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The Impact of Artificial Intelligence on Accounting Education in Libya: The Perspective of Faculty Members at Sabratha University

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A B S T R A C T

The integration of Artificial Intelligence (AI) in accounting education has the potential to enhance learning experiences, automate routine tasks, and improve student engagement. This study examines faculty perceptions of AI adoption in accounting education at the University of Sabratha, focusing on its perceived benefits, challenges, and barriers to implementation. A quantitative research design was employed, utilizing a structured questionnaire distributed to 15 accounting faculty members. The data were analyzed using descriptive statistics, including mean and standard deviation, to assess faculty attitudes toward AI.

The findings indicate moderate agreement on AI's ability to enhance student engagement (M = 3.33, SD = 1.72) but uncertainty regarding its effectiveness in automating repetitive tasks (M = 2.33, SD = 1.29) and personalizing learning experiences (M = 2.20, SD = 1.15). The results also highlight significant challenges in AI adoption, with 27% of faculty members identifying resistance to change and limited institutional resources as major barriers. Additionally, while 53% of respondents were familiar with AI tools, a notable 47% expressed reluctance to receive AI training, underscoring the need for faculty development initiatives.

The study concludes that successful AI integration in accounting education requires structured faculty training programs, institutional investment in AI infrastructure, and clear policy guidelines to address ethical and pedagogical concerns. Future research should explore the long-term impacts of AI adoption, comparative studies across universities, and student perspectives on AI-enhanced learning. By addressing these barriers, AI can be effectively leveraged to modernize accounting education and improve teaching outcomes at the University of Sabratha.

Keywords: Artificial Intelligence, Accounting Education, Faculty Perceptions, AI Adoption, Higher Education.

1. Introduction

The integration of AI in higher education has gained increasing attention in recent years, transforming traditional teaching methodologies and enhancing learning experiences across various disciplines (Holmes et al., 2021). In accounting education, AI has the potential to automate repetitive tasks, provide personalized learning, and improve assessment efficiency, ultimately contributing to a more data-driven and student-centered learning environment (Brynjolfsson & McAfee, 2017). However, the successful adoption of AI in accounting education depends significantly on faculty perceptions, readiness, and willingness to integrate AI tools into their teaching practices (Selwyn, 2019).

Accounting education plays a crucial role in preparing students for professional careers in finance, auditing, and management. The increasing use of AI-powered financial tools, automated auditing systems, and data analytics in the accounting profession necessitates that universities incorporate AI technologies into their curricula to better equip students for the evolving job market (Zawacki-Richter et al., 2019). While AI offers numerous benefits, such as automated grading, adaptive learning, and intelligent tutoring systems, the effectiveness of AI in education relies on faculty acceptance and institutional support (Luckin et al., 2016). In many developing countries, including Libya, AI adoption in education is still at an early stage, and faculty members may lack awareness, training, and access to AI technologies, which can hinder successful implementation (Tuomi, 2020).

2. Problem Statement

Despite the growing importance of AI in education, there is limited research on AI adoption in accounting education in Libyan universities, particularly from the perspective of faculty members. Understanding faculty perceptions is critical for identifying the challenges, opportunities, and barriers that influence AI adoption in teaching. If faculty members perceive AI as a complex, unreliable, or disruptive technology, they may resist its integration, limiting its potential benefits for students. Therefore, this study aims to explore faculty perceptions of AI in accounting education at the University of Sabratha, identifying key factors that impact AI adoption, effectiveness, and institutional support.

3. Research Objectives

This study seeks to achieve the following objectives:

1. To examine faculty perceptions of AI in accounting education.

2. To assess the extent of AI usage among faculty members at the University of Sabratha.

3. To identify key challenges and barriers to AI adoption in accounting education.

4. To explore faculty willingness to receive AI training and the need for professional development programs.

5. To provide recommendations for improving AI integration in accounting education.

4. Research Questions

To achieve these objectives, the study seeks to answer the following research questions:

1. How do faculty members perceive the role of AI in enhancing accounting education?

2. What AI tools are currently used by faculty members in their teaching practices?

3. What are the key barriers to AI adoption in accounting education?

4. How willing are faculty members to undergo AI training to improve their teaching methods?

5. What strategies can be implemented to facilitate AI adoption in accounting education?

5. Significance of the Study

This study is significant for educators, university administrators, and policymakers, as it provides empirical insights into faculty perspectives on AI in accounting education. The findings will help universities design effective AI training programs, develop institutional policies, and allocate resources for AI-driven educational tools. Additionally, understanding faculty concerns and barriers can help policymakers create strategies to overcome resistance and enhance AI implementation in higher education (Baker & Smith, 2019). Ultimately, this research contributes to the broader discussion on technology-enhanced learning in accounting education and supports the advancement of AI-driven teaching methodologies in Libyan universities.

6. Scope and Limitations

This study focuses on faculty members at the University of Sabratha who teach accounting-related courses. The research examines faculty perceptions, experiences, and challenges related to AI adoption using a quantitative research design with structured questionnaires. However, the study has some limitations:

1. The sample size is limited to 15 faculty members, which may not fully represent all accounting educators in Libya.

2. The study is restricted to one university, and findings may not be generalizable to other institutions.

3. The research does not assess student perceptions or the direct impact of AI on learning outcomes, which could be explored in future studies.

AI has the potential to enhance accounting education by improving efficiency, engagement, and student learning outcomes. However, its success depends on faculty acceptance, institutional support, and structured AI training programs. This study aims to bridge the gap in understanding faculty perspectives on AI adoption, providing valuable insights for future AI implementation strategies in accounting education.

7. Literature Review

The integration of Artificial Intelligence (AI) in education has been extensively studied in recent years, with a growing body of research focusing on its applications, challenges, and benefits in higher education. This section reviews the existing literature on AI in education, its role in accounting education, faculty perceptions, and challenges in AI adoption.

7.1 AI in Higher Education

AI has been widely recognized as a transformative tool in higher education, offering solutions that enhance learning experiences, automate administrative tasks, and provide data-driven insights (Holmes et al., 2021). AI applications in education range from intelligent tutoring systems, chatbots for student support, and AI-powered grading tools, to adaptive learning platforms that personalize content based on student progress (Zawacki-Richter et al., 2019).

Studies have shown that AI can increase engagement, improve retention rates, and provide real-time feedback to students, making learning more interactive and efficient (Luckin et al., 2016).

However, the effectiveness of AI in education depends largely on faculty attitudes, institutional readiness, and the availability of technological infrastructure (Selwyn, 2019). While some universities have successfully integrated AI-driven platforms, others face significant resistance from educators who are concerned about pedagogical changes, ethical considerations, and job displacement (Baker & Smith, 2019).

7.2 AI in Accounting Education

Accounting education is evolving to incorporate AI-driven tools that enhance student learning and prepare graduates for an increasingly digitalized financial sector. AI applications in accounting include automated data processing, fraud detection, financial forecasting, and risk assessment (Brynjolfsson & McAfee, 2017). AI-driven accounting software such as QuickBooks, Xero, and AI-powered audit tools has become an industry standard, requiring universities to adapt their curricula to include AI-related competencies (Tuomi, 2020).

Research has demonstrated that AI can improve accounting education by providing automated feedback on financial calculations, real-time auditing simulations, and adaptive learning experiences (Holmes et al., 2021). However, faculty perceptions of AI in accounting education remain divided, with some educators acknowledging AI's benefits, while others express concerns about its reliability and the need for human judgment in financial decision-making (Molnar & Carver, 2020).

7.3 Faculty Perceptions of AI in Education

Faculty perceptions play a critical role in determining the success of AI adoption in higher education. Studies have found that educators with prior AI exposure are more likely to integrate AI tools into their teaching, whereas those with limited AI knowledge tend to resist adoption (Zawacki-Richter et al., 2019). Lack of AI training, concerns over AI replacing instructors, and uncertainty about AI's impact on student learning are among the key factors influencing faculty attitudes (Selwyn, 2019).

According to Luckin et al. (2016), educators who perceive AI as a collaborative tool rather than a replacement for traditional teaching methods are more likely to adopt AI-enhanced learning strategies. Faculty members in technical disciplines such as engineering and computer science are generally more receptive to AI integration, whereas faculty in traditional disciplines, including accounting, may be more skeptical (Baker & Smith, 2019).

The findings of this study align with previous research, as the surveyed faculty members at the University of Sabratha demonstrated mixed perceptions of AI adoption, with some recognizing its benefits while others expressed reluctance due to a lack of AI training and familiarity.

7.4 Challenges in AI Adoption

Several barriers hinder the effective adoption of AI in higher education, including technological, institutional, and pedagogical challenges.

a. Lack of AI Training for Faculty

Research has shown that one of the biggest obstacles to AI adoption is faculty members' lack of AI training and digital literacy, which significantly impacts their willingness and ability to integrate AI into teaching practices (Molnar & Carver, 2020). Without proper training, educators may struggle to understand the functionalities, applications, and pedagogical implications of AI-driven tools, leading to hesitancy in their adoption. Many educators do not receive formal AI training, either due to institutional constraints, lack of professional development opportunities, or limited awareness of available AI resources, which in turn reduces their confidence in effectively utilizing AI technologies in the classroom (Holmes et al., 2021).

Additionally, the absence of structured AI training programs often results in a knowledge gap between educators and students, as many learners may be more familiar with AI tools through independent exploration, while faculty members remain reliant on traditional teaching methods. This disparity can create resistance among faculty, who may perceive AI as complex, unnecessary, or disruptive to established educational models. Addressing this challenge requires institutional investment in AI literacy programs, targeted faculty workshops, and hands-on training initiatives that demonstrate AI's practical benefits in accounting education and other academic disciplines.

b. Resistance to Change

Resistance to change is another major challenge in AI adoption, particularly among faculty members who may perceive AI as a threat to traditional teaching roles or question its effectiveness in enhancing educational outcomes (Tuomi, 2020). This resistance often stems from concerns about job security, fears of AI replacing human instructors, and skepticism regarding AI's ability to deliver quality education. Faculty members who have relied on traditional, lecture-based methods for years may find it difficult to adapt to AI-enhanced teaching strategies, especially when they lack familiarity with these technologies. Additionally, some educators may view AI-driven automation as a mechanistic approach that lacks the human elements of teaching, such as mentorship, critical thinking facilitation, and emotional intelligence, components that are essential in student development.

Such resistance is not uncommon in higher education, where institutional inertia and reluctance to depart from established pedagogical practices can slow down technological innovation. Overcoming this challenge requires clear communication on the benefits of AI, active faculty involvement in AI policy development, and structured AI training programs that emphasize AI as a supportive tool rather than a replacement for human educators. Universities

should foster a culture of technological adaptation, where faculty members are encouraged to experiment with AI in a low-risk, supportive environment, allowing them to gradually integrate AI into their teaching practices.

c. Institutional Constraints and Limited Resources

AI integration requires adequate technological infrastructure, financial investment, and strong institutional support to ensure its effective adoption in higher education (Brynjolfsson & McAfee, 2017). The successful implementation of AI-driven tools, such as automated grading systems, intelligent tutoring platforms, and data-driven learning analytics, depends on universities' ability to provide the necessary digital infrastructure, high-speed internet access, and access to AI-powered software. Without these essential components, AI adoption remains a theoretical possibility rather than a practical reality.

Universities in developing countries face even greater challenges, as limited access to AI-powered tools, outdated technology, and budget constraints create significant barriers to implementation (Baker & Smith, 2019). Many institutions struggle with insufficient funding to invest in state-of-the-art computing systems, AI-driven educational software, and cloud-based platforms, leaving faculty and students with minimal exposure to advanced AI applications. Additionally, inconsistent electricity supply, poor internet connectivity, and a lack of technical support personnel further hinder AI integration in low-resource academic environments.

To overcome these obstacles, universities must prioritize AI investment through strategic partnerships with tech companies, government funding initiatives, and open-access AI education platforms. Institutions should also explore cost-effective AI solutions, such as open-source AI tools and cloud-based learning management systems, which can reduce infrastructure costs while still providing faculty and students with exposure to AI-driven education. Furthermore, policymakers must recognize the long-term benefits of AI adoption in higher education and allocate financial resources toward digital transformation to ensure that AI-enhanced learning is accessible, sustainable, and scalable in developing regions.

d. Ethical and Privacy Concerns

The ethical implications of AI in education remain a critical issue, as the increasing reliance on AI-driven systems raises concerns about fairness, transparency, and accountability in academic settings. Faculty members have expressed apprehension over AI-driven decision-making, data privacy risks, potential biases in AI algorithms, and the ethical consequences of student surveillance (Zawacki-Richter et al., 2019). AI-powered tools used for automated grading, student performance tracking, and predictive analytics can inadvertently introduce algorithmic bias, leading to unfair assessment outcomes if not carefully monitored. Additionally, the collection and analysis of student data through AI-powered learning management systems raise significant privacy concerns, as improper data handling or breaches could compromise student confidentiality and academic integrity.

Furthermore, the use of AI in student monitoring and proctoring has sparked debates about the balance between academic integrity and student rights. AI-based proctoring software, designed to detect cheating behaviors, has been criticized for potentially invasive surveillance practices, which can create stress and discomfort among students while raising questions about consent and autonomy in AI-driven education. Faculty members also worry that overreliance on AI for instructional and administrative decisions may reduce human oversight, leading to mechanistic and impersonal education experiences that lack empathy and contextual judgment.

Addressing these concerns requires clear ethical AI policies that define guidelines for AI transparency, data security, and responsible AI use in academic settings. Universities must implement robust data protection protocols, ensure algorithmic fairness in AI-driven assessments, and establish mechanisms for human oversight in AI-based decision-making. Additionally, faculty training programs should include AI ethics education, equipping educators with the knowledge and skills needed to critically evaluate AI applications and advocate for responsible AI integration in teaching and learning. By fostering an ethical AI culture, institutions can build trust in AI adoption, ensuring that AI serves as an inclusive and fair tool for enhancing education rather than exacerbating existing inequities.

7.5 Strategies for Effective AI Integration in Higher Education

Based on the literature, successful AI adoption in education requires a multidimensional approach that addresses faculty training, institutional support, and ethical considerations.

a. Faculty Development and AI Training

Studies emphasize the need for ongoing AI training programs to equip educators with the skills and confidence necessary to effectively integrate AI tools into their teaching practices (Luckin et al., 2016). Without proper training, faculty members may struggle to understand the functionalities, benefits, and limitations of AI-driven educational tools, leading to hesitancy in adoption. AI literacy programs play a crucial role in addressing these concerns by providing structured learning experiences that familiarize educators with AI applications, ethical considerations, and best practices for AI-enhanced teaching.

To bridge the AI knowledge gap, universities should implement comprehensive faculty development programs that include: hands-on AI workshops focusing on the practical use of automated grading systems, intelligent tutoring platforms, and AI-driven data analytics for personalized learning; Seminars and expert-led discussions on AI ethics, bias mitigation, and responsible AI implementation in education to address faculty concerns; collaborative AI training initiatives, where faculty members with AI expertise mentor their colleagues, fostering peer-to-peer learning and knowledge-sharing; and pilot AI integration projects, where faculty can experiment with AI tools in a controlled environment before fully incorporating them into their courses.

These training programs should be tailored to different levels of AI familiarity, ensuring that both novice and experienced educators can benefit. Additionally, universities should partner with AI research institutions, technology companies, and educational organizations to provide faculty with access to the latest AI advancements and training resources. By investing in ongoing AI professional development, institutions can empower educators to harness AI's full potential, leading to more effective, data-driven, and engaging teaching experiences.

b. Institutional Investment in AI Infrastructure

AI adoption requires universities to invest in digital learning platforms, AI-powered grading tools, and adaptive learning technologies to create a more efficient and personalized educational environment (Tuomi, 2020). These technologies have the potential to automate routine administrative tasks, provide real-time feedback, and enhance student engagement, ultimately improving learning outcomes. For instance, AI-driven grading tools can streamline assessment processes, reducing faculty workload and allowing them to focus on higher-order teaching activities such as critical thinking development and student mentorship. Similarly, adaptive learning technologies leverage machine learning algorithms to adjust curriculum content based on individual student progress, ensuring a customized learning experience that caters to diverse student needs.

Providing adequate technological resources is essential for ensuring seamless AI integration into accounting education. AI-powered tools such as intelligent tutoring systems, financial data analytics software, and automated auditing simulations can significantly enhance accounting students' practical skills by exposing them to real-world industry applications. However, effective implementation requires that universities upgrade existing digital infrastructure, ensuring that faculty and students have access to high-speed internet, cloud-based computing resources, and AI-compatible learning management systems.

Additionally, institutions must establish technical support units to assist faculty in troubleshooting AI-related challenges and providing training on new AI-powered tools. Universities should also consider collaborating with technology firms and AI research centers to gain access to cutting-edge AI innovations and develop cost-effective solutions for AI integration. By making strategic investments in AI infrastructure and support systems, universities can facilitate a smooth transition to AI-enhanced education, ultimately preparing accounting students for AI-driven professional environments in the future.

c. Ethical Guidelines and AI Policies

To address ethical concerns surrounding AI in education, universities should establish clear and comprehensive AI policies that emphasize data privacy, algorithmic fairness, and transparency in AI decision-making (Holmes et al., 2021). As AI-driven tools become more prevalent in higher education, faculty and students must be assured that AI technologies are used responsibly, fairly, and securely. Without clear policies, concerns related to biased AI algorithms, student data protection, and lack of transparency in automated decision-making could undermine trust in AI applications within academic institutions.

Data privacy is a primary concern, as AI-powered educational platforms often collect, store, and analyze vast amounts of student data to provide personalized learning experiences. Universities must implement strict data protection measures, such as secure encryption, access control protocols, and adherence to global data protection regulations (e.g., GDPR or institutional privacy frameworks) to prevent unauthorized data access and potential misuse.

Algorithmic fairness is another critical aspect, as AI models can inadvertently introduce biases in decision-making processes, such as automated grading, admissions recommendations, or performance evaluations. To ensure fair and equitable AI implementation, universities should adopt regular AI audits, bias detection mechanisms, and transparent AI model development practices to prevent discrimination or unfair academic outcomes.

Additionally, transparency in AI decision-making is essential for faculty trust and student confidence in AI-powered systems. Universities should establish clear documentation and explain ability protocols, ensuring that faculty and students understand how AI-based recommendations, grading systems, or predictive analytics function. Institutions can also create AI ethics committees or advisory boards composed of educators, AI researchers, and policymakers to oversee responsible AI implementation in education.

By developing robust AI governance frameworks, universities can foster a culture of ethical AI adoption, encouraging faculty and students to leverage AI responsibly while minimizing risks associated with bias, privacy violations, and opaque decision-making. Establishing these policies not only builds trust in AI technologies but also ensures that AI serves as a fair, transparent, and beneficial tool for higher education.

d. Encouraging Collaborative AI Adoption

Research suggests that faculty engagement in AI decision-making can play a crucial role in reducing resistance to AI adoption and fostering a sense of ownership and trust among educators (Baker & Smith, 2019). When faculty members are actively involved in the planning, development, and implementation of AI technologies, they are more likely to embrace AI as a supportive tool rather than view it as a disruptive force. Resistance to AI often stems from a lack of understanding, fears of job displacement, and skepticism about AI's effectiveness in education. By including faculty voices in AI policy development, universities can address these concerns directly and create a collaborative AI adoption strategy that aligns with educators' needs.

To achieve this, universities should establish faculty-led AI committees responsible for evaluating AI tools, providing recommendations for ethical AI use, and ensuring AI integration aligns with pedagogical goals. These committees can also serve as advisory bodies, allowing educators to express concerns, propose solutions, and contribute to AI decision-making processes. Furthermore, faculty members who are knowledgeable about AI can act as mentors for their colleagues, helping them gain practical AI skills and build confidence in AI-enhanced teaching methods.

In addition to faculty committees, universities should encourage cross-disciplinary AI research initiatives that bring together experts from different academic fields to explore innovative AI applications in education. Such initiatives promote interdisciplinary collaboration, enabling faculty members from accounting, computer science, education, and other disciplines to share knowledge, develop AI-driven teaching solutions, and conduct research on AI's impact on learning outcomes.

By involving faculty in AI decision-making at both strategic and practical levels, universities can enhance AI adoption, reduce skepticism, and create a more inclusive and informed approach to AI integration in higher education. This collaborative model ensures that AI is implemented in ways that truly benefit both educators and students, ultimately fostering innovation and continuous improvement in AI-enhanced learning environments.

8. Methodology

This section outlines the research design, population and sampling methods, data collection techniques, and analytical procedures used in this study. The methodology is designed to systematically examine the perceptions of faculty members at the University of Sabratha regarding the impact of AI on accounting education. By employing a structured questionnaire and statistical analysis, this study aims to provide empirical insights into the adoption, benefits, and challenges of AI integration in accounting education.

8.1 Research Design

This study employs a descriptive research design using a quantitative survey approach to examine the perceptions of faculty members at the University of Sabratha regarding the impact of AI on accounting education. Descriptive research is appropriate as it allows for the collection of data to describe trends, opinions, and behaviors related to AI adoption in higher education (Creswell & Creswell, 2018). A survey questionnaire was used as the primary data collection tool to gather insights from accounting educators.

8.2 Population

The population for this study consists of 15 faculty members from the Accounting Department at the University of Sabratha. These participants were selected based on their experience in teaching accounting courses and their familiarity with artificial intelligence (AI) applications in education. The relatively small population size is justified by the specialized nature of the study, as it focuses on faculty perceptions and experiences with AI in accounting education.

A targeted approach was used to ensure that all selected participants possess relevant expertise in the field. While the sample size is limited, it provides in-depth insights into the challenges and opportunities of AI adoption in accounting education within the Libyan university context. Additionally, similar studies have demonstrated that small but focused samples can yield meaningful qualitative and quantitative data (Creswell & Creswell, 2018).

By focusing on a specific group of educators, this study aims to provide accurate and context-specific findings that contribute to understanding the role of AI in accounting education in Libya.

8.3 Sampling Technique

This study employs a purposive sampling technique, a non-probability sampling method in which participants are selected based on specific characteristics that align with the research objectives (Etikan, Musa, & Alkassim, 2016). The purposive sampling approach ensures that only faculty members with relevant experience in accounting education at the University of Sabratha are included, allowing for more targeted insights into the integration of artificial intelligence (AI) in the field.

Purposive sampling is particularly useful in educational research where specialized knowledge is required from participants (Palinkas et al., 2015). The selection criteria for participants in this study were carefully defined to ensure that only relevant faculty members contributed to the research. Participants were required to be employed as accounting faculty members at the University of Sabratha, ensuring that they have direct experience with the institution's educational practices. Additionally, they needed to have teaching experience in accounting courses at either the undergraduate or postgraduate level, as this would provide them with the necessary background to assess the impact of artificial intelligence (AI) on accounting education. Lastly, familiarity with AI tools or emerging technologies in education was considered essential, as the study focuses on understanding faculty perceptions of AI integration in teaching and learning. By applying these selection criteria, the research ensures that participants have both practical teaching experience and some level of exposure to AI in education, allowing for more insightful and informed responses.

This approach ensures that the study gathers meaningful and relevant data from educators who have direct experience with AI in accounting education. While purposive sampling enhances the depth of insights, it also has limitations, such as potential researcher bias in participant selection and reduced generalizability to broader academic populations (Creswell & Creswell, 2018). To mitigate these limitations, the study includes faculty members from different departments and levels of experience to capture diverse perspectives (Saunders, Lewis, & Thornhill, 2019).

8.4 Data Collection Method

To gather data for this study, a structured questionnaire was used as the primary data collection instrument. The questionnaire was designed to assess faculty members' perceptions of AI in accounting education, their experiences with AI tools, and the challenges they face in integrating AI into their teaching practices. A structured questionnaire is an effective tool for collecting standardized data, ensuring consistency in responses and facilitating quantitative analysis (Creswell & Creswell, 2018).

The questionnaire was distributed through two primary methods: electronically via Google Forms and physically within the university departments. The online distribution allowed for greater accessibility and convenience, enabling participants to complete the survey at their own pace (Bryman, 2016). Meanwhile, the physical distribution within the university departments ensured that faculty members who preferred traditional formats or had limited digital access could still participate. This mixed approach helped increase the response rate and minimize non-response bias, which is a common challenge in survey-based research (Saunders, Lewis, & Thornhill, 2019).

The questionnaire was divided into multiple sections covering demographic information, faculty perceptions of AI, the extent of AI usage in accounting education, and barriers to AI adoption. It included both closed-ended questions (using Likert scale and multiple-choice formats) to facilitate statistical analysis and open-ended questions to capture qualitative insights. By employing a combination of quantitative and qualitative data collection, this study aimed to provide a comprehensive understanding of faculty members' views on AI in accounting education at the University of Sabratha.

8.5 Data Analysis

The collected data was analyzed using Statistical Package for the Social Sciences (SPSS) to conduct descriptive statistics (mean, frequency, and standard deviation) where applicable (Field, 2018). Thematic analysis was also applied to open-ended responses to identify common themes related to AI adoption and its challenges in accounting education.

9. Results

This section presents the findings from the questionnaire distributed to accounting faculty members at the University of Sabratha. The results are di vided into two main parts: (1) demographic information of participants and (2) faculty perceptions of AI in accounting education. The demographic analysis provides insights into participants' backgrounds, including gender, age, academic qualifications, and teaching experience. The second part analyzes faculty perceptions of AI, focusing on its perceived benefits, challenges, and adoption levels in accounting education. Descriptive statistics, including mean and standard deviation, are used to summarize Likert-scale responses, while categorical data are presented in frequencies and percentages.

9.1 Questionnaire responses

Item	Mean	Standard Deviation
AI enhances students' understanding of complex accounting concepts.	2.73	1.44
AI helps automate repetitive tasks in accounting education.	2.33	1.29
AI can personalize learning experiences for students.	2.20	1.15
AI increases student engagement in accounting courses.	3.33	1.72
AI can improve assessment and grading efficiency.	2.73	1.53
AI reduces the need for human instructors in accounting education.	2.80	1.47

Table 1: Summary of Questionnaire Responses

The results indicate that faculty members at the University of Sabratha have mixed perceptions regarding the impact of AI on accounting education. The highest-rated item, AI increasing student engagement (M = 3.33, SD = 1.72), suggests that while some faculty members see AI as a tool to enhance interaction, opinions remain divided, as reflected by the high standard deviation. Conversely, AI's role in automating repetitive tasks (M = 2.33, SD = 1.29) and personalizing learning (M = 2.20, SD = 1.15) received lower agreement, indicating skepticism or limited experience with AI-driven teaching tools. The moderate rating for AI in improving assessment efficiency (M = 2.73, SD = 1.53) and enhancing student understanding (M = 2.73, SD = 1.44) suggests that while faculty recognize some benefits, there is uncertainty regarding AI's effectiveness. Notably, the perception that AI reduces the need for human instructors (M = 2.80, SD = 1.47) reflects resistance to AI replacing traditional teaching. The high standard deviations across most items indicate a wide range of perspectives, likely due to varying levels of AI exposure and adoption among faculty members.

9.2 Questionnaire results

Category	Frequency (N)	Percentage (%)
Gender		
Male	9	60%
Female	6	40%
Age Group		
25-35 years	4	27%
36-45 years	3	20%
46-55 years	3	20%
Above 55 years	5	33%
Academic Qualification		
Master's Degree	11	73%
PhD	4	27%
Years of Teaching Experience		
1–5 years	5	33%
6–10 years	4	27%
More than 10 years	6	40%
Familiarity with AI in Education		
Yes	8	53%
No	7	47%
AI Tools Used in Teaching		
Chatbots (e.g., ChatGPT)	3	20%
Automated Grading Systems	4	27%
Data Analytics Software	4	27%
None	4	27%
Challenges in AI Adoption		
Lack of AI training for faculty	3	20%
Resistance to change among faculty and students	4	27%
Limited university resources and infrastructure	4	27%
Ethical concerns regarding AI in education	4	27%
Willingness to Receive AI Training		
Yes	7	47%
No	8	53%

Table 2: Questionnaire Results

The demographic data provides key insights into the composition of the faculty members surveyed at the University of Sabratha. The gender distribution shows a higher representation of male faculty members (60%) compared to female faculty members (40%), suggesting a relatively balanced gender ratio.

Regarding age groups, the majority of participants fall into the "Above 55 years" (33%) and "25-35 years" (27%) categories, indicating that the sample includes both experienced educators and younger faculty members.

In terms of academic qualifications, most participants hold a Master's degree (73%), while a smaller percentage have a PhD (27%), which may influence their familiarity with advanced AI applications in education. Teaching experience is distributed across different levels, with 40% of faculty members having more than 10 years of experience, suggesting that the majority of respondents have substantial experience in academia.

When assessing familiarity with AI in education, 53% of faculty members reported having experience with AI tools, while 47% stated they were unfamiliar with AI applications, highlighting a gap in AI awareness and training. In terms of AI tools used in teaching, responses were evenly distributed among chatbots (20%), automated grading systems (27%), and data analytics software (27%), while 27% reported not using AI tools at all, indicating varied adoption rates among faculty members.

The challenges of AI adoption reveal that faculty members face significant barriers, with 27% identifying resistance to change, limited resources, and ethical concerns as key issues, while 20% cited a lack of AI training as a primary obstacle. Interestingly, despite the challenges, 53% of faculty members expressed reluctance to receive AI training, suggesting potential skepticism or resistance to AI integration in accounting education.

10. Discussion

The findings of this study provide important insights into faculty perceptions of AI in accounting education at the University of Sabratha. The results indicate mixed views on AI's potential, with faculty members recognizing its role in student engagement but showing uncertainty in its ability to automate tasks, personalize learning, and improve assessment methods. These findings align with previous research suggesting that AI adoption in higher education remains in its early stages, particularly in developing regions (Selwyn, 2019).

10.1 Faculty Perceptions of AI in Accounting Education

The study found that faculty members moderately agree that AI enhances student engagement (M = 3.33, SD = 1.72), which supports the argument that AI-powered tools such as chatbots, virtual tutors, and interactive simulations can improve student participation and motivation in learning (Zawacki-Richter et al., 2019). However, the relatively low mean scores for AI's ability to personalize learning (M = 2.20, SD = 1.15) and automate repetitive tasks (M = 2.33, SD = 1.29) suggest that faculty members may not fully understand how AI can optimize teaching processes. This is consistent with studies indicating that educators often lack training and exposure to AI-driven teaching methods (Luckin et al., 2016).

10.2 Challenges in AI Adoption

The demographic findings revealed that 53% of faculty members are unfamiliar with AI applications, and 27% identified resistance to change as a major barrier to AI adoption. This aligns with research highlighting faculty skepticism and apprehension about AI's impact on traditional pedagogical approaches (Baker & Smith, 2019). Additionally, institutional barriers such as limited resources (27%) and lack of AI training (20%) further hinder AI adoption, reinforcing the need for comprehensive AI training programs and infrastructure investment (Holmes et al., 2021).

10.3 The Need for AI Training and Policy Development

Despite the growing potential of AI in education, the study found that 53% of faculty members are unwilling to receive AI training, indicating a reluctance to engage with emerging technologies. This reluctance is consistent with research suggesting that faculty members may resist AI adoption due to fears of job displacement and concerns over AI's reliability (Molnar & Carver, 2020). To address this challenge, universities should implement structured AI training programs that emphasize AI as a teaching enhancement tool rather than a replacement for human educators. Furthermore, the development of institutional AI policies and ethical guidelines can help mitigate concerns and encourage gradual AI integration in teaching (Tuomi, 2020).

10.4 Implications for Accounting Education

The findings highlight the importance of aligning AI adoption with the specific needs of accounting education. AI-driven data analytics tools, automated grading systems, and real-time financial simulations could significantly enhance learning outcomes if properly integrated into accounting curricula (Brynjolfsson & McAfee, 2017). However, without institutional support and faculty engagement, AI's potential benefits may remain underutilized. Future studies should explore longitudinal effects of AI training on faculty perceptions and assess how AI adoption influences student performance in accounting education.

Overall, the study reinforces the idea that AI adoption in accounting education requires a balanced approach, where faculty training, resource allocation, and policy frameworks work together to facilitate AI integration. While faculty members acknowledge AI's role in enhancing engagement, concerns about pedagogical impact, institutional barriers, and resistance to change need to be addressed to fully realize AI's potential in higher education.

11. Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance the integration of AI in accounting education at the University of Sabratha. These recommendations focus on faculty training, institutional support, and AI implementation strategies to maximize the benefits of AI while addressing the identified challenges.

11.1 Implement AI Training and Professional Development Programs

The results indicate that 47% of faculty members are unfamiliar with AI tools, and 53% are unwilling to receive AI training, highlighting a critical need for faculty capacity-building initiatives. The university should organize AI training workshops, hands-on sessions, and certification programs tailored to accounting educators. Training should focus on equipping faculty with a comprehensive understanding of AI's pedagogical benefits, demonstrating how AI can enhance student learning through personalized instruction, adaptive assessments, and intelligent tutoring systems. Educators should be exposed to practical demonstrations of AI tools specifically designed for accounting education, including automated grading systems that streamline assessment processes, financial simulations that provide real-world business scenarios, and data analytics software that enhances students' quantitative reasoning skills. Additionally, AI training must incorporate ethical considerations and best practices for responsible AI usage, ensuring that faculty members understand issues related to data privacy, algorithmic bias, and transparency in AI decision-making. By addressing these key areas, AI training programs can empower educators to effectively integrate AI tools into their teaching while maintaining ethical and pedagogical integrity. By incorporating AI-focused faculty development programs, universities can increase faculty confidence, reduce resistance to AI adoption, and foster a culture of continuous learning (Luckin et al., 2016).

11.2 Strengthen AI Infrastructure and Institutional Support

The study highlights that 27% of faculty members identified limited university resources as a challenge in AI adoption. To overcome these challenges, the university should invest in AI-powered learning management systems (LMS) that facilitate adaptive learning, automated feedback, and personalized student support, allowing educators to track progress and tailor instructional strategies accordingly. Additionally, establishing dedicated technical support teams is essential to assist faculty in integrating AI tools into their teaching practices, providing hands-on guidance, troubleshooting issues, and ensuring smooth implementation. Moreover, the university must ensure access to AI software and cloud-based accounting applications, enabling both students and faculty to experiment with real-world AI applications in accounting education, such as automated financial analysis, fraud detection, and predictive modeling (Holmes et al., 2021). By making these strategic investments, the university can enhance AI adoption, improve teaching efficiency, and equip students with the skills needed for an AI-driven accounting profession. By improving AI infrastructure, universities can remove technological barriers and enable seamless AI integration in teaching and learning environments.

11.3 Develop AI Adoption Policies and Ethical Guidelines

Faculty concerns about AI replacing instructors and ethical issues (27%) highlight the importance of clear institutional policies on AI usage in education. The university should establish clear guidelines on AI's role in teaching, ensuring that AI is used to enhance rather than replace human instructors, reinforcing its function as a supportive tool for personalized learning and efficient assessment rather than a substitute for traditional teaching methods. Additionally, comprehensive policies on data privacy, student monitoring, and academic integrity must be implemented to prevent the misuse of AI tools, safeguarding sensitive student information and ensuring that AI-driven evaluations adhere to ethical academic standards. Furthermore, the university should develop ethical AI frameworks that directly address faculty concerns regarding bias, automation, and fairness in AI-driven decision-making, ensuring that AI applications in education are transparent, equitable, and aligned with institutional values (Tuomi, 2020). By establishing these policies, the university can build trust in AI adoption, mitigate ethical risks, and promote responsible AI usage in accounting education. By establishing clear AI adoption policies, universities can ensure responsible AI implementation and increase faculty trust in AI technologies.

11.4 Encourage AI Integration in Accounting Curriculum

The findings suggest that faculty members do not strongly perceive AI as a tool for personalizing learning or automating tasks. To address this, AI applications should be strategically integrated into the accounting curriculum to enhance practical learning, efficiency, and industry relevance. One key approach is the use of AI-driven accounting simulations, which allow students to engage with real-time financial data and predictive analytics, improving their ability to analyze trends, assess risks, and make data-driven decisions. Additionally, automated grading and AI feedback systems can streamline the assessment process, providing instant feedback on assignments and exams, and enabling students to identify areas for improvement while allowing faculty to focus on higher-order teaching activities. Furthermore, integrating AI-assisted auditing and fraud detection tools will offer students practical exposure to industry-standard AI applications, helping them develop critical auditing skills, detect anomalies in financial records, and understand AI's role in forensic accounting (Brynjolfsson & McAfee, 2017). By embedding these AI-driven tools into the curriculum, universities can bridge the gap between theoretical knowledge and practical application, ensuring that students graduate with AI-enhanced accounting competencies that align with the evolving demands of the profession. By embedding AI tools into the curriculum, universities can enhance student learning experiences and demonstrate AI's practical value in accounting education.

11.5 Foster a Positive AI Adoption Culture Among Faculty

The results indicate resistance to AI adoption (27%) among faculty members. To address this, university administrators should actively involve faculty members in AI decision-making processes, ensuring that their concerns, insights, and suggestions are taken into account when developing AI integration strategies. By fostering an inclusive approach, universities can reduce resistance to AI adoption and encourage faculty to view AI as a collaborative tool rather than a disruptive force. Additionally, institutions should promote success stories and case studies showcasing real-world examples of AI-enhanced teaching in accounting education, demonstrating how AI tools have positively impacted learning outcomes, improved efficiency, and personalized student experiences. These case studies can help faculty members understand the tangible benefits of AI and inspire confidence in its adoption. Furthermore, establishing an AI mentorship program, where faculty members with AI expertise support their colleagues, can facilitate peer-to-peer learning, skill-sharing, and hands-on guidance in AI integration (Baker & Smith, 2019). This approach ensures that faculty members receive tailored support and practical experience with AI tools, ultimately leading to a smoother and more sustainable AI adoption process in accounting education. By fostering a collaborative and supportive AI adoption culture, universities can overcome resistance and encourage wider acceptance of AI technologies.

12. Conclusion

This study examined faculty perceptions of artificial intelligence (AI) in accounting education at the University of Sabratha, focusing on AI's perceived benefits, challenges, and adoption barriers. The findings indicate moderate agreement among faculty members regarding AI's role in enhancing student engagement, but uncertainty about its effectiveness in automating tasks, personalizing learning, and improving assessment methods. Additionally, the study revealed significant barriers to AI adoption, including limited AI training, resistance to change, and institutional resource constraints.

A key takeaway from the study is that faculty perceptions of AI are largely influenced by their exposure and experience with AI tools. While some faculty members recognize AI's potential to enhance accounting education, many remain skeptical or resistant due to lack of awareness, concerns about AI replacing traditional teaching roles, and limited access to AI resources. These findings are consistent with prior research suggesting that successful AI adoption in education requires faculty training, infrastructure investment, and clear policy guidelines (Holmes et al., 2021; Tuomi, 2020).

To address these challenges, the study recommends implementing structured AI training programs, enhancing AI infrastructure, developing ethical AI policies, and integrating AI applications into the accounting curriculum. By fostering a positive AI adoption culture and involving faculty members in the decision-making process, universities can overcome resistance and ensure AI is used as a complementary tool rather than a disruptive force in education.

AI has the potential to revolutionize accounting education by offering personalized learning experiences, automated grading, and data-driven insights. However, its success depends on faculty acceptance, institutional support, and strategic implementation. By addressing the barriers identified in this study, the University of Sabratha can create an AI-enhanced learning environment that empowers both educators and students in the field of accounting.

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