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Understanding Student Perceptions of Artificial Intelligence Technology: Case Study of Accounting Education Student, Universitas Muhammadiyah Surakarta

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Abstract

This research was conducted to understand the views of Accounting Education students at Universitas Muhammadiyah Surakarta regarding the application of Artificial Intelligence (AI) in accounting education. The main problem faced is the lack of understanding of the effective application of AI and its impact on the role of accountants in the future. This research adopts a case study method with a qualitative approach. Data was obtained through in-depth interviews with nine interviewees who are students with accounting education backgrounds. The results show that, although most students are aware of AI technology in accounting, few actually understand how it works. Their perceptions vary, with some seeing AI as a tool that can improve efficiency, while others are concerned about the potential for AI to replace the role of human accountants. These findings point to the need to improve technological literacy among students so that AI can be optimally utilised in accounting.
Keywords: Artificial Intelligence, Student Perception, Accounting Education

Introduction

The era of Industrial Revolution 4.0 has led to rapid digital transformation in various fields, including education. Artificial Intelligence (AI) or known as artificial intelligence in Indonesian is a branch of computer science that aims to develop systems and machines that can perform tasks that usually require human intelligence. (Eriana & Zein, 2023). Artificial intelligence (AI) technology is becoming one of the main highlights, with its potential to revolutionise the way we teach and learn. (Fakhri et al., 2024). In accounting education, AI offers opportunities to improve the efficiency, effectiveness and personalisation of learning. (Prasetio, 2024). For example, an intelligent teaching system that can provide immediate feedback and learning recommendations based on the needs of each student can be developed using Artificial Intelligence. (Hussin et al., 2023). Artificial Intelligence can make it easier to analyse big data to identify trends and patterns in learning, which can be used to design a more responsive and relevant curriculum.(Abdelwahab et al., 2023). Understanding students' perceptions of AI technology in accounting education is critical to optimising the implementation of such technology in the curriculum. Students' perceptions include their attitudinal views, and expectations towards the use of AI in learning. With a deep understanding of these perceptions, higher education institutions can make more efficient plans to use AI technologies in accounting teaching. (Kim et al., 2020).

Artificial Intelligence (AI) offers a range of significant benefits to the accounting education curriculum that can enhance students' learning experience. One of them is the ability to personalise learning, where AI can analyse students' learning information and provide appropriate material recommendations to improve their understanding of accounting concepts. (Grant & Basye, 2014). In addition, AI can also automate administrative tasks, such as assessment and feedback, so that teachers can focus more on the teaching process and the

development of curriculum materials. The use of AI in education also improves teaching efficiency by providing interactive learning tools and AI-based simulations that help students understand the practical application of theories. (Smalt & Selden, 2013) .

Furthermore, the integration of AI in the curriculum is essential to prepare students with relevant skills for the world of work, especially in the accounting field which is increasingly influenced by technology (Khan et al., 2022). In addition, AI supports the development of information analysis skills, which are important in information-based decision making in accounting. (Temitayo Oluwaseun Jejeniwa et al., 2024). The use of AI also has the potential to increase student engagement by making learning more interactive and engaging, through a gamification approach. (Nguyen et al., 2024). Overall, the integration of AI in accounting education not only enhances learning effectiveness, but also prepares students to face the challenges and opportunities in an ever-evolving industry.

Students' perceptions of Artificial Intelligence in accounting education are often influenced by several factors including students' level of knowledge about Artificial Intelligence. Previous experience with technology, as well as students' beliefs about the benefits and risks of Artificial Intelligence. Students who have more knowledge about Artificial Intelligence tend to be more optimistic about the potential of Artificial Intelligence to improve efficiency and accuracy in the teaching and learning process. However, there are also those who feel worried that Artificial Intelligence can replace human roles, including the accountant and educator professions in the future. In addition, students' perceptions can also be influenced by how AI technology is introduced and applied in the classroom. (Eka Puji Astutik, 2023) Effective use of Artificial Intelligence, such as in adaptive learning applications that provide real-time feedback, can increase student interest and motivation. (Lena et al., 2023). Conversely, if students feel that the technology is complicated or irrelevant to their needs, negative perceptions may arise. Thus, for students to feel comfortable and competent in utilising AI technologies, instructors and educational institutions must provide adequate training and support. (Cele et al., 2023)

The application of Artificial Intelligence (AI) in accounting education curriculum has various significant benefits. Firstly, AI enables automation of routine tasks such as information entry and transaction analysis, which can improve operational efficiency and minimise human error. This helps accounting students understand the use of advanced technology in real practice, preparing them for the challenges in future industries. (Beryl Odonkor et al., 2024). Secondly, AI strengthens information-based teaching by providing predictive analytics, helping students develop more informed decision-making skills. AI also plays a role in simulating financial scenarios, which can enrich case-based learning and enhance their analytical abilities. Third, the application of AI encourages the development of information science and programming skills that are increasingly important in the world of work, especially in technology-based risk review and management.

Although Artificial Intelligence has great potential, its application in accounting education still faces various challenges (Prasetio, 2024) One of the main challenges is that there are not many studies that examine students' perceptions of Artificial Intelligence technology in accounting education. (Hussin et al., 2023). This is important to understand because students' perceptions can affect their readiness and openness to the application of Artificial Intelligence in the teaching and learning process. (Yuni Mustika et al., 2024). If students feel uncomfortable or lack trust in AI technology, they may be less motivated to utilise it optimally, which in turn can hinder learning effectiveness (Abdelwahab et al., 2024).

Several studies have been conducted to examine the impact of Artificial Intelligence on accounting education (Muarif et al., 2019; Rifky, 2024; Suariqi Diantama, 2023; Sugahara & Cilloni, 2021). However, these studies still focus on technical aspects, such as the effectiveness

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of Artificial Intelligence systems in providing feedback or analysing big data to identify learning trends. (Sudaryanto et al., 2023). However, previous research provides valuable insights into the technical potential of Artificial Intelligence in the context of accounting education, but there is still a gap that Digital Competence and Technology Readiness do not have a statistically significant effect on Artificial Intelligence Technology Adoption. There are still research gaps that need to be addressed, one aspect that has not been widely researched is student perceptions of Artificial Intelligence technology. Most of the existing research tends to focus on the application of AI in professional work environments and from an industry perspective, but especially on the student perspective regarding understanding, acceptance, and challenges when integrating AI into the learning process has not received much attention. Bridging this gap is important so that institutions can develop better AI education and training strategies to support students as they enter an increasingly digitalised world of work. Research shows that perceived ease of use and benefits of a technology can influence acceptance and adoption. (Davis, 1989). In the context of education, it is important to understand the factors that shape students' perceptions in order to determine their willingness to adapt to technological developments. (Venkatesh et al., 2012). Without detailed research into student perceptions, it may be difficult for educational institutions and policy makers to develop appropriate approaches to support the adaptation of AI technologies in educational environments, and implementation may be hindered. (Ghobakhloo et al., 2011). Student perception is a key factor that can influence the adoption and application of technology in the learning process. (Sugahara et al., 2024).

This study aims to evaluate students' views on AI technology in accounting education at Universitas Muhammadiyah Surakarta such as to identify opportunities and challenges in integrating AI technology in the curriculum, evaluating its impact on learning. (Sugiarti & Tresna Santhi, 2023). In addition to providing an overview of the level of readiness and acceptance of this technology among students based on the research findings, this study also provides a complete picture of how students of Universitas Muhammadiyah Surakarta perceive and accept Artificial Intelligence technology in the context of accounting learning. The purpose of this study is to evaluate variables or aspects that have an impact on students' opinions about artificial intelligence (AI), such as the level of past technological knowledge, real-world experience, and expectations regarding the impact of integrating AI into the classroom. This study will also investigate how these variables can influence students' opinions regarding the use of AI in learning accounting lessons.

This study utilised a distinctive and thorough methodology tailored to the local context and student demands to investigate how students of Universitas Muhammadiyah Surakarta perceive the use of Artificial Intelligence technology in accounting education. The strength of this study is its in-depth methodology, which involved face-to-face interviews with students from various batches in the Accounting Education Study Programme to ensure that the findings reflect a variety of viewpoints. The novelty of this research lies in its specific focus on students' perceptions of Artificial Intelligence in the context of accounting education at Universitas Muhammadiyah Surakarta.

Method

This study utilises a qualitative approach that takes place through a case study design. The application of a case study is based on its ability to provide a comprehensive investigation of how students at Universitas Muhammadiyah Surakarta perceive artificial intelligence (AI) technology in the context of accounting education. This method works well for investigating how people make meaning of their own or other individuals in a particular environment. (Yin, 2009).

Researchers can record students' subjective experiences and impressions of AI using a qualitative approach. These views may vary depending on a number of aspects, including students' academic background, use of technology, and understanding of AI in an accounting context.

Focus group discussions (FGDs) and in-depth interviews were used to collect data. Researchers obtained opinions from students who have knowledge or expertise with artificial intelligence (AI) through semi-structured in-depth interviews with a number of students selected by purposive sampling. (Creswell, 2018). The selection of participants in this study involved students from various batches in the accounting education study programme. The participants selected were representatives from each batch who already had knowledge about artificial intelligence (AI). This selection criterion aims to ensure that participants not only represent a variety of experiences and perspectives, but also have sufficient understanding of AI, so as to provide deeper insight into the topic under study. Thus, it was hoped that the information collected would reflect diverse views and be relevant to the research objectives. The purpose of conducting this interview is to evaluate how each student understands or views the use of Artificial Intelligence in accounting education and how it will impact their future careers. Furthermore, focus group discussions (FGDs) were conducted to gather opinions from all students, facilitating participant interaction that could enhance the research findings. (Anne, 2014).

A thematic analysis approach was used to conduct the data analysis, where recorded interviews and focus group discussions were coded to uncover important emerging themes. Several steps were taken in this process, including theme generation, data interpretation, initial coding, and data organisation. (Braun & Clarke, 2006). This study also used methodological triangulation, which involved comparing data from existing documents, FGDs and interviews, to strengthen the validity of the research findings. With regard to education as well as potential future consequences for the accounting profession, this research endeavours to show a more detailed description of how students perceive Artificial Intelligence.

Results

In this study, data collection was conducted through in-depth interviews and Focus Group Discussions (FGDs) with nine interviewees who are students of the Accounting Education Study Programme at Universitas Muhammadiyah Surakarta. The interviews were designed to explore students' understanding of the use of Artificial Intelligence (AI) technology in the field of Accounting Education, as well as their views on the prospects and potential of Artificial Intelligence in the future. The questions asked covered various aspects, including students' initial perceptions of AI, their experiences in using AI during the learning process, and their opinions on the possibility of AI replacing the role of human accountants.

In addition, the interviews also included discussions on the skills that future accountants should have to remain competitive in the face of Artificial Intelligence developments, challenges that may arise along with technological advancements, and new opportunities that Artificial Intelligence can create in the accounting world. The results of these interviews and FGDs provide an in-depth insight into students' views on Artificial Intelligence and its implications in the accounting profession. The data obtained from this process is presented below:

Table 1. Interview and Focus Group Discussion Results

Aspects	Interview results, and Focus Group Discussion	Students' attitude towards Artificial Intelligence Technology

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Informant 1	The use of AI such as ChatGPT helps improve productivity and efficiency. Integrating AI in the curriculum is recommended to be done structurally. While AI helps with technical tasks, human accountants are still required for strategic decision-making. Important skills required include data analysis and programming.	From the data, respondents showed an optimistic attitude towards the use of AI in accounting education as indicated by an awareness of the importance of additional skills such as data analysis and programming to maximise the benefits of AI technology.
Informant 2	AI can speed up work and improve efficiency, although the interviewee has no direct experience. He sees AI as an opportunity, especially in forensic accounting and information analysis, but recognises the challenges of limited access to and training in AI.	Cautious, see AI as a potential opportunity but have reservations due to limited experience and accessibility
Informant 3	AI is considered a tool for automation of routine tasks. Interviewees believe that humans remain important in making complex decisions. There is great interest in practically integrating AI in accounting education, especially through classroom training.	Positive; believes AI is useful but still values the importance of humans in decision-making
Informant 4	AI helps speed up work and reduce errors. Interviewees suggested that AI be taught through curriculum and practical training. Although AI replaces technical tasks, the role of accountants remains imperative in strategic analysis.	optimistic, encouraging AI training with a practical approach while recognising the important role of humans
Informant 5	AI speeds up tasks and improves efficiency. A more structured curriculum and practical exercises are needed to maximise the application of AI. Interviewees believe accountants remain essential for in-depth analyses and strategic decision-making.	strongly supports, emphasising the need for structure in AI accounting education to maximise its use.
Informant 6	The use of AI in learning provides positive results, but there are still students who have not utilised it. For effectiveness, AI needs to be integrated in the curriculum with a practical approach.	positive but wary, recognising the potential of AI, but concerned about the lack of uptake among students
Informant 7	The interviewee believes AI will increase efficiency and productivity. He recommended the integration of AI in the curriculum with structured practical training, reducing the fear of AI replacing human roles.	Proactive, believing that AI is beneficial and supporting education that reduces the need for human replacement
Informant 8	AI has great potential to increase productivity, although some students are not utilising it. The curriculum needs to be changed so that AI is integrated with a practical approach.	optimistic but critical, in favour of curriculum revision but concerned about uneven adoption
Informant 9	AI is seen as an opportunity to increase productivity and open up opportunities in information analysis. Speakers emphasised the importance of training and curriculum revision to keep up with technological developments.	Visionary, sees AI as a potential tool and supports curriculum revision for maximum utilisation.

Based on the results of the research conducted, we can categorise students' perceptions of artificial intelligence (AI) into several categories:

Students' Initial Perception of AI : Most students had a positive view of AI's potential to improve productivity and efficiency in accounting. They think AI can speed up technical work and reduce errors, although there is still a need for human accountants to play a role in strategic decision-making. However, there were also students who were sceptical, worried that AI could reduce their future job opportunities, leading to uncertainty and defensiveness towards this technology.

Experience in Using AI During the Learning Process : Most students had used AI technologies, such as ChatGPT and automated accounting software, which they felt provided benefits in the form of increased work speed and reduced errors. However, there were also students who had

no direct experience with AI, despite showing interest in learning more about these technologies. This reflects the need for more structured training and teaching to facilitate their understanding. Opinion on the possibility of AI replacing the role of human accountants : In general, students were of the opinion that AI will not completely replace the role of human accountants. While AI is capable of handling repetitive tasks, strategic decisions and analyses that require professional judgement are still considered essential. This shows a recognition of the importance of human skills in complex accounting processes.
Skills that Future Accountants Should Have : Students identified critical skills that need to be mastered to remain competitive, including information analysis abilities, basic programming, and technical understanding of new tools and technologies. Communication and management skills are also considered important to complement technical abilities, so that accountants can adapt quickly to changes in an increasingly technology-driven work environment.
Challenges and Opportunities Created by AI in Accounting : The main challenges faced include limited access to AI technology and lack of adequate training. However, on the other hand, AI is seen as a great opportunity, especially in the field of information analytics and forensic accounting. Therefore, it is important to adopt a more practical and structured teaching approach in accounting education, so that students can better understand the application of these technologies in real practice.

Discussion

Students' Understanding of Artificial Intelligenc e

Findings from the interviews show that most students understand Artificial Intelligence (AI) as a technology related to productivity, automation, and advanced technology. Students associate AI with things like robotics, automated systems and data processing, although this understanding is more general than specific to the accounting context. However, this shows that students already have a good initial understanding of the role of Artificial Intelligence in improving efficiency in various fields, including accounting. This initial understanding is very important as it reflects the view that students realise AI can improve productivity in data-related work. This is relevant to the literature which states that Artificial Intelligence has the potential to automate repetitive tasks associated with data processing and analysis, which are widely encountered in accounting. According to Brynjolfsson & Mcafee (2014)Artificial Intelligence affects work by automating repetitive and rule-based processes, allowing previously time-consuming work to be done faster and more efficiently. Students who understand Artificial Intelligence as an automation tool reflect that they already have a rationale that is in line with trends in the world of work, especially in accounting which is increasingly driven by technology.

In addition, students' view of AI as part of advanced technology suggests that they see AI as more than just a tool, but as a major innovation that could impact the future of the accounting profession. This view is supported by the theory that AI can play an important role in improving productivity in sectors such as finance and accounting, where automation can reduce the burden of manual tasks and allow a greater focus on strategic analysis and decision-making. (Davenport, T. H., 2016). However, it is also important to note that these students' understanding is still general and not specific to the application of Artificial Intelligence in accounting. This suggests the need for improvement in the accounting education curriculum, in order for students to connect their basic understanding of AI with practical applications in the accounting profession. According to Tucker & Lowe (2013), more structured technology-based teaching, such as through projects and practical experiences, is essential in preparing students to face the challenges of future technologies, including Artificial Intelligence.

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Technological Literacy Affects Students' Understanding of Artificial Intelligence in Accounting Education

Technological literacy has a significant impact on students' understanding of artificial intelligence (AI) in accounting education. Students who have good technological literacy tend to be better able to understand the basic concepts of AI and its application in the educational context. According to Teräs (2022), an understanding of technology is important so that students can utilise the potential of innovation, including AI, in their learning. This makes the learning process more effective, as students can better relate theory to practice.

In addition, technological literacy facilitates students' ability to apply AI-based tools in their assignments and projects. Students who are familiar with the use of information and communication technology (ICT) feel more confident in using accounting software equipped with AI. Research by McGuinness & Fulton (2019) shows that there is a positive relationship between advanced literacy and students' learning outcomes, and how this affects their attitude towards new technologies that can be used in accounting learning.

Students' attitudes towards innovation and the application of new technologies, including AI, are strongly influenced by their level of technological literacy. Students who have high technological literacy are usually more open and ready to adopt new tools, which can increase their motivation to learn. Börekci & Çelik (2024) revealed that good advanced literacy will make it easier for students to accept and use AI in an educational environment, which in turn supports the development of their skills in accounting.

Furthermore, technological literacy also encourages students to develop the critical skills needed to evaluate and analyse information. With these abilities, students can make better decisions on how and when to use AI technologies in their studies. Vassallo & Warren (2018)noted that the integration of technological literacy in the educational curriculum can strengthen students' understanding of technology-based tools, including AI, in the evolving accounting context.

This research supports the argument that student's technological literacy affects their understanding of innovations, including Artificial Intelligence, in accounting education.as stated by Sari (2019) the millennial generation is familiar with technology and tends to be enthusiastic about the use of innovative and interactive technology-based tools. The use of Artificial Intelligence in education is expected to provide similar benefits to application such as Quizlet, namely facilitating access to material, increasing active participation and supporting the development of student's critical thinking skills. With a strong understanding of technology, students can make good use of Artificial Intelligence to deepen their understanding in accounting courses, creating a more effective learning experience

Overall, high technological literacy plays an important role in enhancing students' understanding of AI in accounting education. By providing a deep understanding of the applications and consequences of technology, students not only become better prepared to face challenges in the professional world, but can also contribute positively to the development of an increasingly technology-dependent accounting profession. This suggests that integrating technological literacy in the accounting education curriculum is essential to prepare a competent and adaptive future generation of accountants. (Bennett & Maton, 2010)..

The use of Artificial Intelligence in accounting learning

The results show that most students have used software that integrates Artificial Intelligence (AI) such as ChatGPT and QuillBot in their learning. Students perceived significant benefits from these technologies, especially in task acceleration and error reduction. They realise that AI helps simplify repetitive technical tasks, such as report writing and data analysis. However, there are

still some students who have not had direct experience with AI but are interested in learning about it. This experience shows that AI has been integrated into the learning process, but its implementation is uneven. Some students are already using AI-based tools independently to improve their productivity, while others are still not exposed to the technology. This indicates a gap in the implementation of AI technology in a more structured manner in the accounting education curriculum. The use of Artificial Intelligence (AI) in accounting learning offers great potential to improve the effectiveness and efficiency of the learning process. AI can personalise teaching materials, provide automatic feedback, and increase student interaction and engagement in the learning process. Previous research on the influence of technology on learning motivation shows that learning styles and internet utilisation have a significant impact on student motivation, although the contribution of the internet individually is not significant (Susilo, 2019). With AI, it is expected that the influence is stronger as AI can offer a more adaptive and interactive learning experience.

According to Baldwin (2006) Artificial Intelligence in accounting can assist in the automation of repetitive technical tasks, such as data processing, recording transactions, and producing financial reports. The use of Artificial Intelligence tools in learning can increase students' efficiency in performing these tasks, while giving them hands-on experience of how this technology will play a role in the world of work. This is consistent with the research findings, where students who have used AI technology feel more prepared and efficient in completing their learning tasks. However, there is a lack of integration of AI into the formal curriculum. According to Alles (2015) to maximise the potential of Artificial Intelligence, educational institutions should start adopting technology-based learning, including Artificial Intelligence, into their study programmes. This can be done through courses that specifically address the use of AI technologies in accounting or through practical exercises in the classroom. Students also suggested that Artificial Intelligence should be used more frequently under the guidance of lecturers so that they can better understand the real applications of this technology in accounting. The use of Artificial Intelligence (AI) in accounting learning provides an opportunity to improve the effectiveness and efficiency of the teaching and learning process. Students' technological literacy plays an important role in influencing the extent to which AI can be optimally utilised. Based on previous research that examines the factors of student difficulties in completing academic assignments such as theses at Universitas Muhammadiyah Surakarta (Asmawan, 2016), it was found that skills in understanding technology and research methodology greatly influenced academic success.

In addition, students' views on the need for further training indicate that AI technology in accounting requires not only the introduction of new tools but also additional skills to be developed. In this regard, Davenport and Kirby (2016) stated that a deep understanding of how Artificial Intelligence works, along with skills in analysing and interpreting Artificial Intelligence-generated data, is indispensable for future accountants.

Artificial Intelligence (AI) has great potential to be used in accounting learning as part of digital education innovation. Technological advances such as AI and e-learning provide new opportunities in education, especially in overcoming learning limitations and expanding the scope of learning resources available to students. In this context, AI can be used to present accounting materials in a more interactive and adaptive manner, allowing students to access information flexibly without time and place restrictions. For example, AI can assist in the learning process by providing immediate feedback through an automated grading system, helping students understand complex accounting concepts, and providing realistic case study simulations to hone their analytical skills. As stated by Mustofa and Riyanti, "E-learning is an exciting new opportunity and innovation in education. E-learning is able to have a significant

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impact in overcoming learning limitations and expanding the scope of learning resources. (Mustofa & Riyanti, 2019). Thus, the application of AI in accounting learning not only increases the accessibility and effectiveness of learning, but also encourages students to be more independent and adaptive in mastering accounting materials in the digital era.

Student Recommendations for a More Structured Application of Artificial Intelligence in Accounting Education

Students recommended a more structured implementation of Artificial Intelligence (AI) technology in the accounting education curriculum. They proposed that AI should be taught through specialised courses, and more practical exercises using AI-based software under lecturer supervision. They argue that an *experiential* learning approach is essential to prepare them for the challenges of the working world. This approach is in line with *experiential learning* theory, which emphasises that effective learning occurs when students engage directly with technology relevant to their profession. According to Moon (2004)experiential learning allows students to develop analytical and problem-solving skills through hands-on experience. In the context of accounting education, students will be better prepared if they understand how Artificial Intelligence is applied in the real world, such as through simulations or practical projects.

Students also suggested that Artificial Intelligence be integrated into some related courses, such as accounting information technology and data analysis. According to Brynjolfsson and McAfee (2014)Artificial Intelligence will increasingly automate technical tasks, but also open up opportunities for more analytical and strategic tasks. Therefore, a deeper mastery of analytical skills is becoming increasingly important. In addition, students expressed the need for additional training in skills relevant to AI, such as basic programming, technical understanding, and data analysis. Research from Kokina and Davenport (2017) suggests that Artificial Intelligence can modernise the accounting profession, but future accountants must master more complex technical skills to remain relevant in an increasingly digitised world. With these changes, an accounting curriculum that includes more practical training and integration of Artificial Intelligence into various courses will help prepare students for the challenges of an increasingly digitalised world of work.

Students' Views on the Potential of Artificial Intelligence to Replace the Role of Human Accountants in the Future

The majority of students are of the opinion that AI technology will not completely replace the role of human accountants, but will serve as a tool that simplifies and improves the efficiency of their work. They recognise that while AI can automate routine and repetitive tasks, such as data processing and recording transactions, there are still many aspects of accounting work that require human expertise. One of the main reasons behind this view is that strategic decision-making and in-depth analyses still require human judgement. According to Susskind and Susskind (2015)Although Artificial Intelligence can handle a lot of data and generate recommendations based on existing patterns, the final decision in a business context often involves a deep understanding of unique situations, ethics, and social context elements that cannot be fully understood by machines.

Students also noted that while Artificial Intelligence has the potential to replace some of the accountant's job functions, this technology also creates a new need for human skills. Accountants need to adapt to these changes, becoming more focused on data analysis and interpretation of complex information. Jobs that previously focused on administrative tasks are now shifting to more strategic roles, where accountants serve as business advisors and critical decision-makers. According to authors such as Brynjolfsson and McAfee (2014)this change

opens up opportunities for new careers in data analytics and consulting, which are increasingly important in the digital age. Students indicated that their understanding of Artificial Intelligence as a tool, rather than a threat, shows a realistic awareness of how technology will shape the future of the accounting profession. They believe that human accountants will still be indispensable for performing tasks that require expertise, such as situation analysis, risk assessment, and communication with clients.

Therefore, it is important for accounting education to emphasise the development of interpersonal and strategic skills, in addition to technical skills in the use of Artificial Intelligence technologies. In this way, future accountants can function well in an environment that is increasingly influenced by technology.

Students' Views on Artificial Intelligence as a Threat or Opportunity in Accounting Careers

Most Accounting Education students of Universitas Muhammadiyah Surakarta see Artificial Intelligence (AI) technology more as an opportunity than a threat to their careers in accounting. They realise that AI can increase productivity and efficiency in their work, speed up previously time-consuming tasks, and assist in complex data analysis. Students who have a positive view of Artificial Intelligence tend to feel more prepared to adapt to technological advances. They understand that skills in using AI technologies are becoming increasingly important in the ever-evolving world of accounting. Research shows that the adoption of AI in the accounting industry not only reduces workload but also opens up new career paths in technology, data analysis and consulting. In this context, students believe that AI can help them to focus on more strategic and value-added tasks. For example, by using AI-based tools to manage and analyse data, accountants can be more effective in delivering their services. (Daffa et al., 2024) business insights to their clients. Skills in data analysis and programming are becoming increasingly important, so they recommend that accounting education should emphasise training in these areas.

In addition, there was a realisation that while many see Artificial Intelligence as an opportunity, challenges also exist. Students mentioned the need for updates in curricula and training to be in line with developments in Artificial Intelligence technology, as well as the challenge of understanding and adapting this technology into existing accounting practices. Overall, students' views of Artificial Intelligence as an opportunity reflect an expectation and readiness to adapt to change, as well as a desire to utilise technology as a tool to achieve success in their careers in accounting.

Skills Accountants Need to Have in the Future to Compete with Artificial Intelligence

Accounting Education students at Universitas Muhammadiyah Surakarta understand that technological developments, particularly Artificial Intelligence (AI), are affecting the way accountants work in the future. To be able to compete and adapt to these changes, they believe that accountants need to develop diverse skills. Some of the skills that are considered important for accountants in the future include information analysis, basic programming, understanding technology, strategic decision making, and soft skills. In a period where information is the main source of business decisions, the ability to analyse information is crucial. Accountants need to have skills in interpreting large information, identifying patterns, and using information analysis to provide valuable insights to clients and companies. Research shows that the ability to analyse information can increase the efficiency and effectiveness of the accountant's work. (Brynjolfsson & Mcafee, 2014). In addition, knowledge of programming, although not necessarily in-depth, is very beneficial. A basic understanding of programming languages such as Python or R can assist accountants in automating routine tasks and developing solutions based on Artificial Intelligence,

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which is in line with research showing that programming helps in creating tools that can improve performance in various accounting functions (Bhatta & Hiebl, 2022).

Furthermore, a thorough understanding of Artificial Intelligence-powered technologies and tools is also very important. These skills include the ability to use accounting software that integrates AI and understand how these technologies can be applied in accounting practice. While AI can assist in information processing, strategic decisions still require critical thinking and professional judgement from an accountant. Decision-making skills are essential to add value to organisations and clients. Finally, soft skills, such as communication, collaboration, and leadership, also play a big role in an accountant's success. These skills help accountants work effectively in teams and establish good relationships with clients, as well as being able to explain the results of analyses to non-technical parties in a way that is easy to understand. (Goleman, 1996). Overall, students realise that to succeed in an accounting world influenced by Artificial Intelligence, they must prepare themselves with the appropriate skills. Accounting education needs to adapt to integrate training in data analysis, programming, and soft skills to produce accountants who are ready for future challenges.

This study has some limitations that need to be considered. The main limitations are the relatively small sample size and the restriction to students with specific academic backgrounds, so the results of the study do not reflect students' general perceptions regarding the use of artificial intelligence (AI) in accounting education. In addition, the research approaches used, such as interviews and focus group discussions, allow for perceptual biases influenced by participants' subjective interpretations, which may affect the generalisability of the results of this study. The significance of this study suggests that students' understanding and awareness of AI is critical to the successful implementation of this technology into the accounting education curriculum. The results of this study may encourage educational institutions to more actively incorporate AI technologies into their curriculum and provide appropriate training for students to use these technologies effectively. It also provides insights for educators to develop more adaptive and interactive teaching methods, motivate students to learn and help them develop skills to meet the demands of an increasingly digitalised world of work.

Recommendations for future research include the need for tests with larger and more diverse sample sizes to better represent the perceptions of students from different backgrounds. In addition, future research might explore the use of AI technology on a broader scale across different educational sectors to provide a more comprehensive picture of the impact and benefits of this technology. It is also recommended to conduct a longitudinal study to identify changes in students' perceptions of AI as the technology develops and exposure to AI in education increases.

Conclusion

This research shows that students understand the potential of Artificial Intelligence in improving efficiency and productivity, particularly in the automation of routine and technical tasks. However, they also agree that the role of human accountants is still important, especially in strategic decision making and mandala analyses that require professional judgement. The integration of Artificial Intelligence in the Accounting Education curriculum is suggested to be done in a more structured manner, by adding specialised courses and services that allow students to gain hands-on experience with this technology. This is important because not all students have direct experience with Artificial Intelligence, although many have experienced its benefits through the use of software such as ChatGPT.

Follow-up research needs to be done, because this research provides preliminary findings that can be further developed. Further research is expected to deepen the analysis and broaden the scope to get more comprehensive results. This study only considers the views of students, without involving the perspectives of lecturers or educators involved in curriculum development. This study provides initial insights into the readiness of accounting education students in facing the development of Artificial Intelligence technology. This research shows the importance of reform in Accounting Education so that students can be better prepared for the increasingly digitalised world of work.

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