



Accounting Skills, Digital Literacy, and Human Literacy on Work Readiness of Prospective Accountants in Digital Technology Disruption Era

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ABSTRACT

The evolution and widespread adoption of digital technology have led to diverse transformations, bringing both convenience and disruption while posing a threat to the continuity of established professions, such as accountants. This study aims to investigate the positive impact of accounting skills, digital literacy, and human literacy on the work readiness of accounting students. The target population comprises Bachelor of Accounting students in Pekanbaru. Utilizing a convenience sampling technique and determining the sample size through the Slovin formula, the study included a total of 100 participants. Data collection involved the use of a questionnaire, and the research data were analyzed using SEM PLS. The findings indicate a significant positive correlation between accounting skills, digital literacy, human literacy, and work readiness. The hope is that these research outcomes will serve as valuable information for lecturers, influencing their teaching approaches to enhance the digital and human literacy skills of aspiring accountants.

Keywords: Job Readiness, Accounting Skills, Digital Literacy, Human Literacy, Digital Technology

INTRODUCTION

In recent years there has been the development and use of technology which has led to various changes and innovations in the business world. Such as the existence of online application-based transportation innovations that replace conventional transportation supported by communication technology (Damayanti, 2017). There is an online shopping innovation that replaces conventional shopping which is supported by payment innovation through the use of QR-code scans (Aulia, 2020) and there is an innovation for ease of investment by utilizing robo advisors (Umam, 2019). The changes and innovations that emerge on the one hand provide convenience and comfort for users and on the other hand cause chaos for business actors in the same industry (Hamid, 2017). The chaos, disruption, and division that results is known as disruption (Salim, 2002).

The phenomenon of disruption has been explained by Christensen (1997), namely that by utilizing technology, companies with limited resources are able to defeat and break the glory (market rulers) by producing products that are cheaper, reach consumers more quickly, and are more reliable than what the market demands. The phenomenon of disruption has occurred in various fields such as: in the banking industry, the emergence of financial technology which comes with all its ease of access and flexibility, thus threatening the banking market share. The phenomenon of technological disruption has the potential to eliminate certain jobs or professions (Firdausy et al, 2019).

One of the professions that is experiencing concern and is threatened with disruption by the massive increase in the use of technology is the accounting profession (Frey and Osborne, 2017). This is because the sophistication of technology or ICT is able to change the process of completing accountants' work which previously required a long time and was manual or limited to using computers to be more instant, practical, accurate, and real-time with the development of technology such as AI, Cloud computing and big data used in accounting process (Yoon, 2020). Apart from that, according to Brandas et.al (2015), the presence of technology such as mobile automation, accounting data Gathering, ERP, and others are able to provide benefits for

companies in terms of cost efficiency, maintenance, and accuracy of data in decision making. Thus, influencing the company's need for accounting or accountant skills. Accounting expertise is a form of proficiency and ability to master accounting knowledge which is reflected in knowledge, attitudes, and skills in completing accounting work (Bloom B. et.al, 1956 and Libby R & Joan L, 1993). Accounting skills consist of technical and non-technical skills. According to ACCA (2016) technical skills such as: 1. Audit and insurance, 2. financial reporting, 3. financial management. 4. company strategic performance planning, 5. tax, 6. risk governance and all matters related to technical accounting knowledge while non-technical skills such as skills: 1. Leadership, 2. Collaboration, 3. Communication skills, 4. Adaptation, 5. Ethics, 6. Independent and Skeptical.

Accountants who only rely on technical accounting skills will easily be replaced by sophisticated automation technology. The possibility of an accountant's job or profession being replaced is 98% for routine and technical work (willrobotstakemyjob.com). This is in line with what Frey and Osborne (2013) stated: "Technological advances, computerization, and automation can threaten and eliminate several tasks and jobs that are routine or have very good procedures." Meanwhile, the work or profession of an accountant consists of various tasks, and not all tasks or jobs are routine jobs that are easy and can be completed with automation (Autor, 2014, 2015). Thus, automation and digitalization will not eliminate the jobs of accountants and auditors (Arntz. et al., 2016 Richins. et. al, 2016). However, it only changes the structure of tasks and works as a form of adjustment to tasks carried out computerized as before (Spitz-Oener, 2006).

From this statement, a common thread can be drawn that the work of accountants that can be automated is routine and has been very well proceduralized so that the accounting profession will not disappear and will still be needed as long as they are able to adapt. In light of this, accountants are expected to not only adapt their accounting skills but also complement them with additional competencies. Literacy skills, as emphasized by the World Economic Forum (WEF, 2015), play a crucial role in this adaptation. One facet of literacy is digital literacy, defined by UNESCO (2018) as the capacity to discover, access, organize, integrate, communicate, assess, and securely generate information using digital technology and internet devices for active participation in economic and social realms. The indicators of digital literacy skills encompass seven dimensions: information and data literacy, communication and collaboration, digital content creation, security, problem-solving, operating hardware and software, and career-related competencies (UNESCO, 2018).

Then, to complement digital literacy, other literacy is also needed, namely human literacy. According to the Ministry of Research, Technology, and Higher Education, human literacy is a "[skill] so that humans can function well in an environment that has the advantages of communication and design (Ketut, 2019). The human literacy indicators according to Lestari and Arif (2019) consist of 4 indicators, namely: first, second communication skills, third critical and innovative thinking, cooperation and fourth leadership abilities. Furthermore, accounting skills, digital literacy, and human literacy are expected to provide provisions for prospective accountants to be ready to enter the world of work which is full of changes and challenges. This change is a change in the skills required by the industry. Where, industry needs workers with a set of new skills that are in accordance with the transformation being carried out (Berger and Frey, 2016). This has been emphasized in the World Economic Forum (2015) that, to be able to work in the era of transformation and digitalization, accountants must master three pillars, namely: literacy, competence, and character.

This is in line with the principles of resource-based view theory pioneered by Wernerfelt (1984) and refined by Barney (1991). That, to achieve competitive advantage and be long-term oriented, companies must use and maximize the company's internal competitive resources (Hart, 1995). One strategy for obtaining competitive internal company resources is to recruit professional workers with the characteristics: that can create added value, have extraordinary abilities, are creative, unique, cannot be replaced, and others (Wernerfelt, 1984 and Barney, 1991). Furthermore, research on work readiness using accounting skills, digital literacy, and human literacy variables has received attention from researchers. Among them, Paharyani's (2019) research using indicators that refer to Bloom's taxonomy, the results of his research concluded that accounting skills have no direct effect on work readiness, which is different from the results of Purba's (2020) research which used indicators from Suttipun (2014) which found that accounting skills influence work readiness. Furthermore, research by Sustainable & Arif (2019) using indicators referring to Eshet (2012) and Almi's research (2020) using indicators referring to UNESCO (2018) concluded that digital literacy has an influence on work readiness. Then, Ahmad's research (2020) found that human literacy had no effect on work readiness, which was different from the research findings of Sustainable and Arif (2020) which found that human literacy had an effect on work readiness.

This research seeks to re-examine the influence of accounting skills, digital literacy, and human literacy on work readiness. Accounting skills use Bloom's taxonomy indicators, digital literacy uses UNESCO 2018 indicators and human literacy uses Lestari and Arif (2019) indicators. The aim of partial research is to answer that accounting skills, digital literacy, and human literacy have a significant effect on work readiness.

LITERATURE REVIEW

Resource Based View Theory

Resource based view theory (RBV) is a classic in the field of strategic management. Basically, it suggests that a firm's competitive advantage is derived from its unique and valuable resources rather than its external environment. These resources could be anything from tangible assets like technology and physical infrastructure to intangible assets like a strong brand or a talented workforce.

According to RBV, for a firm to gain a sustained competitive advantage, it must have resources that are valuable, rare, difficult to imitate, and not easily substitutable. So, the idea is to leverage these unique resources to outperform competitors and achieve long-term success.

Work Readiness

Work Readiness theory focuses on preparing individuals for the workforce by developing skills, knowledge, and attitudes necessary for successful employment. It goes beyond traditional education and addresses the practical aspects of entering and thriving in the job market.

The theory often encompasses various components such as (Choudhary et al., 2015; Dyk, 2015; Masole & Dyk, 2016):

1. **Basic Skills Development:** This includes honing fundamental skills such as literacy, numeracy, and communication, which are essential in almost any job.
2. **Occupational Skills Training:** Providing specific training related to the requirements of particular jobs or industries.
3. **Workplace Ethics and Attitude:** Instilling a positive work ethic, professionalism, and a cooperative attitude towards colleagues.
4. **Job Search and Application Skills:** Teaching individuals how to search for job opportunities, create effective resumes, and perform well in interviews.
5. **Career Exploration:** Helping individuals explore and understand various career paths to make informed decisions about their future.
6. **Personal Development:** Focusing on personal growth, self-awareness, and confidence-building to enhance overall employability.

Accounting Skills

Accounting skills refer to a set of abilities and knowledge that individuals possess to effectively manage financial information, analyze economic activities, and ensure accurate and compliant financial reporting. These skills are essential for professionals in the field of accounting and finance. Accounting skills are crucial for managing and interpreting financial information. Accounting skills are crucial for managing and interpreting financial information.

Here are some key aspects about accounting skills (Elo et al., 2023; Kim et al., 2017; Mistry, 2021):

1. **Numerical Proficiency:** At the core of accounting is the ability to work comfortably with numbers. This includes basic arithmetic for calculations and a solid understanding of mathematical concepts.
2. **Financial Reporting:** Accountants often prepare financial statements like the income statement, balance sheet, and cash flow statement. They should know how to accurately record and report financial transactions.
3. **Bookkeeping:** This involves the day-to-day recording of financial transactions. It includes tasks like managing ledgers, balancing accounts, and ensuring accuracy in financial records.
4. **Use of Accounting Software:** Familiarity with accounting software is essential in the modern workplace. Accountants often use tools like QuickBooks, Xero, or other industry-specific software for efficient financial management.
5. **Analytical Skills:** Beyond just recording numbers, accountants need to analyze financial data to provide insights. This may involve identifying trends, forecasting, and making recommendations based on financial performance.
6. **Attention to Detail:** Precision is key in accounting. Small errors can lead to significant financial discrepancies. Accountants need to be meticulous in their work to ensure accuracy.
7. **Ethical Judgement:** Accountants often deal with sensitive financial information. Ethical behavior is crucial to maintaining the integrity of financial reporting and decision-making.
8. **Communication Skills:** Accountants need to communicate financial information effectively, whether it's through reports, presentations, or discussions with colleagues and clients.

9. **Regulatory Knowledge:** Accountants must be familiar with relevant financial regulations and standards. This could include generally accepted accounting principles (GAAP) or international financial reporting standards (IFRS).
10. **Problem-Solving:** When discrepancies or financial challenges arise, accountants need to be adept at problem-solving. This could involve investigating discrepancies, finding solutions, and making recommendations for improvement.

Digital Literacy

Digital literacy refers to the ability to use, understand, and critically evaluate information and communication technologies (ICT). Here are some theories related to digital literacy (Johnston, 2020; McDougall et al., 2018; Pangrazio, 2016):

1. **Information Processing Theory:** This theory focuses on how individuals acquire, process, and use information. In the context of digital literacy, it emphasizes the skills needed to navigate and make sense of digital information effectively.
2. **Cognitive Load Theory:** This theory explores how the human brain processes information and the limits of cognitive capacity. In the realm of digital literacy, it highlights the importance of designing digital interfaces and educational materials in a way that minimizes cognitive load, making it easier for individuals to understand and retain information.
3. **Connectivism:** This modern learning theory asserts that learning is a networked process, especially in the digital age where information is abundant and constantly evolving. Digital literacy, according to connectivism, involves the ability to connect with others, access information, and make informed decisions based on diverse sources.
4. **Media Literacy Theory:** Digital literacy often includes media literacy, which is the ability to analyze, evaluate, and create media content. This theory focuses on understanding how media messages shape our perceptions and how individuals can critically engage with various forms of digital media.
5. **Social Learning Theory:** This theory emphasizes the importance of social interactions in the learning process. In the context of digital literacy, it highlights collaborative learning, online communities, and the role of social networks in sharing and constructing knowledge.
6. **TPACK (Technological Pedagogical Content Knowledge):** This framework is particularly relevant to educators integrating technology into teaching. It suggests that effective teaching with technology requires a combination of technological knowledge, pedagogical knowledge, and content knowledge.
7. **Digital Divide Theory:** This theory addresses the disparities in access to and usage of digital technologies. Digital literacy efforts often aim to bridge the digital divide by providing equitable access to digital tools and skills.
8. **Critical Digital Literacy:** This perspective goes beyond basic digital skills and emphasizes the importance of critically evaluating information, understanding digital citizenship, and navigating the ethical and social implications of digital technologies.

These theories collectively contribute to our understanding of how individuals acquire, apply, and critically engage with digital skills and knowledge. Digital literacy is not just about using technology but also about navigating the complexities of the digital world with awareness and discernment.

Human Literacy

Human literacy can be interpreted as the ability or deep understanding related to human interaction, communication, and understanding of human aspects. This term may encompass a number of skills and knowledge that cover various aspects of human life. Some elements that may be included in the concept of human literacy involve cultural understanding, empathy, communication skills, and a deep understanding of various aspects of human life.

Here are a few perspectives that might contribute to the notion of Human Literacy (Biao, 2011):

1. **Cultural Literacy:** This refers to the knowledge and understanding of the cultural symbols, references, and practices that shape human societies. Being culturally literate involves recognizing and appreciating the diversity of human cultures.
2. **Emotional Intelligence:** Human literacy might involve the ability to understand and manage one's emotions and empathize with the emotions of others. Emotional intelligence contributes to effective communication and interpersonal relationships.
3. **Communication Theories:** The study of communication theories, such as those by scholars like Shannon and Weaver or Harold Lasswell, can provide insights into how humans exchange information and meaning. Effective communication is a key aspect of human literacy.

4. **Social Cognitive Theory:** This theory, developed by Albert Bandura, emphasizes the role of observational learning, imitation, and modeling in human behavior. Human literacy could involve an understanding of how individuals learn from observing others and how behavior is influenced by social factors.
5. **Narrative and Storytelling:** The ability to create, understand, and appreciate narratives is central to human literacy. This includes understanding the power of storytelling in conveying experiences, values, and cultural narratives.
6. **The Theory of Mind:** Developed in the field of psychology, the theory of mind refers to the ability to attribute mental states (such as beliefs, intentions, and desires) to oneself and others. Human literacy might involve a keen understanding of others' perspectives and mental states.
7. **Social Constructivism:** This learning theory emphasizes the importance of social interactions and collaboration in the construction of knowledge. Human literacy could involve an awareness of how knowledge is co-constructed in social contexts.
8. **Philosophy of Communication:** Philosophical perspectives on communication, such as those by philosophers like Martin Heidegger or Paul Ricoeur, explore the nature of human communication, language, and understanding.

METHODOLOGY

This research is hypothesis testing in nature, so this research is analyzed using a quantitative approach to correlational inferential statistics (Amin et al., 2023; Purba et al., 2023; Setyowati et al., 2023). The research object is students. The population used in this research were all public and private accounting students (Purnama, 2023) in Pekanbaru City. The total population in this research was 3,756 students. The sample in this study were accounting students at the undergraduate level in accounting at state and private universities throughout Pekanbaru City. The sampling technique in this research is non-probability with convenience sampling type. The formula used to determine the sample size is the Slovin formula with a tolerance level of 10%. Based on the calculation results, the sample size was 100 students. The data used in this research is primary data obtained through distributing closed questionnaires. The dependent variable in this research is work readiness and the independent variable consists of 3 variables, namely: accounting skills, digital literacy, and human literacy.

In this research, two main techniques were employed for data analysis: descriptive statistical analysis and multiple linear regression analysis (utilized for hypothesis testing). The chosen technique for multiple linear regression analysis was SEM-PLS, aiming to predict relationships among variables. This decision was supported by the fact that the data did not pass the multivariate normality distribution test, a prerequisite for using CB_SEM. As recommended by Schumacker and Lomax (2010), addressing non-normally distributed data involved removing outlier data and implementing bootstrapping. Despite various attempts to overcome the non-normal distribution issue, the model results were ultimately deemed inconclusive. Subsequently, the adoption of SEM-PLS was justified by Hair et al. (2017), who asserted that SEM-PLS serves as a viable alternative due to its robust statistical power and its lack of stringent assumptions, such as the need for normally distributed data. Overall analysis in SEM-PLS comprises three stages: 1) Evaluation of the outer model (measurement); 2) Evaluation of the inner model (structural); and 3) The assessment of model feasibility.

RESULTS AND DISCUSSION

Preliminary Test

Table 1. Reliability and Validity Test

No	Variable	Composite Reliability	Cronbach's Alpha	Average Variance Extracted (AVE)
1	Accounting Skills	0.908	0.820	0.710
2	Digital Literacy	0.920	0.944	0.543
3	Human Literacy	0.949	0.811	0.663
4	Working Readiness	0.922	0.878	0.783

Source: Processed data, 2023

According to Table 1, Cronbach's alpha values are greater than 0.7, and the composite reliability values also exceed 0.7. As per the criteria established by Hair et al. (2017), this indicates that all variables can be

deemed reliable. Additionally, in the AVE column, all values surpass 0.5. Consequently, based on the results of these tests, it can be inferred that both validity and reliability criteria have been met.

Structural Equation Modeling

Table 2. PLS Test Result

No	Variable	Original Sample	T Statistics	P Values	VIF	Adjusted R-Square
1	Accounting Skills -> Working Readiness	0.433	1.319	0.095	1.592	
2	Digital Literacy -> Working Readiness	0.616	1.629	0.053	1.608	0.628
3	Human Literacy -> Working Readiness	0.886	1.987	0.025	1.673	

Source: Processed data, 2023

From Table 2, we observe that accounting skills exhibit a positive impact on work readiness, accounting for 43.3%, and this effect is statistically significant with a T value (1.319) exceeding the critical value (1.28), and a p-value (0.095) below the significance level (0.1). Therefore, the hypothesis is accepted. Similarly, Digital Literacy demonstrates a positive influence on work readiness, explaining 61.6% of the variance. The statistical T value (1.629) surpasses the critical value (1.28), and the p-value (0.053) is less than 0.1, supporting the acceptance of the hypothesis. Furthermore, human literacy is found to have a substantial positive impact on work readiness, contributing to 88.6% of the variance. The statistical T value (1.987) is higher than the critical value (1.28), and the p-value (0.025) is below 0.1, leading to the acceptance of the hypothesis. In summary, based on the statistical analysis presented in Table 2, it can be concluded that the hypotheses related to the positive effects of accounting skills, digital literacy, and human literacy on work readiness are supported by the data.

Discussion

The accounting students in Pekanbaru City, aspiring to become future accountants, strongly believe that possessing accounting skills is pivotal in enhancing their level of work readiness. This conviction is particularly relevant in the current era of digital technology disruption, where the demand for real-time capabilities is paramount. In this context, accounting skills are considered fundamental prerequisites for prospective accountants to navigate and excel amidst the challenges posed by technological disruptions. This perspective aligns with the Resources Based View (RBV) theory, asserting that companies and employers value individuals who can contribute significantly to the organization and possess exceptional skills. Interestingly, the findings of this research differ from those of Paharyani's (2019) study, which claimed that accounting skills have no direct influence on work readiness. However, the results align with Latifah's (2020) research, which underscores the positive and significant impact of accounting skills in fostering work readiness. The research emphasizes the critical importance of adapting to the rapid changes brought about by digital technology disruption. Failure to adapt could lead to disruption for prospective accountants in their professional journey. This resonates with the notion that companies seek individuals capable of adapting to change, providing added value, and possessing exceptional expertise, consistent with the principles of the RBV theory that emphasizes maximizing internal resources for long-term profitability. Moreover, the research findings are in harmony with the conclusions drawn by Lestari and Arif (2019) and Almi (2020), highlighting the substantial and significant influence of digital literacy on work readiness. This reinforces the understanding that, in the contemporary landscape of digital disruption, being digitally literate is a key factor in preparing for the workforce. In essence, the research underscores the dynamic nature of the accounting profession in the face of technological advancements, emphasizing the importance of accounting skills and digital literacy for future accountants to thrive and contribute effectively to the ever-evolving business environment.

The pervasive phenomenon of disruption has ushered in transformative changes across various aspects of life, from lifestyle patterns to learning methods and even the fundamental business models of companies. In the contemporary landscape shaped by disruption, prospective accountants aiming for success must not only focus on technical skills but also equip themselves with human literacy skills. This perspective aligns with the assertion of Bowles et al. (2020) that graduates or undergraduates need to complement their technical prowess with non-technical abilities, including human literacy, to secure professional accounting jobs or careers. This sentiment resonates with the key principles of the Resources Based View (RBV) theory, which underscores the need for workers with unique, creative skills that are not easily replaceable to achieve a competitive advantage for companies. Contrary to the findings of Ahmad's (2020) research, which posited that human literacy (specifically communication skills and leadership) has no effect on work readiness, the results of this research tell a different story. This study aligns with the conclusions drawn by Lestari and Arif (2019), Anggresta (2019), and Rahmat (2020), which affirm that human literacy significantly influences work readiness. This discrepancy in findings highlights the nuanced nature of the relationship between human literacy and work readiness, with

contextual factors likely playing a substantial role. In essence, the research emphasizes the evolving requirements for success in the era of disruption, where technical proficiency alone may not suffice. Human literacy skills, encompassing communication and leadership abilities, emerge as essential components for prospective accountants to navigate the complexities of the contemporary professional landscape. The consistent findings with other studies underscore the relevance and significance of human literacy in preparing individuals for the workforce in the midst of disruptive changes.

The accounting students in Pekanbaru City, aspiring to become future accountants, hold the belief that possessing accounting skills, complemented by robust digital literacy and human literacy skills, is integral to elevating their level of work readiness. This perspective aligns seamlessly with the core tenets of the Resources Based View (RBV) theory, emphasizing that companies, in their pursuit of competitive advantage, seek and employ individuals with unique, creative skills that are not easily replaceable. In the contemporary professional landscape, where disruptive forces and technological advancements play a pivotal role, the amalgamation of accounting skills, digital literacy, and human literacy is seen as a potent formula for success. This holistic approach is in harmony with the findings of the research conducted by Latifah (2020) and Lestari and Arif (2019), which assert that proficiency in accounting, along with literacy in both digital and human aspects, significantly influences work readiness. The recognition of the interconnectedness of these skills underscores the evolving nature of the accounting profession. It also reflects the understanding that a multifaceted skill set, encompassing not only technical expertise but also digital and human literacy, is crucial for preparing prospective accountants to meet the demands of the modern workforce. The alignment with existing research findings strengthens the validity of the argument that a comprehensive skill set is essential for achieving optimal work readiness in the dynamic and competitive business environment.

CONCLUSION

Conclusion

Drawing upon the theoretical framework and the research outcomes discussed earlier, it can be inferred that there exists a noteworthy positive impact of accounting skills, digital literacy, and human literacy on the preparedness of aspiring accountants within the context of digital technology disruption.

Implications

The aspiration is that the findings of this study will inspire enthusiasm among accounting students for their careers, particularly by encouraging them to enhance their accounting skills, bolstered by proficiency in digital literacy and complemented by human literacy abilities.

Limitation

Limitations in this research include determining research subjects that cover (semester 1-Graduate), data collection techniques that only use questionnaires, and statistical test analysis tools that use the SEM-PLS method because they do not pass the data normality distribution test. The expectation is that future researchers will offer rationale for defining sample criteria, including considerations such as semester boundaries, to enhance the precision of data interpretation. Additionally, the suggestion is to incorporate interviews into the data collection process for increased accuracy and deeper analysis. Furthermore, it is recommended that future studies explore statistical analysis using alternative tools such as CB SEM with the Amos program or other comparable programs to broaden the analytical perspective.

Recommendation

Moreover, it is anticipated that the outcomes of this research will serve as valuable information for educators. These findings have the potential to impact teaching methodologies, encouraging lecturers to adapt their patterns and methods to foster the development of digital literacy and human literacy skills among future accountants.

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