

Geographical Disparities on ICT Content in Accounting Curricula and Students' ICT Competence

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Abstract. This study explores the impact of geographical variations on the quality of Information and Communication Technology (ICT) content in accounting curricula and its influence on the ICT competencies of accounting students in Indonesian universities. An online survey to accounting students across regions assesses perceived ICT content quality and self-reported digital competencies. Statistical analyses, including t-tests and Partial Least Squares Structural Equation Modeling (PLS-SEM), reveal differences in ICT content and competencies among students in these areas. Notably, Eastern Indonesian students rate ICT content more favorably. The study also identifies areas where curriculum development and instructional methods need enhancement to bridge competency gaps. This exploratory research enhances our understanding of the intricate relationship between geographic disparities, ICT content, and students' digital competencies in accounting education. It emphasizes the need for adaptive curricula and targeted teaching methods to equip future accountants with essential digital skills for an evolving job market.

Keywords: ICT competency, digital divide, ICT content, accounting curricula.

Research Funding: This research was funded by the Directorate General of Higher Education, Research and Technology, Ministry of Education, Culture, Research and Technology of the Republic of Indonesia (DRTPM Kemdikbud) in the 2023 Competitive Research Grant Scheme.

1. Introduction

Ensuring equitable access to digital resources has become increasingly crucial in the contemporary era driven by Information and Communication Technology (ICT). This phenomenon is widely recognized as the “digital divide”, denoting the disparity in accessing and utilizing digital technology among diverse societal groups (Mathrani *et al.* 2022; Tapsell & Jurriens 2017; Vassilakopoulou & Hustad 2021). The digital era has simultaneously elevated ICT competency to a pivotal determinant of success across various domains, including education. The advancement of ICT has inherently impacted numerous business facets, many of which intersect with the field of accounting (Commission on Science and

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Technology for Development 2018; Mustafa EL-dalahmeh 2017; Muthaiyah 2021; Shopova 2014; Syuhada 2015; Tanaka & Sithole 2015; Weli & Marsudi 2022).

Furthermore, the role of accountants in this rapidly evolving landscape has undergone a profound transformation. This metamorphosis is intricately intertwined with the pervasive impact of information within the global economic fabric (Alkhaffaf *et al.* 2018; Lestari & Santoso 2019; Mujiono 2021; Mustafa EL-dalahmeh 2017). This paradigm shift has significantly redefined the anticipated competencies of accounting graduates (Damasiotis *et al.* 2015; Ku Bahador & Haider 2012; Maisurah *et al.* 2012).

Traditionally, accounting work primarily revolved around fundamental tasks such as recording transactions, categorizing data, and generating financial reports (Andreassen 2020). However, propelled by the advancement of information technology and the strategic utilization of information as a pivotal resource, the sphere of accounting has evolved into a sophisticated and technologically integrated domain (Awang *et al.* 2023; Damasiotis *et al.* 2015; Mujiono 2021; Mustafa EL-dalahmeh 2017).

This evolution mandates that accounting graduates not only grasp the foundational principles of accounting but also exhibit adeptness in harnessing an array of ICT tools and applications to augment operational efficacy and overall effectiveness. This imperative calls for educational institutions to play a pivotal role in cultivating enhanced ICT competencies and nurturing students' adaptability to technological progressions (Alaqrabawi & Alshurafat 2020; McCrary 2022; Tan & Laswad 2018). Acknowledging this transformative backdrop, it becomes imperative for accounting curriculum programs to undergo tailored adaptations that resonate with the evolving industry requisites (Ku Bahador & Haider 2012; Maisurah *et al.* 2012; Mustafa EL-dalahmeh 2017; Rhodes 2019; Weli & Marsudi 2022).

This paradigm encompasses a breadth beyond the theoretical realm, encompassing the cultivation of practical proficiencies to adeptly maneuver through pertinent ICT tools and applications within the multifaceted accounting landscape. Moreover, the curriculum should be sculpted to cultivate lifelong learning, enabling students to seamlessly recalibrate their knowledge and competencies in harmony with the ever-evolving technological vistas. However, it's worth noting that the seamless amalgamation of ICT into accounting curricula is not devoid of challenges. Educational institutions navigate a labyrinth of hurdles, ranging from infrastructural limitations to the scarcity of adept instructors well-versed in ICT (Birt *et al.* 2018; Taiwo 2016).

The significance of ICT content in accounting curricula has long been a concern of various international accounting education standards (ACCA 2021; Brand 2020; International Accounting Education Standards Board 2014; International Federation of Accountants (IFAC) 2019) and previous researchers (Al Mallak *et al.* 2020; Alaqrabawi & Alshurafat 2020; Alrizqi *et al.* 2021;

Awang *et al.* 2023; Birt *et al.* 2018; Damasiotis *et al.* 2015; Day 2017; Osmani 2017; Rhodes 2019; Syuhada 2015). Despite these efforts, a need remains to investigate how ICT learning content in accounting curricula adequately equips students with ICT competencies. Previous studies have revealed gaps between industry needs and the competencies of accounting program graduates (Al Mallak *et al.* 2020; Birt *et al.* 2018; Chen *et al.* 2010; Damasiotis *et al.* 2015; Maisurah *et al.* 2012; Marx *et al.* 2020; Mustafa EL-dalameh 2017). Additionally, a mismatch exists between the types of technology taught in accounting programs and the technological skills employers seek (Meyer 2021).

The gap between industry needs and graduate competencies can stem from various factors. One of them is the absence and diversity of infrastructure in educational institutions, including the ability of instructors to implement ICT in accounting curricula (Birt *et al.* 2018; Soomro *et al.* 2020). Various ICT infrastructure facilities across different geographical areas contribute to the Digital Divide. Geographic factors are considered because infrastructure development in urban areas differs from suburban or rural areas (Habibi *et al.* 2023; Vassilakopoulou & Hustad 2021).

This research is intriguing to conduct, considering that despite the rapid growth of the digital economy following the COVID-19 pandemic due to the adoption of internet technology, e-commerce, and digital services, connectivity disparities remain a significant challenge in Indonesia (Sapulette & Muchtar 2023; Tiwari *et al.* 2021). Furthermore, as the World Bank (Tiwari *et al.* 2021) reported, although there has been progress, nearly half of Indonesia's adult population still lacks internet access. Geographical disparities persist, especially between urban and rural areas, with approximately 60-70% of Indonesians in the eastern regions experiencing inadequate internet connectivity due to varying service quality.

The aforementioned phenomenon poses a unique challenge for accounting students in Indonesia in meeting the competencies expected by the industry. On the other hand, the conditions of students in Indonesia vary significantly based on geographical factors and the status of public and private universities. Previous studies (Soomro *et al.* 2020) have shown differences in access to digital technology in faculties of public and private universities, leading to disparities in students' digital skills. Students in private universities may have better digital skills because these institutions are more actively utilizing digital technology for teaching and learning purposes.

Consequently, this study addresses two research questions: RQ1. Does the digital divide factor, such as the geographical location of students, affect the quality of ICT content in accounting curricula across different universities in Indonesia? RQ2. Does the ICT content in accounting curricula impact students' ICT competencies?

This study explores the potential relationship between the quality of ICT content in accounting curricula and students' ICT competencies. Additionally,

the study analyzes how the digital divide, observed through geographical factors, affects the quality of ICT content in accounting curricula and the ICT competencies of accounting students in various universities in Indonesia.

Birt *et al.* (2018) demonstrated that students' background interaction with computers can influence their ICT competencies. Therefore, the intensity of classroom learning using computers seems to support increased student competencies. Understanding how the quality of ICT learning content in the accounting curriculum can influence students' ICT competencies is crucial. ICT competence refers to the ability to use digital technology, communication tools, and networks to access, manage, integrate, evaluate, and create information effectively for various purposes (Awang *et al.* 2023; Falloon 2020; Kim *et al.* 2018; Vassilakopoulou & Hustad 2021).

This research is expected to reveal the extent to which ICT learning content in the Accounting curriculum impacts students' ICT competencies. The results of this research can provide recommendations for educational institutions to improve ICT instruction in the context of Accounting and enhance the quality of education offered to students facing rapid technological changes.

Moreover, within the context of the digital divide, the study aims to determine whether geographical differences in students' study locations influence their level of ICT competencies. This digital divide can significantly impact students' career prospects in accounting. Lacking adequate ICT skills, they may find it challenging to compete in an increasingly digital job market (Gulin *et al.* 2019; Kaplan & Bier 2018).

Research related to the digital divide has been extensively conducted, generally focusing on causative factors, strategies for mitigation, and necessary government policies. This study, however, emphasizes the digital competencies of accounting students resulting from disparities in digital access due to geographical factors. The research outcomes are expected to have implications for accounting curricula in addressing the limitations in digital access faced by students in Indonesia and other developing countries grappling with similar digital divide challenges.

Thus, the findings of this study are anticipated to provide new insights into how accounting education can be adapted to better prepare students for a digital world. Additionally, the results are expected to offer recommendations for educational institutions to enhance ICT instruction within the Accounting context and improve the quality of education provided to students in response to rapid technological changes.

2. Method

This study will employ an exploratory quantitative research design to analyze the impact of the digital divide based on geographical location concerning the ICT