

Original Research

The Influence of Technological Knowledge and Digital Skills on Accounting Students' Readiness to Face Artificial Intelligence Technology

Siti Manira¹ , Lukman Effendy 

Departement of Accounting, University of Mataram, Mataram, Indonesia

Received 2 April 2024 Revised 14 May 2024 Accepted 17 May 2024

Abstract

In the face of the era of digital technological advancement, accounting students must prepare themselves and have competence in the field of accounting technology, even though this raises various concerns regarding the future of accountants and the possibility of them being replaced by AI. This research aims to examine the influence of technology knowledge and digital skills on the readiness of accounting students to face artificial intelligence technology. The data source used was primary data collected online through Google Forms using purposive sampling method. The population of this study sampled 286 respondents, namely active undergraduate accounting students in Indonesia. The research technique used is Structural Equation Modeling (SEM) based on the Partial Least Squares (PLS) analysis tool version 4.0. The results indicate that the variables of technology knowledge and digital skills have a positive and significant influence on the readiness of accounting students to face artificial intelligence technology in the era of digital technology disruption. Thus, this research indicates that accounting students in Indonesia will be more prepared to face technological advancements if supported by the understanding and digital skills possessed by these students.

Keywords: Accounting Students, Artificial Intelligence, Digital Skills, Industry 4.0, Technology Knowledge.

¹ Corresponding author's Email: manira326@gmail.com

Introduction

The emergence of technologies in the fourth industrial revolution (Artificial Intelligence, Big Data, Internet of Things, Cloud Computing, and Additive Manufacturing) represents a collaboration between cyber technology and automation, which will undoubtedly impact various sectors, including accounting (Majchrzak et al., 2016). The phenomenon of utilizing AI (Artificial Intelligence) technology in accounting marks a significant transformation in the management and analysis of financial information, bringing about substantial impacts on modern accounting practices and the evolution of information technology (Triatmaja et al., 2019). AI introduces automation, sophisticated data analysis, and high-speed information processing, optimizing efficiency and accuracy in accounting tasks (Triatmaja et al., 2019). Therefore, accounting students are challenged to understand and integrate AI technology into their accounting skills and knowledge (Y. Li, 2019).

The Public Accountant Profession Committee (KPAP) argues that Artificial Intelligence is something highly crucial based on cost reduction, supporting decision-making, service enhancement, and accelerating capacity building. As reported by CNBC Indonesia, Microsoft utilizes AI as a co-pilot in the company's decision-making processes. On the other hand, AI can also be utilized in financial fields such as auditing and invoicing, as demonstrated by Price Waterhouse Coopers, one of the world's largest accounting firms (Kindzeka, 2023). Similarly, in Indonesia, despite the increasing development of AI, many entrepreneurs have yet to adopt AI in their businesses (*WartaEkonomi*, 2023). History shows that new technologies can have wide-ranging impacts, and the potential of AI applied to modern digital operations is likely to result in significant economic disruptions. According to the CompTIA IT Industry Outlook 2024 report, 22% of companies are aggressively pursuing AI integration in various technology products and business workflows, 33% are engaged in limited AI implementation, and 45% are still in the exploration stage. Doubts in its application may arise from challenges such as the cost of application improvement, infrastructure development costs, or the need to fully understand the data required to properly train AI (Plamena Zlateva, 2023).

The readiness of accounting students to face AI technology is crucial due to the evolving market dynamics and the need for professionalism in managing financial information effectively (Stancheva & Todorova, 2019). In this context, technology knowledge and digital skills are essential foundations for accounting students to compete and adapt to the ongoing digital transformation (Stanislash Kihm, 2023). Accounting researchers have long aimed to integrate computer usage into higher education accounting curricula to meet technological advancements and complex market demands (Louis P. Le Guyader, 2019). Many accounting students feel unprepared for emerging technologies, such as computer usage, information systems, and artificial intelligence practices (Prasetio, 2024). Consequently, researchers have proposed adjusting accounting courses to include relevant content that aligns with contemporary advancements (Moore & Felo, 2021).

To stay relevant in an increasingly digital work landscape, universities and students must keep pace with technological advancements, particularly Artificial Intelligence (Li,

Jialing et al., 2023). This study aims to explore how technology knowledge and digital skills impact the readiness of accounting students to navigate AI technology. The objective is to develop relevant teaching materials for future accounting students (Pakpahan & Nikmah, 2023). This is essential to ensure that accounting graduates possess the skills demanded by today's job market (Pusparini et al., 2022). Additionally, learning about pertinent technologies helps students become adaptable accountants ready for future changes (Taib et al., 2022). In an educational context, accounting students rely on the curriculum to enhance their knowledge and skills in accounting, auditing, taxation, and technology. Therefore, the effectiveness of the accounting curriculum significantly influences students' readiness and acceptance of emerging technologies such as AI.

Theoretical Foundations

The Theory of Planned Behavior

The Theory of Planned Behavior, developed by Icek Ajzen in 1985 as an extension of the Theory of Reasoned Action, is a social psychology theory used to predict an individual's behavior based on their intentions. It explains three factors that influence intentions and predict human behavior (Ajzen, 1991):

1. Attitude toward the behavior: This refers to an individual's positive or negative attitude toward a given behavior.
2. Subjective norm This is the social pressure on individuals to perform or not perform the behavior.
3. Perceived behavioral control This refers to the perceived competence to perform the behavior based on past experiences or anticipated obstacles.

The increasing development of technology, such as the emergence of AI, has led to its adoption in many sectors, including accounting. Accountants and accounting professionals must actively adapt to technology and update their knowledge; otherwise, they may be replaced by AI (Güney, 2014). Therefore, the willingness to expand knowledge and adopt technology can be examined through the factors mentioned in the Theory of Planned Behavior.

Technology Knowledge and Digital Skills

Students' comprehension of fundamental technology concepts, software, and the most recent advancements in the field constitutes technology knowledge. This particular knowledge plays a pivotal role in preparing accounting students for the digital transformation era (Taib et al., 2022). Accounting students who possess a solid understanding of technology knowledge are more inclined to effectively utilize cutting-edge tools and technologies in executing their accounting responsibilities. Within the realm of accounting, technology knowledge encompasses the capacity to employ accounting software, understand database systems, and adapt to technological shifts like the integration of Enterprise Resource Planning (ERP) systems (Mutfi et al., 2022).

Nevertheless, the distribution of technological knowledge among students of accounting is frequently unequal. Obstacles might emerge from deficiencies in guaranteeing accessibility or channels for comprehending and applying technology in accounting contexts (John Forword, 2023). Consequently, endeavors to boost technological literacy among students of accounting are pivotal. Higher education institutions and academic establishments play a vital role in delivering curricula that encompass technological elements, facilitating instruction, and establishing educational atmospheres conducive to enhancing the technological skills of accounting students (Andani et al., 2022). With sufficient technology knowledge, accounting students can be better prepared to face the dynamic changes in the accounting profession, which are increasingly driven by technology (Stanislash Kihm, 2023).

Digital skills are a critical component in preparing accounting students to face an increasingly digitized business environment (Stanislash Kihm, 2023). Accounting students with strong digital skills can effectively utilize various tools and technology platforms to handle accounting tasks with a high level of efficiency (Abdurrochman Assyalabi, 2023). Digital skills encompass the ability to use accounting software applications, manage and analyze financial data with spreadsheet software, as well as understand basic technology concepts such as cloud computing and big data (Rindasu, et al., 2023).

In the context of modern accounting, digital skills also encompass understanding data analysis and data visualization (Tatjana & Ivanova, 2022). Accounting students with digital proficiency can leverage data analysis techniques to identify financial trends, analyze costs, and provide valuable insights to business stakeholders. Digital skills also include proficiency in managing digital information, maintaining data security, and understanding regulations related to data privacy (Goh et al., 2023). However, some accounting students may face challenges in developing their digital skills, either due to lack of access to adequate training or uncertainty regarding the rapid pace of technological changes (Okubokeme et al., 2020; Ramaj, 2014). Therefore, efforts are needed from higher education institutions to align accounting curricula with the digital skills required by the industry (Fauzia et al., 2021). Additional training and digital skills development programs can also help accounting students bridge the skills gap and prepare for technological challenges in the workplace (Elo et al., 2023). With enhanced digital skills, accounting students can not only increase their productivity but also provide significant added value in supporting the strategic role of accounting in business decision-making (Budi, 2023).

Accounting Student's Readiness to Face Artificial Intelligence

The preparedness of accounting students to confront Artificial Intelligence (AI) is crucial for their relevance and competitiveness in the digital era. To be equipped to encounter AI, students must deeply understand its implications in accounting practices. This includes how AI can impact traditional accounting procedures such as data analysis, transaction recording, and financial decision-making (Govil & Shavani 2020). Student readiness also involves developing skills for effective collaboration with AI technology, such as proficiency in machine learning algorithms, interpreting AI outputs, and integrating AI solutions into their workflows. Additionally, students should demonstrate

proficiency in managing and analyzing large datasets, commonly used in AI applications to generate valuable insights for financial decision-making (Vina et al., 2020).

The main challenge in this readiness is that AI continues to evolve and undergo changes. Therefore, accounting students need to have an open attitude towards continuous learning and adaptation to technological changes (Eriza & Tiara, 2020). This involves actively participating in additional training, online courses, and practical experiences related to the implementation of AI technology in the real world. The readiness of accounting students to face AI also involves an understanding of the ethics in using this technology. Students should be able to identify and address ethical dilemmas that may arise, including data security, algorithm fairness, and the social impact of AI usage in the business world and society. Higher education plays a crucial role in creating a learning environment that supports the readiness of accounting students to face AI (Kavanagh & Drennan., 2008). This includes aligning the curriculum with the latest technological trends, providing adequate training resources, and opening opportunities for collaboration with industries to offer practical experiences (Damerji & Salimi, 2021). With good readiness, accounting students can become valuable assets in leveraging AI technology to enhance efficiency, analysis, and decision-making in their accounting practices.

Research Methodology

This research employs a quantitative approach and utilizes purposive judgment sampling to select samples. The questionnaire, as the research instrument, consists of 4 questions in the Respondent Background section and a total of 20 questions divided into 2 parts for each research variable.

Research Type

This study utilizes both dependent and independent variables. The independent variables include technology knowledge and digital skills, while the dependent variable focuses on the readiness of accounting students to confront artificial intelligence (AI) technology. The study adopts a quantitative research design with hypothesis testing. A Likert scale is utilized in this study for all variables, with assessments rated on a scale of 1-4. A score of four indicates "Strongly Agree" (SA), three for "Agree" (A), two for "Disagree" (D), and one for "Strongly Disagree" (SD) responses from the respondents to support the given statement indicators. The reason for using a Likert scale of 1-4 in this study is to avoid respondents choosing a neutral answer. This indicates that the higher the score, the more the respondents believe that the information used for decision-making is of higher quality. By examining the independent variables, namely technology knowledge and digital skills, it will drive the dependent variable, which is the readiness of accounting students to face artificial intelligence technology.

Population and Sample

The population in this study consists of active undergraduate accounting students in Indonesia. The sampling technique employed is non-probability sampling using the purposive sampling method, where criteria determined by the researcher are applied. The

sample for the study consists of the number and characteristics of the population that meet the researcher's desired criteria as follows:

- 1) Population of Active Undergraduate Accounting Students in Indonesia
- 2) Active undergraduate accounting students currently enrolled in public or private universities in Indonesia.

2. Data collection techniques

Data was collected using the primary data type distributed online via Google Forms for a duration of 3 weeks. The determination of the sample size was based on a formula using the number of indicators multiplied by 5 to 10 (Ferdinand, 2006). In this study, there are 15 indicators, resulting in a minimum sample size of 150, which is 10 multiplied by 15 indicators. Therefore, the researcher decided to select a sample size of 286 based on the criteria and considerations in this study.

Data Analysis

The gathered data underwent processing using Microsoft Excel 2021 and was subsequently analyzed using the SmartPLS version 4.0 software to test the hypotheses using Partial Least Square (PLS) within the Structural Equation Modeling (SEM) framework. Following this, the research instruments underwent validity and reliability testing (outer model). For convergent validity, the criteria were loading factor values > 0.60 and Average Variance Extracted (AVE) values > 0.50 , indicating reliability. Discriminant validity was assessed using Fornell-Larcker criteria, Cross-Loading, and the heterotrait-monotrait ratio (HTMT ratio) with loading values < 0.90 . Reliability tests included ensuring composite reliability > 0.70 and Cronbach's Alpha > 0.60 . Additionally, this study employed other data analysis techniques such as the inner model and hypothesis testing.

Results and Discussion

The data for this study were obtained from 286 respondents through primary data collected from the questionnaire statements. The results of this study were conducted with the complete collection of data from all respondents who met the specified characteristics. The characteristics of the respondent data are presented in Table 1:

Table 1. Characteristics of respondent Data

Characteristics	Description	N	Frequency%
University Origin	TEDC Polytechnic Bandung	5	1,75%
	STIE AMM Mataram	16	5,59%
	STIE YAPIS Dompu	2	0,70%
	Ahmad Dahlan University	18	6,29%
	Airlangga University	7	2,45%
	Brawijaya University	5	1,75%

Characteristics	Description	N	Frequency%
	Bumi Gora University	29	10,14%
	Hasanuddin University	21	7,34%
	University of Mataram	86	30,07%
	University of Muhammadiyah Malang	18	6,29%
	Muhammadiyah Mataram University	8	2,80%
	University of Muhammadiyah Sukabumi	7	2,45%
	Jakarta State University	7	2,45%
	State University of Malang	10	3,50%
	Semarang State University	6	2,10%
	Yogyakarta State University	7	2,45%
	Pasundan University	7	2,45%
	Mandalika University of Education	10	3,50%
	University of North Sumatra	9	3,15%
	Udayana University	8	2,80%
	Total	286	100,00%
Semester	8	220	76,92%
	6	41	14,34%
	4	14	4,90%
	2	5	1,75%
	10	6	2,10%
	Total	286	100,00%

Based on the data in Table 1, it is evident that the participants are undergraduate accounting students from various Public and Private universities in Indonesia. Private university participants total 120, while those from Public universities number 166. Notably, the largest group of respondents is from Mataram University, with 86 students, representing 30.07% of the total sample. Additionally, Semester 8 is the most prevalent among respondents, with 220 participants, accounting for 76.92% of the total surveyed population.

Outer Model

Convergent Validity Test

Based on this research, the convergent validity test uses the results of testing the loading factor value and Average Variance Extracted (AVE), with the following explanation:

Table 2. Outer Loading Factor Value

Variables	Factor Loading Value
technology knowledge	0.788-0.809
digital skills	0.711-0.858
accounting students' readiness to face artificial intelligence technology	0.607-0.811

Judging from the value of the outer model or correlation on the results of each variable of technological knowledge, digital skills, and readiness of accounting students to face artificial intelligence technology has met the criteria, which is more than > 0.6 declared valid (Sarstedt, 2017; Wong, 2013). Based on the results of the Average Variance Extractd (AVE) value on this research variable, namely:

Table 3. Average Variance Extracted (AVE)

Variables	Average Variance Extracted (AVE)
technology knowledge	0.647
digital skills	0.672
accounting students' readiness to face artificial intelligence technology	0.507

In this study, it can be seen that the AVE value has exceeded 0.5, it can be concluded that the constructs that have convergent validity are valid (Ghozali & Latan, 2015).

Discriminant Validity Test

Furthermore, the discriminant validity test uses the Fornell and Lacker Criterion, namely the square root of the AVE, cross loading and heterotrait-monotrait ratio (HTMT ratio) (Henseler at al., 2015). Discriminant validity aims to determine whether a reflective indicator is a good measure of its construct based on the principle that each indicator should be highly correlated with its construct alone. Measures of different constructs should not be highly correlated (Ghozali & Latan, 2015). The value of the results of the discriminant validity test in this study is as follows:

Table 4. Fornel-Lacker Criteria

Variables	KET	KOM	PEN
digital skills	0.805		
accounting students' readiness to face artificial intelligence technology	0.291	0.712	
technology knowledge	0.516	0.402	0.820

Based on table 4, the value criteria on Fornell-Larcker are said to be valid based on the value of each variable indicator greater than other variables (Henseler at al., 2015). Based on the results of the Cross Loading value on this research variable, namely:

Table 5. Cross Loading

Variables	KET	KOM	PEN
KET1	0.711	0.137	0.372
KET2	0.837	0.261	0.444
KET3	0.858	0.268	0.427
KOM4	0.275	0.746	0.368
KOM5	0.257	0.811	0.352
KOM6	0.215	0.749	0.256
KOM7	0.098	0.624	0.142
KOM8	0.089	0.607	0.206
PEN2	0.531	0.313	0.809
PEN3	0.502	0.329	0.861
PEN4	0.247	0.343	0.788

Description:

KET = Digital Skills

PEN = Technology Knowledge

KOM = Readiness of Accounting Students to Face Artificial Intelligence Technology

The cross loading value of each construct is evaluated to ensure that the correlation of the construct with the measurement items is greater than that of other constructs. The expected cross loading value is >0.60 (Ghozali & Latan, 2015). Based on the results of the Heterotrait- Monotrait Ratio (HTMT ratio) value on this research variable, namely:

Table 6. Discriminant Validity of HTMT

Variables	KET	KOM	PEN
Digital Skills			
accounting students' readiness to face artificial intelligence technology	0.320		
Tech Knowledge	0.692	0.477	

This method uses a multitrait-multimethod matrix as the basis for measurement. The HTMT value used <0.9 indicates that the discriminatory validity has been accepted (Henseler et al., 2015).

Reliability Test

In the reliability test, it is carried out by looking at the value of Cronbach's Alpha (CA) and the Composite Reliability (CR) value, the composite reliability value > 0.7 is considered to have good reliability. (Sarstedt, 2017) and the expected Cronbach's alpha value is above 0.6 (Ghozali & Latan 2015):

Table 7. Reliability Test

Variables	Cronbach's alpha	Composite reliability (rho c)	Description
Digital Skills	0.738	0.846	Reliable
accounting students' readiness to face artificial intelligence technology	0.774	0.835	Reliable
Technology Knowledge	0.756	0.860	Reliable

Reliability testing is a crucial step in data analysis, particularly in the context of Partial Least Squares Structural Equation Modeling (PLS-SEM) used in SmartPLS. This testing aims to assess the consistency and reliability of the measurement instruments used in the research, whether they are latent variables or observed variables. The process of reliability testing in SmartPLS involves generating statistical output that presents reliability values for each latent variable in the model. These results enable researchers to evaluate the consistency and reliability of the constructs used in their research.

In practice, reliability testing assists researchers in ensuring that the measurement instruments used are trustworthy and provide consistent results, thereby strengthening the validity of the findings and research conclusions. Therefore, this step is highly important in the data analysis process using PLS-SEM in SmartPLS. table 7 above, it can be concluded that the results of the Cronbach's Alpha value > 0.6 (Ghozali & Latan, 2015) and the Composite Reliability value that the value is met at > 0.7 is said to be valid and reliable (Sarstedt, 2017).

Inner Model

R-square Testing

The purpose of this stage is to find out how much the independent variable affects the dependent variable. The following are the results of the R-square evaluation test:

Table 8. R-square testing

Variables	R-square	Adjusted R-square
accounting students' readiness to face artificial intelligence technology	0.171	0.165

The results of table 8 show that the R-square value of the technology knowledge variable, and digital skills affect the readiness of accounting students to face artificial intelligence technology by 0.171 or 17.1%, so it can be said that the independent variable affects the dependent variable in the weak category, namely with a value of ≤ 0.25 or 25%. (Ghozali & Latan, 2015) Conversely, about 82.9% is influenced by other variables or models that are not included in this study.

Predictive Relevance(Q²)

Cross-validated redundancy (Q^2) or Q-square test is used to assess predictive relevance. A value of $Q^2 > 0$ indicates that the model has accurate predictive relevance for a particular construct while a value of $Q^2 < 0$ indicates that the model lacks predictive relevance (Sarstedt, 2017). The following are the results of testing Predictive Relevance(Q^2):

Table 9. Predictive Relevance Testing(Q^2)

Variables	KET	KOM	PEN
Digital Skills		0.011	
accounting students' readiness to face artificial intelligence technology			
Tech Knowledge		0.104	

Testing Predictive Relevance in SmartPLS evaluates how well the model predicts dependent variables based on independent variables. Two common methods are used:

Q^2 : Uses Leave-One-Out Cross-Validation to measure prediction quality. Values range from 0 to 1, with higher values indicating better prediction ($Q^2 > 0.2$ is good).

Stone-Geisser's Q^2 ($Q^2(SG)$): Similar to Q^2 but corrects for model complexity. Positive values show better predictivity than baseline.

Testing involves calculating Q^2 or $Q^2(SG)$ based on model-tested data. It helps assess model utility and reliability in predicting outcomes based on predictors. This ensures models provide significant value in research contexts. Thus, it's an essential part of model evaluation in SmartPLS. From the table above, because the Q^2 value > 0 means that the variables and data can predict the research model well.

Hypothesis Test

Furthermore, the path coefficients between constructs are measured to see the significance and strength of the relationship and also to test the hypothesis. There is a significance level of 10%, a significance level of 5% and a significance level of 1% (Hamid & Anwar, 2019). In this study, researchers used the significant effect between variables assessed by the Alpha level $\leq 10\%$ or 0.10 and the insignificant effect between variables seen from the Alpha level $> 10\%$ or 0.10.

Table 10. Hypothesis Testing

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Digital Skills -> readiness of accounting students to face artificial intelligence technology	0.114	0.126	0.068	1.679	0.093

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Knowledge of technology -> readiness of accounting students to face artificial intelligence technology	0.343	0.348	0.071	4.827	0.000

Based on table 10, shows the results of the test value seen from each variable Knowledge of Technology and Digital skills, has a positive effect on the readiness of accounting students to face artificial intelligence technology using a 10% level or level of significance. The results of this study are in line with (Ghozali & Latan 2015) if the value of :

The Technological Knowledge variable obtained a statistical t value of $4.827 > 1.65$ or p values of $0.000 < 0.10$, so H1 is accepted, namely Technological Knowledge affects the readiness of accounting students to face artificial intelligence technology.

Digital Skills Variable Obtaining a statistical t value of $1.679 > 1.65$ or p values $0.093 < 0.10$, then H2 is accepted, namely digital skills affect the readiness of accounting students to face artificial intelligence technology.

The following are the results of testing the research model in Figure 1.

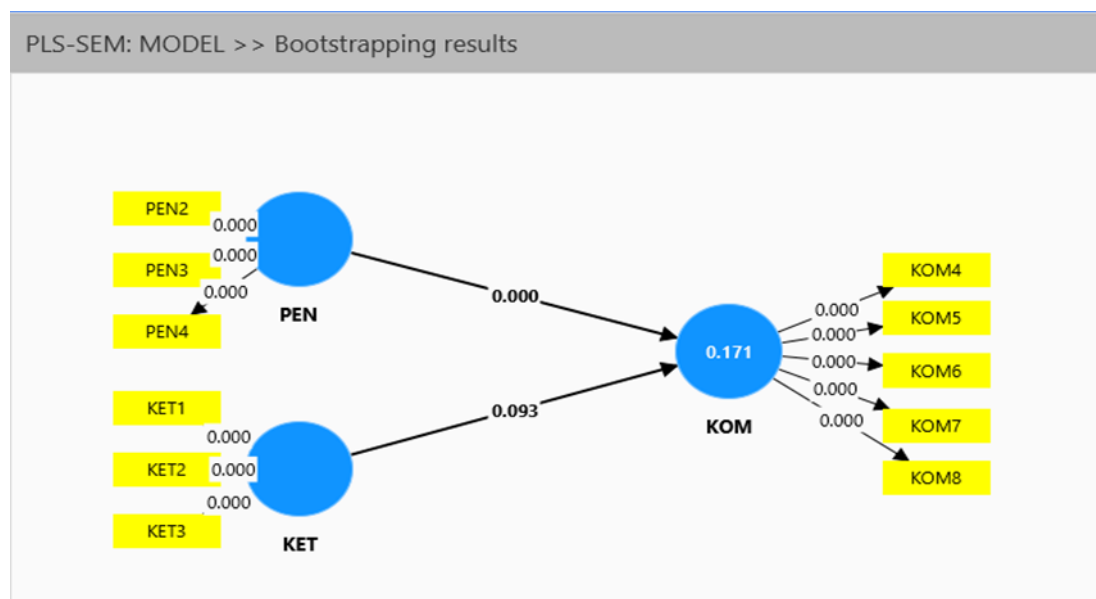


Figure 1. Research Model Testing

Discussion

The influence of technological knowledge on the readiness of accounting students to face artificial intelligence technology

The results of the first hypothesis research show a positive and significant effect that accounting students in Indonesia believe it is necessary to have technological knowledge and expertise, which will support students' readiness for increasingly sophisticated technology such as Artificial Intelligence today. Students who have competent, professional, and quality accounting technology knowledge and expertise will suit the needs of accounting in the future. (Aniswatin et al., 2020). The results of the study are also supported in the theory of Planned Behavior Theory where increasing technological developments such as the emergence of AI now, increase the adoption of AI in many sectors including accounting. accountants and aspiring accountants must actively adapt to technology and update their knowledge, otherwise they may be replaced by AI (Güney, 2014)

Influence of Technological Knowledge on Artificial Intelligence Preparedness, Findings suggest how accounting students technological proficiency impacts their readiness for artificial intelligence (AI). For example, Indonesian accounting students with strong grasp of technology concepts may better confront AI challenges.

The influence of Digital Skills on the readiness of accounting students to face artificial intelligence technology

The results of this second hypothesis research show a positive effect that accounting students in Indonesia believe it is necessary to have digital skills, which will support students' readiness for increasingly sophisticated technology such as Artificial Intelligence today. According to (Rosmida, 2019) shows that students must start improving technological capabilities to compete and succeed in the era of digital technology. This is in line with the theory of Planned Behavior Theory explained by the willingness to expand knowledge and adopt technology can be examined through the factors mentioned in the theory of planned behavior described.

Influence of Digital Skills on AI Preparedness, Research shows that accounting students' digital acumen significantly influences their AI readiness. Proficiencies such as data analysis and software adaptation play key roles in their preparedness for technological shifts.

Interaction between Technological Knowledge and Digital Skills, Additionally this study examines how technological knowledge and digital skills interact to shape accounting students' preparedness for AI. Strong technological understanding synergizes with proficient digital skills to enhance AI readiness. Regarding data limitations, Sample Size may restrict generalization this study focuses solely on Indonesia. Variable Scope may affect validity if it fails to encompass crucial aspects. Resource Constraints may limit analysis depth. Subjectivity Risks in data collection methods, such as questionnaires, may introduce biases, impacting result reliability. Acknowledging these limitations can strengthen the research's insights into accounting students' preparedness for future technological challenges.

The impact of these findings on accounting and technology's role is significant. With good tech knowledge and digital skills, accounting students are better equipped to handle AI advancements. Many companies use AI, giving an edge to proficient students. This

changes accounting practices, introducing automation, advanced data analysis, and efficient info processing. Tech's role in accounting grows, with AI integral to tools and processes. Understanding, managing, and integrating AI is vital in the accounting profession, altering work methods, and enhancing efficiency, accuracy, and analytical abilities.

The research's focus on students' tech knowledge and digital skills' influence on AI development is relevant to accounting's future trends. Understanding this influence helps prepare accountants for digital challenges. The hope is this research increases students' interest in tech in accounting, fostering digital knowledge and skills during education. The relevant previous research conducted by (Andani et al., 2022) which examined the Confidence of Indonesian accounting students in adopting Artificial Intelligence (AI).

Conclusion and Recommendation

Based on the results of the study, it is revealed that the readiness of accounting students to face artificial intelligence technology is significantly influenced by technological knowledge and digital skills in the era of digital technology disruption or the era of massive innovation and fundamental changes due to the presence of digital technology, which changes the system occurring in Indonesia and globally. Accounting students in Indonesia view that having digital skills is also based on the existence of technological knowledge literacy, enabling them to control themselves in preparing to face artificial intelligence technology. It is hoped that the results of this study can increase students' desire to deepen their expertise in accounting technology and gain an understanding of digital knowledge and skills during their education.

The limitation of this study is the sample used, which is relatively large but it is difficult to find specific data to produce a better analysis. This study examines variables only through the perspective of active undergraduate accounting students as a whole to fill the gaps of previous research that have been mentioned. Future research can add other variables to complement the factors that influence the readiness of accounting students to face artificial intelligence technology. It can also take specific samples, such as choosing certain universities, using more specific variable measurements, or collaborating on the perspectives of students and academics to provide broader insights. This study only includes active undergraduate accounting students in Indonesia, so it cannot be generalized to accounting students at other universities.

implications for further research on this topic include Curriculum Development, Future research can focus on developing curriculum enhancements to prepare accounting students for artificial intelligence (AI). This involves identifying necessary digital skills and integrating them into existing accounting curricula. Comparative Analysis Among Universities, Subsequent studies can compare the readiness of accounting students across various Indonesian universities, providing insights into differences in technological preparedness. Development of Readiness Measurement Tools, Research should aim to create specific and reliable measurement tools for assessing accounting students' readiness for AI. This will aid in evaluating educational programs and identifying areas for improvement. Case Studies on Technology Implementation, Further studies can conduct case analyses on AI technology implementation in Indonesia's accounting sector,

offering insights into practical application and effective student preparation. Perspectives of Faculty and Professionals, Incorporating faculty and professional viewpoints through interviews or surveys can enrich research, providing valuable insights into student readiness and educational needs. Longitudinal Studies, Longitudinal surveys tracking accounting students throughout their education can offer deeper insights into their evolving preparedness for AI technology. These approaches will yield comprehensive insights crucial for advancing accounting education in today's rapidly evolving technological landscape.

References

- Abdurrochman Assyalabi. (2023). *Pentingnya Sistem Akuntansi Di Era Digital*.
- Ajzen, I. (n.d.). *The Theory of Planned Behavior*.
- 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. <https://doi.org/10.21002/jaki.2022.02>
- Aniswatin, A. dan J. (2020). *Pengaruh Motivasi Pengetahuan Perpajakan, Karier, Dan Kualitas Terhadap Minat Mahasiswa Akuntansi Untuk Mengikuti Brevet Pajak*.
- Damerji, H. and A. Salimi. (2021). *Mediating effect of use perceptions on technology readiness and adoption of artificial intelligence in accounting*. *Accounting Education*.
- Elo, T., Pätäri, S., Sjögrén, H., & Mättö, M. (2023). Transformation of skills in the accounting field: the expectation–performance gap perceived by accounting students. *Accounting Education*. <https://doi.org/10.1080/09639284.2023.2191289>
- Eriza, T. (2020). Motivasi, Komitmen, Kepuasan Kerja, Keinginan Berpindah Kerja Sarjana Akuntansi Di Bengkulu. *Jurnal Fairness*, 10(3), 167–176.
- Fauzia, T., Afni, Z., & Santi, E. (2021). *Konten Kurikulum Akuntansi Perguruan Tinggi Dan Kesesuaiannya Dengan Standar Kompetensi Lulusan*. 16(2), 168–190. <https://akuntansi.pnp.ac.id/jam>
- Ferdinand, A. (2006). *Metode penelitian manajemen: pedoman penelitian untuk skripsi* .
- Ghozali, I. , & L. H. (2015). *Partial least squares konsep, teknik dan aplikasi menggunakan program smartpls 3.0 untuk penelitian empiris*.
- Goh, C., Lew, M., Pan, G., & Seow, P. S. (2023). Measuring the Learning Effectiveness of Two Courses in a Program in Accounting Data and Analytics. *Education Quarterly Reviews*, 6(2). <https://doi.org/10.31014/aior.1993.06.02.757>
- Govil, S. (2020). *What AI does for accountants*. *Accounting Today*.

- Güney, A. (2014). Role of Technology in Accounting and E-accounting. *Procedia - Social and Behavioral Sciences*, 152, 852–855.
<https://doi.org/10.1016/j.sbspro.2014.09.333>
- Hamid & Anwar. (2019). *STRUCTURAL EQUATION MODELING (SEM) BERBASIS VARIAN: Konsep Dasar dan Aplikasi dengan Program SmartPLS 3.2.8 dalam Riset Bisnis*. www.institutpenulis.id
- Harto Budi, A. Y. R. R. S. R. T. E. W. A. C. S. S. M. K. (2023). *Transformasi Bisnis Di Era Digital (Teknologi Informasi dalam Mendukung Transformasi Bisnis di Era Digital)*. PT. Sonpedia Publishing Indonesia.
- Henseler, J.-R. C.-S. M. (2015). A New Criterion for Assessing Discriminant Validity in Variance-based Structural Equation Modeling . *Journal of the Academy of Marketing Science*.
- John Forword. (2023). *Mengatasi kesenjangan keterampilan digital dalam akuntansi dan keuangan*.
- Kavanagh, M. H. , & D. L. (2008). *What skills and attributes does an accounting graduate need? Evidence from student perceptions and employer expectations*. *Accounting & Finance*.
- Kindzeka, K.-A. C. (2023). Impact of Artificial Intelligence on Accounting, Auditing and Financial Reporting. In *American Journal of Computing and Engineering* (Vol. 6). www.ajpojournals.org
- Li Jialing, P. Y. S. J. (2023). Analysis of the impact of artificial intelligence on college students and countermeasures based on the perspective of comprehensive development. *The Frontiers of Society, Science and Technology*, 5(9).
<https://doi.org/10.25236/fsst.2023.050905>
- Louis P. Le Guyader. (2019). *Artificial intelligence in accounting: GAAP's "FAS133."*
- Majchrzak, A., Markus, M. L., & Wareham, J. (2016). Designing for Digital Transformation: Lessons for Information Systems Research from the Study of ICT and Societal Challenges. *MIS Quarterly*, 40(2), 267–277.
<https://doi.org/10.25300/MISQ/2016/40:2.03>
- Moore, W., & Felo, A. (2021). *The evolution of accounting technology education: Analytics to STEM*.
- Okubokeme, O. D., Woyengibuomo, T., & Ebi, A. S. (2020). The Challenges and Prospects of Knowledge Gap for Accounting Practitioners in Emerging Economies. In *International Journal of Finance and Managerial Accounting* (Vol. 5, Issue 19).
- Pakpahan, S. R., & Nikmah, N. (2023). Kesiapan Kerja Mahasiswa Akuntansi Di Era Disrupsi Teknologi Digital: Peran Keahlian Akuntansi, Literasi Digital, Literasi


- Manusia, Dan Adaptabilitas Karir. *Al-Kharaj : Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 6(3), 3796–3811. <https://doi.org/10.47467/alkharaj.v6i3.5592>
- Plamena Zlateva, D. V. (2023). *Challenges of artificial intelligence application for disaster risk management*.
- Prasetio, T. (2024). *Perspektif: Jurnal Ekonomi & Manajemen Universitas Bina Sarana Informatika Persepsi Mahasiswa Program Studi Akuntansi Terhadap Dampak Artificial Intelligence Pada Profesi Akuntan*. <https://doi.org/10.31294/jp.v17i2>
- Pusparini, H., Nurabiah, N., & Mariadi, Y. (2022). Analisis Content Iklan Bidang Akuntansi Dengan Persyaratan Keterampilan Akuntan. *Jurnal Aplikasi Akuntansi*, 7(1), 81–94. <https://doi.org/10.29303/jaa.v7i1.163>
- Ramaj, B. (2014). *Impact of information technology in the accounting profession*.
- Rosmida. (2019). *Transformasi Peran Akuntan dalam Era Revolusi Industri 4.0 dan Tantangan Era Society 5.0*. www.ejournal.polbeng.ac.id/index.php/IBP
- Sarstedt, M.-R. C.-H. J. (2017). *Partial Least Squares Structural Equation Modeling*.
- Sinziana Maria Rindasu, L. D. T. L. L.-F. (2023). *The Evolution of Management Accountants' Digital Skills in Industry 4.0: A Qualitative Approach*.
- Stancheva-Todorova, A. (2019). *Are Accounting Educators Ready To Embrace The Challenges Of Industry 4.0*. <http://www.accaglobal.com/bigdata>
- Stanislash Kihm. (2023). *Professional Competencies for Student Success in an Increasingly Global, Digital, and Virtual World*.
- Sumadi Mutfi, P. R. F. A. (2022). Peran Perkembangan Teknologi Pada Profesi Akuntan Dalam Menghadapi Industri 4.0 Dan Society 5.0. *Journal of Law, Administration, and Social Science*.
- Syafrudin Vina, L. A. N. (2020). *Pengaruh Sifat Machiavelliane, Personal Cost, Dan Komitmen Profesional Terhadap Niat Untuk Melakukan Whistleblowing Pada Pengelola Keuangan Dan Anggaran Kanwil Kementerian Hukum Dan Ham Wilayah Sumatera*.
- Taib, A., Awang, Y., Shuhidan, S. M., Rashid, N., & Hasan, M. S. (2022). Digitalization in Accounting: Technology Knowledge and Readiness of Future Accountants. *Universal Journal of Accounting and Finance*, 10(1), 348–357. <https://doi.org/10.13189/ujaf.2022.100135>
- Tatjana, Ivanova. (2022). *Transformatization of accounting in the digitalization of the economy*.
- Triatmaja, M. F., Acc, M., Acpa, A., Program, *, Akuntansi, S., Ekonomika, F., Bisnis, D., Muhammadiyah, U., & Pekalongan, P. (2019). *Seminar Nasional dan The 6th*

Call for Syariah Paper Universitas Muhammadiyah Surakarta Dampak Artificial Intelligence (Ai) Pada Profesi Akuntan.

WartaEkonomi. (2023).

Wong, K. (2013). *Partial least square structural equation modeling (PLS-SEM) techniques using SmartPLS.*

Y. Li. (2019). *Artificial intelligence in accounting and auditing: A review of the literature.*

<p>COPYRIGHTS</p> <p>©2024 The Author(s). This is an open access article distributed under the terms of the Creative Commons Attribution (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, as long as the original authors and source are cited. No permission is required from the authors or the publishers.</p>	
<p>HOW TO CITE THIS ARTICLE</p> <p>Manira, S., & Effendy, L. (2024). The Influence of Technological Knowledge and Digital Skills on Accounting Students' Readiness to Face Artificial Intelligence Technology. <i>International Journal of Management, Accounting and Economics</i>, 11(5), 581-598.</p> <p>DOI: https://doi.org/10.5281/zenodo.11311900</p> <p>URL: https://www.ijmae.com/article_196328.html</p>	