



Accounting Students on the Role of AI: Future of Accountants

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Abstract: The rapid advancement of technology, particularly artificial intelligence (AI), has profoundly impacted the accounting profession. Despite extensive research examining the effects of technology and AI on accounting practices globally, studies specifically addressing the readiness of accounting students in Indonesia to adapt to AI remain limited. This study explores students' readiness at Universitas Negeri Padang to face the challenges of the Industrial Revolution, particularly concerning AI integration into accounting practices. A quantitative research approach will be employed to achieve this objective, utilizing surveys to gather data from a sample of accounting students. The research framework is built around three main hypotheses. Technological competence positively affects students' accounting competence; The accounting curriculum influences students' accounting competence; and accounting competence positively affects students' readiness to work with AI. The findings of this research are anticipated to provide valuable insights into how educational frameworks can be enhanced to prepare better accounting students for the demands of an AI-driven profession. Ultimately, the study seeks to contribute to improving the accounting curriculum, thereby increasing students' readiness to succeed in an evolving job market.

Keywords: accountant; accounting curriculum; artificial intelligence; student readiness; technology

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INTRODUCTION

Technology has opened access to new learning methods, such as e-learning and virtual classes while providing various educational resources that enrich the learning experience. The economy and finance sectors have also undergone significant transformations through the development of fintech, digital payment systems, and blockchain technology. These advancements facilitate financial transactions and offer broader access to financial services. Meanwhile, in the transportation and logistics sector, advanced technologies such as autonomous vehicles and smart traffic management systems are improving travel and goods distribution efficiency and safety. In the healthcare sector, the latest medical technologies, such as telemedicine and wearable devices, have enhanced the quality of care and health monitoring, making healthcare services more accessible and personalized.

Advances in computer technology, particularly the rapidly increasing computing capacity, have been a key driver in the development of AI. The use of powerful graphics processors (GPUs), the development of computationally efficient algorithms, and the ability to store and process large amounts of data have enabled significant achievements in AI. The operations of financial institutions have rapidly transformed with the introduction of Artificial Intelligence due to cost savings and operational efficiency; AI is also expected to take over core functions of financial institutions soon (Dilek et al., 2015; Husain et al., 2022; Brown et al., 2019; Islam et al., 2025). Artificial Intelligence has a long history in the accounting profession (Li, 2023). Integrating AI in accounting will enable companies to enhance accounting processes' efficiency, accuracy, and reliability while providing more profound and valuable insights into financial performance and business risks. In Indonesia, although many AI technologies have been developed, many businesses have yet to adopt these innovations, possibly due to concerns related to professional codes of ethics specific to the accounting profession (Prabowo et al., 2023; Nugrahanti et al., 2023; Gotthardt et al., 2020; Richards & Jones, 2019)

For some students, using AI in accounting may present new challenges in learning. They need to understand better this technology, including how it works, its applications in accounting, and its ethical implications (Putri et al., 2023; Jiménez-Rodríguez & Morales-Zumaquero, 2016). To address these challenges, students must be theoretically and practically prepared. The current conditions require the generation that will soon enter the workforce to quickly adapt to technological advancements (Latifah et al., 2020). Accounting has been effectively influenced by digitalization, thus necessitating an understanding of technology and its applications in accounting education (Kovalenko et al., 2021). The Institute of Chartered Accountants in England and Wales (ICAEW) It has been reported by the Financial Professional Development Center of the Ministry of Finance that as of February 2023, the number of registered public accountants in Indonesia as active members

is 1,464. This indicates a significant opportunity for students to pursue a career in accounting. However, achieving this in the current landscape requires a solid understanding and skill set related to artificial intelligence. In the future, accountants will need to think strategically. Management accountants must be knowledgeable, high-quality professionals with adequate skills, capable of adapting and continuously innovating with technology. Collaboration will be key in creating added value for accountants in conventional businesses and startups.

Technological readiness impacts knowledge and technology's usefulness (Andani, 2022; Askary et al., 2018; Akinadewo, 2021). This is supported by Kroon et al. (2021). The accounting profession will continue to evolve, and accountants will acquire new knowledge and competencies to respond adequately to various challenges, including technology-related ones. This research raises the question of what higher education institutions can take initiatives to prepare accounting students to compete effectively and equip them to face the new era and challenges of the accounting profession (Tavares et al., 2023),

The concept of Artificial Intelligence (AI) refers to intelligence created by humans capable of thinking, learning, and making decisions, which is quite extraordinary. Tech giants are attempting to transform the automotive industry by leveraging AI technology in their product creation. The advancement of AI technology is transitioning to a critical point where several innovations or new developments can potentially change how a profession or field of study is practiced and experienced worldwide (Hasan, 2022; Li, 2023; Lee & Tajudeen, 2020). Research by the University of Oxford in 2015 found that accountants experienced a 95% job loss due to machines taking over roles such as data analysis and numerical calculations (Li, 2023). Since the emergence of the Fourth Industrial Revolution, various reports have suggested that Artificial Intelligence (AI) machines will replace certain professions. Frey and Osborne (2013) indicate that professional accountants are at risk of being 94% replaced by AI. Accounting is expected to undergo significant disruption, with the profession potentially vanishing as if swallowed by the Earth. Such views and reports have begun to influence public perception regarding the existence of the accounting profession to this day. This is supported by data from the Accounting Study Program at Universitas Negeri Padang, where the number of first-year students did not meet the target for national selection admissions. Indeed, the accounting field faces massive changes due to digital transformation and shifts in the new normal following the COVID-19 pandemic. However, rather than being destroyed or disappearing, the accounting profession is adapting and transforming effectively

Previous research discussing the impact of AI on the accounting profession has been extensively conducted and yielded various findings. These include the necessity for preparation within the educational and professional realms to equip students to face the challenges of big data, blockchain technology, and AI (Hasan, 2022). A well-designed learning curriculum gives accounting students confidence that they are prepared to utilize AI in the workplace (Andani et al., 2022; Pradnyani et al., 2021). This contrasts with Amdanata et al. (2023), who state that technological readiness does not impact knowledge of AI technology in the accounting field. The growth in the number of public accountants in Indonesia from 2021 to 2022 has been observed, but it is not significant. In Sumatra alone, there are 118 accountants distributed across the region (pppk.kemenkeu., 2022). However, in 2022, the Financial Professional Development Center released a Sectoral Risk Assessment Report for Accountants and Public Accountants. The report outlines statistics on the development of the number of accountants and Public Accounting Firms from 2018 to 2022, showing a steady increase, although there was no significant rise or decline in the last two years. In 2022, 893 professional accountants and 692 active Accounting Services Firms spread throughout Indonesia. This is quite similar to the development of public accountants and Public Accounting Firms from 2018 to 2022, which saw a slight decrease in 2022. In that year, there were 1,425 public accountants and 467 active Accountants Public Firms across Indonesia. This statistical data indicates that the accounting profession will not disappear and will continue to evolve as it has rapidly developed. However, it also suggests that the advancement of technology and current training may contribute to a decline in interest in pursuing a career in accounting (Jefriyanto et al., 2022). Therefore, to address these challenges, the readiness of accounting students—who are future accountants—must begin to hone their skills in technology starting from their college years to compete in the future. Although many studies discuss the impact of technology and AI in the accounting profession globally (Akinadewo, 2021; Askary et al., 2018), research specifically examining the readiness of accounting students in Indonesia to adapt to AI is still very limited (Latifah et al., 2020; Pradnyani et al., 2021). The increasing integration of AI in accounting has raised concerns about how well future accountants are prepared for these changes. As financial tasks become more automated, accountants are expected to develop technological competencies alongside their traditional skills. Higher education plays a critical role in equipping students with the necessary knowledge and tools to navigate this evolving landscape.

Many studies have shown the workings of the aggregation principle, demonstrating that general attitudes and personality traits predict clusters of behavior much better than they predict specific behaviors (Ajzen, 1991). However, it does not explain the variability of behavior across different situations nor allow the prediction of specific behaviors in particular contexts. It aims to show that, in general, attitudes and personality traits are involved in human behavior, but their influence can only be observed by examining a broad,

aggregated, and valid sample of behaviors. The impact of these factors on specific actions in particular situations is significantly weakened by other, more pressing factors. Indeed, it can be argued that broad attitudes and personality traits affect specific behaviors indirectly by influencing several factors more closely related to those behaviors (Ajzen & Fishbein, 1980).

The Theory of Planned Behavior (TPB) can assist in designing interventions or programs aimed at changing behavior by influencing individual intentions and the factors that affect them. TPB can predict desired or undesired behaviors by identifying the key factors that drive or inhibit specific behaviors and designing more effective campaigns or interventions to change societal behavior. Attitude refers to an individual's responses and beliefs about something perceived as favorable or unfavorable about the behavior in question (Sumaryono, 2016). The Theory of Planned Behavior indicates that human actions are guided by two following components (Ajzen, 1988): 1) Intention: Intention is a key factor in the Theory of Planned Behavior (TPB) as it is considered a direct indicator of a person's likelihood of engaging in a behavior. Intention is influenced by three main factors: (a) Attitude towards the behavior. Attitude is measured by the subjective evaluation of the behavior, specifically to what extent the behavior is considered good or bad. (b) Social Norms (Subjective Norms) encompass an individual's perception of the expectations of important people in their lives (such as family, friends, or society) regarding their behavior. (c) Perceived Behavioral Control reflects an individual's perception of the ease or difficulty of performing the behavior; 2) Behavior: Behavior results from an individual's intention to perform a specific action. Behavior refers to the actions or reactions of an individual in response to external or internal stimuli. Intention represents a person's motivation or desire to do something, reflecting their plans or goals. People's actions are influenced by their intentions or desires to accomplish particular tasks. It highlights the link between what someone intends to do and how they actually behave.

The application of AI represents a significant change in how accounting and auditing tasks are performed. Professionals and organizations must be willing to adapt to these changes, leveraging new technologies and methodologies to remain relevant and competitive. Different regions and countries may face unique challenges, and AI solutions can be tailored to address specific issues arising from the pandemic. For example, AI-supported analytics can help businesses manage cash flow, assess financial risks, and make informed decisions in an uncertain economic environment (Raswan, 2020). This can dispel the notion that AI will 100% replace accounting. To prevent this from happening, higher education institutions, particularly in teaching accounting, need to continue developing skills related to technology operations (Gina et al., 2022).

The accounting profession will change the skills required. In addition to traditional accounting and auditing skills, the ability to work with technologies such as AI is becoming increasingly important. Teaching Artificial Intelligence in accounting programs will enable students to understand the usefulness and ease of this technology, allowing them to utilize it when they become accountants or auditors (Amdanata et al., 2023). Accounting education programs need to be updated to include teaching on AI, data analytics, and other related technologies. Students must be equipped with relevant skills to address these technological developments in the workplace. The current accounting curriculum should be adjusted to meet the demands of the accounting profession, and accounting graduates must possess technological knowledge in addition to the accounting material provided. The accounting curriculum should better integrate technology to prepare for future market demands and to face technological disruption (M. S. et al., 2022).

The accounting curriculum guides learning to achieve educational goals (Adrian & Dewanto, 2024). According to www.ifag.org in Andani et al. (2022), there are several courses that students must understand during their education to prepare them for their future work using AI: (1) Introductory Accounting, (2) Financial Accounting, (3) Management Accounting, (4) Cost Accounting, (5) Intermediate Financial Accounting, (6) Auditing, (7) Accounting Information Systems, and (8) Taxation. Various studies examining the skills and attributes required by accounting graduates have resulted in several agreements between students and employers regarding the necessary skills for success in today's business or accounting careers. These include analytical problem-solving, problem-solving, oral and written communication, teamwork, and continuous learning (Awayiga et al., 2010; Kavanagh and Drennan, 2008). The role of technology in accounting necessitates that the curriculum also adapts to meet these needs, along with individuals' abilities to use it, which is essential in the workplace (Güney, 2014).

Companies that can facilitate their needs can create integrated professional development, such as accountants who can become business transformers, data scientists, digital trailblazers, and others, which will be highly beneficial for the company, accountants, and other stakeholders (ACCA, 2020). The role of accountants as pillars of the business and industry can collaborate with the IT realm, which has become a focal point for the sustainability of companies to achieve competent performance and facilitate virtual connections among parties. This allows for easier dissemination of information and communication, which is shared periodically to assist in decision-making processes determining the company's future. Krahel et al. (2015) state that the advantage in the 4.0 era is to enhance competitive competitiveness, which is becoming increasingly stringent and accelerates growth to meet internal and external company needs. However, the technological advancements in the 4.0 era

primarily focus on corporate development, creating vulnerabilities in various professions that have not yet adapted to technology. This threatens their existence, as the workforce is predicted to decrease from 67% to 53%, according to a report by the [World Economic Forum \(2020\)](#). This is due to the automated system updates leading to a lack of knowledge and skills among humans, resulting in an imbalance between people and technological progress.

The theory of the revolution in the accounting profession refers to significant changes in the practices and roles in line with economic development, technology, and market demands. The theory of the evolution or revolution of the accounting profession was developed by [Michael Power \(1999\)](#). He introduced the concept of 'audit society,' highlighting how auditing and oversight have become increasingly important in regulating organizations and institutions in the modern era. Power emphasizes that the accounting profession not only faces pressure to keep up with technological advancements and globalization but must also continually adapt to the growing demands for ethics, transparency, and accountability in today's business environment. As high-level decision support specialists, accountants will increasingly play the role of financial analysts rather than merely providing accounting data. Therefore, besides their financing and accounting functions, accountants must also master marketing functions to detect market situations in the forthcoming global competition. Thus, in the future, accountants must be able to think strategically ([Rosmida, 2019](#)).

[Paul A. David \(2007\)](#) developed the Theory of Path Dependence. The concept of 'Path Dependence' has evolved through David's works and research in understanding how past choices and decisions influence future development paths and innovation. In economics, he highlights how decisions or technologies adopted in the past can create paths that are difficult to change or abandon in the future, even when technology options may be more efficient or economically optimal. The motivations driving technology adoption are multifaceted and align with global trends in the corporate world. Competitive advantage, increased efficiency, and cost reduction are common motivators, emphasizing multinational companies' desire to remain at the forefront in rapidly changing markets. Additionally, the need for compliance with regulations, especially in sectors with stringent reporting requirements, serves as a strong driver for technology adoption ([Nugrahanti et al., 2023](#)).

Technological competence encompasses the skills required to use software and digital tools in accounting practices. In today's digital era, accounting relies on theoretical knowledge and the ability to operate information technology and accounting software effectively. [Akinadewo \(2021\)](#) shows that students with strong information technology skills tend to perform better academically in accounting courses. Additionally, [Askary et al. \(2018\)](#) note that integrating technology into the accounting curriculum is crucial for preparing students to meet the industry's evolving demands. [Alani et al. \(2020\)](#) further emphasize that the technology training students receive during their education enhances their understanding and application of accounting concepts.

The accounting curriculum should be designed to include theoretical and practical aspects relevant to industry demands. [Wibowo et al. \(2021\)](#) indicate that a curriculum integrated with information technology and industry practices can enhance students' accounting competence. [Martono \(2020\)](#) found that students following a curriculum focused on practical competencies performed better in accounting exams and were better prepared to enter the workforce. Furthermore, [Latifah et al. \(2020\)](#) emphasize the importance of periodically updating the curriculum to reflect the latest accounting practices and technology developments. This research shows that an adaptive and responsive curriculum to market changes can enhance students' readiness to face industry challenges.

Good accounting competence prepares students to face new challenges posed by technological advancements, including using AI in accounting practices. [Abdullah et al. \(2024\)](#) found that students with a strong understanding of accounting principles can more effectively utilize AI technology to improve efficiency and accuracy in their work. [Smith \(2020\)](#) states that accounting education integrated with new technologies can significantly enhance students' readiness for careers in increasingly technology-driven fields. [Innab et al. \(2024\)](#) also emphasize that strong accounting competence is a crucial foundation for students to leverage AI in financial data analysis and decision-making. Thus, there is a significant relationship between accounting competence and readiness to work with AI, as students with a solid accounting knowledge base can more easily adapt to new tools and technologies.

METHODS

Descriptive quantitative research describes or explains the characteristics of variables or the relationships among variables within a population or sample ([Ishtiaq, 2019](#)). This study employs a descriptive quantitative approach to examine accounting students' readiness to adapt to AI-driven accounting environments. The research follows a survey-based design, allowing for a systematic collection of data that represents the target population. The study aims to assess the impact of technological competence and an updated accounting curriculum on students' preparedness for AI adoption in the accounting profession. By adopting a structured methodology, the study ensures reliability and validity in its findings ([Creswell, 2014](#)). These competencies will be tested against the students' confidence levels in using AI in the workplace. The

perceptions of accounting students regarding AI, aimed at preparing them as future accountants who can work with AI, will be measured using competencies based on the skills required for accounting students to work with AI as outlined by [IAESB 2018](#). This can be assessed through the courses or other technology-related knowledge students have acquired, such as financial spreadsheets, computerized accounting, communication software, and database management systems ([IAESB, 2018](#)).

Research objectives focus on evaluating students' technological competence, the effectiveness of AI-related coursework in accounting programs, and their perceived readiness to work with AI-integrated tools. Specifically, this study aims to determine whether current educational curricula provide sufficient training for students to navigate the evolving demands of the profession. Identifying gaps in knowledge and preparedness will aid in recommending improvements in accounting education ([Saunders, Lewis, & Thornhill, 2019](#)). The primary instrument used in this research is a structured questionnaire designed to capture quantitative data from a purposive sample of 339 undergraduate accounting students at Universitas Negeri Padang. The questionnaire includes sections on demographic information, AI awareness, technological skills, and self-assessed readiness for AI in accounting. Responses are measured using a 5-point Likert scale to quantify students' perceptions and competencies ([Hair et al., 2018](#)). Validity and reliability tests were conducted to ensure the instruments' consistency ([Sekaran & Bougie, 1993](#)).

Data analysis uses multiple regression analysis to establish relationships between technological competence, curriculum exposure, and readiness to work with AI. Descriptive statistics summarize the dataset, while inferential techniques determine significant predictors of students' readiness. The analysis is guided by the Theory of Planned Behavior ([Ajzen, 1991](#)), which explains how attitudes, subjective norms, and perceived behavioral control influence students' behavioral intentions regarding AI adoption ([Bryman & Bell, 2015](#)).

RESULT AND DISCUSSION

Number of Respondent

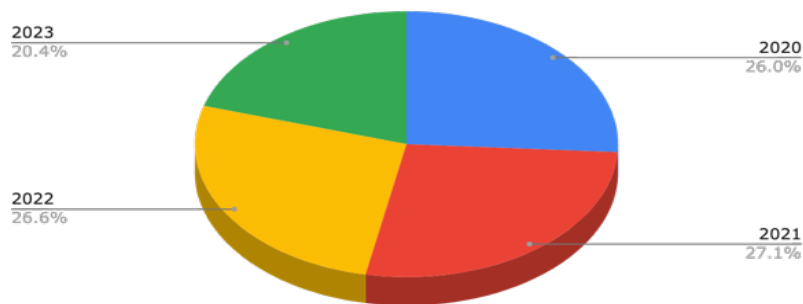


Figure 1. Respondents Criteria

The respondents of this study are undergraduate accounting students at Universitas Negeri Padang from the 2020-2023 cohort, a total of 339 respondents. Figure 1 illustrates the distribution of respondents based on the year. Each color represents the proportion of respondents from different years, with corresponding percentages. According to the chart, respondents from 2021 constitute the most significant proportion, accounting for 27.1% of the total. This is followed closely by respondents from 2022, who make up 26.6% of the sample. Respondents from 2020 represent 26.0%, while the lowest proportion of respondents comes from 2023, at 20.4%. These results indicate that most respondents come from 2020–2022, with 2021 having the highest participation. Meanwhile, the lower percentage of respondents from 2023 may suggest reduced participation or other factors influencing respondent engagement in that year.

Table 1. Regression of Basic Technology and Curriculum Towards Competencies

Model	Unstandardized Coefficients B	t	Sig.
(Constant)	2.549	11.548	.000
Basic Technology	0.117	2.225	.027
Curriculum	0.15	3.521	.000

Table 1 presents a regression analysis examining the influence of Basic Technology and Curriculum on Competencies. The table includes unstandardized coefficients (B), t-values, and significance levels (Sig.), which indicate each predictor's strength and statistical significance in the model. The regression results show that the

constant has a coefficient of 2.549, meaning that when both Basic Technology and Curriculum variables are zero, the predicted competency level is 2.549. This constant is statistically significant, with a t-value of 11.548 and a significance level of .000, indicating strong confidence in the model's baseline prediction. The Basic Technology variable has a positive regression coefficient of 0.117, suggesting that an increase in Basic Technology is associated with a 0.117 increase in Competencies. The t-value of 2.225 and a significance level of .027 indicate that this relationship is statistically significant at a 5% significance level ($p < 0.05$), implying that technological skills play a meaningful role in enhancing competencies. Similarly, the Curriculum variable has a regression coefficient of 0.15, meaning that improvements in curriculum contribute to a 0.15 increase in Competencies. With a t-value of 3.521 and a significance level of .000, this effect is highly significant, suggesting that curriculum enhancements strongly impact competency development.

Overall, the findings highlight that both Basic Technology and Curriculum significantly contribute to Competencies, with Curriculum having a slightly more substantial influence. These results suggest that integrating technological elements into education, alongside curriculum improvements, can effectively enhance students' competencies in the field.

Table 2. Regression of Competencies Toward Students' Readiness to Work with AI

Model	Unstandardized Coefficients B	t	Sig.
(Constant)	1.309	5.948	.000
Competencies	0.609	10.125	.000

Table 2 presents a regression analysis examining the influence of Competencies on Students' Readiness to Work with AI. The table provides unstandardized coefficients (B), t-values, and significance levels (Sig.), which indicate the strength and statistical significance of the relationship between these variables. The regression results show that the constant has a coefficient of 1.309, meaning that when the competency level is 0, the predicted readiness to work with AI is 1.309. This constant is statistically significant, with a t-value of 5.948 and a significance level of .000, suggesting a strong baseline effect in the model. The Competencies variable has a positive regression coefficient of 0.609, indicating that increased competencies lead to a 0.609 increase students' readiness to work with AI. With a t-value of 10.125 and a significance level of .000, this relationship is highly significant, demonstrating that students with higher competencies are more prepared to adapt to AI-driven work environments.

These findings suggest that competency development is crucial to students' readiness to integrate AI into their professional careers. Enhancing students' technical and analytical skills may significantly improve their ability to navigate AI-driven changes in accounting and beyond. Technology enables students to access advanced data analysis tools like business intelligence and big data systems. The ability to conduct in-depth financial data analysis and generate valuable insights is a highly valued skill in the accounting field. Students who master these tools can provide more accurate and comprehensive analyses, assisting in better decision-making for management (Kogan et al., 2019). Accounting students with a basic understanding of technology tend to be more adept at using accounting software commonly used in professional practice. Software such as QuickBooks, SAP, and Xero play a crucial role in facilitating the recording, processing, and reporting of financial transactions.

Research shows that students skilled in using these tools can complete tasks more efficiently and reduce errors, enhancing financial reports' accuracy and work efficiency (Hodge, 2020). A positive attitude toward technology is crucial to students' intentions to learn and use technology. This aligns with the Theory of Planned Behavior (TPB), which states that a positive attitude will enhance the intention to adopt technology and, in turn, improve accounting competencies. Andiola et al, (2020) found that encouragement from instructors and the academic environment significantly motivate students to master technology. This research indicates that students who feel encouraged by their instructors to learn technology are likelier to commit to technology learning.

This study highlights the critical role of foundational technological knowledge in shaping students' competencies in accounting. Accounting education can bridge the gap between traditional practices and modern technological advancements by ensuring students gain early exposure to digital tools and AI applications. Educators must integrate structured technology-based training into introductory courses to cultivate digital literacy. Future research should explore how early technological proficiency impacts long-term career readiness in AI-driven accounting environments. The important role of technology in accounting education and how integrating technology into the curriculum affects students' skills in accounting is evident. A technology-based accounting curriculum allows students to practice using the latest software and technology tools used in professional accounting practice. This enhances students' technical skills and helps them adapt quickly to a

technology-driven work environment. It shows that integrating accounting software and data analysis tools in the accounting curriculum enhances students' technical skills (Borthick & Murray, 2022; Satata et al, 2024).

This research indicates that students exposed to the latest technology in their education have a competitive advantage in the job market. Kachelmeier and Shehata (2019) found that using technology-based simulations in the accounting curriculum enhances students' understanding of the practical applications of accounting theory. The research suggests that simulations and technology-based tools allow students to practice and reinforce their knowledge. Andiola et al, (2020) found that students who practice using technology tools in the accounting curriculum exhibit a more positive attitude toward their ability to master technology and apply it in professional practice. A curriculum integrating analytical tools and information systems enables students to develop the necessary technical skills, improving their perceived behavioral control (Garrison et al., 2019; Scherer & Teo, 2019; Gray & DiLoreto, 2016; Ifenthaler, 2020)

Integrating AI-driven technologies into accounting curricula ensures that students develop the necessary competencies to meet industry demands. This study reinforces the need for continuous curriculum updates to align with technological trends in the financial sector. Institutions should collaborate with industry professionals to design courses that reflect real-world applications of AI in accounting. Future research could examine the impact of immersive learning experiences, such as AI simulations, in enhancing students' preparedness for digital transformation.

The hypothesis testing results indicate that competencies significantly influence students' readiness to work with artificial intelligence (AI). These findings are consistent with various previous studies emphasizing the importance of competencies in facing disruptive technologies such as AI. Relevant competencies, such as digital literacy, analytical skills, problem-solving, and technical understanding of AI, are key to ensuring graduates are prepared for the challenges and opportunities in the modern labor market. Bowles et al, (2020) show that individuals with strong competencies in technology and analytics exhibit higher adaptability to new technologies, including AI. Another study by Huang and Rust (2021) found that students with technological skills and an understanding of how AI works are better prepared to enter an increasingly digitalized workforce. Davenport and Kirby (2016) highlight that enhancing competency in technology encompasses not only technical skills but also an understanding of AI ethics, creativity, and the ability to collaborate with machines. These competencies enable students to work effectively with AI while understanding how it can be used responsibly across various job sectors.

The findings of this research align with the competency-based education approach, which suggests that developing relevant competencies is crucial for enhancing students' readiness to enter the labor market in the future (García-Holgado, 2020). In other words, the higher the students' competency levels, the more prepared they are to work with AI. Students' competencies in technology and understanding of AI are closely related to the three main elements of the Theory of Planned Behavior (TPB): attitude, subjective norms, and perceived behavioral control. When their competencies are enhanced, their positive attitudes, supportive subjective norms, and perceptions of behavioral control will also improve, ultimately strengthening their intention to work with AI and increasing their readiness. Teo and Zhou (2014) found that students' positive attitudes toward technology and confidence in mastering it significantly influence their intention to use it in their careers. Bowles et al, (2020) also discovered that developing competencies in technology encourages students to be more prepared to face challenges in AI-based industries, which can be explained through the lens of TPB,

This study provides insights into how specific competencies shape students' readiness to work with AI in accounting. The findings suggest that higher education institutions must focus on fostering analytical and digital competencies through targeted coursework and hands-on AI training. Universities should establish strategic partnerships with technology firms to expose students to real-world AI applications in finance and accounting. Future research could explore the longitudinal effects of AI-focused training on graduates' career trajectories in accounting. One of the key contributions of this study is identifying the competencies that influence students' readiness to work with AI. Competencies such as digital literacy, analytical thinking, and AI-related technical skills are critical in ensuring graduates can navigate a technology-driven workforce. Findings by Bowles et al, (2020) and Huang and Rust (2021) support this, showing that students proficient in AI technology are better equipped for digital transformation in accounting. Moreover, aligning with the Theory of Planned Behavior (Ajzen, 1991), this study confirms that competence development enhances students' attitudes, subjective norms, and perceived behavioral control, leading to greater confidence in AI adoption (Teo & Zhou, 2014). The ability to integrate AI tools into financial decision-making processes not only improves efficiency but also enhances students' problem-solving capabilities in complex accounting environments.

CONCLUSION

The findings of this study highlight the significant role of technological competence and an updated accounting curriculum in preparing students for AI-integrated accounting environments. As AI continues reshaping the accounting profession, higher education institutions must ensure that students develop strong

digital skills and adaptability. By incorporating AI-related subjects and practical experiences, students can enhance their readiness to navigate an increasingly automated industry. Future research should explore additional factors like hands-on AI training and real-world applications to understand further and improve student preparedness for AI-driven workplaces. This study confirms that technological competence and an updated accounting curriculum significantly enhance students' preparedness for AI-driven professions. Institutions should integrate AI-related subjects into accounting education to equip students with essential digital skills. Future research should explore additional factors such as self-efficacy and internship experiences to understand students' readiness for AI adaptation better. In terms of research variables, future studies could explore other variables that may affect students' readiness to work with AI, such as self-efficacy, internship experiences, or support from academic and industrial environments. These variables could provide a more holistic understanding of the factors shaping work readiness.

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REFERENCES

- Abdullah, A. A. H., & Almaqtari, F. A. (2024). The Impact of Artificial Intelligence and Industry 4.0 on Transforming Accounting and Auditing Practices. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1).
- Adrian, F. H., & Dewayanto, T. (2024). Integrasi Blockchain dan Artificial Intelligence pada Kurikulum Akuntansi: Systematic Literature Review. *Diponegoro Journal of Accounting*, 13(3).
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Akinadewo, I. S. (2021). Artificial Intelligence and Accountants' Approach to Accounting Functions. *Covenant University Journal of Politics & International Affairs*, 9(1), 40–55.
- Alani, F., Johnson, T., & Wang, L. (2020). Impact of Technology Training on Students' Accounting Competence. *Accounting Research Journal*, 18(4), 302-317.
- Amdanata, D. D., Burhan, B., Seswandi, A., & Annisava, A. R. (2023). Apakah Mahasiswa Akuntansi Menghadapi Artificial Intelligence dalam Akuntansi? *Jurnal Akuntansi Kompetif*, 6(1), 163–174.
- Andani, G., Lindrianasari, L., Oktavia, R., & Septiyanti, R. (2022). Indonesian Accounting Students' Self-Confidence To Adopt Artificial Intelligence (AI). *Jurnal Akuntansi Dan Keuangan Indonesia*, 19(1), 24–45.
- Andiola, L. M., Masters, E., & Norman, C. (2020). Integrating technology and data analytic skills into the accounting curriculum: Accounting department leaders' experiences and insights. *Journal of Accounting Education*, 50, 100655.
- Askary, S., Abu-Ghazaleh, N., & Tahat, Y. A. (2018). Artificial intelligence and reliability of accounting information. *Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*, 11195 LNCS(1995), 315–324.
- Association of Chartered Certified Accountants (ACCA). (2020). *Future Ready: Accountancy Careers in the 2020s*.
- Borthick, A. F., & Murray, D. (2022). The impact of accounting software integration in education. *Journal of Accounting Research*, 60(4), 1123-1145.
- Bowles, M., Ghosh, S., & Thomas, L. (2020). Future-proofing accounting professionals: Ensuring graduate employability and future readiness. *Journal of Teaching and Learning for Graduate Employability*, 11(1), 1-21.
- Brown, T., Smith, A., & Lee, J. (2019). Artificial intelligence in financial services: Enhancing efficiency and reducing risks. *Journal of Financial Innovation*, 25(3), 112-130.
- Bryman, A., & Bell, E. (2015). *Business Research Methods* (4th ed.). Oxford University Press.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). SAGE Publications.
- Davenport, T. H., & Kirby, J. (2016). *Only Humans Need Apply: Winners and Losers in The Age of Smart Machines*. Harper Business.

- David, P. A. (2007). Path Dependence: A Foundational Concept for Historical Social Science. *Cliometrica*, 1(2), 91-114
- Dilek, S., Cakır, H., & Aydın, M. (2015). Applications of Artificial Intelligence Techniques to Combating Cyber Crimes: A Review. *International Journal of Artificial Intelligence & Applications*, 6(1), 21–39.
- Frey, C. B., & Osborne, M. A. (2013). The Future of Employment: How Susceptible Are Jobs to Computerisation? *Technological forecasting and social change*, 114, 254-280.
- Garcia-Holgado, A. (2020). Competency-based education in technology driven accounting. *International Journal of Accounting Education*, 27(3), 89-102.
- Garrison, D. R., Anderson, T., & Archer, W. (2019). Technology and the future of accounting education. *Accounting Education Review*, 32(2), 56-71.
- Gina, L., Smith, J., & Brown, K. (2022). Redesign of Accounting Education to Meet the Challenges of Artificial Intelligence: A Literature Review. *Journal of Accounting Education*, 30(2), 150-165
- Gotthardt, M., Koivulaakso, D., Paksoy, O., & Zilke, J. (2020). Current State and Challenges in the Implementation of Smart Robotic Process Automation in Accounting and Auditing. *ACRN Journal of Finance and Risk Perspectives*, 9(1):90-102
- Gray, J. A., & DiLoreto, M. (2016). The Effects of Student Engagement, Student Satisfaction, and Perceived Learning in Online Learning Environments. *International Journal of Educational Leadership Preparation*, 11(1)
- Güney, A. (2014). Role of Technology in Accounting and E-accounting. *Procedia - Social and Behavioral Sciences*, 152(October 2014), 852–855.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate Data Analysis* (8th ed.). Cengage Learning.
- Hasan, A. R. (2022). Artificial Intelligence (AI) in Accounting & Auditing: A Literature Review. *Open Journal of Business and Management*, 10(01), 440–465.
- Hodge, F. (2020). The Effect of Humanizing Robo-Advisors on Investor Judgments. *Contemporary Accounting Research*, 35(2), 99-118.
- Huang, M. H., & Rust, R. T. (2021). Engaged to a Robot? The Role of AI in Service. *Journal of Service Research*, 24(1), 30–41.
- Husain, A.R.A.M., Hamdan, A., Fadhul, S.M. (2022). The Impact of Artificial Intelligence on the Banking Industry Performance. *Studies in Computational Intelligence*, 1037.
- IAESB_Information_Communications_Technology_Literature_Review. (2018). February.
- Innab, A., Almotairy, M. M., Alqahtani, N., Nahari, A., Alghamdi, R., Moafa, H., & Alshael, D. (2024). The Impact of Comprehensive Licensure Review on Nursing Students' Clinical Competence, Self-Efficacy, And Work Readiness. *Heliyon*, 10(7).
- Institute of Chartered Accountants in England and Wales (ICAEW). (2023). *The Skills Chartered Accountants Need in an AI World*.
- Ifenthaler, D., & Yau, J. Y. K. (2020). Utilising Learning Analytics to Support Study Success in Higher Education: A Systematic Review. *Educational Technology Research and Development*, 68, 1961-1990
- Ishtiaq, M. (2019). Book Review Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage. *English Language Teaching*, 12(5), 40.
- Jefriyanto, Masril, & Veronica, Y. (2022). Pengaruh Pelatihan, Motivasi dan Penghargaan Finansial Terhadap Minat Karir Menjadi Akuntan Publik. *Jurnal Ilmiah Akuntansi*, 6(4), 316–326.
- Jiménez-Rodríguez, R., & Morales-Zumaquero, A. (2016). A new look at exchange rate pass-through in the G-7 countries. *Journal of Policy Modeling*, 38(5), 985–1000.
- Kachelmeier, S. J., & Shehata, M. (2019). Simulation-based Learning in Accounting. *Journal of Business Education*, 34(1), 77-92.
- Kogan, A., Vasarhelyi, M. A., & Wu, J. (2019). Big Data and Analytics in The Modern Audit Engagement: Research Needs. *Journal of Information Systems*, 33(3), 1-13.
- Kovalenko, S. N., Kalutskaya, N. A., Bolvachev, A. I., Prodanova, N. A., Sotnikova, L. V., & Shevchenko, O. P. (2021). Artificial intelligence in the accounting profession. *Laplace em Revista*, 7(Extra-B), 378-383.

- Krahel, J. P., Vasarhelyi, M. A., & Alles, M. G. (2015). How 'Big Data' Will Change Accounting. *Accounting Horizons*, 29(2), 397-407.
- Kroon, N., Do Céu Alves, M., & Martins, I. (2021). The Impacts of Emerging Technologies on Accountants' Role And Skills: Connecting to Open Innovation-A Systematic Literature Review. *Journal of Open Innovation: Technology, Market, and Complexity*, 7(3).
- Latifah, S., Junaidi, & Sari, A. F. K. (2020). Persepsi Mahasiswa Akuntansi Tentang Keilmuan Akuntansi dan Soft Skill. *E-Jra*, 09(05), 40-55.
- Lee, C. S., & Tajudeen, F. P. (2020). Usage and Impact of Artificial Intelligence on Accounting: Evidence From Malaysian Organisations. *Asian Journal of Business and Accounting*, 13(1), 213-239.
- Li, Z. (2023). The Impact of Artificial Intelligence on Accounting. *Springer Proceedings in Business and Economics*, 181(Icsshe), 247-265.
- Martaseli, E., & Maragita, M. (2023). The impact of Artificial Intelligence on the accounting profession in the era of industry 4.0 and society 5.0. *JASS (Journal of Accounting for Sustainable Society)*, 5(01).
- Md S. I., & Nayem, R. (2025). AI-Driven Fraud Detections in Financial Institutions: A Comprehensive Study. *Journal of Computer Science and Technology Studies*, 7(1), 100-112.
- MS., D., N, D. A., Kulal, A., & Kanchan, S. G. (2022). Time to Bridge the Gap between Accounting and Technology through Improving the Accounting Curriculum: A Perceptual View. *SSRN Electronic Journal*, 21(12), 1054-1061.
- Nugrahanti, T. P., Puspitasari, N., & Andaningsih, I. R. (2023). Transformasi Praktik Akuntansi Melalui Teknologi: Peran Kecerdasan Buatan, Analisis Data, dan Blockchain dalam Otomatisasi Proses Akuntansi. *Jurnal Akuntansi Dan Keuangan West Science*, 2(03), 213-221.
- Power, M. (1999). *The Audit Explosion*. Democratic Audit.
- pppk. kemenkeu. (2022). Sectoral Risk Assessment on Money Laundering and Terrorist Financing for Accountant and Public Accountant in Indonesia 2022 – Updated. *Pppk.Kemenkeu.Go.Id*. <https://pppk.kemenkeu.go.id/in/post/sectoral-risk-assessment-on-money-laundering-and-terrorist-financing-for-accountant-and-public-accountant-in-indonesia-2022---updated>
- Prabowo, M. A., Hanifah, M. N., Abduh, M., Kalsum, U., & Jefriyanto, J. (2023). Internalisasi Nilai Kearifan Lokal Budaya Jawa dalam Kode Etik Akuntan. *Wahana Riset Akuntansi*, 11(2), 89.
- Pradnyani, N. L. P. N. D. A., Pramitari, I. G. A. A., & Abdi, I. N. (2021). Persepsi Kesiapan Mahasiswa Akuntansi dalam Menghadapi Tantangan di Era Revolusi Industri 4.0. *E-Jurnal Akuntansi*, 31(10), 2582.
- Putri, V. A., Carissa, K., Sotyawardani, A., & Rafael, R. A. (2023). Peran Artificial Intelligence dalam Proses Pembelajaran Mahasiswa di Universitas Negeri Surabaya. *Prosiding Seminar Nasional*, 615-630.
- Raswan, M. (2020). The Role of Artificial Intelligence in Financial Risk Management. *International Journal of Financial Studies*, 8(3), 45-56.
- Richards, J., & Jones, T. (2019). The role of AI in financial decision-making: Ethical considerations for accounting professionals. *International Journal of Ethics in Accounting*, 15(4), 102-118.
- Rosmida, R. (2019). Transformasi Peran Akuntan dalam Era Revolusi Industri 4.0 dan Tantangan Era Society 5.0. *Inovbiz: Jurnal Inovasi Bisnis*, 7(2), 206.
- Satata, D. P. I., Dewi, T. P., & Prajanto, A. (2024). Peningkatan kompetensi akuntan melalui integrasi teknologi data, blockchain dan artificial intellegence dalam kurikulum akuntansi untuk menghadapi revolusi industri 5.0. *Accounting Global Journal*, 8(2), 95-110.
- Saunders, M., Lewis, P., & Thornhill, A. (2019). *Research Methods for Business Students* (8th ed.). Pearson.
- Scherer, R., & Teo, T. (2019). Unpacking Teachers' Intentions to Integrate Technology: A Meta-Analysis. *Educational Research Review*, 27, 90-109
- Sekaran, U., & Bougie, R. (1993). Research methods for business: A skill building approach. *Long Range Planning*, 26(2), 136.
- Sekaran, U., & Bougie, R. (2016). *Research Methods for Business: A Skill-Building Approach*. Wiley.
- Smith, H., & Fotheringham, K. (2020). Artificial intelligence in clinical decision-making: Rethinking liability. *Medical Law International*, 20(2), 131-154.

- Sumaryono. (2016). *Pengujian Pengaruh Theory of Planned Behavior dan Tingkat Pemahaman Mengenai Chartered Accountant Terhadap Niat Mahasiswa Untuk Mengambil Sertifikat Chartered Accountant*. [Undergraduate Thesis, Universitas Negeri Yogyakarta]
- Tavares, M. C., Azevedo, G., Marques, R. P., & Bastos, M. A. (2023). Challenges of education in the accounting profession in the Era 5.0: A systematic review. *Cogent Business and Management*, 10(2), 0–30.
- Teo, T., & Zhou, M. (2014). The role of attitudes and perceptions in accounting students' adoption of technology. *Journal of Accounting and Behavioral Research*, 19(1), 67-85.
- Wibowo, A., Nugroho, H., & Sari, P. (2021). Industry-Oriented Accounting Curriculum and Its Effect on Student Competency Development. *Journal of Educational Accounting Research*, 27(1), 87-102
- World Economic Forum. (2020). *The Future of Jobs Report 2020*.