Mapping between Digital Competencies and Digitalization of the Accounting Profession among Postgraduate Accounting Students

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Abstract: The Fourth Industrial Revolution has transformed global industrial demands and changed how people work, learn, communicate, access information, and spend their spare time. Similarly, the push towards digitalization of the accounting profession raised concerns about whether formal education and professional training will effectively equip accountants for the challenges brought on by the extensive use of IT in businesses and its dynamic nature. Thus, this study examined the relationship between digital competencies among postgraduate accounting students and the digitalization of the accounting profession. Questionnaires were distributed via online to postgraduate accounting students at a comprehensive university in Malaysia. Based on 136 responses, the results show that all four elements of digital competence have high mean scores. In addition, media literacy and information and communication technology literacy are insignificant, whereas information literacy and digital literacy are significant towards the digitalization of accounting profession. The results of this study can be used as a benchmark to evaluate the digital competencies of postgraduate accounting students who have some job experiences, as this may indicate how prepared the players are for the digitization of the accounting profession. Ultimately, this research might combine the efforts of university management and professional accounting bodies to get the players ready for the digitalized accounting profession. Future research may be conducted on postgraduate accounting students at other public and private universities and may also be expanded to assess non-accounting postgraduate students' digital competencies towards digitalization in their related fields.

Keywords: Accounting profession, Digital competence, Digital literacy, Information literacy, Information and communication technology literacy, Media literacy

1. Introduction

Global industrial demands have changed because of the Fourth Industrial Revolution (IR4.0), relying more on digital software and robotic function automation to replace human tasks. It is changing among other things, how people work, learn, communicate, access information, and spend their free time, as technology is used more broadly in society and the economy (Ala-Mutka, 2011). The accounting sector is expected to respond to comparable changes as the accounting profession moves towards digitization. Nowadays, software programs that are connected to the internet of things have taken over more clinical functions. The fundamental shift in accounting due to technologies involving cloud computing, social media, big data, and mobile technologies led to a re-assessment of the possibilities for financial information change in this evolving information context (Bhimani & Willcocks, 2014).

According to Kruskopf et al., (2020) as the accounting and auditing professions develop, there have been a lot of discussions about the digital revolution in the accounting industry. Although the revolution is growing swiftly, many aspects of its future are yet unknown. These changes may result in the loss of many jobs, but they will also open up various new options for workers looking to expand their skill sets as well as recent graduates. Additionally, the digitalization of the accounting industry has changed how people think about and practice the profession (Fettry et al., 2019). Although internet-related technologies, such as cloud computing, big data, blockchain, and artificial intelligence, may reasonably make accountants feel threatened, these technologies also present new opportunities for accountants (Moll & Yigitbasioglu, 2019). There are numerous tasks and responsibilities for accounting professionals. Thus, to fulfil their function and duties, accountants must acquire and develop several skills and competencies since they must perform a variety of duties (Georgieva, 2019). In the digitized environment, accounting becomes more challenging which demands that accountants be increasingly knowledgeable in Information Technology (IT) and Accounting Information Systems (AIS). Therefore, questions raised about whether professional training and college education can adequately prepare accountants for the challenges posed by the widespread adoption of IT in enterprises and dynamic nature (Chang & Hwang 1, 2003).

Undeniably, digital skills are pertinent to the digitized environment. Specifically, digital competence relates to how all citizens are equipped with sufficient digital capabilities to participate in the digital society. It is about everyone being able to utilize digital technology to make their daily lives easier, to communicate and seek information, to recognize and use different digital services, to comprehend what goes on in the digital world, and to be aware of security threats (Wiggberg et al., 2022). People who lack the necessary digital competence face the risk of being excluded from vital activities, failing to take advantage of the opportunities presented, and even risking themselves when using digital tools and media. Digital competency discrepancies appear to be correlated with and probably made worse by other social and economic inequalities. Therefore, regardless of their age, career, or level of information and communication technology (ICT) usage, people must be encouraged to increase their digital competence (Ala-Mutka, 2011). This evidence that digital competence is regarded as the most crucial skill that should equally be imposed in the accounting industry.

Accountants serve as users, controllers, and evaluators, as well as IT system managers and designers (Georgieva, 2019). Those roles leads to the development and evolution of digital skills into various forms of competencies that are not directly related to information systems but are nonetheless necessary for carrying out a certain task (Damasiotis et al., 2015). As a result, accountants' responsibilities are strongly tied to their digital competencies, which are mandated by their job. Thus, this study aims to examine the relationship between digital competencies among postgraduate accounting students and the digitalization of the accounting profession. Choosing to pursue postgraduate courses shows that they are deliberately making efforts to acquire and develop the skills required for their profession. They are mature and experienced students, with some currently holding positions at the management level in their various careers. Due to their diversity in terms of age, social background, and technical competence, postgraduate students are ideal respondents (Edwards et al., 2011). Through their job experiences and keeping up with the new industrial transformation, they can provide an insightful view of the accounting profession's digitization and digital competency.

The underlying theory in this study is Technology Acceptance Model (TAM), which has been widely used in organizational research. TAM is often regarded as the most effective paradigm for

explaining technology adoption at both the individual and organizational levels (Gangwar et al., 2014). According to Jones et al. (2010), TAM makes the assumption that users will be more likely to invest time in learning and adopting the new system over the existing one if they are more open to using it. According to TAM theory, perceived ease of usage and perceived usefulness are the two key factors that influence how quickly an IT system is adopted. In other words, a person's intention to use a given application is anticipated and justified by their assessment of the benefits and simplicity of the technology.

2. Literature Review

2.1 Accounting profession and Digitalization

The IR4.0 has evidenced that technology is being used more frequently in society and the economy, which is changing various aspects of people's lives (Ala-Mutka, 2011). The IR4.0 marked the digitalization of business processes. Digitalization, in a broader sense, is the process of digitizing interactions, communications, corporate operations and business models (Branca et al., 2020). Digitalization is one of the biggest and most pervasive changes in today's society because it already affects many facets of our lives (Leitner-Hanetseder et al., 2021).

The accounting sector is anticipated to respond to comparable changes due to the push toward digitalization. IR4.0 necessitates multitasking since financial tasks such as accounting, compliance, management and control, strategy and risk, funding, and resource allocation, encounter challenges and demands related to organizational contexts (Smith & Payne, 2011). The digitalization of the accounting profession is also closely tied to the Sustainable Development Goals (SDGs) specifically Goal 9, which intends to considerably enhance access to ICT and strive to give universal and reasonably priced access to the Internet in the least developed countries by 2030 (https://www.un.org). The SDGs call on governments, corporations, and the general public to intensify efforts to combat contemporary issues including poverty, inequality, environmental pollution, and climate change (Makarenko & Plastun, 2017).

Notably, accountants must have more IT and AIS knowledge to cater to the challenges of the accounting profession in a digitalized world. As stated by Pan and Seow (2016) that the accounting industry urgently needs a group of competent AIS specialists capable of handling sophisticated IT demands in accounting services and activities. As part of their distinctive skill and contribution to the organization, accountants' implicit competence gained through professional knowledge and education should always be kept and incorporated into the curriculum (Quattrone, 2016). This is because only 2.6% of organizations in the accounting industry are unconcerned about the IT proficiency of accounting graduates (Afolabi, 2014). This is consistent with the assertion made by Gonçalves et al. (2022) that accountants working in the digital era must integrate digital talents with previously required knowledge, competencies, and skills using the logic of addition and subtraction.

2.2 Digital competencies

According to Moreno-Morilla et al. (2021), competence is "the set of knowledge, skills, and attitudes necessary for individuals' development in different contexts (e.g., home, school, library, office, etc.). One of the eight basic competencies for lifelong learning identified by the European Union is digital competence, which is defined as "involving the confident and critical use of Information Society Technology (IST) for work, leisure and communication". Digital competence in the information society relates to fundamental life skills and resources. With the ever-changing tools and techniques that people use in their work, study and leisure time, digital competence must be constantly developed. The employees' knowledge and competencies, combined with digital culture and skills, are important factors in coping with an extensive transformation caused by technology, automation, and the digitalization of production processes and operations within an organization (Stancheva-Todorova, 2019). Meanwhile, the digital competency discrepancies appear to be correlated with and probably made worse by other social and economic inequalities (Ala-Mutka, 2011).

In the contexts of 21st-century skills, digital competence comprises digital literacy, digital skills, electronic skills, Internet skills and media literacy (Kongpradit et al., 2020). Additionally, Ala-

Mutka (2011) and Moreno-Morilla et al., (2021) described digital competence as comprising four elements of literacies - digital literacy, information literacy, ICT and internet literacies, and media literacy. In this study, digital competence is operationalized to include information literacy, media literacy, information and communication technology literacy, and digital literacy. The definition of the four elements is summarised in Table 1 below.

Table 1. Components and definition of digital competence

Components	Definition
Information literacy	The ability to search for, select, analyze, organize and communicate information effectively.
Media literacy	The ability to understand, interpret, recreate and assess different media.
ICT literacy	The set of skills and knowledge related to the ICT industry.
Digital literacy	The technical ability to use the computer and internet.

(Source: Guzmán-Simón et al., 2017)

Generally, it is believed that the workforce's needs for certain skills such as new literacy in digital, technological and human literacy (Lestari & Santoso, 2019) posed constraints to the holistic implementation of IR4.0 (Mian et al., 2020). Utilizing a variety of digital tools may provide a beneficial effect to develop knowledge, skills and readiness for a potentially great career path (Rizal et al., 2021). People who lack the necessary digital competence run the risk of being left out of vital activities, unable to take advantage of the opportunities presented, and even at detrimental when using digital tools and media. With the rapid development of computer and information technologies, the concepts like "digital and technological literacy" as well as the more general idea of "information literacy" emerged, which serve as the cornerstone for the development of modern societies. A study by Lestari and Santoso (2019) found a positive and significant influence of digital, technological, and human literacy skills on job readiness. Kim (2020) discovered that digital literacy positively influenced perceived employability. With the widespread deployment of IR4.0, it is important to clarify the precise workforce skill needs (Mian et al., 2020).

Concerning skills development, as digital tools, devices, and technologies are being heavily invested in higher education environments for learning and teaching, the education system must define strategies that take into account the requirements for the programs, guidelines, and training sessions created to advance and improve students' informational and digital literacy and skills (Jang et al., 2020). Moreover, in meeting the demand and need in the digital world, universities' skill development that maps to current job positions requires immediate attention and planning (Tandon & Tandon, 2020). Since today's society is increasingly reliant on new technologies, ICT literacy is receiving a great deal of attention, comparable to the importance of reading, writing, and arithmetic in the nineteenth and twentieth centuries (Ivanković et al., 2013). Hafifah and Sulistyo (2020) found the participants' ICT literacy levels are above average, and they frequently include ICT in their daily lesson preparation as they become more literate as they utilise ICTs more frequently. According to Shin and Zanuddin (2019), the majority of pupils have a medium level of skill with new media. Based on demographic variables, there were no significant differences in understanding of new media, with the exception of a weak positive correlation between media use and both knowledge dimensions. Meanwhile, Polizzi (2020) contends digital literacy as subset of media literacy that focuses on digital media and the internet. While functional digital literacy refers to the practical abilities and understanding needed for online participation, critical digital literacy should be understood to be more than just the ability to evaluate online content.

The impact of digitalization is with no exception on the accounting profession. Professional accountants continue to undergo technical transformations, which could have a significant effect on the organization's profitability component (Ghorbani, 2019). Accounting professionals must be able to recognize and use evidence in order to assess the accuracy of digital data, as well as conduct complex online searches in order to uncover information relevant to their clients. Digital literacy expands the options for finding answers to a variety of accounting tasks (O'Callaghan et al., 2021). The relationships between the use of data, information, and knowledge in a system by an individual, an organization, or

a society, and how such a system can be viewed as effective are central to understanding continuing changes in accounting system design (Bhimani & Willcocks, 2014). Additionally, the way accountants carry out their jobs has changed because of the growing digitalization of business. They must be aware of the new skills, notably in engineering, that will support the creation of new types of accounting professionals (Gulin et al., 2019). Accounting, compliance, management and control, strategy and risk, funding, and resourcing activities, all of which are part of finance functions, require multitasking as they face difficulties and pressures in organizational settings (Smith & Payne, 2011).

In the current digital era, accountants are expected to actively participate in system development projects to ensure that the IT system designer is meeting their needs. Accountants are also expected to be responsible for the conceptual system that determines the nature, sources, destinations, and applicable accounting rules of the information required. Similarly, the accountants are expected to perform the necessary analyses of IT investments and the benefits associated with them (Noor Azizi & Azlan Zainol, 2009). Smart software and systems will automate complex and multifaceted processes (such as financial closing) and encourage trends toward outsourcing some services and repatriating others (ACCA, 2016). Accountants must be conversant with accounting software tools in order to maximize accounting functions effectively and efficiently. Accounting software, income tax software, audit software, word processing software, and graphic software are examples of software that must be mastered in the accounting industry (Ghasemi et al., 2011). Accounting software such as Financio, SQL Account, Biztory, Intuit Quickbooks, Ace Software, and UBS are popular and frequently used in Malaysia, while worldwide, Enterprise Resource Planning (ERP) has become increasingly popular in recent years, particularly in large corporations.

Given its critical role in transforming society, technology literacy is currently regarded as the greatest means to offer necessary skills to professionals. The requirement for professional accountants to be proficient in information technology is no longer debatable. IT knowledge deals with facts, information, and skills that are acquired during lifelong learning through education and experience. Accounting practice and the competencies required of professional accountants will be transformed as a result of the evolution of digital technologies and their impact on business. In the future, the accountants who are notaries and creatives will replace the currently employed accountants (Slyozko & Zahorodnya, 2016; Yang, 2012). Thus, the accounting profession and accounting education must focus on the needs of the younger generation, the digital natives, who are rapidly experiencing digitalization and must also prepare for their job-based education on how to integrate and deal with related technology. The intellectual challenges facing accountants of the future are not accidental but rather are a direct outcome of the growing complexity of modern work tasks and technological tasks (Al-Htaybat et al., 2018). Impliedly, accounting students' competencies should not be limited to the technical skills and knowledge traditionally required of accounting professionals, but their competencies also to cover their ability to respond to environmental changes and stakeholder needs (Black, 2012). In other words, digital competence is no longer an optional skill for accounting students since technology literacy will increase as usage in daily work urging the accounting professionals to rely on technology to obtain, evaluate, and synthesize digital data.

Previous research indicates that there are numerous issues with the digitization of skills and knowledge in accounting education. A study in Thailand, for example, discovered that Thai accounting professionals struggle with English language communication and IT usage, despite having high levels of knowledge and skill in the field of accounting (Wattanawirai & Sithipolvanichgul, 2012). Additionally, the English communication skills and IT accounting software skills of Thai accounting students are still weak (Suttipun, 2014). Meanwhile, Malaysian accounting students appear to be confident in their current accounting education's ability to prepare them for professional accounting education learning, but students' awareness of higher accounting education programs should be increased (Mas Ervina et al., 2015). The suggestion could be a result of today's accounting students having more digital competence but less digital content creation (Kongpradit et al., 2020). These led to the question of the effectiveness and efficiency of college education and professional training in preparing accountants to address the problems of “machine learning" and its widespread use in business organizations (Chang & Hwang 1, 2003).

Based on those arguments, this study seeks to examine the relationship between digital competencies (i.e., information literacy, media literacy, information and communication technology

literacy, and digital literacy) and the digitalization of the accounting profession among postgraduate accounting students at a comprehensive university (CU). Thus, this study hypothesized that:

H_1: There is a significant positive relationship between digital competence components and the digitalization of the accounting profession among postgraduate accounting students.

3. Methodology

Postgraduate accounting students at a comprehensive university in Malaysia served as the unit of analysis for this study. The number of registered students at the time of research commenced was 440, taken as the study population. The figure is obtained from the registration record of the Accounting Postgraduate Office. This study used a quantitative methodology utilizing a questionnaire distributed online to the target group to gauge the postgraduate accounting students' digital competencies level and its relationship with the digitalization of the accounting profession. Non-probability sampling (purposive sampling) applied in this study, while SPSS used for data analysis. Purposive sampling "is confined to specific types of people who can provide the desired information, either because they are the only ones who have it or conform to some criteria set by the researcher" (Sekaran & Bougie, 2010: 276). Overall, the survey received 136 (or 30.9%) responses.

As the topic of the digitalization of the accounting profession is still relatively new, there is a limited number of research papers that either address the digitalization of the accounting profession or on postgraduate accounting students. Hence, the questionnaire items for this study were adapted from a few relevant past studies.

4. Findings and discussion

4.1 Respondents' profile

In total, there were 136 responses out of 440 registered students (30.9%), with more female respondents (110 or 81%) than male responders (26 or 19%) among the sample. Malay respondents make up the majority (121 or 89%); 1% are Chinese, and 10% are from other ethnic groups. The Master of Forensic Accounting and Financial Criminology contributed 43% of the responses, followed by the Master of Accountancy with 38%. Part-time students (79 or 58%) had more respondents than full-time students (42% or 57), with the majority of students (63 out of 136) are currently in Year 2, while the least number of students (only 12) are in Year 4 and beyond. The bulk of respondents is between the ages of 25 to 29, followed by those between the ages of 35 to 39 years old, and, from 40 years old and above, with a frequency of 52, 32, and 23 respectively.

4.2 Reliability of the Instrument

The Cronbach-Alpha value was chosen to assess the validity and reliability of the scale's internal consistency. According to DeVellis (2003), the Cronbach alpha value had to be higher than 0.7 to be regarded as reliable. It is evident from the Cronbach Alpha result in Table 2 below that all results for each questionnaire component are higher than 0.7. Therefore, it indicates that the questionnaire is valid and reliable for use.

Table 2. Reliability test

Factor	Cronbach-Alpha
Information Literacy	0.942
Media Literacy	0.951
Information and Communication Technology Literacy	0.937
Digital Literacy	0.960
Digitalization	0.870

4.3 Mean analysis

The scales of the questionnaire comprise of "1 (Strongly disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly agree)". The mean score achieved for each component of digital competence is summarised in Table 3 below.

Table 3. Mean score

Variable	N	Minimum	Maximum	Mean
Information Literacy		1.24	5.00	3.9979
Media Literacy		1.00	5.00	3.9681
Information and Communication Technology Literacy	136	1.10	5.00	3.9169
Digital Literacy		1.41	5.00	4.0125
Digitalization		1.30	5.00	4.0287

Overall results show that the participants gave positive feedback to each component of digital competence, which are information literacy, media literacy, information and communication technology literacy, digital literacy, and to the digitalization of the accounting profession, represented by the mean value of 3.9979, 3.9681, 3.9196, 4.0125 and 4.0287 respectively. The mean score level for each component is assessed based on Landell's (1997, as cited in Abdul Halim et al., 2017; Hairuzila & Muhammad Ridhuan Tony Lim, 2018), which are low (between 1.00 and 2.33), medium (between 2.34 and 3.67), and high (i.e., 3.68 - 5.00). Thus, the mean score is high for all four components of digital competence.

4.4 Multiple Linear Regression

In testing for the hypotheses of the study, a multiple linear regression test was conducted on the four components of digital competence with digitalization of the accounting profession. The necessary assumptions before performing multiple linear regression were checked for and satisfied. These include the following:

i. Homogeneity, which assessed the constant variance of the error term by plotting a scatterplot between the residual and the predicted value. As no funnel-like shape is detected and the plots are scattered randomly, the assumption of constant variance is met.

ii. Linearity Assumption that assessed the scatterplot between residuals versus predicted value. As no parabolic shape of the plot and the plot are scattered randomly, the linearity assumption is satisfied.

iii. Normality, which uses a P-P Plot of regression residual. The results in Figure 1 show all the plots are scattered along the diagonal line, indicating the normality assumption is met.

iv. Multicollinearity that assessed the value for tolerance (TOL) and variance inflation factors (VIF) for the independent variables. Table 4 shows that there is no problem with multicollinearity because each predictor's VIF value is less than 10 and its TOL value is larger than 0. Thus, the assumption of no multicollinearity is fulfilled.

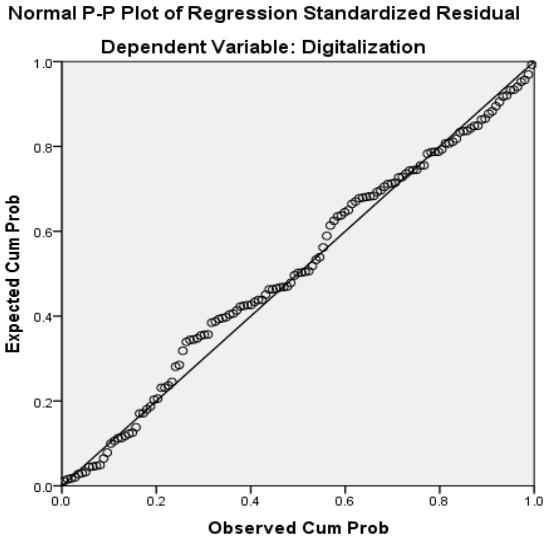

Fig. 1 Normal P-P Plot of Regression Standardised Residual

Table 4. Multicollinearity

Variable	Variance Inflation	Tolerance
Information Literacy	2.571	0.389
Media Literacy	2.238	0.447
Information and Communication Technology Literacy	2.991	0.334
Digital Literacy	3.995	0.250

The model evaluation result is shown in Table 5 below. The overall model is significant since p-value = 0.00 which is less than alpha = 0.05.

Table 5. Significance of the Model

Source	P Value	F test
Regression	0.000	10.363

Table 6. Statistics Table for Parameter Estimates

Variables	Parameter Estimate	P-Value
Information Literacy	0.352	0.011
Media Literacy	-0.097	0.343
Information and Communication Technology Literacy	-0.020	0.864
Digital Literacy	0.528	0.000

However, the parameter estimates in Table 6 above, highlighted that media and information and communication technology literacy of the postgraduate accounting students are insignificant since their p-value are greater than alpha = 0.05. In other words, postgraduate accounting students' capacity to perceive, analyze, recreate, and assess various media, as well as their skills and knowledge linked to the ICT industry, are insignificant to the digitalization of the accounting profession.

This is consistent with Buckingham (2009) that media literacy concepts should promote more effective information-gathering techniques. This shows that the skill required for the function of the accounting profession is unlikely to be media literacy because an accountant, their role is more on giving professional judgement. Additionally, research by Shin and Zanuddin (2019) shows that most students have a medium level of competency in new media, and no significant differences in

understanding of new media based on demographic characteristics were found, except that media use had a small positive correlation with both categories of knowledge.

Similarly, Li (2022) found more difficulties in addressing the demands of innovative education because the participants lacked confidence in integrating ICT literacy. ICT literacy focuses more on the less innovative components of technology. In contrast, Hafifah and Sulistyo (2020) claim that the participants' ICT literacy levels are above average and that they routinely include ICT in their daily lesson preparation as they use ICTs more frequently, which increases their literacy. This demonstrates that as ICTs become more common in regular employment, ICT literacy will rise.

Further analysis was conducted with the re-evaluation of the model after removing the media literacy and, information and communication technology literacy components. Referring to Table 7, the p-value for the model is p-value = < 0.00, which is less than alpha= 0.05. Thus, it can be concluded that the model is significant.

Table 7. Significance of the Model

Source	P Value	F test
Regression	0.000	47.734

The remaining independent variables which are Information literacy and digital literacy are shown in Table 8 and are also significant as their p-value are also less than alpha = 0.05.

Table 8. Statistics Table for Parameter Estimates

Variables	Parameter Estimate	P-Value
Information Literacy	0.320	0.010
Digital Literacy	0.460	0.000

Based on table 8, it can be concluded that information literacy and digital literacy do give a significant impact on the digitalization of accounting profession among postgraduate accounting students since their significance value is less than 0.05. The findings are somehow consistent with Nikou et. al. (2022) which show that both information literacy and digital literacy have a direct influence on the perceived ease of use of technology. Therefore, accounting firms need to have a coherent strategy that includes a plan to reskill their workforce in addition to adopting strategies to deal with digitalization.

The coefficient of determination for the model R^2 = 0.427, which means that information literacy and digital literacy explain 42.7% of the variability in digitalization, whereas other factors excluded from this study explain the remaining 57.3%.

In short, out of the four components of digital competence described in this study, the two components - media literacy and information and communication technology literacy are insignificant, whereas the other two components - information literacy and digital literacy are significant towards the digitalization of the accounting profession among the postgraduate accounting students.

5. Conclusion

This study examined the relationship between digital competencies among postgraduate accounting students at a comprehensive university and the digitalization of the accounting profession. The descriptive analysis show that the mean scores for all four components of digital competence, namely information literacy, media literacy, information, and communication technology literacy, digital literacy, and information literacy, are high. In terms of hypothesised relationship, it was found that media literacy and information and communication technology literacy are insignificant, whereas information literacy and digital literacy are significant towards digitalization of accounting profession.

This study imparts views on how digital competencies are mapped to the digitization of the accounting profession. As mature students with working experiences, postgraduate accounting students can offer meaningful information on how digital competencies will affect the digitalization of the

accounting profession. Choosing to pursue postgraduate courses shows that they are deliberately making the effort to acquire and develop the skills required for their profession. Without a doubt, having digital skills is important for them in dealing with technological advancement, particularly in the digital world and with the internet of things, which is currently a popular trend in business. Furthermore, this study makes it possible to evaluate how well the existing university curriculum supports students for the digitized labour market. Besides, the professional accounting bodies would also receive a signal from this study about how prepared the job market players are toward digitalized accounting profession.

As this study is confined to the postgraduate accounting students in a comprehensive university, future research may be conducted on postgraduate accounting students at other public and private universities and may also be expanded to assess non-accounting postgraduate students' digital competencies towards digitalization in their related fields.

6. Authors' Contribution

The authors declared that there is no conflict of interest in this article. All authors are involved in the conceptualization of the article. In addition, Authors 1, 2, and 3 contributed to the writing, data collection, analysis, and interpretation of the quantitative data for the final manuscript. Author 4 was responsible for the technical aspect of the manuscript, while Authors 5 and 6 assisted with the literature review and related theory.

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