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Review Article

Enhancing Pedagogical Competencies of Accounting Educators in Higher Education for the Digitalization Era

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Abstract: The rapid advancement of digitalization in the accounting field demands significant changes in the education process, particularly regarding the pedagogical competence of accounting educators. Pedagogical competence, which includes teaching skills relevant to modern technology, is crucial for preparing students to face challenges in the digital era. This study aims to analyze the development of pedagogical competence among accounting educators in higher education to address the challenges of accounting digitalization. The study was conducted using a qualitative descriptive method, with primary data collected from interviews and observations, as well as an in-depth literature review. The results indicate that integrating technology into accounting education requires enhancing the ability to use information and communication technology (ICT), in addition to adopting problem-solving-based teaching methods. Support from higher education institutions, particularly in the form of technology training, is a key factor in improving the pedagogical competence of accounting educators.

Keywords: Accounting Digitalization; Accounting Educators; Higher Education; Pedagogical Competence; Technology.

1. Introduction

Rapid technological advancements in the digital era have significantly impacted the accounting field, including teaching methods and processes in higher education. Technologies such as artificial intelligence, big data analytics, and cloud-based accounting software are transforming how accounting is practiced in various organizations. In this context, the role of accounting educators in higher education is becoming increasingly complex. They are required not only to master traditional accounting knowledge but also to develop digital skills that prepare students for modern accounting practices. A report from McKinsey indicates that digitalization will transform more than 50% of routine tasks in the accounting profession, highlighting the need for accounting educators to adapt their curricula to remain aligned with industry demands. (Farmer, 2016).

However, there is still a gap between the demands of digitalization and the pedagogical competence of accounting educators in higher education. Many educational institutions have not fully integrated technology into the learning process, which impacts the quality of education provided. A 2022 survey by the International Federation of Accountants (IFAC) found that 40% of accounting educators worldwide feel unprepared to adopt new technologies in their teaching. This lack of preparedness reflects the insufficient training and development of pedagogical competencies related to digital technologies, which should be a priority in this era.

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In addition, today's accounting students have higher expectations for technology-based learning methods. The generation that grew up in the digital era prefers more interactive, dynamic, and technology-driven learning models. According to a study by PwC, accounting students expect the use of the latest technologies in the learning process, such as accounting software simulations and project-based learning (PWC, 2011). This reinforces the urgency of improving the pedagogical competence of accounting educators to meet student expectations and industry developments.(Hariyanto, 2023)

The development of pedagogical competence among accounting educators is not limited to mastery of technology but also involves their ability to design effective and relevant learning strategies in line with digital advancements. This competence includes understanding how technology can be applied in the context of accounting education, the ability to integrate digital tools into the curriculum, and the capacity to facilitate interactive, practice-based learning. Research by Kim & Graham suggests that improving pedagogical competence in accounting education is essential to ensure that students not only understand accounting theory but are also prepared to face practical challenges in an increasingly digitalized workforce (Kim & Graham, 2022).

Therefore, universities must take a more serious approach in developing training programs focused on enhancing digital pedagogical competencies for accounting educators. This initiative will ensure that educators are equipped to facilitate adaptive, innovative, and technologically advanced learning. Investing in such training will not only improve the quality of teaching but also positively impact the quality of graduates, preparing them for the era of accounting digitalization. Thus, developing the pedagogical competencies of accounting educators is a key factor in creating competitive accounting education in the digital age.

1.1 Pedagogical Competence

Pedagogical competence refers to an educator's ability to design, implement, and evaluate effective and relevant learning processes, including in the context of accounting. It involves knowledge of the content, appropriate teaching methods, and an understanding of student characteristics (Shulman, 1986). In the context of accounting educators, this ability is crucial, especially when facing the challenges of accounting digitalization, which requires them to integrate modern technology into the learning process. Accounting digitalization refers to the use of digital technology in accounting practices, including accounting software, data analysis, and cloud-based reporting. (Y. Zhao et al., 2021).

Project-based learning is an effective approach to enhancing educators' pedagogical competence (Suseno et al., 2022). This approach allows students to engage in more practical and contextual learning, requiring educators to design relevant and challenging projects. This also helps educators develop skills in managing dynamic and interactive classrooms. Student engagement encompasses affective, cognitive, and behavioral aspects of the learning process (Alrashidi et al., 2016).

Educators with high pedagogical competence can create an environment that supports all three dimensions of engagement, leading to better learning outcomes. They need to understand how to stimulate students' interest and motivation to actively engage in learning. Pedagogical Content Knowledge (PCK) refers to the combination of knowledge about the content being taught and the pedagogical understanding required to deliver that content effectively. Educators with strong PCK can adapt teaching methods to meet the needs of their students, thereby enhancing the effectiveness of learning (Aydin et al., 2015).

2. Literature Review

2.1 Accountant Educator

The professional competence of accountants includes not only technical knowledge but also the pedagogical skills needed to teach effectively (Sawitri, 2017). Accounting educators are expected to connect theory with practice in the context of accounting education, ensuring that graduates are better prepared to face challenges in the industry. They must also master technology to create a more interactive learning experience (Mukmin & Wulansari, 2017). By integrating technology into teaching, accounting educators can help students understand the practical application of accounting theory and develop skills that are relevant to the workforce.

It is important for accounting educators to have connections with the industry as practitioners to ensure that the curriculum is relevant and aligned with market needs. Collaboration with accounting professionals can enrich students' learning experiences and provide valuable insights into best practices in the field (Mahbubah & Putri, 2020).

2.2 Digitalization of Accounting

Accounting digitization refers to the process of integrating technology into accounting practices, including process automation and the use of data analytics. This transformation not only enhances efficiency but also changes the way accountants interact with data and information (Sri Anjarwati et al., 2023). Innovations in accounting technology are changing the way financial statements are prepared and analyzed. By using digital tools, accountants can produce faster and more accurate reports, while providing deeper insights to stakeholders (X. Zhao et al., 2023).

To successfully implement digitalization in accounting, organizations must effectively manage change. This approach highlights the importance of clear communication and training to help employees adapt to new technologies applied in accounting practices (Levin, 2014). In the digital era, learning and knowledge are not only gained through formal education but also through connections and interactions (Baker & Siemens, 2013). Connectivism acknowledges the importance of networks in learning, especially in higher education, which is increasingly influenced by technology.

Technology enables adaptive learning that is tailored to the needs of each individual student. By using algorithms and data analysis, educators can create more personalized and effective learning experiences, helping students achieve better results (Sabatti, 2024). UNESCO (2021) Digitalization in education involves the use of technology to improve access, relevance, and quality of learning. In the context of higher education, this means that institutions must invest in digital infrastructure to support enhanced learning processes.

2.3 Higher Education

Higher education should focus on developing competencies that can be applied in the real world (Fiandi & Tsanawiyah Negeri, 2023). This requires changes to the curriculum, making it more oriented toward outcomes and skills relevant to industry needs.

The level of student involvement in the educational process significantly influences academic outcomes and learning satisfaction. Higher education must create an environment that supports active student engagement, allowing them to contribute fully to the learning process (Gregory, 2009).

Distance learning has become increasingly important in higher education, especially during the pandemic. This model offers flexibility for students, allowing them to learn in a way that better suits their needs and lifestyles (Haryadi et al., 2017).

The development of pedagogical competence among accounting educators in higher education is crucial to addressing the challenges of accounting digitalization. The digitalization of accounting brings significant changes to practices, requiring adjustments in teaching methods. Accounting educators must integrate technology and innovation into their teaching to prepare students for the evolving industry needs.

The components of pedagogical competence include knowledge of accounting content, skills in using educational technology, and the ability to apply interactive and relevant teaching methods. Therefore, it is essential to design ongoing training programs that focus on enhancing these skills. By incorporating technology into the curriculum and collaborating with the industry, it is expected that more work-ready graduates will be produced, accounting educators will become more competent, and the overall quality of accounting education will improve. This study will discuss how the development of pedagogical competence in accounting educators through technology training can enhance the effectiveness of accounting teaching in the digital era.

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3. Proposed Method

This research uses a qualitative descriptive approach with a case study method on several universities in Indonesia. Data were collected through in-depth interview questionnaires with 11 accounting educators from three different institutions: Serang Raya University, Faletehan University, and Polytechnic Serang. Observations were also made during the accounting learning process based on technology. The accounting educators have an average teaching

experience of 72.7%, with more than 4 years of experience. Additionally, 45.5% of them are members of the Indonesian Accountants Association (IAI). A literature review was also conducted to support the research results, including studies from accounting textbooks and related scientific articles. The collected data were analyzed using a qualitative descriptive method, focusing on the development patterns of pedagogical competence in the context of accounting digitalization.

4. Results and Discussion

4.1 Digitalization Impact on Accounting Education in Higher Education

Digitalization in accounting and its impact on accounting education in higher education provides several important insights into the changes that have occurred in accounting practices and their implications for higher education. Digitalization has transformed the way accounting is done, integrating technologies such as artificial intelligence (AI), blockchain, big data, and cloud-based accounting software. This transformation affects how teaching materials are developed and the teaching methods used by educators in higher education. This study aims to analyze how higher education responds to these changes and how the impact of digitalization is reflected in the curriculum and teaching methods.

Several accounting educators from universities have shared their views on digitalization in the accounting field and its impact on accounting education at universities:

a. 72.7% of accounting educators stated that accounting education in higher education must adapt to technological developments. Students need to be equipped with new skills, such as data analysis and the use of accounting software, to be ready to compete in an increasingly digital job market.
b. 54.5% of accounting educators stated that universities are required to update their curricula to include aspects of digitalization, such as the use of information technology and online-based learning, to produce graduates who are relevant and ready to face industry challenges.
c. 18.2% of accounting educators stated that digitalization has changed the way accountants work by automating routine tasks and using advanced technology. This increases efficiency and accuracy, which directly impacts accounting practices.

Based on the opinions of accounting educators regarding digitalization in the accounting field and its impact on accounting education in higher education, digitalization presents significant challenges for higher education. First, changes in accounting practices create a need for educators to understand the new tools and technologies used in the industry. Many accountants now use sophisticated accounting software, automation, and data analytics to improve efficiency. Educators need to update their knowledge in order to teach the latest methods to students. Second, new skill sets are emerging, such as data analysis skills, understanding of information systems, and the use of information technology. Research

shows that educators who do not keep up with these developments may struggle to provide relevant and quality education.

The study shows that digitalization is significantly changing accounting practices, particularly in terms of efficiency, automation, and data accuracy. Technologies such as automated accounting software and data analytics enable companies to process transactions faster and more accurately. Artificial intelligence is used for predictive analysis, while blockchain offers higher security in recording financial transactions. These findings align with McKinsey's report that more than 70% of large banking companies have adopted digital technology in their accounting operations, and this transformation has created a higher demand for workers with advanced digital skills (Maiya, 2017). As a result, accounting graduates need to master not only traditional accounting concepts but also technological skills in order to compete in the job market.

4.2 Challenges Faced by Accounting Educators

This descriptive qualitative research aims to understand the main challenges faced by accounting educators in adapting to technological developments in teaching. Based on the results of interviews and discussions with several accounting lecturers, it was found that these challenges are not only related to technological readiness but also to other aspects such as pedagogical skills, institutional support, and changes in student and industry expectations.

The following are the opinions of several accounting educators based on the results of interviews and discussions:

a. 63.6% of accounting educators stated that accounting educators need to continually upgrade their skills in new technologies. However, the time and cost of training can be a challenge, especially for those with a high teaching load.
b. 36.4% of accounting educators stated that many educational institutions face obstacles in providing the latest devices and technology, making it difficult for accounting educators to integrate digital tools into the curriculum.
c. 36.4% of accounting educators said that adapting traditional teaching methods to more interactive and technology-based approaches requires adaptation that is not easy. Some students may also have difficulty adapting to the changes.

Based on the opinions of accounting educators, in order to face the challenges of digitalization, accounting educators must develop appropriate pedagogical competencies. First, knowledge of content must be strengthened, with a focus on current topics in accounting and technology. Educators must have a deep understanding of applicable theories and practices. Second, innovative teaching methods need to be applied, including active learning approaches such as project-based learning and case discussions. These methods can increase student engagement and help them apply knowledge in real-world situations. Third, the use of technology in teaching, such as online learning platforms and interactive tools, is

important to create an engaging and effective learning experience. Educators who master these three dimensions can improve the quality of their teaching.

One of the key challenges identified in the study was the limited technological skills among accounting educators. Many accounting educators have a strong background in traditional accounting but struggle to master the latest, rapidly evolving technologies, such as data analytics, blockchain, or cloud-based accounting software. Most respondents felt that these technologies required intensive new learning, which was difficult to fit into their already busy teaching workload. This finding is in line with research conducted by IFAC (2022), which found that accounting educators felt underprepared to adopt new technologies in their teaching methods (Herawati, 2012).

This limitation is also influenced by the lack of relevant training. Most educational institutions do not have specific training programs for lecturers to develop their technological skills. This result aligns with research findings, which state that training for lecturers is often inadequate in preparing them for digitalization, both in terms of infrastructure and managerial support (Baporikar, 2018).

In addition to skills, the study found that the lack of technological infrastructure support is another major challenge. While many universities have adopted more advanced technology systems, such as e-learning platforms and accounting software, access to relevant devices remains limited. Several respondents mentioned that their campuses lack sufficient devices to fully integrate technology into the learning process, such as computer labs equipped with the latest accounting software or reliable internet connectivity.

Previous research has shown similar findings, with universities in various countries facing significant challenges in providing adequate technological infrastructure (Farmer, 2016). This is especially true in developing countries, where the digital divide between institutions with advanced and limited technological resources remains highly pronounced.

The study also found that lecturers' workload serves as a barrier to technology adaptation. Accounting lecturers often juggle heavy teaching responsibilities alongside research and administrative duties. With such a demanding workload, they have limited time to learn and master new technologies. Additionally, resistance to change was observed in some respondents. Lecturers with long-standing teaching experience using traditional methods find it challenging to alter their teaching approaches, particularly when it comes to incorporating technology they perceive as complicated or less relevant to basic accounting material.

The study confirms findings that resistance to change is more prevalent among senior faculty. Lecturers who have been in academia for an extended period tend to be more conservative when it comes to adopting new technology-based teaching methods (IFAC, 2023).

4.3 Use of Digital Technology in the Learning Process

This descriptive qualitative study aims to understand the extent to which digital technology has been integrated into the accounting learning process by accounting educators, as well as the types of digital tools and platforms used. Based on interviews with accounting lecturers from various universities, the study explores the frequency of digital technology use in learning and the tools chosen to support teaching.

The following are the opinions of several accounting educators based on the results of interviews and discussions:

a. 54.5% of accounting educators stated, "In one week, I usually hold at least two to three sessions using Zoom, which allows me to interact directly with students and answer questions in real-time."
b. 27.3% of accounting educators stated, "I use Google Classroom every time I give new assignments or materials, so students can easily access information and submit their work in an organized manner."
c. 18.2% of accounting educators stated, "I use digital technology such as Google Classroom and Zoom routinely in every learning session, both for face-to-face lectures and distance learning."

The results of this study indicate that most accounting lecturers have begun integrating digital technology into their teaching, although with varying frequencies. Some lecturers stated they use digital tools routinely in every lecture session, especially projectors and cloud-based accounting software. Others use them only for specific courses or topics. Younger lecturers tend to use technology more frequently than senior lecturers, who still rely on traditional teaching methods. This aligns with findings suggesting that younger lecturers are more open to technology and integrate it more regularly into the learning process compared to their more senior counterparts (IFAC, 2023).

The frequency of technology use is also significantly influenced by institutional readiness. Lecturers at universities with adequate technology infrastructure—such as fast internet access and appropriate hardware—tend to use technology more frequently in their teaching compared to those working at institutions with limited technological resources. This finding aligns with a McKinsey study, which highlighted that technology use in higher education is often dependent on the availability of supporting infrastructure (Farmer, 2016).

Accounting lecturers use a variety of digital tools and platforms to support the teaching process. Some of the most commonly used platforms include Learning Management Systems (LMS) such as Moodle and Google Classroom, which are utilized to manage course materials, assignments, and facilitate student interaction. These platforms are regularly used by lecturers to upload teaching materials, organize assessments, and communicate with students.

On the other hand, some lecturers still prefer using simpler digital tools such as Microsoft Excel and Google Sheets to teach basic accounting concepts. These tools are

favored due to their accessibility and versatility, making them suitable for both traditional classroom settings and distance learning. The use of Excel in accounting education remains highly relevant, as it is an essential tool for financial analysis and reporting.

4.4 Integration of Technology, Such as Accounting Software or Big Data, into Teaching Methods

This descriptive qualitative study explores how accounting lecturers integrate technology into their teaching methods, specifically accounting software and big data, and examines whether they feel adequately trained to use these tools. Based on interviews with accounting educators from various universities, the study reveals significant variation in how technology is utilized and how prepared lecturers feel to incorporate it into their teaching.

The following are the opinions of several accounting educators based on the results of interviews and discussions:

a. 54.5% of accounting educators stated, "I often use technology-based simulations that combine accounting software and data analytics, allowing students to work on real case studies. This approach enables them to apply the concepts they have learned in a practical context."
b. 36.4% of accounting educators stated, "In certain topics, I teach students how to analyze big data using platforms such as Excel and Tableau, helping them interpret large financial datasets for better decision-making."
c. 9.1% of accounting educators stated, "I integrate accounting software such as QuickBooks into my teaching by assigning practical tasks that allow students to directly use the tools, helping them understand the real-world applications of the theories taught."

The study found that while most lecturers have incorporated technology into their teaching, the extent of integration varies. Some educators use accounting software in practical lessons, encouraging students to practice using the software through simulations or case studies. This helps students grasp the workings of modern accounting systems, which are highly relevant to current industry practices.

Lecturers with more experience in technology tend to adopt a more advanced approach. In addition to using accounting software, they also integrate big data into their teaching. This integration aims to equip students with advanced analytical skills, aligning with the growing trend in the accounting profession towards data-driven decision-making. These findings support the idea that data analytics is becoming a major focus in accounting education (Wilson, 2014). In contrast, some lecturers, particularly those less familiar with technology, tend to rely on basic software such as Microsoft Excel and prefer traditional teaching methods. They feel that more advanced technologies, such as big data, are still challenging to fully integrate, primarily due to limited resources and their own lack of technological expertise.

A key finding of the study was that not all lecturers felt adequately trained in using more advanced technologies, such as cloud-based accounting software and big data. While many lecturers had received basic training, they had not been exposed to more advanced training that could enhance their ability to incorporate these technologies effectively into their teaching. The training they did receive often lacked a focus on practical classroom applications, leaving many educators feeling ill-equipped to teach these technologies to their students.

In comparison, research by IFAC also revealed that only 40% of accounting educators worldwide felt they had received adequate training to use digital technologies in their teaching. They pointed out that a lack of institutional support and time constraints were the primary reasons many lecturers did not feel fully prepared to integrate digital tools into their teaching methods. These findings are also supported by (IFAC, 2023). Baporikar's research highlights that a lack of access to technology training is a significant barrier to accounting education, particularly in developing countries (Baporikar, 2018).

Lecturers who received more intensive training reported feeling more confident in using technology and emphasized the importance of ongoing training to stay current with evolving technological advancements. This underscores the need for continuous training programs that focus on practical applications within teaching contexts, rather than just offering introductory technology overviews.

Most lecturers agree that integrating technologies like accounting software and big data significantly enhances teaching. They recognize that students exposed to these tools are better prepared for the workforce, particularly in roles that demand high-tech skills. For instance, using big data allows students to understand how data-driven decisions can shape strategic financial outcomes.

Experienced lecturers also noted that technology makes learning more interactive and engaging. The use of accounting software simulations and data analysis tools enables students to gain hands-on experience, helping them apply theoretical concepts in real-world contexts.

These findings align with previous studies, which emphasize the growing importance of technology integration in accounting education. Research has shown that accounting software and data analytics are becoming integral components of modern accounting curricula (PWC, 2011) (IFAC, 2023). However, this study adds that the readiness of lecturers to integrate technology remains a significant challenge, particularly in terms of training and infrastructure. While previous studies have primarily focused on the benefits of technology for students, this study highlights the critical need for ongoing training for lecturers to fully leverage technology's potential in enhancing the learning experience.

4.5 Steps Taken by Accounting Educators to Improve Pedagogical Competence in the Digital Era

This descriptive qualitative study focuses on the strategies employed by accounting lecturers in higher education to enhance their pedagogical competence in response to the digital era. Through in-depth interviews, the study explores the various approaches adopted by lecturers to develop their competencies, including formal training, self-directed initiatives, and collaboration with peers.

The following insights were gathered from interviews and discussions with accounting educators:

a. 54.5% of accounting educators stated, "I actively collaborate with fellow educators to share experiences and best practices in adopting technology, as well as attending seminars or workshops that discuss the latest trends in accounting education."
b. 54.5% of accounting educators also shared, "I regularly try new teaching methods, such as project-based learning and flipped classroom, to explore how technology can enhance student engagement and improve learning effectiveness."
c. 18.2% of accounting educators mentioned, "I have participated in various training programs and earned certifications in the use of educational technology and accounting software, which has helped me understand the best ways to integrate these tools into my teaching."

The first step commonly taken by many accounting lecturers is attending formal training sessions and workshops organized by universities or external institutions. These training programs typically focus on the use of technology in teaching, such as the application of Learning Management Systems (LMS) and an introduction to accounting software.

Most lecturers found these formal training opportunities to be highly beneficial in improving their pedagogical competence, particularly in the area of technology use. The training not only helped them become more comfortable with technological tools but also provided the opportunity to learn new interactive teaching methods that are more aligned with the evolving needs of students exposed to technology. These findings are consistent with research by Farmer, which indicates that formal training is a key strategy used by educators globally to enhance their digital skills, especially in fields like accounting that are rapidly adapting to technological advancements (Farmer, 2016).

However, some lecturers stated that the training provided was sometimes not in-depth or relevant enough to their specific needs. They felt that the training focused more on the technical aspects of the software rather than on how to effectively integrate the technology into pedagogy. This is consistent with the findings (Baporikar, 2018), which suggests that while formal training is important, it is often not enough to provide a deep understanding of how to use technology to improve the overall quality of learning.

In addition to formal training, many lecturers also take independent initiatives to improve their pedagogical competence. Some lecturers use online learning platforms to learn about educational technology and digital teaching methodologies. They also seek information through professional forums or read academic literature related to innovations in accounting education.

This step shows that many lecturers recognize the need to take an active role in self-development, especially in a changing technological environment. They also feel that this self-initiative gives them the freedom to choose topics that are relevant to their teaching needs. IFAC research supports this finding by stating that lecturers who take self-initiative in developing their skills tend to be more adaptive to technological changes in education (IFAC, 2023).

4.6 Technology-Based Teaching Methods Improve Students' Understanding of Accounting Material

Technology-based teaching has become increasingly relevant in education, especially in the accounting discipline. This study aims to explore the views of accounting educators on how this method can improve students' understanding of accounting materials. Using a qualitative descriptive approach, in-depth interviews were conducted with 15 accounting educators at various institutions.

The following are the opinions of several accounting educators based on the results of interviews and discussions:

a. As many as 63.6% of accounting educators stated that technology provides easy access to various learning resources, such as video tutorials, articles, and discussion forums. This allows students to learn from various perspectives and deepen their understanding of accounting material.
b. 63.6% of accounting educators stated that, with technology, students can learn at their own pace and learning style. Online learning platforms often allow them to review material or explore topics in more depth, which supports a better understanding of complex accounting concepts.
c. As many as 18.2% of accounting educators stated that technology-based teaching methods, such as the use of simulations and accounting applications, allow students to interact directly with the material.

Based on the opinions of accounting educators, they emphasize that technology, such as interactive videos and accounting software simulations, increases interactivity. They believe that this interaction helps students to be more active in learning and better understand accounting concepts. This is in line with research by Garrison, which shows that enhanced interaction through technology can increase student engagement. Interactivity is especially important in accounting, where understanding concepts often requires hands-on practice (Garrison, 2011).

Technology allows students to access a variety of learning resources, such as online tutorials and e-books, which can deepen their understanding. They see this as an important step in independent learning. Better access to learning resources is also supported by research by Kahiigi, which found that easy access to learning materials helps students deepen their understanding, especially in complex subjects such as accounting (Kahiigi et al., 2007).

The use of technology allows accounting educators to provide quick and effective feedback to students. This helps students identify their mistakes and correct them directly. Research by Nicol and Macfarlane-Dick states that effective feedback is the key to improving learning (Nicol & MacFarlane-Dick, 2006). In this context, technology allows accounting educators to provide faster and more accurate feedback to students.

Lecturers noted that online learning platforms support collaboration between students. Discussions that occur in online forums allow students to exchange ideas and discuss difficult concepts. This finding is also in line with research by Zhang et al., which shows that collaboration in online learning can improve understanding of the material (Zhang et al., 2004). Discussions between students help them see different points of view and explore the material more comprehensively.

Despite the many benefits, accounting educators also note challenges, such as a lack of technology skills among students and difficulty integrating technology into existing curricula. Difficulty integrating technology is a challenge faced by many educational institutions, as Selwyn notes. Limited technology skills among students can hinder the benefits of technology-based teaching methods (Selwyn, 2016).

4.7 The Role of Accountant Educators in the Future in Facing Rapid Technological Changes

In the increasingly developing digital era, the role of accounting educators is undergoing a significant transformation. This study uses a qualitative descriptive method to explore the views of accounting educators on their future roles in facing technological change.

a. The following are the opinions of several accounting educators based on the results of interviews and discussions:
    1) As many as 63.6% of accounting educators stated that accounting educators will be responsible for continuously updating the curriculum to include the latest trends and technologies in accounting, such as data analytics and artificial intelligence, ensuring students are prepared for the challenges of a rapidly changing workplace.
    2) As many as 54.5% of accounting educators stated that accounting educators will also serve as drivers of innovation within educational institutions, encouraging collaboration with industry and the use of new technologies to improve the quality of teaching and the relevance of accounting education in the digital era.

3) As many as 45.5% of accounting educators stated that they will act as facilitators who help students develop the necessary technology skills, by integrating digital tools and platforms into teaching to create interactive and relevant learning experiences.

Based on the opinion statements from the accountants, accounting educators believe that they need to integrate technology into their curriculum. They highlighted the importance of teaching modern accounting software and data analysis tools. By teaching relevant accounting software, accounting educators can prepare students for real challenges in the industry.

Many accounting educators feel that they must continually update their digital skills in order to teach effectively. They recognize that information technology is a critical part of accounting practice today. Digital skills are key to accounting education. Research by Cascio and Montealegre shows that information technology skills are critical to future success (Cascio & Montealegre, 2016). Accounting educators must continuously develop these skills to teach effectively.

Accounting educators have expressed the need for a curriculum that is flexible and adaptive to technological changes, including the development of teaching materials that align with industry needs. Research by Kit et al. emphasizes the importance of a curriculum that responds effectively to technological advancemen (Kit et al., 2023). Accounting educators must continuously develop relevant teaching materials and periodically update the curriculum to reflect the latest advancements in the field of accounting.

Despite recognizing the importance of technology, accounting educators also acknowledge challenges in its implementation, such as inadequate infrastructure and resistance to change. These challenges in integrating technology into accounting education have also been highlighted by Selwyn (2016). Infrastructure limitations and resistance to change must be addressed in order to ensure the smooth integration of technology.

The role of accounting educators in the future will be significantly shaped by technological advancements. The integration of technology in teaching, development of digital skills, curriculum adaptation, and emphasis on soft skills are key factors in preparing students to face workplace challenges. Addressing the challenges in technology application is crucial to ensure that accounting education remains relevant and effective. Further research should explore strategies for training accounting educators to navigate these changes successfully.

4.8 Developing a Curriculum That Can Integrate Digitalization Into the Accounting Learning Process

Digitalization has become an integral part of various fields, including education and accounting. This study explores the best approach to developing an accounting curriculum that can seamlessly integrate digital technology into the learning process. Using qualitative

descriptive methods, the study gathers insights from experts, educators, and practitioners in the field.

The following are the opinions of several accounting educators based on the results of interviews and discussions:

a. 72.7% of accounting educators stated that involving industry practitioners in curriculum development can help ensure the material taught aligns with market needs. This collaboration can also facilitate the integration of current technologies used in everyday accounting practices.
b. 54.5% of accounting educators suggested that developing projects that utilize technology, such as data analysis with accounting software, can provide students with practical experience. This approach not only helps them understand the real-world application of accounting concepts but also enhances their technology skills.
c. 27.3% of accounting educators emphasized the importance of providing training for lecturers on the latest technologies and digital teaching methodologies. By enhancing lecturers' competence, they will be better equipped to integrate digital tools into teaching, thereby providing students with a richer learning experience.

Respondents also highlighted the significance of incorporating modern accounting software into the curriculum. This aligns with previous research indicating that familiarity with accounting software can significantly improve students' practical skills (Handayani, 2021).

Emphasis on Developing Digital Competencies as Part of the Curriculum. Students need to be trained not only in accounting theory but also in information technology skills. This aligns with previous research findings, which emphasize that digital skills should be a priority in accounting education (Akuntansi & Bali, 2021).

Project-Based Learning is proposed as an effective method to integrate digitalization. Students can work on real projects that require the use of digital technologies, thereby enhancing their learning experience. Previous research has shown that project-based learning can improve analytical and problem-solving skills. (Taufiqurrahman & Junaidi, 2021).

This study found that training for lecturers in the use of technology and innovative teaching methods is essential. Lecturers need to have digital skills to teach effectively. References from previous studies show that improving lecturers' skills in technology leads to an improvement in the quality of teaching (Taufiqurrahman & Junaidi, 2021).

The importance of continuous evaluation and feedback in curriculum development is also emphasized. Curriculum development must be adaptive to changes in technology and industry needs. As expressed by Laksonodan Izzulka, continuous evaluation helps ensure the relevance of the curriculum (Laksono & Izzulka, 2022).

The expected outcomes of this pedagogical competency development include several important aspects. First, the main priority is to produce graduates who are ready to work. By

integrating the latest technology and practices into learning, students will be better prepared to face challenges in the workforce. Second, competent educators will have a direct impact on the quality of education. Well-trained accounting educators will be able to provide more meaningful and effective learning experiences. Third, improvements in the overall quality of education will be reflected in a curriculum that is more relevant and responsive to industry changes. Thus, this study highlights that the development of accounting educators' pedagogical competencies is essential to face the era of accounting digitalization and achieve the desired outcomes in higher education.

The results of the study show that most accounting educators in universities are not fully prepared to integrate digital technology into accounting teaching. One of the main reasons is the lack of training focused on the use of technology in teaching. Although most accounting educators recognize the importance of technology in the modern accounting world, only a few have adequate technical skills to use it effectively in the learning process.

The study also found that higher education institutions play a crucial role in providing training and support for accounting educators. Ongoing training is essential to ensure that educators possess the latest skills in using digital accounting software and interactive teaching methodologies. Institutions that offer regular training opportunities for lecturers tend to provide better quality learning.

In addition, the application of a blended learning approach is an effective strategy for combining traditional teaching methods with digital technology. Observations show that students respond more positively to teaching that utilizes interactive digital tools, such as cloud-based accounting software simulations, which allow them to practice with real business scenarios.

6. Conclusions

Developing the pedagogical competence of accounting educators in higher education is a crucial step in preparing competitive accounting graduates for the digital era. The ability to use digital technology in the teaching process not only increases the effectiveness of learning but also ensures that students are ready to face a workforce that is increasingly integrated with technology. Support from higher education institutions, in the form of ongoing training, improved technological infrastructure, and the development of relevant curricula, is essential to realizing effective teaching.The success of developing these pedagogical competencies will depend on strong collaboration between higher education institutions and the educators themselves. In conclusion, this study recommends that higher education institutions be more proactive in developing technology training programs and providing adequate resources to support the digitalization process in accounting teaching.

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