

The Optimization of Digitalization in Facing Global Competition: The Case of Islamic Accounting

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ABSTRACT: Analyzing the optimization that needs to be done from the digital aspect of Islamic accounting to improve student competence to compete in the world of work according to company needs. This study investigates and analyzes this based on the perspective of Islamic accounting graduate students as a workforce and the perspective of company stakeholders as employers. They are using a qualitative descriptive approach. In-depth interviews with research participants collected data and then analyzed using the Miles and Huberman model. The findings show that it is essential for Islamic higher education to integrate technology into the learning process. Make adjustments to meet the needs of the company and the learning provided. The most proposed optimization towards the digitalization of Islamic accounting is using accounting software, Microsoft Excel, digital literacy regarding financial technology, and AI. These proposals are significant in shaping the readiness of graduates to compete in an increasingly competitive world of work. This research contributes to providing an overview of digitalization that needs to be optimized by Islamic higher education according to the needs of Islamic accounting graduates as a workforce and company stakeholders as employers. Islamic higher education can then use this picture to shape student competencies to be ready to compete in the world of work.

Keywords: Islamic accounting, Digitalization, Job readiness, Islamic financial institution, Higher education.

I. INTRODUCTION

The importance of digitalization can be felt in many aspects of life, be it in companies, government institutions, educational institutions, and everyday life. This shows that digitalization has become an integral component in progress and evolution in the modern era [1]. Digitalization converts or transforms processes, activities, information, and data into digital formats. Digitalization has changed educational and practical activities [2]. In addition, technological developments also require the working society to make significant changes in thinking and approaches to carrying out tasks to utilize the opportunities of the digital economy [3]. By transforming towards digital, the automation process can improve the efficiency and effectiveness of organizational work. Manual processes that are slow and prone to errors can be replaced with faster and more accurate digital solutions [4]. It is inevitable that many companies and organizations adopt technology and turn to digitalization for more efficient business processes [5]. The fact shows that nowadays, companies will be oriented toward an economic structure that designs the demand for digitalization experts or someone who masters the digital and technological world [6]. It can be observed that organizations and companies are adapting their policies, strategies, and qualifications to meet the changing needs of their workforce [7].

The investigation related to the awareness of the world of work noted several implications for accounting education [8]. The necessity to employ digital technology in accounting education is justified by the fact that graduates emerging from business schools will enter a workplace abundant in technology. Accounting education in this environment carries a greater responsibility and plays a crucial function as it must equip graduates with the ability to effectively adjust to the evolving needs of the labor market. Undoubtedly, education is the primary catalyst for ensuring the socio-economic progress of a nation. The primary objective of the education system is to provide proficient human resources equipped with the information and skills required by the job market [9]. Consequently, higher education must use technology in order to effectively educate the workers for the labor market.

Unfortunately, graduates from Islamic accounting colleges do not have sufficient knowledge and understanding regarding utilizing digitalization opportunities to compete in the labor market. Therefore, the higher education system majoring in Islamic accounting must provide in-depth and diverse training for students. Improvements must be made continuously in teaching methods, expanding the use of interactive methods, and training teachers, which is essential in training accountants in universities [10]. As stated in the Association to Advance Collegiate School of Business (AACSB) in 2018, lecturers and students majoring in accounting must develop learning experiences related to integrating information technology in accounting and business. This is needed to adapt to emerging technology and master current technology [11]. In addition, the problem that is also quite prominent is the incompatibility of the learning obtained with the needs and demands of the company. This is reflected when students enter the world of work, where several things are different between the learning provided during college and the reality in the field.

Several studies have conducted investigations that require higher education as a place or place to be occupied and created by the workforce to make adjustments and transformations towards digitalization in order to meet the needs of the global labor market [12-14]. These studies also mention that it is essential for universities to be more flexible and open to technological changes to adjust the accounting education curriculum to meet the demands of labor companies in the global market.

Unfortunately, the above research still has shortcomings in examining the relationship between the digitization of higher education with workforce readiness and company needs. No research specifically analyzes and explores this topic at the Islamic higher education level. Therefore, this research is present to fill the gap from previous research that has been done. This preliminary study on Islamic higher education examines the necessary enhancements in the digitalization of Islamic accounting education to enhance students' competence in meeting the demands of the job market. This research investigates and analyzes this based on the perspective of Islamic accounting graduate students as a workforce and the perspective of company stakeholders as employers. This research is essential to provide insights and a relevant and appropriate picture related to digitalization that needs to be improved in Islamic accounting learning in Islamic universities, which in turn helps Islamic higher education stakeholders and related study programs in making policies for developing digitalization skills both through the learning process and appropriate internships and field practices by the qualifications set by the company. This will later benefit students by supporting their readiness in the world of work and increasing the skills, knowledge, and skills needed.

II. MATERIALS AND METHODS

The study employs phenomenological interpretative methods, which aim to acquire a profound comprehension of specific phenomena in life by focusing on the experiences of the research participants. In addition, a thorough understanding of phenomenological interpretation requires researchers to actively develop a phenomenological attitude, which involves being sensitive to the lived experiences of others. This study seeks to investigate employment prospects within the realm of Shariah finance amidst the rise of artificial intelligence.

The researchers employed the purposive sampling approach to ensure that the participants chosen were the most representative in addressing the research questions. This technique is widely regarded as the most suitable for discovering, comprehending, and gaining a diverse perspective on the problem under investigation. In order to gather information and delve further into the issues addressed in the study, the authors selected seven individuals to serve as participants. The study involved four participants who were graduate students of Islamic higher education and currently employed in various enterprises. The participants were chosen based on their educational background in Shariah accounting and job-seeking experiences as aspiring enterprise accountants. Subsequently, three additional participants joined the discussion, representing the practitioners and stakeholders of the company. The participants were chosen based on their expertise and direct involvement in the recruitment process. They can offer extensive information based on their expertise and experience regarding the current workforce requirements that align with the qualifications sought by the company.

In order to explore opportunities and employment options within Shariah financial institutions, researchers employ data collection methods such as conducting interviews and analyzing secondary data. The interview guide has been meticulously crafted to gather comprehensive research data across various vital sections. The initial section delves into the participants' demographic information, encompassing their age, educational background, and work experience. In the second part, the interview delves into the perspective of a knowledgeable participant, offering valuable insights on the digitization of accounting. The focus is on enhancing students' competence to ensure they are well-equipped to thrive professionally. The company needs to consider its role as an employer and understand the various aspects of digitization that need to be improved. This will ensure that the future workforce remains competitive in the job market. The interviews were conducted face-to-face, with meticulous recording of each participant's responses. These responses were then transcribed individually using the voice tape website.

For this study, the data from the live interviews was digitally recorded to capture the desired responses from the participants. The interview footage undergoes meticulous manual encoding and thematically transcribed before being comprehensively analyzed. This study employs content analysis to analyze the data and provide a contextual understanding of the issues being investigated. Furthermore, secondary data such as documentation and other materials are employed to bolster and authenticate the precision of participants' responses.

1. TECHNOLOGY READINESS

Technology Readiness Level" (TRL) is a concept used to evaluate how much technology has developed or matured before it can be implemented commercially or operationally. The concept was first introduced by NASA and is used to measure technological progress in space mission development. TRL has a scale of 1 to 9, each representing a stage in the technology development cycle. Here is an overview of each TRL level:

- a. TRL 1: Basic Scientific Observations: The concept is identified but has yet to be further evaluated.
- b. TRL 2: Early Technology Concepts and Applications: Concepts are detailed and possibly tested in the laboratory.
- c. TRL 3: Examination of Concepts in a Laboratory Environment: Concepts are tested in a laboratory under controlled environmental conditions.
- d. TRL 4: Model or Prototype Development: A model or prototype must be created before being tested in a suitable setting.
- e. TRL 5: Testing and Validation in Relevant Environments: Tests are conducted on prototypes in settings representative of actual use.

- f. TRL 6: Validation and Testing in a Factory or System Environment: The entire system or model is tested in an environment of regular use.
- g. TRL 7: Testing and Validation in a Completely Operational Environment: Real-world operating conditions are used to test the system.
- h. TRL 8: Production Equipment Selection and Testing: Systems or equipment used in production are used and tested.
- i. RL 9: Fully Operational: Technology is successfully employed in daily operations.

TRLs are frequently employed in the context of technology development across a wide range of industries, including information technology, healthcare, and energy. Their use is not restricted to space research. Developers and stakeholders can make more informed decisions about implementation and investment by knowing a technology's readiness level [15].

2. TECHNOLOGY ACCEPTANCE MODEL

The Technology Acceptance Model (TAM) theory was created to explain and comprehend how people adopt and use information technology. The hypothesis was initially introduced by Davis (1989) [16], and has subsequently undergone multiple extensions and revisions. The Technology Acceptance Model (TAM) places emphasis on the perceived usefulness and ease of use as the principal determinants influencing the adoption of technology. Perceived ease of use explains an individual's level of belief in the simplicity of using technology. On the other hand, perceived usefulness describes how much a person thinks using technology will increase their productivity or efficacy. People's perception of how easy it will be to learn and use technology is a component of perceived ease of use. People's perceptions that using technology will improve their performance or productivity are known as perceived usefulness. A person's intention to use or not use technology is known as their intention to use. The actual way that people use technology is called "actual use."

TAM suggests that perceived ease of use and usefulness directly affect usage intention and actual use. Other factors, such as individual characteristics, prior experience, and social factors, can influence perceptions and usage intentions. The model has been widely applied and developed in various contexts, including business applications, enterprise information systems, and consumer technology. TAM and its variations remain a popular tool in technology-related user behavior research. Several studies have examined the need for higher education to adopt technology or digitalization and its relation to the world of work. These studies will be described as follows. The research undertaken by [12] examines the effects of the difficulties arising from digitalization and the pandemic crisis.

The digital era causes changes in business models through technology and automation. This research found that further action is needed effectively and efficiently in the current context. Digitalization has changed the business world more than imagined. This, directly and indirectly, impacts accounting education and continuous professional development that can keep up with current and future market needs and demands. In addition, other research related to digitalization in higher education was also conducted by [14], who analysed the digital economy in higher education institutions in the European Union, America, and the Russian Federation. The issue raised in this study is the direction of higher education transformation in creating a digital learning environment. The research findings state that there is a need to adapt the education system to changes in the labor market. Companies and universities must be integrated. Higher education institutions should focus on improving students' digital and business literacy and continuous digital training and retraining of educators.

III. FINDINGS AND DISCUSSION

Today's industry has undergone significant changes. Technology and digitalization are essential components to create work effectiveness and efficiency. Thus, industries or companies demand a tech-savvy workforce with good digital literacy. Students formed by higher education need learning that is integrated with digitalization to improve their readiness to compete in the labor market. Based on the interviews conducted with Sharia accounting graduate students and company stakeholders, the following is a mapping of findings based on research problems.

1. UTILIZATION OF TECHNOLOGY IN THE LEARNING PROCESS

Optimizing the use of technology in Islamic accounting learning is a must to ensure that students have the skills and knowledge that match the demands of the ever-evolving labor market. Higher education must integrate learning with technology and digital devices to prepare students to support their careers. So that there is no longer a problem that new graduates need to learn how to operate accounting software used by companies. This lack of knowledge is driven by the fact that higher education institutions have not traditionally provided instruction on the utilization of accounting software that is routinely employed by companies. This statement is attributed to a graduate from UIN Sunan Kalijaga.

"When I first started working in the company, I was quite surprised because I had to use the ERP application from the company. Well, I did not know because, during college, I was never taught to use the application. Acquiring proficiency in using the application was a time-consuming process as I had to start from the very beginning.

" (Participant 1, graduate of UIN Sunan Kalijaga).

The information from students who graduated from UIN Sunan Kalijaga is the same as that submitted by students who graduated from Islamic higher education at UIN Maulana Malik Ibrahim Malang. During their time in higher education, they were not taught how to use ERP accounting programs, as specifically desired by the company. Upon entering the workforce, individuals often encounter perplexity and must undergo a process of learning and adapting to the digital accounting technologies employed by firms.

2. LINK AND MATCH BETWEEN CAMPUS AND COMPANY

Optimizing the link and match between campuses and companies in Islamic accounting learning can create a learning environment that is more relevant to the needs of the labor market. Higher education must review the learning provided to students in terms of digitalization. This is based on the problem that occurs, which is that the accounting digitization learning received by students during college needs to be synchronized with the reality and needs of companies when working. This is conveyed by graduate students from UIN Sumatra Utara as follows.

"The lessons taught in college are different from those encountered when entering the world of work. The use of Microsoft Excel in companies is much different from what was encountered during college. In addition, the accounting applications taught in college are different from those used by companies. When we were in college, we were taught to use MYOB (Mind Your Own Business), while when we work, we are required to use accurate, so it is not synchronized between what we were taught in college and the company's demands". (Participant 3, graduate of UIN Sumatra Utara)

The student's statement is supported and consistent with the results of interviews conducted with company stakeholders.

"Companies encounter challenges when hiring a freshgraduate, since they must provide comprehensive training on how to utilize corporate accounting software from the beginning. Fresh grads are encountering challenges in utilising Excel as a result of" (Participant 5, Bank Syariah Indonesia company stakeholder)

"Fresh grads may have challenges when using the Excel software commonly utilized by companies due to their lack of familiarity with it. In addition, the version of Excel utilized by the organization is more intricate, thus it is possible that they have not experienced a similar situation throughout their undergraduate education". (Participant 7, Takaful company stakeholder)

One of the job vacancy fliers displayed on Instagram also supports this. The illustration can be seen in the following image.



FIGURE 1. Job vacancy flier.

The results of interviews and evidence displayed through job vacancy fliers in Figure 1 show that learning needs to be synchronized with company needs. This can be an evaluation material for Islamic accounting higher education to review their readiness in shaping students to compete in the world of work. Referring to the results of interviews conducted with Islamic accounting graduate students and company stakeholders, the following authors map the optimization of digitalization that needs to be improved in Islamic higher education to support the readiness of students to compete in the world of work and by company needs. This optimization proposal is based on the perspective of Islamic accounting graduate students as a workforce and the perspective of company stakeholders as employers. The mapping will be presented in the following table.

Table 1. Proposed optimization of Islamic accounting digitalization in Islamic higher education

No	Participants	Optimization of the proposed digitalization of Islamic accounting
1	Graduate of UIN Sunan Kalijaga	<ul style="list-style-type: none"> - Use of ERP (Enterprise Resource Planning) - Audit technique
2	Graduate of UIN Sunan Ampel	<ul style="list-style-type: none"> - Utilize Microsoft Excel. Companies commonly use
3	Graduate of UIN Sumatra Utara	<ul style="list-style-type: none"> - Microsoft Excel - Use of accurate application
4	Graduate of UIN Maulana Malik Ibrahim	<ul style="list-style-type: none"> - ERP Usage - More complex Microsoft Excel - Use of fintech

5	Bank Syariah Indonesia	- Big data analytics - Use of SAP accounting - Accounting software
6	National Committee for Sharia Economics and Finance (KNEKS)	- Use of AI - Use of Microsoft - Understanding the use of fintech
7	Takaful	- Understanding of more complex Microsoft Excel techniques - Understanding of accounting applications

Based on the data presented in Table 1 above, it can be concluded, in general, that the use of accounting software is the most dominant proposed to be improved both based on the perspective of Islamic accounting graduate students as a workforce and the perspective of company stakeholders as employers. In addition to using accounting software, participants also proposed optimizing the use of the more complex Microsoft Excel spreadsheet commonly used by companies. Furthermore, the proposed optimization is about AI and literacy or understanding of the use of financial technology. These proposals are very relevant when viewed in light of the current situation. Companies, in general, have shifted to automation and digitalization, so accounting software is a top priority for companies in preparing financial statements.

Employers now demand that graduates have good digital literacy skills [17]. Technological changes and developments increasingly showing progress can lead to a shortage of skilled labor [18]. Therefore, Islamic higher education and companies must establish cooperation in digitalization to shape students' readiness to compete in the labor market. This cooperation can be carried out to optimize the use or integration of technology in Islamic accounting learning. In addition, cooperation can also be carried out to link and match the learning received by students with the company's needs. The higher education landscape will shift due to the power of technology [19] and will need to adjust to meet the demands of rapidly evolving businesses. Higher education and university campuses have transformed into future-focused hubs for technology and talent development. Consequently, institutions of higher learning now play a different function [20].

Enhancing collaboration to enhance student preparedness for labor market competition can be achieved through diverse approaches, such as incorporating internships and hands-on experiences into the curriculum. During internships and work practices, students will get knowledge about the implementation of digital work processes by companies. Human potential is contingent upon both increasing the influx of labor and enhancing the productivity of the existing workforce [21]. Cooperation with the company provides students with hands-on practical experience in a natural work environment and the opportunity to build a professional network. Through internships and fieldwork practices, students will directly know the digital technology used by companies in supporting work, which will increase their insight and competence to compete in the world of work. By optimizing the use of technology in Islamic accounting learning, students can gain the necessary skills to succeed in an increasingly digital and global labor market. It also helps them to be better prepared for the challenges and opportunities in the business world. They organize seminars, workshops, or training for industry practitioners and Islamic accounting experts. This can help students understand the latest trends, challenges, and best practices in the industry while gaining insights directly from those in the field. The key challenges can be systematized as follows: the use of big data in accounting and reporting, cloud computing and sustainable accounting, artificial intelligence, and blockchain technology. In addition, users of accounting information in the digital era are also changing; they want accounting information immediately when business events occur, not with a time lag [22].

IV. CONCLUSION

Advances in technology and digitalization are bringing significant changes to the world of work. Companies and industries are changing how they work, from business processes, data, and so on, and turning to digital transformation and technology adoption. Therefore, companies are also making strategic changes to the need for a workforce with good digital literacy. This research has shown critical results focused on the proposed optimization. The proposal highlights several proposals that higher education should improve in preparing students to compete in the labor market. The proposal is then mapped into two parts. The first is that in preparing students to enter the labor market, Islamic higher education needs to integrate technology into the learning process. The second is to match the company's needs with the learning provided to students. The most proposed optimization of the digitalization of Islamic accounting is using accounting software, Microsoft Excel, digital literacy regarding financial technology, and AI. These proposals are based on the needs of companies to help them prepare financial statements. This research provides benefits for Islamic higher education, especially Islamic accounting. This research provides an overview of the digitalization needed by graduates as a workforce and company stakeholders as employers. Islamic higher education can then use this picture to shape student competencies to be ready to compete in the world of work. The theoretical benefit is that it can be a reference source for future research interested in discussing the same theme as this research.

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