area of AI. The advantages of a closer collaboration between industry and universities are emphasized by Eriksson et al. with the case study of the eight AI competence centers established in Italy.[14] Besides, the specialised studies by UNESCO have also demonstrated a range of good practices on the set of AI skills at the educational level: in Finland, an AI solution (named Headai) focusing on the development of AI skills maps was developed, with the aim to align the university education with the demand of the labour market; in Singapore, an initiative named the SkillsFuture82 was developed, focusing on digital reskilling and the development of specific skills; in China, the "Algorithms and Computational Intelligence" discipline has been introduced in the ICT curriculum standards for high schools since 2017.[15] Moreover, many governments have also acknowledged the significance of AI projects in higher education, leading to the publication and distribution of national AI strategies by countries such as Germany,[16] China,[17] and the United States.[18] Meanwhile, government-supported pilot projects, like Finland's "Elements of AI" (https://www.elementsofai.com/), have been developed to enhance AI literacy among individuals without AI expertise.

[13] C.V. Marinaș, S.I. Goia, A.A. Gora, R.Ș. Igreț, M. Roman, and S.C. Ștefan, "A Bibliometric Analysis of the Relationship Internship–Skills–Employ-Ability," in *The 15th International Management Conference, Managing People and Organizations in a Global Crisis*, (Bucharest, Romania, n.d.), S.l.: s.n.

[14] T. Eriksson, A. Bigi, and M. Bonera, "Think with Me, or Think for Me? On the Future Role of Artificial Intelligence in Marketing Strategy Formulation," *The TQM Journal* 32, no. 4 (2020): 795-814, https://doi.org/10.1108/TQM-12-2019-0303.

[15] United Nations Educational, Scientific and Cultural Organization, *AI and Education: Guidance for Policy-Makers* (2021), https://unesdoc.unesco.org/ark:/48223/pf0000376709.

[16] Bundesministerium für Bildung und Forschung, *Guideline on the Federal-State Initiative for the Promotion of Artificial Intelligence in Higher Education*, (2021), https://www.bmbf.de/bmbf/shareddocs/bekanntmachungen/de/2021/02/3409_bekanntmachung.html.

[17] PRC Ministry of Education (教育部), *Notice of the Ministry of Education on Issuing the Artificial Intelligence Innovation Action Plan for Institutions of Higher Education* (English translation, etcetera language group, inc., trans.; Center for Security and Emerging Technology, 2019), https://cset.georgetown.edu/wp-content/uploads/Notice-of-the-Ministry-of-Education-on-Issuing-the-Artificial-Intelligence-Innovation-Action-Plan-for-Institutes-of-Higher-Education.pdf.

[18] National Artificial Intelligence Initiative Office (NAIIO), *Education and Training*, National Artificial Intelligence Initiative (2021), https://www.ai.gov/strategic-pillars/education-and-training/.

1.2 Research aim and objectives

The existing literature highlights the critical role played by higher education institutions such as business schools in equipping students with AI skills that are relevant to the labour market. Currently, even though the number of people who are aged between 25 and 34 and have a higher education degree has doubled in the previous two decades, a skills shortage still exists in the labour market in terms of using AI systems.[19] This indicates that there is a long way to go for higher education institutions (e.g., business schools) to increase students' AI skills that can be transferred to the labour market. Therefore, assessing the current level of AI literacy of business school students can help those business schools better understand the current levels of students' AI literacy in order to adjust their AI education strategies and tactics. Therefore, one of the research purposes of this thesis is to measure the current level of AI literacy of business school students.

However, cultivating higher AI literacy and more AI skills does not necessarily mean that students will be willing to use AI solutions in their future work, that is, it does not guarantee that their AI literacy and AI skills will transform into a competitive advantage in their workplaces, since some researchers showed that technological competencies do not have a positive and significant influence on intention to use AI solutions.[20] Therefore, investigating the factors that can influence students' intention to use AI applications in workplace is also of great importance, such as the mediating factors in the translation of AI literacy into intention to use AI technologies in workplace.

Based on the above discussion, this study aims to investigate the current level of

[19] The Lisbon Council, *What Artificial Intelligence Can Do for Workers and What Skilled Workers Can Do for the World* (Brussels: The Lisbon Council, 2022), [page number], accessed September 5, 2023, https://lisboncouncil.net/wp-content/uploads/2022/11/LISBON-COUNCIL-RESEARCH_Skills_Innovation_and_AI.pdf.
[20] S. Gupta, W. Ghardallou, D.K. Pandey, and G.P. Sahu, "Artificial Intelligence Adoption in the Insurance Industry: Evidence Using the Technology–Organization–Environment Framework," *Research in International Business and Finance* 63 (2022): article no. 101757, https://doi.org/10.1016/j.ribaf.2022.101757.

AI literacy of business school students and how their AI literary influences their intention to use AI technologies in their future workplace.

The research objectives are as follows:

1) To understand the current situation of business school students learning AI;
2) To measure the level of AI literacy of business school students through the case of Emory University's Goizueta Business School;
3) To investigate the impacts of students' AI literary on their intention to use AI in their future workplaces;
4) To evaluate the effects of potential mediating roles in the process.

Correspondingly, the research questions are as follows:

1) What is the current situation of business school students learning AI?
2) What level of AI literacy have business school students achieved?
3) How does students' AI literacy impact their intention to use AI in the workplace?
4) What additional factors affect students' intention to use AI?

2. Theoretical background and hypotheses development

2.1 Theoretical underpinnings

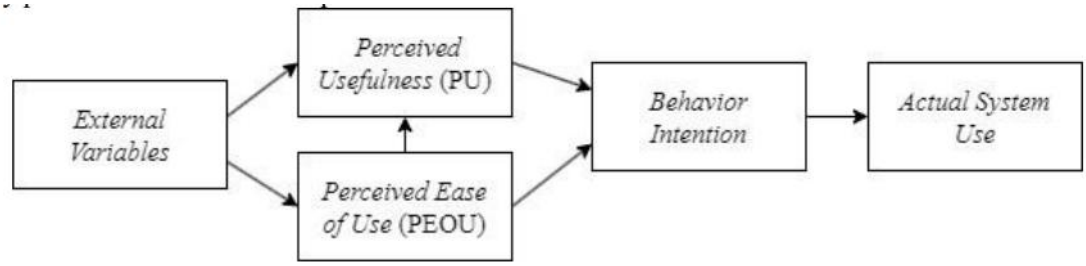
Davis introduced the Technology Acceptance Model (TAM) in 1980 as a framework to explain and predict users' intentions to adopt technology.[21] With reference to "Theory of Reasoned Action (TRA)" proposed by Fishbein and Ajzen,[22]

[21] Fred D Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology," *MIS quarterly* (1989).
[22] Martin Fishbein and Icek Ajzen, "Misconceptions about the Fishbein model: Reflections on a study by Songer-Nocks," *Journal of Experimental Social Psychology* 12, no. 6 (1976).

Davis developed TAM to identify key factors determining computer acceptance.[23] It aims to provide explanations of user behaviours across various populations and end-user computing technologies while remaining theoretically and parsimonious sound.

This model has been evaluated across various respondent groups and contexts, making it become a reliable and robust framework to understand the acceptance of new technologies.[24] [25] According to the model, perceived ease of use (PEU) and perceived usefulness (PU) play a vital role in shaping individuals' new technology acceptance and their actual usage behaviors.[26] [27] Perceived usefulness refers to the extent to which an individual believes that utilizing technology will improve their job performance. In contrast, perceived ease of use is defined as the belief that interacting with technology requires minimal effort.[28]

Picture 1: Original Model of Technology Acceptance Model (TAM) Theory



Since its introduction, TAM has been refined into a dependable model for predicting user acceptance. Addressing its initial limitations, researchers have developed several improved models, all of which extend from the two core variables of perceived usefulness and perceived ease of use.[29] [30] Further advancements of TAM

[23] Fred D Davis, "User acceptance of information technology: system characteristics, user perceptions and behavioral impacts," *International journal of man-machine studies* 38, no. 3 (1993).
[24] Andrina Granić and Nikola Marangunić, "Technology acceptance model in educational context: A systematic literature review," *British Journal of Educational Technology* 50, no. 5 (2019).
[25] Mostafa Al-Emran and Andrina Granić, "Is it still valid or outdated? A bibliometric analysis of the technology acceptance model and its applications from 2010 to 2020," *Recent advances in technology acceptance models and theories* (2021).
[26] Davis, "User acceptance of information technology: system characteristics, user perceptions and behavioral impacts."
[27] Linda C Gumbo, Douglas Halimani, and Misheck Diza, "Perceived usefulness (PU) and perceived ease of use (PEOU) as key drivers of mobile banking adoption: a case of Zimbabwe," (2017).
[28] Davis, "User acceptance of information technology: system characteristics, user perceptions and behavioral impacts."
[29] Muhammad Mitsal Islami, Muhammad Asdar, and Andi Nur Baumassepe, "Analysis of perceived usefulness and perceived ease of use to the actual system usage through attitude using online guidance application," *Hasanuddin Journal of Business Strategy* 3, no. 1 (2021).
[30] Viswanath Venkatesh et al., "User acceptance of information technology: Toward a unified view," *MIS quarterly* (2003).

include models such as the Unified Theory of Acceptance and Use of Technology (UTAUT),[31] TAM 2, [32] and TAM 3.[33]

For the past thirty years, empirical research has consistently provided evidence in favor of the TAM, demonstrating its ability to explain technology acceptance. Recognized as both succinct and powerful, the TAM has been shown to apply across different technological contexts and environments. Within educational settings, it has been widely employed to evaluate the extent to which teachers intend to adopt technologies in their instruction.[34] However, there is insufficient studies that employed TAM to evaluate the extent to which students intend to adopt AI technologies in their future workplace. Therefore, this study tries to fill this gap by providing more empirical evidence targeting university students.

In addition, although a substantial number of empirical studies have examined the TAM with different samples, two meta-analyses by Scherer and colleagues identified structural discrepancies in TAM findings across studies.[35] [36] Differences were noted in terms of the statistical significance of path coefficients, the degree of variance explained in technology adoption intentions, and the moderating effects present in the studies. For example, some research did not support the statistical significance of the relationship between PEU and PU; in certain cases, PU emerged as a more influential factor in shaping attitudes than PEU, whereas other studies reported the reverse trend. Variations in findings might be attributed to differences in the characteristics of the studied samples, which could moderate the relationships among the TAM constructs. As an example, a study suggested that the variance of the impacts of PEU on attitudes

[31] Venkatesh et al., "User acceptance of information technology: Toward a unified view."
[32] Venkatesh et al., "User acceptance of information technology: Toward a unified view."
[33] Viswanath Venkatesh and Hillol Bala, "Technology acceptance model 3 and a research agenda on interventions," *Decision sciences* 39, no. 2 (2008).
[34] Nikola Marangunić and Ankica Granić, "Technology Acceptance Model: A Literature Review from 1986 to 2013," *Universal Access in the Information Society* 14, no. 1 (2015): 81,
[35] Rainer Scherer and Timothy Teo, "Unpacking Teachers' Intentions to Integrate Technology: A Meta-Analysis," *Educational Research Review* 27 (2019): 90, https://doi.org/10.1016/j.edurev.2019.03.001.
[36] Rainer Scherer, Fazilat Siddiq, and Jo Tondeur, "The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education," *Computers & Education* 128 (2019): 13, https://doi.org/10.1016/j.compedu.2018.09.009.

was influenced by the level of educational experiences.[37]

The aforementioned differences in findings underscore the necessity of continued investigation into the TAM, especially concerning its applicability in specific research settings. For instance, several studies exploring the structural consistency of the TAM across educator subgroups (such as pre-service versus in-service educators or educator of different national origins) have found that full invariance is not always supported, indicating that contextual factors may influence its applicability.[38]

Such reflections prompted our investigation of the TAM in the context of business school education. While many studies have applied TAM in educational settings,[39] there remains a lack of empirical validation specifically examining business school students' acceptance of AI solutions in this sector.[40] Moreover, while technological integration is increasingly vital in employment-related education, studies focusing on students' acceptance of technology in this domain are relatively scarce.[41] Applying the TAM to business school education and assessing its relevance in this field would serve as an additional step toward validating the model. This research incorporates essential factors into a newly proposed framework designed to assess business school students' AI literacy levels and their intentions to use AI technology in their future workplace (see Picture 2). The novelty of this conceptual model lies in that AI literacy is treated as the external variable and perceived credibility is added as one of the mediating variables. A few studies have already studied AI literacy as the external variable based on the TAM model, and some studies have incorporated perceived credibility as a variable that influence intention to use AI. However, few studies have incorporated both

[37] Scherer and Teo, "Unpacking Teachers' Intentions," 95.

[38] Scherer, Siddiq, and Tondeur, "The technology acceptance model (TAM)," 15.

[39] Stephanie G Fussell and Dothang Truong, "Using virtual reality for dynamic learning: an extended technology acceptance model," *Virtual Reality* 26, no. 1 (2022).

[40] Chiara Antonietti, Alberto Cattaneo, and Francesca Amenduni, "Can teachers' digital competence influence technology acceptance in vocational education?," *Computers in Human Behavior* 132 (2022).

[41] Kambiz Zarafshani, Ali Solaymani, Marco D'Itri, Michelle M. Helms, and Saeed Sanjabi, "Evaluating technology acceptance in agricultural education in Iran: A study of vocational agriculture teachers," *Social Sciences & Humanities Open* 2, no. 1 (2020): 100041, https://doi.org/10.1016/j.ssaho.2020.100041.

of two in this model.

Treating AI literacy as the external variable in this new extended TAM model is mainly due to the importance of AI literacy in predicting Students' intention to use AI technologies in their future workplaces, which will be elaborated in the following section. Adding perceived credibility as the third mediating variable in the new extended model is because that this factor is expected to play an important role in students' acceptance and adoption of AI technologies due to the phenomenon like "hallucinations". Some GenAI tools (Generative Artificial Intelligence, a type of artificial intelligence that can generate new content like text, videos, audio, music, and images, through learning from existing data and creating new similar outputs) can sometimes generate information that seems to be factual but is actually fabricated or incorrect, and people often call this phenomenon as "hallucinations".[42] Reasons behind this phenomenon include: text generated by AI seem very professional and confident, making it hard to discern which piece of information is accurate and which one is not. Gen AI can produce misleading content easily and quickly, allowing it to spread misinformation more scalable and faster than human do. GenAI models do not actually understand content while appearing to understand it; if biased or inaccurate data is used to train AI models, they may generate content containing biased or inaccurate information, which may spread misinformation and reinforce stereotypes.[43] Another difference between the classic TAM model (see Picture 1) and the new extended model (see Picture 2) is that the new extended model only includes the behavioural intention or behaviour intention (i.e., intention to use), and ignores the actual system use of AI technologies in the workplace. This is because most students have not yet entered the formal workplaces and thus do not have actual usage experience of AI technologies in

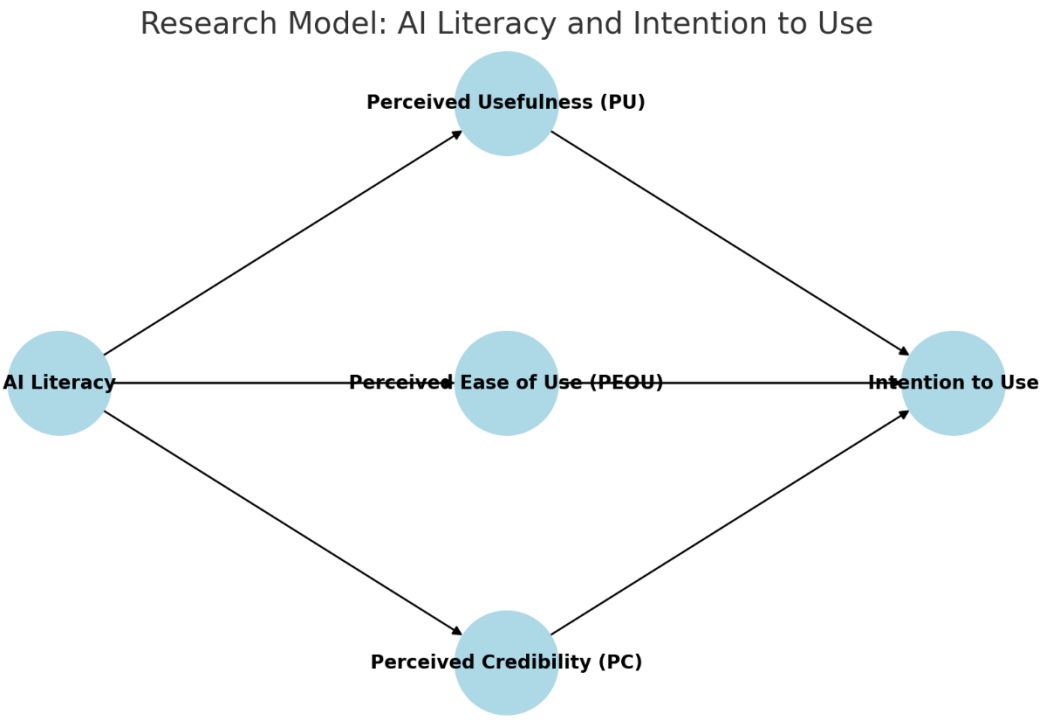
[42] Sonja Bjelobaba et al., "Research Integrity and GenAI: A Systematic Analysis of Ethical Challenges Across Research Phases," *arXiv preprint arXiv:2412.10134* (2024).

[43] Xiao Fang et al., "Bias of AI-generated content: an examination of news produced by large language models," *Scientific Reports* 14, no. 1 (2024).

the workplace. Therefore, this new extended model only involves students' intention to use AI technologies in the workplace as the predictor to their actual usage in the future.

All in all, it can be said that this new conceptual model proposed by this study is an extended TAM model that is expected to serve the research purpose more effectively. In comparison, the classic TAM model (see Picture 1) serves as the basic model facilitating the construction of this new model and provides inspirations for its birth.

Picture 2. Conceptual model of the research



2.2 Hypothesis Development

2.2.1 AI literacy

Literacy, in its traditional sense, refers to specific ways of understanding and engaging with reading and writing to express or comprehend ideas within a particular

context.[44] Digital literacy extends this concept to the ability to effectively utilize, evaluate, and apply digital services, resources and tools in lifelong learning.[45] AI literacy is defined by Long and Magerko as a collection of competencies that enable people to critically assess AI technologies, collaborate and communicate effectively with AI, and utilize AI in various settings, including online platforms, the home, and the workplace.[46] Their definition comprises 17 specific skills and serves as an operational framework.

AI literacy shares connections with computational, data, and digital literacy, though their relationships can be mutually dependent yet distinct.[47] For instance, AI literacy needs users to obtain a basic understanding of how to use computers so as to understand AI[48]—a prerequisite. Regarding the close connection between machine learning (a branch of AI) and data, data literacy is defined as the ability to understand, evaluate, work with, and argue with data as a part of a more comprehensive procedure of inquiry of the world; therefore, AI literacy largely overlaps with data literacy.[49] Furthermore, scientific and computational literacies may not have close relation to AI literacy. For example, scientific literacy, which refers to an appreciation of the basic limitations, contributions and nature of science, is not required in AI literacy.[50] Similarly, computational literacy is also not required in AI literacy, which involves communicating and exploring ideas through code,[51] since AI literacy does not need to write codes to understand the working mechanisms of AI.

The definition of AI literacy proposed by Long and Magerko is among the first

[44] Elizabeth B Keefe and Susan R Copeland, "What is literacy? The power of a definition," *Research and practice for persons with severe disabilities* 36, no. 3-4 (2011).
[45] Garry Falloon, "From digital literacy to digital competence: the teacher digital competency (TDC) framework," *Educational technology research and development* 68, no. 5 (2020).
[46] Duri Long and Brian Magerko, "What is AI literacy? Competencies and design considerations" (paper presented at the Proceedings of the 2020 CHI conference on human factors in computing systems, 2020).
[47] Long and Magerko, "What is AI literacy? Competencies and design considerations."
[48] Allan Martin and Jan Grudziecki, "DigEuLit: Concepts and tools for digital literacy development," *Innovation in teaching and learning in information and computer sciences* 5, no. 4 (2006).
[49] Annika Wolff et al., "Creating an understanding of data literacy for a data-driven society," *The Journal of Community Informatics* 12, no. 3 (2016).
[50] Jack Holbrook and Miia Rannikmae, "The meaning of scientific literacy," *International journal of environmental and science education* 4, no. 3 (2009).
[51] Katerina Tsarava et al., "A cognitive definition of computational thinking in primary education," *Computers & Education* 179 (2022).

tailored for non-AI professionals, offering new insights for educators and researchers regarding AI-related content and skill assessment.[52] This definition primarily stems from a literature review conducted by engineering professors and is based on studies presented at engineering conferences between 2018 and 2019. Consequently, it may not be entirely suitable for education, a concern acknowledged by the authors themselves. They highlight the need for further empirical research, particularly from the perspective of educators, to refine the understanding of AI literacy for non-technical audiences (e.g., students majoring in business and finance).[53] Therefore, this study adopted the refined definition of AI literacy by Chiu, Ahmad, Ismailov and Sanusi to better align with educational contexts, that is, AI literacy refers to an individual's capability to clearly explain how AI technology function and influence society, utilize them in an ethical and responsible way, and effectively collaborate and communicate with them across various settings.[54]

AI literacy was selected as the independent variable of this study due to the following reasons. Firstly, the usage of AI technologies has both opportunities along with challenges. As discussed above, the phenomenon of “hallucinations” can mislead users with inaccurate or misleading information. Moreover, over-reliance on AI technologies may diminish creative problem-solving and critical thinking skills of students. Furthermore, the new content generated by AI applications may be based on existing copyrighted content, so there may be problems of copyright infringement.[55] Additionally, unequal access to AI tools can deepen educational disparities, further intensifying social inequalities.[56]

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[52] Long and Magerko, "What is AI literacy? Competencies and design considerations."
[53] Long and Magerko, "What is AI literacy? Competencies and design considerations."
[54] Thomas KF Chiu et al., "What are artificial intelligence literacy and competency? A comprehensive framework to support them," *Computers and Education Open* 6 (2024).
[55] Rosa Maria Ballardini, Kan He, and Teemu Roos, "AI-generated content: authorship and inventorship in the age of artificial intelligence," in *Online Distribution of Content in the EU* (Edward Elgar Publishing, 2019).
[56] Jeromie Whalen and Chrystalla Mouza, "ChatGPT: Challenges, opportunities, and implications for teacher education," *Contemporary Issues in Technology and Teacher Education* 23, no. 1 (2023).

As a result, AI literacy becomes critical for them when using AI technologies in educational settings and workplaces. AI literacy provides students with the knowledge of how AI applications function, helping them to use these technologies efficiently and responsibly.[57] Higher AI literacy levels may make students become more open to experimenting and exploring with AI applications for working purposes. They may get more confidence in their capability to navigate and use AI technologies effectively. Students who are literate in the underlying mechanisms of AI applications are better equipped to critically evaluate the content generated by AI tools, and distinguish between potential misinformation and reliable information.[58] This is key to preventing the usage and spread of inaccurate or biased information.[59] For instance, those who have higher levels of AI literacy are more likely to know when AI applications are suitable assisting tools in working (e.g., getting language help, analysing data, brainstorming ideas) and when other methods may be more suitable (e.g., critical analysis, in-depth research).

Moreover, AI literacy can help students mitigate the risk of over-reliance on AI technologies. Students with higher AI literacy levels are more likely to employ AI applications as a supplement to their working rather than a replacement for their own problem-solving and critical thinking efforts. Such a balanced approach can help students strengthen rather than undermine the development of their essential cognitive capabilities. Furthermore, AI literacy can help students understand the ethical issues involved in using AI.[60] [61] They will be equipped with more awareness of issues like

[57] Jane Southworth et al., "Developing a model for AI Across the curriculum: Transforming the higher education landscape via innovation in AI literacy," *Computers and Education: Artificial Intelligence* 4 (2023).

[58] Gianluca Schiavo, Stefano Businaro, and Massimo Zancanaro, "Comprehension, apprehension, and acceptance: Understanding the influence of literacy and anxiety on acceptance of artificial Intelligence," *Technology in Society* 77 (2024).

[59] Bingcheng Wang, Pei-Luen Patrick Rau, and Tianyi Yuan, "Measuring user competence in using artificial intelligence: validity and reliability of artificial intelligence literacy scale," *Behaviour & information technology* 42, no. 9 (2023).

[60] Schiavo, Businaro, and Zancanaro, "Comprehension, apprehension, and acceptance: Understanding the influence of literacy and anxiety on acceptance of artificial Intelligence."

[61] Davy Tsz Kit Ng et al., "Conceptualizing AI literacy: An exploratory review," *Computers and Education: Artificial Intelligence* 2 (2021).

data privacy and copyright infringement. This awareness can help students understand the ethical implications, avoid misusing AI-generated content, and respect intellectual property rights. In addition, cultivating AI literacy through AI-related courses can help equip students with the skills required to leverage and navigate AI technologies, which can help solve the issue of educational inequalities. This can stimulate a more equitable and inclusive educational environment by narrowing the divide between those with easier access to AI technologies and those without.

Recently, people pay more and more attention to AI literacy as an important element in people's acceptance of AI technologies.[62] [63] It influences the public's capability to use AI technology and deal with its complexity.[64] Meanwhile, AI literacy emerges as a growingly important concept in AI education. For instance, Laupichler, Aster, Perschewski and Schleiss investigated a reliable and valid measurement tool that can be utilized to assess AI-learning gains, and found preliminary evidence that their validated AI-literacy-assessment instrument enables a valid evaluation of AI-learning gains.[65]

According to Safinah Ali et al., high AI literacy helps people understand complex technology better and hold more positive attitudes toward using it.[66] This is confirmed by Ayanwale and Ndlovu who pointed out that enhancing AI literacy can greatly increase the behavioural intention of certain groups to use AI technology.[67] Behavioural intention (BI) is defined as the strength of a user's intention to engage in a

[62] Schiavo, Businaro, and Zancanaro, "Comprehension, apprehension, and acceptance: Understanding the influence of literacy and anxiety on acceptance of artificial Intelligence."

[63] Wang, Rau, and Yuan, "Measuring user competence in using artificial intelligence: validity and reliability of artificial intelligence literacy scale."

[64] Núria Vallès-Peris and Júlia Pareto, "Artificial intelligence as a mode of ordering. Automated-decision making in primary care," *Information, Communication & Society* (2024).

[65] Matthias Carl Laupichler et al., "Evaluating AI courses: a valid and reliable instrument for assessing artificial-intelligence learning through comparative self-assessment," *Education Sciences* 13, no. 10 (2023).

[66] Safinah Ali, Tyler Moroso, and Cynthia Breazeal, "Can children learn creativity from a social robot?" (paper presented at the Proceedings of the 2019 Conference on Creativity and Cognition, 2019).

[67] Musa Adekunle Ayanwale and Mdutshekelwa Ndlovu, "Investigating factors of students' behavioral intentions to adopt chatbot technologies in higher education: Perspective from expanded diffusion theory of innovation," *Computers in Human Behavior Reports* 14 (2024).

specific behavior.[68] It can effectively predict people's actual behavior [69] and functions as a mediating factor that influences actions aligned with one's stated intentions.[70] In the conceptual model of this study, intention to use AI technologies in future workplaces is a kind of behavioural intention. This thesis only measured self-reported AI literacy and the intention to use AI technologies in future workplaces, rather than conducing objective measurements of actual AI literacy levels and the actual degree of AI application usage in workplaces. According to the TAM model, this was because that intention to use is proven to be a useful predictor of actual usage behaviors. Moreover, except for those who have done internships, students have not yet entered the workplace nor used AI technologies in the workplace. In addition, AI tools are relatively new in educational settings and in daily workplaces, so many students may not have owned the opportunity to apply them extensively yet. Therefore, this study measured behavioural intention to assess students' potential for AI technology adoption in their future workplaces, even among those who did not frequently use AI tools. What's more, self-reported AI literacy is a useful variable since it reflects students' willingness and confidence to engage with AI technologies, which are critical elements predicting technology adoption and usage.

Based on above discussion, the following hypothesis is formulated:

H1: AI literacy is positively correlated with intention to use.

2.2.2 Perceived usefulness, perceived ease of use, and perceived credibility

Perceived usefulness (PU) refers to one's perception that a technology effectively

[68] Martin Fishbein and Icek Ajzen, "Belief, attitude, intention, and behavior: An introduction to theory and research," (1977).
[69] Wei Zhang and Oscar Gutierrez, "Information technology acceptance in the social services sector context: An exploration," *Social Work* 52, no. 3 (2007).
[70] Rita Nasrallah, "Learning outcomes' role in higher education teaching," *Education, Business and Society: Contemporary Middle Eastern Issues* 7, no. 4 (2014).

facilitates tasks, thereby increasing their interest in using it.[71] Fahmy & Azhari define it as the probability that a system enhances user performance.[72] In summary, PU reflects users' views on whether a technology streamlines their work and boosts productivity. Venkatesh and Davis outline four key indicators: 1) the ability of the system to enhance individual performance; 2) increased productivity through system usage; 3) improved effectiveness of individual work; 4) the overall benefits the system provides to the user.[73]

Perceived ease of use (PEOU) refers to one's belief that a technology minimizes effort and reduces difficulties in achieving tasks.[74] Arta describes PEOU as a system specifically designed to simplify user interactions.[75] According to Venkatesh and Davis, the key indicators of PEOU include: 1) a clear and easily understandable interaction between users and the system; 2) minimal effort required for interaction; 3) ease of use of the system; 4) system that aligns with user needs and preferences.[76]

Perceived credibility refers to an individual's belief or trust towards the information received by the receiver.[77] Alsajjan and Dennis underscored the need to include trust as a strong component of TAM after they found that trust favorably influences the acceptance of digital banking.[78] This is supported by Yousafzai et al. who demonstrated that a bank's capability to adopt digital banking appeared to be dictated by the level of trust that its clienteles have placed in it.[79] Multiple researches that adopted TAM have identified a positive correlation between customers' trust and

[71] Tifani Lidiya Febri Arta, "Pengaruh Perceived Usefulness, Perceived Ease Of Use Dan E-Service Quality Terhadap Keputusan Menggunakan Fitur Go Food Dalam Aplikasi Gojek (Studi Pada Pengguna Fitur Go-Food di Kecamatan Kebumen)" (Universitas Putra Bangsa, 2020).
[72] M Fahmy and M Azhari, "Pengaruh Persepsi Manfaat," *Persepsi Kegunaan, Dan Persepsi Resiko Terhadap* (2020).
[73] Viswanath Venkatesh and Fred D Davis, "A theoretical extension of the technology acceptance model: Four longitudinal field studies," *Management science* 46, no. 2 (2000).
[74] Davis, "Perceived usefulness, perceived ease of use, and user acceptance of information technology."
[75] Arta, "Pengaruh Perceived Usefulness, Perceived Ease Of Use Dan E-Service Quality Terhadap Keputusan Menggunakan Fitur Go Food Dalam Aplikasi Gojek (Studi Pada Pengguna Fitur Go-Food di Kecamatan Kebumen)."
[76] Venkatesh and Davis, "A theoretical extension of the technology acceptance model: Four longitudinal field studies."
[77] Rheina Febriane, Wahyudi Wibowo, and Yulika Rosita Agrippina, "The Influences of Perceived Credibility and Consumer Attitude Towards Purchase Intention of Some by Mi's YouTube User Generated Content" (paper presented at the Proceedings of the 4th Asia Pacific Management Research Conference (APMRC 2022), 2023).
[78] Bander Alsajjan and Charles Dennis, "Internet banking acceptance model: Cross-market examination," *Journal of business research* 63, no. 9-10 (2010).
[79] Shumaila Yousafzai, John Pallister, and Gordon Foxall, "Multi-dimensional role of trust in Internet banking adoption," *The Service Industries Journal* 29, no. 5 (2009).

their possibility to utilize online banking.[80] For customers, lacking trust in a new technology will result in customers' hesitance to accept it, a crucial finding in any financial transaction.[81] As stated above, the credibility of AI-generated content can be undermined by the phenomenon of "hallucinations", which can hinder people's intention to employ such content. Therefore, it is inferred that students' perceived credibility of AI technology may play an important role in their AI technology usage and adoption behaviours. This prompted the inclusion of perceived credibility in this study.

Individuals with higher AI literacy are more likely to have better understanding of the working principles of AI technology and applications, and perceive AI as both useful and easy to use in enhancing work efficiency.[82] This is in line with the finding of Ma amd Lei who showed that individuals with higher levels of AI literacy are more able to effectively apply AI applications, and demonstrate higher Perceived usefulness and perceived ease of use in their professional fields.[83] Alsyouf et al. suggested that combining practical application scenarios with technical understanding is crucial to improve perceived ease of use and perceived usefulness.[84]

Moreover, a study found that when students understood the processes of how ChatGPT functions (i.e., AI literacy), they were more likely to trust in its outputs and use it strategically.[85] Similarly, experiments showed that AI transparency such as information and knowledge about rationales and mechanisms behind AI's decision making processes[86] can significantly reduce uncertainty perceptions of users and

[80] Irfan Bashir and Chendragiri Madhavaiah, "Consumer attitude and behavioural intention towards Internet banking adoption in India," *Journal of Indian Business Research* 7, no. 1 (2015).
[81] Barry Howcroft, Robert Hamilton, and Paul Hewer, "Consumer attitude and the usage and adoption of home-based banking in the United Kingdom," *International journal of bank marketing* 20, no. 3 (2002).
[82] Mette Mortensen, "Sneaking AI through the back door: constructing the identity of Capitol Hill rioters through social media images and facial recognition technologies," *Information, Communication & Society* (2024).
[83] Shuaiyao Ma and Lei Lei, "The factors influencing teacher education students' willingness to adopt artificial intelligence technology for information-based teaching," *Asia Pacific Journal of Education* 44, no. 1 (2024).
[84] Adi Alsyouf et al., "The use of a technology acceptance model (TAM) to predict patients' usage of a personal health record system: the role of security, privacy, and usability," *International journal of environmental research and public health* 20, no. 2 (2023).
[85] Ahlam Mohammed Al-Abdullatif and Merfat Ayesh Alsubaie, "ChatGPT in learning: Assessing students' use intentions through the lens of perceived value and the influence of AI literacy," *Behavioral sciences* 14, no. 9 (2024).
[86] Stefan Larsson and Fredrik Heintz, "Transparency in artificial intelligence," *Internet policy review* 9, no. 2 (2020).

enhance their trust in AI-assisted decisions.[87] Thereby, the next hypotheses are formulated:

H2a: AI literacy is positively correlated with perceived usefulness.

H2b: AI literacy is positively correlated with perceived ease of use.

H2c:AI literacy is positively correlated with perceived credibility.

2.2.3 Impacts on intention to use

In a study that used TAM to examine the adoption of digital banking in India, perceived usefulness was found to exert an immediate influence on adoption of digital banking technology.[88] This is supported by other studies that confirmed the positive impacts of perceived usefulness on adoption of online banking.[89] [90] Researches have demonstrated a positive and high correlation between perceived usefulness and the desire to accept and adopt different technologies, although the impacts of perceived usefulness on behavioural intentions have not yet been thoroughly investigated,[91] such as in the adoption of e-government system[92] and mobile learning.[93]

Based on TAM, Davis proposed that through stimulating a more positive attitude towards new technologies, perceived ease of use can positively influence perceived usefulness and indirectly influence intention to use.[94] Moreover, past researches have shown that perceived ease of use is strongly related to current and future usage, and the

[87] Bingjie Liu, "In AI we trust? Effects of agency locus and transparency on uncertainty reduction in human–AI interaction," *Journal of computer-mediated communication* 26, no. 6 (2021).
[88] Bashir and Madhavaiah, "Consumer attitude and behavioural intention towards Internet banking adoption in India."
[89] Hakan Celik, "What determines Turkish customers' acceptance of internet banking?," *International journal of bank marketing* 26, no. 5 (2008).
[90] Alain Yee-Loong Chong et al., "Do interorganisational relationships and knowledge-management practices enhance collaborative commerce adoption?," *International Journal of Production Research* 51, no. 7 (2013).
[91] Yeunhee Kwak, Yon Hee Seo, and Jung-Won Ahn, "Nursing students' intent to use AI-based healthcare technology: Path analysis using the unified theory of acceptance and use of technology," *Nurse Education Today* 119 (2022).
[92] Apeksha Hooda et al., "The effects of trust on behavioral intention and use behavior within e-government contexts," *International Journal of Information Management* 67 (2022).
[93] Ahmed Al-Azawei and Ali Alowayr, "Predicting the intention to use and hedonic motivation for mobile learning: A comparative study in two Middle Eastern countries," *Technology in Society* 62 (2020).
[94] Fred D Davis, Richard P Bagozzi, and Paul R Warshaw, "User acceptance of computer technology: A comparison of two theoretical models," *Management science* 35, no. 8 (1989).

attitude towards people's acceptance of a technology.[95]

Additionally, the variable of trust was added to TAM to investigate the adoption of online banking information systems, and the research found significant positive influence of trust on both perceived usefulness and behavioral intention.[96] Van Pinxteren et al. also reported trust as a critical variable in understanding the technology adoption behaviour.[97] In addition, Chi et al. suggested that consumers' readiness in interacting with robots may be influenced by their confidence in human-robot interaction. Those who have perceived credibility are more likely to trust others due to their admirable behaviors.[98] Perceived credibility stimulates the development of enduring customer relationships and is key to the adoption of new technology.[99] Likewise, a study by Ahmad investigated diabetic patients' intention to use digital health services, and the study results showed that all six constructs including perceived credibility, perceived usefulness, perceived ease of use, perceived irreplaceability, social influence, and compatibility, positively influenced the continued intention of the elderly diabetic patients to utilize digital health wearables.[100] Accordingly, the next hypotheses are presented:

H3a: perceived usefulness is positively correlated with intention to use.

H3b: perceived ease of use is positively correlated with intention to use.

H3c: perceived credibility is positively correlated with intention to use.

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[95] Davis, Bagozzi, and Warshaw, "User acceptance of computer technology: A comparison of two theoretical models."
[96] Jihyun Kim et al., "Perceived credibility of an AI instructor in online education: The role of social presence and voice features," *Computers in Human Behavior* 136 (2022).
[97] Michelle ME Van Pinxteren et al., "Trust in humanoid robots: implications for services marketing," *Journal of Services Marketing* 33, no. 4 (2019).
[98] Nidhi Singh and Neena Sinha, "How perceived trust mediates merchant's intention to use a mobile wallet technology," *Journal of retailing and consumer services* 52 (2020).
[99] Victor Partel, Sri Charan Kakarla, and Yiannis Ampatzidis, "Development and evaluation of a low-cost and smart technology for precision weed management utilizing artificial intelligence," *Computers and electronics in agriculture* 157 (2019).
[100] Ashfaq Ahmad et al., "Understanding factors influencing elderly diabetic patients' continuance intention to use digital health wearables: extending the technology acceptance model (TAM)," *Journal of Open Innovation: Technology, Market, and Complexity* 6, no. 3 (2020).

2.2.4 The mediating effects

According to Tzirides AOO et al., higher levels of AI literacy are related with higher levels of confidence in using AI tools.[101] AI literacy influences how users perceive AI technology and whether they will use it. Individuals with more knowledge about AI are more likely to see the value of AI technology, and are more likely to think that AI technology is useful in their specific fields.[102] For example, AI literacy helps individuals accept new technology in healthcare and education. Besides, in industries like e-commerce or finance, individuals with higher levels of AI literacy are able to use AI solutions more easily. Professionals in fields like creative and marketing industries can be helped by AI literacy in better using AI tools.[103]

Meanwhile, according to Long and Magerko, if individuals find a technology easy to learn and use, they are more likely to use it.[104] Multiple researches showed that both Perceived usefulness and perceived ease of use significantly affected behavioural intentions.[105] [106] [107] Furthermore, Chen and Tseng showed that PU is the primary factor that directly influences behavioural intention.[108] Mallat, Rossi, Tuunainen and Oorni held that the impacts of PU on behavioural intention to use are influenced by specific instances of system usage.[109] In summary, Perceived usefulness and perceived ease of use remain the main predictors of people's attitudes towards their intentions to

[101] Anastasia Olga Olnancy Tzirides et al., "Combining human and artificial intelligence for enhanced AI literacy in higher education," *Computers and Education Open* 6 (2024).
[102] Sage Kelly, Sherrie-Anne Kaye, and Oscar Oviedo-Trespalacios, "What factors contribute to the acceptance of artificial intelligence? A systematic review," *Telematics and Informatics* 77 (2023).
[103] Sichen Zhang, "How AI Literacy Affects the Intention to Use AIGC: An Empirical TAM-Based Study," *Journal of Big Data and Computing (ISSN: 2959-0590)* 2, no. 3 (2024).
[104] Long and Magerko, "What is AI literacy? Competencies and design considerations."
[105] Mohammed J Asiri, "Do Teachers' Attitudes, Perception of Usefulness, and Perceived Social Influences Predict Their Behavioral Intentions to Use Gamification in EFL Classrooms? Evidence from the Middle East," *International Journal of Education and Practice* 7, no. 3 (2019).
[106] Muslichah Muslichah, "The effect of self efficacy and information quality on behavioral intention with perceived usefulness as intervening variable," *Journal of Accounting, Business and Management (JABM)* 25, no. 1 (2018).
[107] Linda Fitria Adi Winata et al., "The effect of electronic coupon value to perceived usefulness and perceived ease-of-use and its implication to behavioral intention to use server-based electronic money," *International Journal of Innovative Science and Research Technology* 5, no. 1 (2020).
[108] Hong-Ren Chen and Hsiao-Fen Tseng, "Factors that influence acceptance of web-based e-learning systems for the in-service education of junior high school teachers in Taiwan," *Evaluation and program planning* 35, no. 3 (2012).
[109] Niina Mallat et al., "The impact of use situation and mobility on the acceptance of mobile ticketing services" (paper presented at the Proceedings of the 39th Annual Hawaii International Conference on System Sciences (HICSS'06), 2006).

use.

In addition, Wu and Wang showed that both Perceived usefulness and perceived ease of use play essential roles in technology adoption.[110] In a more direct way, Rezvani, Heidari, Roustapisheh and Dokhanian highlighted the mediating role of PEOU between a system's quality and the satisfaction of its users.[111] As for PU, Daud, Farida and Razak highlighted its mediating role between computer anxiety, satisfaction with the system, and system acceptance.[112] The existing literature indicates that perceived ease of use and perceived usefulness exert a mediating effect between AI literacy and intentions to use AI, influencing their overall success. As for perceived credibility, Kang et al. showed that the relationship between digital literacy and attitude towards AI-driven medical consultations was fully mediated by perceived efficiency and perceived distrust of AI.[113] Although these findings are limited to the context of these studies and the populations they examined, they provide important references for this thesis. Therefore, the following hypotheses are formulated:

H4a: perceived usefulness mediates the link between AI literacy and intention to use.

H4b: perceived ease of use mediates the link between AI literacy and intention to use.

H4c: perceived credibility mediates the link between AI literary and intention to use.

[110] Jen-Her Wu and Shu-Ching Wang, "What drives mobile commerce?: An empirical evaluation of the revised technology acceptance model," *Information & management* 42, no. 5 (2005).
[111] Shahla Rezvani et al., "The effectiveness of system quality, habit, and effort expectation on library application use intention: the mediating role of perceived usefulness, perceived ease of use, and user satisfaction," *International Journal of Business Information Systems* 1, no. 1 (2022).
[112] Anshar Daud, Naili Farida, and Mashur Razak, "Impact of customer trust toward loyalty: the mediating role of perceived usefulness and satisfaction," *Journal of Business and Retail Management Research* 13, no. 02 (2018).
[113] Enoch Yi-No Kang, Duan-Rung Chen, and Yen-Yuan Chen, "Associations between literacy and attitudes toward artificial intelligence–assisted medical consultations: The mediating role of perceived distrust and efficiency of artificial intelligence," *Computers in Human Behavior* 139 (2023).

3. Methodology

3.1 Research design

In order to investigate the relationships between the variables discussed above and test the hypotheses formulated above, this thesis applied the quantitative research method to statistically examine the relationships. This belongs to the deductive approach to research, that is, hypotheses are formulated based on previous researches and existing theories, and the researcher collects data to test the hypotheses by confirming them or rejecting them. Hypothesis testing has many advantages, such as making the research more scientific, systematic and verifiable. First, hypothesis testing is based on existing theories and research results, which helps to ensure the logic and systematicity of the research and make the research conclusions more scientific.[114] It can get to findings that are more generalizable to broader contexts, since the findings are based on well-defined theories and hypotheses. The comparability of the findings across different researches will also be improved, such as researches investigating the same concepts or theoretical frameworks. At the same time, clear hypotheses help the research to be verified by quantitative methods, so that the research results can be repeatedly tested, thereby improving reliability and validity. In addition, hypotheses provide a clear direction for the research, make the research objectives more focused, avoid aimless data collection, and improve research efficiency.

Another important advantage is that hypothesis testing can help researchers find whether there are correlations between variables, rather than just staying at descriptive analysis.[115] For example, this method can help the researcher deeply explore whether AI literacy is correlated with the willingness of business school students to use AI in

[114] Jan Recker, *Scientific research in information systems: a beginner's guide* (Springer Nature, 2021).

[115] William E Martin and Krista D Bridgmon, *Quantitative and statistical research methods: From hypothesis to results* (John Wiley & Sons, 2012).

the future workplace, and further analyze what factors play a role in the transformation of AI literacy into behavioral intention to use AI technologies. In addition, hypothesis testing relies on quantitative data analysis, providing more empirical and statistical evidences for the findings, making the research results more objective and reducing subjective bias, thereby providing more valuable conclusions for practical applications.[116]

3.2 Procedure and sampling method

Both primary data and secondary data were collected in this study. Primary data refers to the data collected directly by a researcher for a specific research purpose.[117] The primary data was collected through a questionnaire survey. More specifically, an online survey was conducted through the Questionnaire Star platform among students from Emory University's Goizueta Business School. The convenience sampling method was adopted, that is, the participants were selected from the researcher's social networking based on the principle of convenience. All participants were informed of the research aim, and their anonymity get guaranteed. In the survey, 124 answering sheets were collected; those that were completed in less than 60 seconds and those were not from Emory University's Goizueta Business School were excluded. Among the 98 valid answering sheets, 59.2% are male and 40.8% are female. In terms of academic level, the majority are seniors (43.9%), followed by juniors (27.6%), sophomores (12.2%), freshmen (12.2%), and graduate students (4.1%). Regarding majors, Finance is the most common field (31.6%), with Marketing (21.4%), Accounting (16.3%), and Management (14.3%) also being well-represented, while 16.3% fall into the "Others" category.

Secondary data refers to the data collected by other researchers and for other

[116] Peter M Nardi, *Doing survey research: A guide to quantitative methods* (Routledge, 2018).

[117] Victor Oluwatosin Ajayi, "Primary sources of data and secondary sources of data," *Benue State University* 1, no. 1 (2017).

research purposes.[118] This thesis collected secondary data from articles, books, literature and the like so as to obtain information and deepen previous evidences and existing theories.

3.3 Measurement

The questionnaire design has undergone rigorous theoretical and practical validation. Firstly, all scales were adapted from validated literature. Secondly, through pre-research and interviews with students, the question formulations were adjusted to match the business school context. For example, technical terms were adapted to fit in with business environment. Moreover, a pilot test was conducted to verify participants' comprehensibility of the questions.

Four items developed by Laupichler et al. were adapted to measure AI literacy in the sample.[119] 5-point Likert scale (from strongly disagree to strongly agree) was applied to measure the responses. A higher level of agreement corresponds to a higher level of AI literacy in the sample.

Four items developed by Flavián et al. were adopted to measure perceived usefulness, and four items from the same source were applied to measure perceived ease of use.[120] Based on a 5-point Likert scale, a higher level of agreement corresponds to more positive beliefs about AI's usefulness and ease of use.

Three items developed by Gong and Clifford were adopted to measure perceived usefulness. [121] Similarly, a higher level of agreement in the responses corresponds to a higher level of trust in AI technologies.

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[118] Ajayi, "Primary sources of data and secondary sources of data."

[119] Laupichler et al., "Evaluating AI courses: a valid and reliable instrument for assessing artificial-intelligence learning through comparative self-assessment."

[120] Carlos Flavián et al., "Intention to use analytical artificial intelligence (AI) in services–the effect of technology readiness and awareness," *Journal of Service Management* 33, no. 2 (2022).

[121] Li Gong and Clifford Nass, "When a talking-face computer agent is half-human and half-humanoid: Human identity and consistency preference," *Human communication research* 33, no. 2 (2007).

Lastly, four items adapted from the research of Chatterjee and Bhattacharjee were used to measure intention to use AI technologies in future workplaces.[122] A higher level of agreement indicates more willingness to use AI technologies in the workplace. In summary, all of the items and constructs related to the above-proposed research model were validated by previous researches, which helps ensure their validity and reliability.

3.4 Data analysis

The analysis of moment structures (AMOS) and social science statistical package (SPSS), along with path analysis and bootstrapping were utilized to analyze the data for validity, reliability, descriptive findings, correlations, and the moderating effects. For example, the statistical analysis was conducted to describe the demographics of the sample, such as gender, academic level and major. Confirmatory factor analysis and path analysis were conducted to investigate the hypothesized model and the hypotheses. The analysis of the mediating effects was conducted through SPSS and AMOS.

Among the analysis methods, path analysis, a precursor to and subset of structural equation modelling, refers to a method utilized in social sciences to investigate and identify the relationships between variables within a hypothesized model.[123] With this method, researchers can identify the indirect and direct causal relationships between variables, which can help the researcher disentangle complicated relationships and find significant pathways to predict outcomes. Using this method requires the researcher to develop a detailed theoretical model that is suitable for hypothesis testing in nonexperimental research. Bootstrapping refers to a statistical method utilized in mediation analysis to evaluate the significance of indirect effects (i.e., mediated effects) through resampling from the original dataset with replacement, generating a distribution of indirect effect estimates to establish confidence intervals and test the

[122] Sheshadri Chatterjee and Kalyan Kumar Bhattacharjee, "Adoption of artificial intelligence in higher education: A quantitative analysis using structural equation modelling," *Education and Information Technologies* 25 (2020).
[123] John C Loehlin, *Latent variable models: An introduction to factor, path, and structural equation analysis* (Psychology Press, 2004).

hypotheses.[124] All in all, path analysis helps this study identify and verify the relationships between variables, including direct and indirect effects, and supports hypothesis testing. The Bootstrap method calculates confidence intervals through repeated sampling, without making strict assumptions about the data distribution, which improves the accuracy of hypothesis testing. The combination of the two can effectively test the relationships and mediation effects between variables, thereby providing robust statistical support for your research.

3.5 Ethical considerations

This thesis followed ethical guidelines. The study was approved by the Institutional Review Board (IRB) of the university. Participants were informed about the purpose of the study, the nature of the questions, and their right to withdraw at any time without consequences. Before beginning the survey, they were required to read and agree to an informed consent statement. The survey was designed to collect responses anonymously, ensuring that no personally identifiable information (PII) was recorded. Data was stored securely and used solely for academic research purposes.

4. Results

4.1 Reliability and validity

Reliability is defined as the consistency of a measure, that is, whether the measurement results can be reproduced under the same conditions.[125] In contrast, validity is defined as the accuracy of a measure, that is, whether the measurement

[124] Andreas Alfons, Nüfer Yasin Ateş, and Patrick JF Groenen, "A robust bootstrap test for mediation analysis," *Organizational Research Methods* 25, no. 3 (2022).

[125] Patrick Meyer, *Understanding measurement: reliability* (Oxford University Press, 2010).

results can really represent what they are supposed to measure.[126] The reliability and validity of the measurement in this study were tested as follows. The composite reliability (CR) and average variance extracted (AVE) for these constructs range from 0.821 to 0.875 and from 0.546 to 0.700, respectively, showing good convergent validity. The Cronbach's α coefficients, ranging from 0.808 to 0.873, further support the reliability of the scales. [127] Additionally, the fit indices for most models are significant, with χ^2/df values below 2, and RMSEA values indicating good fit (all below 0.070), affirming the robustness of the measurement models (see Table 1). [128] These results suggest that the scales exhibit good internal consistency, reliability, and construct validity, making them suitable for further analysis.

Table 1: Reliability and validity test results

Construct	CR	AVE	Cronbach's α (Range)	Overall Cronbach's α	χ^2/df	PNFI	CFI	IFI	RFI	RMSEA
AI Literacy	0.821	0.546	0.545 - 0.880	0.819	1.124	0.877	0.987	0.980	0.987	0.034
Perceived Ease of Use	0.828	0.557	0.550 - 0.889	0.808	1.697	0.787	0.991	0.990	0.991	0.045
Perceived Usefulness	0.860	0.606	0.736 - 0.814	0.854	1.568	0.812	0.949	0.950	0.949	0.035
Perceived Credibility	0.875	0.700	0.800 - 0.871	0.873	-	-	-	-	-	-
Intention to Use	0.864	0.615	0.750 - 0.822	0.864	1.476	0.824	0.995	0.995	0.985	0.070

Furthermore, confirmatory factor analyses were conducted before hypothesis testing to determine the most suitable measurement model. The results indicated that the 5-factor model (AIL, PEOU, PU, PC, IU) exhibited excellent model fit, $\chi^2 = 224.672$, χ^2/df = 1.582, CFI = 0.917, TLI = 0.900, RMSEA = 0.077, and SRMR = 0.067, outperforming alternative models. Additionally, all indicator values exceeded 0.5, and factor loadings were statistically significant. The proposed model demonstrated

[126] Denny Borsboom, Gideon J Mellenbergh, and Jaap Van Heerden, "The concept of validity," *Psychological review* 111, no. 4 (2004).

[127] William R. Dillon and Matthew Goldstein, *Multivariate Analysis: Methods and Applications* (New York: Wiley, 1984).

[128] Joseph F. Hair, *Multivariate Data Analysis* (Chicago: Pearson, 2009).

adequate discriminant validity, as shown in Table 2.

Table 2. Measurement model

Model	Type	X2	Df	X2/Df	CFI	TLI	RMSEA	SRMR
5-factor model	AIL,PEOU,PU,PC,IU	224.672	142	1.582	0.917	0.900	0.077	0.067
4-factor model	AIL,PEOU+PU,PC,IU	390.942	146	2.678	0.755	0.713	0.132	0.120
3-factor model	AIL,PEOU+PU+PC,IU	531.698	149	3.568	0.617	0.560	0.163	0.148
2-factor model	AIL+PEOU+PU+PC,IU	608.873	151	4.032	0.542	0.481	0.177	0.141
1-factor model	AIL+PEOU+PU+PC+IU	625.321	152	4.114	0.526	0.467	0.179	0.142

AIL AI Literacy, *PEOU* Perceived Ease of Use, *PU* Perceived Usefulness, *PC* Perceived Credibility, *IU* Intention to Use

4.2 Descriptive statistics

When it comes to AI tool usage for learning or work, most respondents use them occasionally (61.2%), while 35.7% use them frequently, and only 3.0% have never used them (see Table 3). These findings indicate a high level of AI adoption among students, with varying degrees of engagement across different academic levels and fields of study.

Moreover, 57.1% of respondents had not taken any AI-related courses before the survey; 33.7% had attended one AI-related course. Additionally, 7.1% had taken two AI-related courses, while only 2.0% had attended more than two AI-related courses.

Outside of the classroom, 27.6% of respondents did not learn AI through other means, 54.1% engaged with AI learning resources on an irregular basis, and 18.4% used other opportunities or media to learn AI fairly regularly. This suggests that although most respondents have limited exposure to formal AI courses, informal AI learning—especially irregular learning—is common.

Table 3. Frequency analysis

Variable	Option	Frequency	Percentage (%)
Gender	Male	58	59.2
	Female	40	40.8
Academic level	Freshman	12	12.2
	Sophomore	12	12.2
	Junior	27	27.6
	Senior	43	43.9
	Graduate	4	4.1
Major	Finance	31	31.6
	Accounting	16	16.3
	Marketing	21	21.4
	Management	14	14.3
	Others	16	16.3
Have you used AI tools to assist with learning or work?	Frequently use	35	35.7
	Occasionally use	60	61.2
	Never used	3	3.0

According to Table 4, the mean values suggest that students generally have a positive perception of AI, with Intention to Use (4.000) and Perceived Usefulness (3.880) receiving the highest ratings, indicating strong interest and recognition of AI's benefits. Perceived Ease of Use (3.850) also scores relatively high, reflecting students' confidence in using AI tools. Meanwhile, AI Literacy (3.314) and Perceived Credibility (3.214) have relatively lower mean scores, suggesting that while students acknowledge AI's value, there may be some concerns regarding its reliability and their own

understanding of AI concepts.

Additionally, the correlation coefficient between AI literacy level and the number of courses containing AI education content is 0.470, and the correlation coefficient between AI literacy level and the frequency of learning AI through other means is 0.444. This indicates a moderate positive correlation between AI literacy level and both formal AI education and informal AI learning. However, since the correlation coefficients did not reach a high level, this suggests that simply increasing the number of AI-related courses or enhancing informal AI learning frequency cannot fully determine an individual's AI literacy level. Other factors, such as the type and quality of learning content and materials, learning methods, and personal engagement, may also play significant roles in shaping AI literacy.

Table 4. Normality test analysis results

	Mean	Standard Deviation	Skewness	Kurtosis
AI literacy	3.314	0.734	-0.436	-0.859
Perceived usefulness	3.880	0.805	-1.668	2.984
Perceived ease of use	3.850	0.916	-1.386	1.122
Perceived credibility	3.214	1.069	0.230	-1.427
Intention to use	4.000	0.762	-1.403	1.744

* $p<0.05$ ** $p<0.01$

4.3 Direct effect and mediating effect

With references to Baron and Kenny as well as Preacher and Hayes, the direct and mediating effects in this study were examined. Specifically, the first mediation

condition proposed by Baron and Kenny was that AI literacy should significantly predict intention to use (i.e., H1), which was supported by a significant connection between AI literacy and intention to use ($\beta = 0.321$, $p < 0.05$).

The second mediation condition is that AI literacy should significantly predict perceived usefulness, perceived ease of use, and perceived credibility, corresponding to H2a, H2b, and H2c respectively, which were supported by the links between AI literacy and perceived usefulness ($\beta = 0.423$, $p < 0.05$), AI literacy and perceived ease of use ($\beta = 0.342$, $p < 0.05$), and AI literacy and perceived credibility ($\beta = 0.442$, $p < 0.05$).

The third mediation condition is that perceived usefulness, perceived ease of use, and perceived credibility should significantly predict intention to use, corresponding to H3a, H3b, and H3c respectively, which were supported by the connections between perceived usefulness and intention to use ($\beta = 0.360$, $p < 0.05$), perceived ease of use and intention to use ($\beta = 0.302$, $p < 0.05$), and perceived credibility and intention to use ($\beta = 0.233$, $p < 0.05$) (see Table 5).

Hence, the mediation was examined based on the guidelines of Baron and Kenny.

Table 5. Path analysis results

Path			Unstandardized Path Coefficient	Standardized Path Coefficient	S.E.	C.R.	P
PEOU	<---	AIL	0.363	0.342	0.140	2.590	0.010
PU	<---	AIL	0.701	0.423	0.212	3.310	***
PC	<---	AIL	0.887	0.442	0.252	3.516	***
IU	<---	AIL	0.478	0.321	0.172	2.780	0.005
IU	<---	PU	0.324	0.360	0.086	3.758	***
IU	<---	PEOU	0.425	0.302	0.139	3.066	0.002

IU	<---	PC	0.173	0.233	0.068	2.556	0.011

AIL AI Literacy, *PEOU* Perceived Ease of Use, *PU* Perceived Usefulness, *PC* Perceived Credibility, *IU* Intention to Use

Next, the indirect effects exerted by the independent variable on the dependent variable were calculated using the bootstrapping method proposed by Preacher and Hayes. The results showed a significant indirect effect of AI literacy on intention to use via the mediating role of perceived usefulness ($\beta = 0.152$, $p < 0.05$). The bootstrap results did not contain zero in all the confidence intervals, indicating a significant mediating effect. Hence, these results supported H4a.

The indirect effects of AI literacy on intention to use via the mediating roles of perceived ease of use and perceived credibility were also significant ($\beta = 0.103$, $p < 0.05$) and ($\beta = 0.103$, $p < 0.05$), respectively (see Table 6). The bootstrap results also indicated that the mediating effects were significant. Therefore, these results supported H4b and H4c.

Table 6. Direct, indirect and total B coefficients

Total, direct, and indirect effect		**Path Coefficient**	**Bias-Corrected**		**Percentile**	
			Lower	**Upper**	**Lower**	**Upper**
AIL→IU	Total effect	0.679	0.461	0.815	0.476	0.821
AIL→IU	Direct effect	0.321	0.029	0.58	0.002	0.565
AIL→IU	Indirect effect	0.358	0.181	0.636	0.178	0.629
AIL→PEOU→IU	Individual indirect effect	0.103	0.016	0.386	0.008	0.322
AIL→PU→IU	Individual indirect effect	0.152	0.039	0.495	0.028	0.432
AIL→PC→IU	Individual indirect effect	0.103	0.048	0.224	0.024	0.174

AIL AI Literacy, *PEOU* Perceived Ease of Use, *PU* Perceived Usefulness, *PC* Perceived Credibility, *IU* Intention to Use

5. Discussion

5.1 AI literacy

The research results showed that AI literacy was positively associated with intention to use, perceived usefulness, perceived ease of use, and perceived credibility among the business school students. Besides, perceived usefulness, perceived ease of use, and perceived credibility played a mediating role in the connection between AI literacy and intention to use AI technologies in future workplaces. This is in line with Wang et al. who suggested that students' acceptance and adoption of AI technologies are determined by their AI literacy levels.[129] Students with higher levels of information and AI literacy are more likely to own a deeper understanding of the limitations and capabilities of AI technologies.[130] The capability to use AI tools efficiently contributes to their perception of AI tools as highly useful.[131] [132] [133] With a solid understanding of AI technologies, students may be more open and willing to integrate them into their routine learning and future works, recognising AI technologies' potential to assist their learning and work. Moreover, knowledgeable users of AI tools can better set realistic expectations for what they can offer, and this alignment between capabilities and expectations can yield higher levels of satisfaction with the tools' performance, which can further enhance perceived usefulness of these tools. Similarly, Al-Abdullatif and Alsubaie also found that AI literacy is crucial in shaping students' perceptions of

[129] Wang, Rau, and Yuan, "Measuring user competence in using artificial intelligence: validity and reliability of artificial intelligence literacy scale."

[130] Taejun Lee, Byung-Kwan Lee, and Seulki Lee-Geiller, "The effects of information literacy on trust in government websites: Evidence from an online experiment," *International Journal of Information Management* 52 (2020).

[131] Ng et al., "Conceptualizing AI literacy: An exploratory review."

[132] Wang, Rau, and Yuan, "Measuring user competence in using artificial intelligence: validity and reliability of artificial intelligence literacy scale."

[133] Jiahong Su and Weipeng Yang, "AI literacy curriculum and its relation to children's perceptions of robots and attitudes towards engineering and science: An intervention study in early childhood education," *Journal of Computer Assisted Learning* 40, no. 1 (2024).

usefulness, fees and enjoyment of adopting ChatGPT in learning.[134] What's more, a better understanding of AI tools can help students know how to use them, increasing their perceived ease of use. The research findings of this study also confirm the results of the study by Schiavo et al. noting that AI literacy enhanced perceived ease of use and perceived usefulness.[135] In addition, a deeper understanding of how AI applications operate can demystify the applications and encourage students to regard them as powerful resources rather than just some black-box technologies.[136] When students understand the mechanisms and processes that make AI tools function, they are more probably to trust the outputs of these tools and use them strategically.[137] This is in consistence with the identified relationship between AI literacy and perceived credibility in this study.

5.2 Perceived usefulness, perceived ease of use, and perceived credibility

This study indicates that perceived usefulness, perceived ease of use, and perceived credibility of AI technologies are positively correlated with participants' intention to use AI technologies in future workplace. This is supported by the finding of Alzebda and Matar who noted that perceived usefulness and perceived ease of use had positive effect on citizen's intention towards the acceptance and adoption of AI applications.[138] The research findings of a survey targeting accounting students from universities in Indonesia also showed that perceived usefulness and perceived ease of

[134] Al-Abdullatif and Alsubaie, "ChatGPT in learning: Assessing students' use intentions through the lens of perceived value and the influence of AI literacy."

[135] Schiavo, Businaro, and Zancanaro, "Comprehension, apprehension, and acceptance: Understanding the influence of literacy and anxiety on acceptance of artificial Intelligence."

[136] Al-Abdullatif and Alsubaie, "ChatGPT in learning: Assessing students' use intentions through the lens of perceived value and the influence of AI literacy."

[137] Al-Abdullatif and Alsubaie, "ChatGPT in learning: Assessing students' use intentions through the lens of perceived value and the influence of AI literacy."

[138] Said Alzebda and Mohammed AI Matar, "Factors affecting citizen intention toward AI acceptance and adoption: the moderating role of government regulations," *Competitiveness Review: An International Business Journal* 35, no. 2 (2025).

ease played a significant role in influencing the adoption of AI technologies among the respondents.[139] Similarly, Osman and Khuzaimah investigated 319 students from private and public higher education institutions and confirmed the positive effects of perceived AI usefulness and perceived ease of use on students' intention to use AI technologies with self-efficacy and attitude acting as mediating variables. In addition, a study showed that perceived ease of use exerts a positive influence on students' tendency to use artificial intelligence because a user-friendly technology will enhance student perception performance, thereby influencing artificial intelligence adoption.[140] Another research demonstrated that students felt the usefulness and got their satisfaction if they used applications that were easy to use, so perceived ease of use exerts a significant influence on AI technology adoption among students.[141] Moreover, the research findings were supported by Majali et al. who showed that credibility, ease of use and usefulness, all influenced how positively students feel about using ChatGPT in a classroom setting.[142] Among the few studies investigating the relationship between perceived credibility and intention to use AI technologies, a study showed that teachers' perceptions of credibility and usability can significantly affect their willingness to use AI systems.[143] In the context of education, perceived credibility is found to be one of the key predictors of technology adoption by teachers, since they are not likely to utilize tools that they do not trust.[144] Even though the finding was made from a survey targeting teachers, its empirical evidences confirmed the positive relationship between

[139] Miftah Rizqullah Sudaryanto, Muhammad Aditya Hendrawan, and Tommy Andrian, "The effect of technology readiness, digital competence, perceived usefulness, and ease of use on accounting students artificial intelligence technology adoption" (paper presented at the E3S Web of Conferences, 2023).

[140] Mahdi M Alamri et al., "Towards adaptive e-learning among university students: By applying technology acceptance model (TAM)," *e-learning* 7, no. 10 (2019).

[141] Young Ju Joo, Sunyoung Park, and Eui Kyoung Shin, "Students' expectation, satisfaction, and continuance intention to use digital textbooks," *Computers in Human Behavior* 69 (2017).

[142] Salwa AL Majali et al., "Antecedents of adoption and usage of ChatGPT among Jordanian university students: Empirical study," *International Journal of Data and Network Science* 8, no. 2 (2024).

[143] Rose Weeks et al., "Usability and credibility of a COVID-19 vaccine chatbot for young adults and health workers in the United States: formative mixed methods study," *JMIR human factors* 10 (2023).

[144] Widia Murni Wijaya et al., "The credibility of the digital media: Teacher perceptions and practice," *Jurnal Akuntabilitas Manajemen Pendidikan* 10, no. 2 (2022).

perceived credibility and technology adoption in the contest of education. Another study found that students' perceived credibility of an AI instructor positively influenced their intentions to enroll in future AI-instructor-based online courses,[145] which provided more direct support for the positive correlation between perceived credibility and intention to use AI technologies among students. All in all, these researches can confirm the positive correlations between perceived usefulness, perceived ease of use, perceived credibility and intention to use AI technologies in the workplace.

5.3 Mediating effects

This thesis highlighted the mediating effects of perceived usefulness, perceived ease of use, and perceived credibility in translating students' AI literacy into intention to use AI technologies in their future works. This is in line with Zhang who found the mediating effects of perceived usefulness and perceived ease of use in the relationship between AI literacy and intention to use.[146] Hussain et al showed the mediating effects of the same two variables in the link between technology sophistication and intention to use AI-driven medical applications among nurses.[147] Similarly, with pre-service special education teachers as the sample, Yao and Wang demonstrated that the majority of indirect effects of digital literacy on intention to use AI in education were mediated by perceived usefulness of AI in education, and slightly smaller indirect effects were mediated together by perceived ease of use and perceived usefulness.[148] Abdulayeva et al. also found that perceived usefulness of AI played a partial mediating role in the relationship between AI literary and intention to integrate generative solutions in potential teaching among pre-service physics teachers.[149] Esen and Erdoğmuş noted

[145] Kim et al., "Perceived credibility of an AI instructor in online education: The role of social presence and voice features."

[146] Zhang, "How AI Literacy Affects the Intention to Use AIGC: An Empirical TAM-Based Study."

[147] Abid Hussain et al., "The mediating effects of perceived usefulness and perceived ease of use on nurses' intentions to adopt advanced technology," *BMC nursing* 24, no. 1 (2025).

[148] Ni Yao and Qiong Wang, "Factors influencing pre-service special education teachers' intention toward AI in education: Digital literacy, teacher self-efficacy, perceived ease of use, and perceived usefulness," *Heliyon* 10, no. 14 (2024).

[149] Aigerim Abdulayeva et al., "Fostering AI literacy in pre-service physics teachers: inputs from training and co-variables" (paper

the mediating effect of perceived usefulness in the association between perceived ease of use and intention to use of technology among human resource managers.[150] These researches can help confirm what have been found in this study.

The research results suggest that perceived credibility can be added to the TAM model, especially when it is used in AI-related studies. The extension of the TAM model in this study - adding "perceived credibility" as a mediating variable - holds theoretical value. The results show that the standardized path coefficient between this variable and intention to use is 0.233 ($p<0.05$). Although it is lower than that of perceived usefulness (0.360) and perceived ease of use (0.302), it reveals a crucial dimension not captured by the standard TAM. Firstly, it compensates for AI-specific risks. Against the backdrop of the frequent occurrence of the "hallucination" phenomenon in generative AI (such as the information distortion risk pointed out by Bjelobaba et al. in 2024), credibility assessment has become an important filter for the intention to use. Secondly, it reflects the role of ethical cognition. Students with high AI literacy pay more attention to the credibility of the technology ($\beta = 0.442$), indicating that the ethical awareness aspect of AI literacy indirectly affects behavioral intention through this variable. This has implications for the design of AI education courses, such as enhancing students' awareness and knowledge about how to identify and deal with credibility issues when using AI technologies.

Several other studies have already experimented with incorporating credibility into the TAM model. For instance, Ayeh combined source credibility factors with TAM model to investigate online travellers' acceptance of consumer-generated media usage, and suggested that source credibility factors could effectively capture variations in attitudes and perceived usefulness that may not be accounted for by the TAM model.[151]

presented at the Frontiers in Education, 2025).

[150] Murat Esen and Nihat Erdoğmuş, "Effects of technology readiness on technology acceptance in e-hrm: Mediating role of perceived usefulnes," *Bilgi Ekonomisi ve Yönetimi Dergisi* 9, no. 1 (2014).

[151] Julian K Ayeh, "Travellers' acceptance of consumer-generated media: An integrated model of technology acceptance and source

Among the few studies investigating perceived credibility as the mediating variable in the acceptance and adoption of AI technologies, AI-Abdullatif showed that perceived trust played a mediating role in the relationship between AI literacy and perceived usefulness of generative artificial intelligence (GenAI) technologies among teachers in higher education.[152] Another study by Kang et al. that investigated factors influencing attitudes towards AI-assisted medical consultations showed that perceived distrust of AI and the efficiency of AI fully mediated the relationship between digital literacy and attitudes towards AI-assisted medical consultations. The study by Kang et al. highlighted the importance of users' perceived credibility of AI-assisted contents, however, the mediating effect of perceived credibility in this thesis was not as strong as that in the study by Kang et al. This maybe because the credibility of assisted medical consultations impacts people's health and lives, which attaches great importance to the credibility of the content. In contrast, for business school students, AI tools can be used for various purposes, such as drafting emails, assisting with PPT creation, processing images, and organizing document content. These tasks do not necessarily involve critical interests or important content. Therefore, even if business school students find AI unreliable in some aspects (e.g., fabricating legal regulations), it is still useful and easy to use for handling daily tasks.

5.4 Recommendation

This thesis highlights the increasing importance of integrating AI literacy into educational curriculum to enhance the acceptance and adoption of innovative AI technologies in students' future workplaces. The literacy skills of individuals are not

credibility theories," *Computers in Human Behavior* 48 (2015).

[152] Ahlam Mohammed Al-Abdullatif, "Modeling teachers' acceptance of generative artificial intelligence use in higher education: The role of AI literacy, intelligent TPACK, and perceived trust," *Education Sciences* 14, no. 11 (2024).

only important in learning activities,[153] [154] but also in workplaces. Several studies have underscored the positive influences of high AI literacy levels on human-AI interactions. For instance, Su and Yang demonstrated students' improvement in AI skills, knowledge and attitude from AI literacy programs, and showed that AI literacy positively influenced students' abilities and perceptions.[155]

Curriculum designers and teachers can amplify the perceived usefulness of AI technologies by aligning their features with industry trends, personal career development, and employability skills. In practice, they can design specific projects or assignments that require the usage of AI solutions to complete, reinforcing their applicability and utility in real-world applications. Furthermore, providing targeted tutorials and workshops on maximising the adoption of AI for working purposes can help students get a better understanding of how to use AI technologies to improve work performance. Moreover, institutions can consider designing more easy-to-use and intuitive interfaces, and integrating AI tools with other platforms that are used in various industries, so as to make AI applications more user friendly and accessible. Additionally, Students should learn to employ AI technologies clearly and discern between unethical and ethical practices.[156] [157] Guidelines, examples of ethical use, and best practices can help students navigate how to utilize AI tools responsibly and ethically.

Apart from setting up dedicated AI courses, integrating AI literacy components into the existing curriculum can allow AI education to become part of a broader learning

[153] Moonkyoung Jang et al., "The impact of literacy on intention to use digital technology for learning: A comparative study of Korea and Finland," *Telecommunications Policy* 45, no. 7 (2021).

[154] Siu-Cheung Kong, William Man-Yin Cheung, and Guo Zhang, "Evaluating artificial intelligence literacy courses for fostering conceptual learning, literacy and empowerment in university students: Refocusing to conceptual building," *Computers in Human Behavior Reports* 7 (2022).

[155] Su and Yang, "AI literacy curriculum and its relation to children's perceptions of robots and attitudes towards engineering and science: An intervention study in early childhood education."

[156] Krzysztof Wach et al., "The dark side of generative artificial intelligence: A critical analysis of controversies and risks of ChatGPT," *Entrepreneurial Business and Economics Review* 11, no. 2 (2023).

[157] Olaf Zawacki-Richter et al., "Systematic review of research on artificial intelligence applications in higher education–where are the educators?," *International journal of educational technology in higher education* 16, no. 1 (2019).

strategy, helping university students develop AI skills and gain a critical understanding of how to utilize AI technologies effectively and responsibly. For instance, AI literacy can be embedded in digital literacy modules, introductory computer science classes, business and social sciences courses. This interdisciplinary approach to AI literacy can help equip students from different academic backgrounds such as business-related majors to use AI tools, regardless of their fields of study. All in all, these initiatives can improve business school students' interest, comfort, ability, and willingness to use AI technologies and applications in their future workplaces.

6. Conclusion

To sum up, this study empirically investigated the roles of students' AI literacy, perceived ease of use, perceived usefulness, and perceived credibility on the intention to use AI in their future workplaces. With a sample from Emory University's Goizueta Business School, the research results showed that AI literacy was positively associated with intention to use, perceived usefulness, perceived ease of use, and perceived credibility among the business school students. Besides, perceived usefulness, perceived ease of use, and perceived credibility played a mediating role in the connection between AI literacy and intention to use. Additionally, this study confirms that the TAM model can be extended and successfully applied in the context of AI education in business schools as well.

6.1 Significance of this study

6.1.1 Theoretical contribution

Theoretically, this study contributes to extending the current perspective of the TAM model as its relationship with AI literacy is explored. Besides, this study proves

that the TAM model stays applicable within the areas of AI education and labour market, and among business school students. With the rapid development of AI technologies in various fields, it is increasingly important to understand those subtle variables and mechanisms that influence students' willingness to utilize such technologies in their future workplace, and this study demonstrates the roles of perceived usefulness, perceived ease of use, and perceived credibility in making AI technologies appealing to business school students in their future working scenarios.

Furthermore, this thesis extends the TAM model by adding the perceived credibility as the mediating variable, which turns the former two-mediating-variable model to the new three-mediating-variable model, and by demonstrating the reconfiguration and adaptability of this extended model for AI education research, as AI technologies growingly integrate into global labour market. The relevance of perceived usefulness, perceived credibility, and perceived ease of use has become even more crucial due to emerging challenges such as the impact of the global economic downturn on employment rates, the threat of various emerging AI technologies to some traditional jobs.

This thesis enriches the TAM model by suggesting that these mediating variables are key to promote business school students' adoption of AI technologies in their workplaces. This indicates that the perception or realization of these mediating factors are crucial determinants of successful adoption of AI technologies in workplace. This study offers theoretical insights on how a tailored approach based on the TAM framework can help fill the gap between AI education in business schools and actual adoption of AI technologies in students' future workplaces, which provides a roadmap for improving the integration of AI education in universities with students' employability and professional development. Last but not least, this thesis provides more empirical evidences to the research on AI education by applying the well-established TAM model.

6.1.2 Practical implications

Practically, this study contributes by showing that AI literacy, perceived ease of use, perceived credibility, and perceived usefulness are important factors that influence business school students' adoption of AI technologies in workplace in the United States and internationally. Through recognizing these mediating factors in translating students' AI literacy into actual adoption in their workplace, teachers can improve their teaching contents and methods to increase the real-world relevance and applicability of the AI courses and enhance students' employability competencies. Moreover, this study bridges practical execution and theoretical understanding by providing a framework for school administrators and teachers to design and develop AI courses so as to enhance students' competitive advantages and employability in the labour market, and the overall improvement of human productivity, which can contribute to the ongoing discourses on AI-driven human resource management innovation.

6.2 Research Limitations and Directions

There are several limitations of this study. Firstly, this study targeted the business schools in the United States, and the sample was students from Emory University's Goizueta Business School, which may limit the generalizability of the research findings to other populations, such as students from different universities, disciplines, or cultural contexts. As discussed above, research results based on the TAM model can exhibit variations due to differences in contextual factors, so the applicability of the TAM model to other educational contexts is not guaranteed and should be verified by empirical studies linked to specific educational contexts. Therefore, future research can expand the study in other contexts or among other groups, such as business school students in other developing countries, or students from other majors, in order to improve the generalizability of the results.

Secondly, this study employed a cross-sectional research design, which may also limit the generalizability of the findings. AI applications and tools have just appeared recently; the development and application of AI technologies may vary across different time periods. It can be inferred that students' AI literacy levels and their perceptions of the credibility, ease of use, and usefulness of AI technologies may also differ across different time periods. Therefore, the current research findings may not be applicable to future situations. Future research can employ a longitudinal design that may help provide different perspectives and valuable insights to the research in this field.

Thirdly, the research scope was limited to the investigation of five core variables and the interactions between them. The extended TAM model in this study included AI literacy as the external variable, and added perceived credibility as the mediating variable. This focused approach facilitated rigorous and detailed exploration of these crucial factors, while future research can expand the research scope to involve more variables and investigate more complex interactions. For instance, other aspects like technology readiness, specific features of the AI tools, and institutional support may also play critical roles, and can be incorporated into the TAM model. Through investigating a wider variety of factors and considering relevant complex interactions, future studies can offer a more holistic and comprehensive understanding of usage intention and actual adoption of AI technologies in the workplace. Besides, the incorporation of these factors into the TAM model can extend and enrich this model, promoting the evolution of this model.

Fourthly, this study employed a convenience sampling method (selecting students from Emory University's Goizueta Business School within the researcher's social network), which introduced additional limitations. Random sampling can ensure that each individual has an equal probability of being selected, thereby enhancing the representativeness of the sample for the population. However, convenience sampling may lead to the following issues: 1) Selection bias: The participants are mostly students

within the researcher's social circle. Their AI literacy or technology acceptance may be higher than the average level of business school students. For example, 35.7% of the sample frequently use AI tools, which is much higher than that of the general population. 2) Limited representativeness: The results are difficult to generalize to other institutions, cultural backgrounds, or non-business students. 3) Self-selection bias: Voluntary participants may hold a more positive attitude towards AI technology. For instance, the average intention to use AI in the questionnaire reached 4.0 out of 5. Although convenience sampling has the advantage of efficiency in exploratory research, future studies should adopt stratified random sampling to improve generalizability.

Lastly, the current study used self-report questionnaire survey to measure students' perceived AI literacy as well as intention to use AI technologies in workplaces. Future research can use more objective measurements to measure students' actual AI literacy levels and the degree of actual AI technology usage, which may reflect AI technology usage and adoption behaviours in a more accurate and direct way.

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Appendix: Questionnaire:

I. Basic Information

Your gender:

- Male
- Female

Your grade level:

- Freshman

- Sophomore
- Junior
- Senior
- Graduate

Your major:

- Finance
- Accounting
- Marketing
- Management
- Other (please specify)_____

II. Current Use of AI Tools

Have you ever used AI tools (such as ChatGPT, automated analysis tools, etc.) to assist with your learning or work?

- Frequently use
- Occasionally use
- Never used

What is your primary purpose for using AI tools? (Multiple selections allowed)

- Improve work efficiency

- Analyze data
- Improve decision quality
- Learn new skills
- Other (please specify)_____

III. Time spent on learning AI

Have you already attended/completed AI courses? Please indicate whether you have already attended AI courses and, and if so, how extensive those courses were. It is irrelevant whether the courses took place within the scope of your studies or outside of your studies (e.g. online courses, school, etc.).

- Prior to the survey today, I have not taken any AI-related courses.
- Prior to the survey today, I have attended one AI-related course.
- Prior to the survey today, I have attended two AI-related courses.
- Prior to the survey today, I have attended more than two AI-related courses.

To what extent do you use other means to learn about AI? Please indicate to what extent you have already educated yourself about the subject area of AI outside of AI courses. Opportunities for AI education outside of actual courses would include books about AI, YouTube videos, news articles, social media posts, etc.

- Outside of AI courses, I do not use any other opportunities/media to learn about AI.
- Outside of AI courses, I only use other opportunities/media to learn about

AI on an irregular basis.

- Outside of AI courses, I use other opportunities/media to learn about AI fairly regularly.

IV: AI literacy (5-point Likert scale)

- I can explain how AI applications make decisions.
- I can assess if a problem in my field can and should be solved with artificial intelligence methods.
- I can critically reflect on the potential impact of artificial intelligence on individuals and society.
- I can explain why data privacy must be considered when developing and using artificial intelligence applications.

V: Perceived ease of use (5-point Likert scale)

- Learning to use AI application would be easy for me.
- I would find it easy to manage my work using AI application.
- It would be easy for me to become skillful at using AI application.
- I would find AI application easy to use.

VI: Perceived usefulness (5-point Likert scale)

- Using AI application would improve my performance in my future work.
- Using AI application would improve my productivity in my future work.
- Using AI application would enhance my effectiveness in my future work.
- I would find AI application useful in my future work.

VII: Perceived Credibility (5-point Likert scale)

- I believe that AI applications are trustworthy.
- I believe that AI applications are dependable.
- I believe that AI applications ensure safety and confidentiality.

VIII: Intention to use AI technology in work (5-point Likert scale)

- I am willing to use AI technology to develop business-related content and skills that will enhance my future career in the workplace.
- I believe that AI technology could assist me in tasks such as financial analysis, which are increasingly important in the labor market.
- I would recommend my peers in the business school to explore and adopt AI tools to stay competitive in the evolving job market.
- I intend to integrate AI technology into my studies and future professional work to adapt to the demands of the AI-driven job market within the next few years.