Volume: 8 Issues: 26 [March, 2025] pp. 262 - 279]
Jurnal Penyelidikan Sains Sosial (JOSSR)
eISSN: 2637 -0956
Journal Website: https://academicinspired.com/jossr
DOI: 10.55573/JOSSR.082626

FACTORS AFFECTING THE ADOPTION OF INTERACTIVE DIGITAL LEARNING TOOLS AMONG ACCOUNTING STUDENTS AT POLITEKNIK MUKAH: USING UTAUT MODEL

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Article history
Received date : 15-2-2025
Revised date : 16-2-2025
Accepted date : 24-3-2025
Published date : 15-4-2025

To cite this document:
Ahmad, N. F., Mohamad, A., & Salem, N. A. (2025). Factors affecting the adoption of interactive digital learning tools among accounting students at Politeknik Mukah : Using UTAUT model. *Jurnal Penyelidikan Sains Sosial (JOSSR)*, 8 (26), 262 - 279.

Abstract: *This study investigates the factors influencing the adoption of Interactive Digital Learning Tools among accounting students at Politeknik Mukah, utilizing the Unified Theory of Acceptance and Use of Technology (UTAUT) model. The research seeks to understand the key factors including performance expectancy, effort expectancy, social influence, and facilitating conditions, in order to uncover how these factors impact students' acceptance on interactive digital tools. The findings intended to provide information for educators and institutions in promoting effective digital engagement, which would improve student learning experiences in Malaysia's polytechnic education system. This study used quantitative approach, with questionnaires distributed via google form and the survey link shared through WhatsApp. A total of 150 students participated in the survey. By analysing the challenges faced by accounting students, particularly in subjects that combine theory with practical application, the study contributes to our understanding of how interactive tools can improve engagement and retention. This study highlights the role of digital tools in creating flexible learning environments. Multiple regression analysis confirms that performance expectancy significantly influences adoption among accounting students, while effort expectancy, social influence, and facilitating conditions do not. The results indicate that students are more likely to adopt digital tools when they perceive clear academic benefits, such as improved understanding and efficiency in completing assignments. This finding reinforces the importance of designing digital learning environments that align with students' expectations of performance improvement. Additionally, the study extends the UTAUT model's theoretical application in technical education and provides practical insights for educators and institutions to develop more effective digital learning strategies.*

Keywords: *Interactive digital learning tools, Unified Theory of Acceptance and Use of Technology (UTAUT) theory model, Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions.*

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Introduction

This study explores the factors influencing the adoption of interactive digital learning tools among accounting students at Politeknik Mukah, guided by the Unified Theory of Acceptance and Use of Technology (UTAUT) model. Focusing on performance expectancy, effort expectancy, social influence, and facilitating conditions, it seeks to understand how these variables impact students' use of digital tools. Accounting is often viewed as difficult due to its technical and theoretical nature (Temelli, 2018), making effective digital tools particularly valuable in improving student engagement and understanding. Tools like Kahoot!, Quizizz, and interactive eBooks have shown potential to enhance participation and academic performance (Smiderle et al., 2020; Wang & Tahir, 2020; Merkle et al., 2022). Platforms such as CIDOS and Microsoft Teams, especially during the COVID-19 pandemic, have facilitated blended and flexible learning approaches (Ying et al., 2022). With Gen Z students being digitally native yet in need of deeper cognitive skills (Martín et al., 2024), educators are challenged to adopt more engaging teaching methods. This study is further motivated by national initiatives like TVET DIGITAL POLYCC, which aim to fully digitize higher education to remain adaptable in a tech-driven world (Yahya, 2023). By identifying how students interact with and benefit from these tools, the study contributes insights for educators and institutions to enhance teaching strategies and student learning outcomes.

Problem Statement

Accounting students in Malaysian polytechnics often experience disengagement due to traditional lecture-based methods and the overwhelming nature of learning from multiple information sources. This lack of engagement can negatively impact their understanding and academic performance. Although digital learning tools offer potential for more interactive and effective learning experiences, their integration within TVET institutions remains limited. Key barriers include inadequate infrastructure, inconsistent digital competencies among students, and limited exposure to discipline-specific digital strategies. Existing platforms, such as CIDOS 3.5, face usability and accessibility issues, while newer teaching techniques, although promising, are yet to be fully optimized for accounting education. Despite the growing emphasis on digital transformation, there is a notable gap in research that directly addresses the needs and challenges of accounting students in polytechnic environments. A more targeted approach that incorporates practical solutions and theoretical frameworks is necessary to enhance learning outcomes and support the digital shift in TVET accounting education.

Research Objectives

The purpose of this study is to recognize the factors that contribute to the adoption of interactive digital learning tools among accounting students at Politeknik Mukah. This study adopts UTAUT theoretical model as it is able to prove the drivers of an adoption of digital technology in higher education. This study's specific objectives are listed as follows:

1. To investigate the relationship between Performance Expectancy and acceptance of digital learning tools among accounting students of Politeknik Mukah.
2. To investigate the relationship between Effort Expectancy and acceptance of digital learning tools among accounting students of Politeknik Mukah.
3. To investigate the relationship between Social Influence and acceptance of digital learning tools among accounting students of Politeknik Mukah.
4. To investigate the relationship between Facilitating Conditions and acceptance of digital learning tools among accounting students of Politeknik Mukah.

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Research Questions

This study intends to solve the research questions as follows:

1. What is the relationship between performance expectancy and acceptance of digital learning tools among accounting students of Politeknik Mukah.
2. What is the relationship between effort expectancy and acceptance of digital learning tools among accounting students of Politeknik Mukah.
3. What is the relationship between social influences and acceptance of digital learning tools among accounting students of Politeknik Mukah.
4. What is the relationship between facilitating condition and acceptance of digital learning tools among accounting students of Politeknik Mukah.

Significance of Research

This study explores the factors influencing the adoption of interactive digital learning tools among accounting students, offering both theoretical and practical contributions. Theoretically, it enhances understanding of technology acceptance in technical education using the Unified Theory of Acceptance and Use of Technology (UTAUT), focusing on performance expectancy, effort expectancy, social influence, and facilitating conditions. These insights can help address challenges like digital literacy gaps and resistance to technology (Venkatesh et al., 2003). Practically, the research provides valuable data specific to Politeknik Mukah, helping institutions tailor digital strategies to student needs. Lecturers can use the findings to integrate engaging tools effectively, boosting classroom interaction and learning outcomes (Wang & Tahir, 2020). Students benefit through improved engagement and better comprehension of accounting concepts. The study also supports initiatives like TVET DIGITAL POLYCC (Yahya, 2023), aligning with efforts to digitize education and enhance digital readiness across Malaysia's polytechnic and community college system.

Literature Review

This chapter explores the literature review of past researchers regarding the UTAUT theoretical as a basis in developing a research framework and hypotheses that are tested in this study. This chapter starts with literature review from previous studies, followed by the discussion on theoretical background.

Digital Learning in Higher Institution

Digital learning has significantly transformed higher education by enhancing flexibility, accessibility, and interactivity. Research indicates that technology has improved student engagement and learning outcomes. For instance, a study by Almaiah and Alismaiel (2019) examined factors influencing the use of mobile learning systems and found that perceived usefulness and ease of use significantly affect students' acceptance of digital learning tools. Similarly, El-Masri and Tarhini (2017) identified that perceived information quality and trust are crucial in students' adoption of e-learning systems.

The Unified Theory of Acceptance and Use of Technology (UTAUT) provides a framework to understand the acceptance of digital learning tools. According to Venkatesh et al. (2003), technology acceptance is influenced by factors such as performance expectancy, effort expectancy, social influence, and facilitating conditions. Applying this model, recent studies have explored how these factors affect students' intentions to use digital learning platforms. For example, a study highlighted in the Journal of Educational Technology Systems emphasized the role of social influence and facilitating conditions in students' behavioral intentions to use e-learning during the COVID-19 pandemic.

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Despite the advantages, challenges persist in the implementation of digital learning. A systematic review by Frontiers in Education (2023) discussed the effectiveness of online learning during the pandemic, noting that while online learning offers flexibility, it also presents challenges such as reduced social interaction and the need for self-discipline among students. Additionally, disparities in access to reliable internet and digital devices can hinder the learning experience for some students. To address these challenges, it is recommended that universities invest in robust technological infrastructure develop inclusive policies to ensure equitable access to digital learning resources.

Performance Expectancy

Performance expectancy is the degree to which users believe that using a particular technology will help them achieve better performance or enhance their job effectiveness (Fedorko et al., 2021). This concept is essential in determining whether a technology will be adopted, especially in academic settings. Performance expectancy also refers to how much students believe that using technology will enhance their academic performance and productivity (Budhathoki et al., 2024). This element is used to determine the student's subjective perception of the extent to which using a particular technology such as using interactive tools in classroom will enhance their education performance or facilitate the accomplishment of specific assignment. If they believe that using a certain technology will help them improve their academic results or make their learning experience more efficient, they are more likely to adopt it.

It is an important factor in deciding whether a technology will be adopted in academic settings (Martin et al., 2019). In higher education, the decision to integrate new technologies often depends on whether students and educators perceive the technology as useful and beneficial for learning. Performance expectancy affects people's intention to use a certain technology (Kumar et al., 2019). When students believe that certain tools can improve their grades or make it easier to complete their assignments, they become more motivated to use them. This confidence in the tools' ability to support their academic success encourage students to actively engage with them.

Several research studies discovered that performance expectancy is an important reason in adopting a new technology. This is particularly evident in higher education where innovations in technology are continuously changing the traditional learning approaches made by educators. Today, many universities have embraced e-learning platforms, not only for their convenience but also for the potential to enhance students' academic outcomes. Research often correlates higher performance expectancy with an increased willingness among users to explore and adopt these systems. Nurkhin (2020) found in his findings that students in the accounting department have higher expectations of how well e-learning will work for them, and this will lead to an increased intention to use it. This suggests that students' confidence in a tool's ability to meet their academic needs plays a significant part in its adoption. Accounting students, for example, may prioritize functionalities like advanced problem-solving tools or real-time assessment systems, which directly impact their learning objectives.

This is further supported by other researchers such as Mujalli and Almgrashi (2022), Omar et al. (2020), Decman (2020) and Mahande and Malago (2019). These studies point to the critical role of performance expectancy across a range of educational and technological environments. They explain that when users see a tool as helpful and able to improve their work, they are more likely to use it. This means developers and educators should create systems that meet students' needs and expectations.

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Effort Expectancy

Effort expectancy is "how easy the system is to use." This concept explains how straightforward and user-friendly a particular technology or system appears to its users. Recent studies have emphasized the importance of effort expectancy in technology adoption. For instance, Onaolapo and Oyewole (2018) found that when users perceive a system as easy to use, they are more likely to accept and utilize it. Similarly, a study by Al-Gahtani et al. (2020) highlighted that effort expectancy significantly influences users' intentions to adopt new technologies. The idea is rooted in the belief that when a system is perceived as easy to use, individuals are more likely to adopt and interact with it positively. The ease of use can reduce the complexity and time needed to learn or operate the system, making it more appealing to potential users. This shows users tend to attract to systems that require minimal effort to understand and utilize effectively. Effort expectancy describes the level of comfort or effort involved in using a technology for customers (Yee & Abdullah, 2021). It reflects how effortlessly customers can perform tasks using a system without feeling overwhelmed or burdened by its complexity. The perceived effort required to learn and navigate a technology significantly impacts a user's overall experience, influencing how satisfied they feel and whether they want to keep using it. In the context of consumer technology, a high level of effort expectancy suggests that users find the system intuitive and easy to operate, which can enhance their engagement and loyalty.

Al-Mamary (2022) described effort expectation (EE) as the sense of ease and convenience in using advanced technologies, noting that its impact on users' attitudes and behavioural intentions varies depending on factors such as effort expectation, race/ethnicity, and age. He emphasized that EE's influence on users' attitudes and behavioural intentions is not uniform but varies based on several factors. For instance, younger users who are generally more tech-savvy may find it easier to adapt to new technologies, while older users might face greater challenges, impacting their comfort levels and overall experience. Similarly, cultural factors, such as race and ethnicity, may affect users' familiarity with and attitudes toward certain technologies, influencing their perceived ease of use. Moreover, the individual's initial expectation of the effort required to use the technology can significantly shape their willingness to engage with it.

According to Omar et al. (2020), if a user experiences happiness when using a new system, it could lead to a decrease in their perception of the effort they are putting in while learning and applying the new systems. In other words, the level of ease is associated with the use of technology by users. Positive experiences, such as finding the technology engaging or fun, can make it seem less complex or demanding, encouraging greater adoption. For example, interactive and visually appealing e-learning platforms can reduce the mental effort students perceive while using them. This is further supported by other researchers such as Mujalli and Almgrashi (2022) and Mahande and Malago (2019). These studies suggest that when users perceive a system as easy to use, they are more likely to adopt and continue using the technology. It also involves understanding whether students perceive these tools as complementary to their prior accounting education and whether it aligns with their skill set. If digital tools are perceived as fitting naturally into their academic toolkit, accounting students are more likely to embrace them with greater ease.

However, there are opposite findings that showed when a new technology lacks enjoyable features or teachers are unable to use it, the level of ease in using the technology (Effort Expectancy) does not significantly predict the intention to use it (Decman, 2020). This highlights that usability alone is not always sufficient; other factors, such as training and relevance to users' needs, also play crucial roles in technology adoption. Online learning has not yet made teaching and learning activities more comfortable, and the advantages of each

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online learning feature in aiding these activities have not been better than using a manual system (Nurkhin, 2020). This suggests that despite technological advancements, some users may still prefer traditional methods if new systems fail to offer a clear and substantial improvement in ease of use or overall experience.

Social Influence

Social influence refers to the degree to which students believe that their loved ones (family and friends) think they should use the technology (Fedorko et al., 2021; Yee & Abdullah, 2021). By fostering a culture where the use of digital tools is positively endorsed by friends, family, and professionals in the field, accounting students are more likely to embrace technology as an integral part of their academic and future career.

According to Dewa (2023), people tend to share their experiences about a service with those close to them, whether the experience is positive or negative. This sharing of information can influence whether others decide to use the service or not. This shows that social influence is very important in shaping students' decisions to use new technologies, especially when the opinions of people close to them, like family, friends, and peers, matter a lot. When these close circles actively support the use of digital tools, it makes students feel more comfortable and confident in trying them out. For accounting students, seeing their friends or family members use digital tools in their studies or work can help reduce any fears or doubts they might have.

In addition, the opinions of teachers, mentors, and industry experts can also play a big role in influencing students. When respected figures in the field of accounting talk about the importance of using technology and show how it can be applied in real-world tasks, it can motivate students to learn these skills. This support helps students see the connection between what they learn in class and what is needed in the job market. Overall, when students feel encouraged by their social circles and mentors, they are more likely to adopt new digital tools, making it easier for them to be prepared for future challenges.

Most recent studies (Mujalli & Almgrashi, 2022; Omar et al., 2020; Mahande & Malago, 2019; Nurkhin, 2020) found similar result that the increase of social Influence will affect the adoption of the new technology. These findings show how important it is to use social connections and group influence to encourage technology use. When respected individuals in a community, like teachers or leaders, support a specific tool, their recommendation can greatly increase its adoption.

However, according to Decman (2020), there is no positive and significant influence of social influence on behavioural intention of use. This means that social influence might not always be a strong factor in deciding whether people use new technology. In some cases, personal preferences or other things, like how easy the technology is to use or how useful it is, might matter more than what others think. Factors like culture, workplace rules, or specific situations can change how much social influence affects people’s decisions. For example, in places where people value making their own choices, they may focus more on their own opinions about the technology instead of what others think.

Facilitating Conditions

Facilitating conditions refer to the extent to which a person believes that the available organizational and technical infrastructure can effectively support their use of a system (Rachmawati et al., 2020). This factor highlights the importance of having the right tools, training, and technical support in place for users to effectively adopt and utilize new

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technologies. In educational environments, for instance, making sure both students and educators have access to devices, stable internet and technical help can greatly influence their readiness to engage with e-learning platforms or other digital tools in education.

Facilitating condition refers to how much person feels that necessary organizational and technical support is available to help them use a system effectively (Venkatesh et al., 2003). This concept is especially important for accounting students, as their willingness to adopt new technologies often depends on the level of support they feel they have. When students believe that their school or institution provides a strong support system such as clear instructions, responsive technical assistance, and regular training sessions they are more likely to feel confident in exploring and using digital tools.

This kind of supportive environment helps students build the skills they need to handle technology effectively, making it a valuable part of their education. With a reliable infrastructure in place, students are more open to trying new systems, which not only enhances their learning experience but also better prepares them for their future careers in the accounting field.

Similar studies have found that there is positive influence of facilitating condition with intention to use (Mujalli & Almgrashi, 2022; Omar et al., 2020; Mahande & Malago, 2019). These studies suggest that when users feel that the necessary support and resources are available, they are more likely to embrace new technology. For instance, when institutions provide easy access to learning management systems and offer training or technical help, users are more inclined to adopt and regularly use those systems.

On the other hand, Nurkhin (2020) and Decman (2020) found negative relationships between facilitating condition and intention to adopt the technology. These results suggest that in some cases, even when the necessary resources and infrastructure are present, they may not be enough to encourage adoption. Factors such as lack of motivation, poor user experience, or resistance to change can overshadow the importance of facilitating conditions, making it difficult for users to see the value in adopting new technology.

Interactive Digital Learning Tools among Accounting Students in Politeknik Mukah

Interactive digital learning tools have emerged as essential in advancing this goal, particularly for accounting students who need to master both conventional methods and modern financial technologies. To facilitate this shift, educational institution must embrace a new approach that focuses on building strong analytical and digital skills. This shift calls for curriculum updates that incorporate data analytics, visualization tools, and practical applications of digital technologies in accounting (Januszewski et al., 2024).

A study has shown that the integration of various digital tools like cloud computing, data analytics, and business intelligence does not only enhance students' technical and analytical skills but also prepares them for changing demands of the accounting profession (Lee & Ivancevich, 2018). Tools like accounting software simulations, online collaboration platforms, and gamified learning modules offer interactive and engaging ways for students to understand complex concepts, making learning more dynamic and accessible. Additionally, the use of gamified learning platforms has been shown to increase student motivation and engagement, turning the educational process into a more interesting and fulfilling experience. These platforms facilitate the transition from theoretical knowledge to practical application, helping

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students prepare for real-world challenges in the workplace (Shenoy & Kumar, 2024). The hands-on nature of these tools aligns well with Politeknik Mukah's emphasis on practical learning, offering students opportunities to experience realistic scenarios and develop technical proficiencies that are critical in accounting roles.

As part of Malaysia's TVET initiatives, the curriculum is tailored to prepare students for real-world challenges in the accounting profession. This approach is consistent with the objectives outlined under the Transformasi Politeknik 2023-2030, which emphasizes aligning education with technological advancements and workforce demands. According to Deputy Prime Minister Datuk Seri Dr Ahmad Zahid Hamidi, these reforms aim to position Polytechnics, including Politeknik Mukah, as key drivers in equipping students with cutting-edge skills to remain competitive in the digital era (Bharian, 2023).

The integration of interactive digital learning tools is not just about enhancing technical capabilities; it also fosters critical thinking and adaptability in an evolving industry. As Datuk Seri Dr Ahmad Zahid Hamidi emphasized, aligning research, curriculum, and pedagogy with technological advancements ensures that students are future-ready (Bharian, 2023). For accounting students at Politeknik Mukah, this approach is particularly relevant, as it bridges the gap between academic knowledge and industry requirements. By utilizing innovative digital tools, the institution ensures its graduates are well-equipped to thrive in a competitive, technology-driven global economy.

Politeknik Mukah offers a curriculum that integrates industry-relevant practices and state-of-the-art technology, which aligns with the goals of TVET to produce skilled professionals who can meet the demands of the workforce.

In 2023, the employability rate for graduates from polytechnics in Malaysia was reported at 97.1%. This reflects a slight increase from 96.2% in 2022. The employability statistics show that polytechnic graduates are competitive in the job market, proving that their education and training are relevant to employers' needs. The high employment rate reflects the practical, job-ready skills that polytechnics teach, which help graduates succeed in technical and professional fields.

The focus on technical education, as seen at Politeknik Mukah, supports the goals of Malaysia's Technical and Vocational Education and Training (TVET) system. TVET aims to build a skilled workforce that can boost Malaysia's economic growth and help the country stay competitive in the global market. By focusing on vocational training and practical skills, Polytechnics must ensure its students especially accounting students are not only proficient in the technical aspects of their field but also adaptable to the rapidly changing business environment. This alignment with TVET principles helps accounting students at Politeknik Mukah become competitive in the job market, ultimately contributing to the growth and sustainability of the accounting profession in Malaysia.

Hypothesis Development

The factors that contribute to the prediction of digital tools adoption are Performance Expectancy, Effort Expectancy, Social Influence and Facilitating Condition which act as the independent variables. Meanwhile, the adoption of interactive digital tools among accounting students in Politeknik Mukah is the dependent variable. The relationships between the dependent and independent variables are discussed below.

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The relationship between Performance Expectancy (PE) and Adoption of Digital Learning Tools among Accounting Students of Politeknik Mukah

Students are more likely to adopt digital learning tools if they believe these tools will enhance their academic performance (Mahande et al., 2019; Decman, 2020). Tools offering interactive and flexible features—like real-world simulations in accounting—improve both learning outcomes and motivation. During the COVID-19 pandemic, performance-based benefits led to greater adoption (Omar et al., 2020). Studies by Terblanche et al. (2023) and Mujalli et al. (2022) confirm a positive relationship between performance expectancy and behavioral intention to use digital tools.

H1: There is a significant relationship between Performance Expectancy and Adoption of Interactive Digital Learning Tools among accounting students.

The relationship between Effort Expectancy (EE) and Adoption of Digital Learning Tools among Accounting Students of Politeknik Mukah

Ease of use significantly impacts students' willingness to adopt digital learning tools. While some argue e-learning may not always outperform traditional methods (Nurkhin, 2020), other studies (Mahande et al., 2019; Terblanche et al., 2023) show that when students perceive the system as user-friendly and supportive of their learning goals, adoption increases. Mujalli et al. (2022) also found that minimal effort required to use platforms like Blackboard correlates with higher behavioral intention.

H2: There is a significant relationship between Effort Expectancy and Adoption of Interactive Digital Learning Tools among accounting students.

The relationship between Social Influence (SI) and Adoption of Digital Learning Tools among Accounting Students of Politeknik Mukah

Support from peers, instructors, and institutions positively affects students' intention to use digital tools (Mahande et al., 2019; Decman, 2020). Students are influenced when important figures in their academic circle value technology use. Encouragement fosters engagement, while lack of support may reduce usage (Omar et al., 2020). Studies by Terblanche et al. (2023) and Mujalli et al. (2022) confirm that social influence significantly predicts technology adoption.

H3: There is a significant relationship between Social Influence and Adoption of Interactive Digital Learning Tools among accounting students

The relationship between Facilitating Conditions (FC) and Adoption of Digital Learning Tools among Accounting Students of Politeknik Mukah

Adequate access to infrastructure, technical support, and relevant resources enables students to adopt digital tools more confidently (Venkatesh et al., 2003; Mahande et al., 2019). When these facilitating conditions are in place, students feel more prepared to engage with e-learning. Terblanche et al. (2023) support this, showing a positive relationship between facilitating conditions and behavioral intention. However, Mujalli et al. (2022) offer a contrasting view, suggesting that access alone may not drive adoption without accompanying organizational support and training.

H4: There is a significant relationship between Facilitating Conditions and Adoption of Interactive Digital Learning Tools among accounting students.

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Conceptual Framework

This study introduces a suitable conceptual model and material as outlined below. The conceptual framework for this study is derived from UTAUT theory that identifies four independence variables influencing the acceptance and use of interactive learning tools, which include Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. Figure 1 illustrates the proposed conceptual framework for this study.

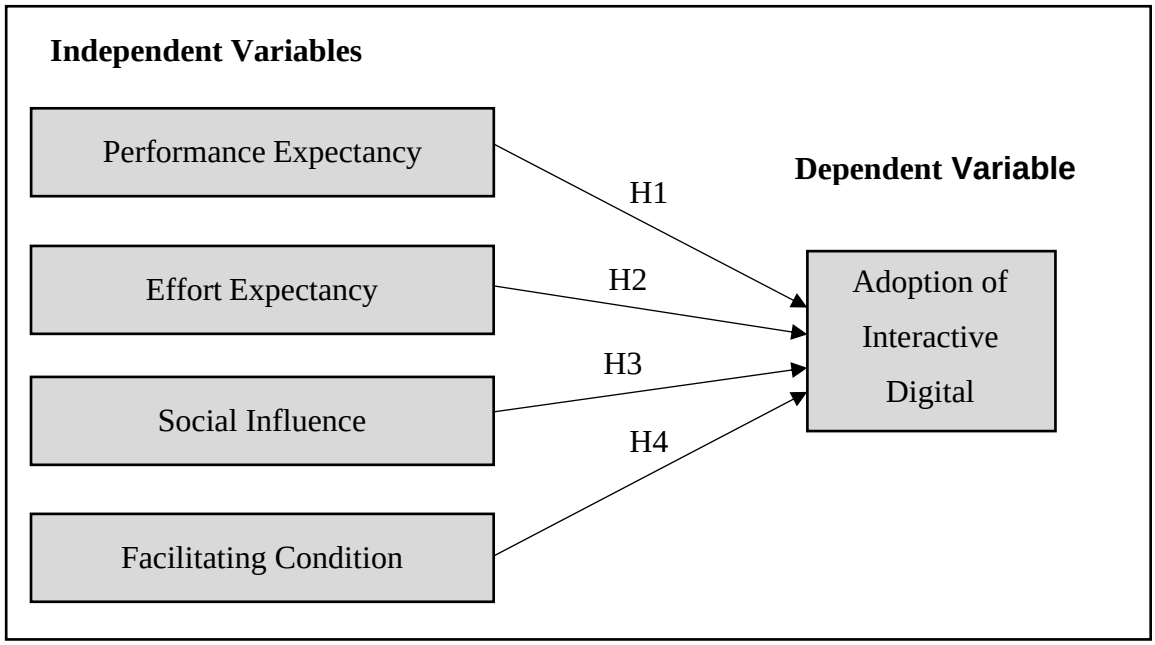

Figure 1: Proposed Conceptual Framework

Figure 1 illustrates a proposed conceptual framework that examines the factors influencing the adoption of interactive digital learning tools. The model is structured around four independent variables: Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Condition. These independent variables are hypothesized to have direct relationships with the dependent variable, which is the Adoption of Interactive Digital Learning Tools.

Research Methodology

This study employed a quantitative research approach to examine the factors influencing the adoption of interactive digital learning tools among accounting students at Politeknik Mukah, using the Unified Theory of Acceptance and Use of Technology (UTAUT) framework. The four key constructs investigated were Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions, all hypothesized to affect students' adoption of digital tools.

The target population consisted of 227 accounting students enrolled in the Department of Commerce for the academic session 2024/2025, excluding those on industrial training. Using Krejcie and Morgan's sample size determination table, a sample of 140 students was selected via systematic sampling, choosing every 14th student from each of the 10 classes. Due to a shortfall in one class, remaining respondents were recruited from Semester 1, which had the highest enrollment.

Data was collected using a structured online questionnaire developed in Google Forms, distributed through WhatsApp to ensure wide accessibility and participation. The instrument

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was adapted from prior research including Decman (2020), Meng (2021), Fernandez (2020), Alangari (2020), and Dong (2019). The questionnaire was divided into three parts: Section A captured demographic data, Section B assessed the independent variables (PE, EE, SI, and FC), and Section C measured the dependent variable—adoption of digital learning tools. All variables were measured using a 5-point Likert scale ranging from "strongly disagree" to "strongly agree."

A pilot test was conducted with 30 students to assess the questionnaire's reliability, with Cronbach's alpha values above 0.7, indicating acceptable internal consistency for all constructs (Sekaran & Bougie, 2016). Data was analyzed using SPSS Version 28, applying descriptive statistics, correlation analysis, and multiple regression analysis to test the hypotheses and determine the relationships among variables.

The methodology was designed to ensure validity, reliability, and generalizability, offering practical insights into how accounting students interact with digital tools within a Malaysian polytechnic context. This rigorous methodological framework aligns with past studies that utilized the UTAUT model to investigate technology adoption in educational settings (Venkatesh et al., 2003; Mujalli et al., 2022; Terblanche et al., 2023).

Data Analysis and Result

The analysis was carried out using a software program called Statistical Package for Social Science (SPSS). It begins by discussing the response rate and providing an overview of the respondents' profiles. Next, it goes into detail about factor analysis and reliability analysis, which are used to examine the study's main variables. This chapter also includes a discussion on the results of evaluating how the variables are related to each other, as well as the outcomes of linear regression analysis.

Response Rate

The responses collected from the questionnaire about the demographic profiles of the general characteristic of the participants are presented in Table 1. This table provides details on general characteristics of the respondents.

Table 1: Demographic Items

Demographic Items	Frequency (*N* = 150)	Percentage (%)
Gender		
Male	42	28
Female	108	72
Age		
18 years old	55	36.7
19 years old	36	24
20 years old	30	20
21 years old and above	29	19.3
Semester		
Semester 1	58	38.7
Semester 2	14	9.3
Semester 3	28	18.7
Semester 4	8	5.3
Semester 5	28	18.7
Semester 6	14	9.3

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DOI: 10.55573/JOSSR.082626

Number of Times Using Interactive Digital Tools in a Week during Studies		
1 time	2	1.3
2 times	18	12
3 times	22	14.7
4 times	16	10.7
5 times and above	92	61.3
Types of Interactive Digital Learning Tools Used during Studies		
Educational games (example: Kahoot!, Quizizz etc.)	113	75.3
Interactive eBOOKs	3	2
Interactive Assessment Platform (example: Microsoft Teams, Socrative, Mentimeter etc.)	8	5.3
Learning Management System (LMS) (example: CIDOS, Canva, Moodle etc.)	25	16.7
Others	1	.7

Table 1 shows the demographic and behavioral analysis of study population which consist of 150 participants. When examining the frequency of using interactive digital tools during their studies, the data revealed that the majority of 92 participants (61.3%) use these tools five times or more each week. Smaller groups reported using these tools less frequently, with only 1.3% of participants using them once per week while 12%, 14.7%, and 10.7% used them two, three, and four times weekly, respectively. This shows that using digital tools is common among these students.

The types of interactive digital learning tools utilized also vary. Educational games such as Kahoot! and Quizizz are the most widely used, engaging 75.3% of students. Learning Management Systems (LMS) like CIDOS, Canva, and Moodle are the second most popular, used by the students which is 16.7% of the sample. Meanwhile, interactive assessment platforms (e.g., Microsoft Teams, Socrative, Mentimeter) are used by 5.3% of students, and interactive eBooks are the least utilized, with only 2% reporting their use. A small fraction (0.7%) reported using other tools which are not listed.

Descriptive Statistics

Descriptive statistics are fundamental for summarizing and understanding data. Kaur et al. (2018) emphasized that calculating descriptive statistics is an important step in research, done before making inferential statistical comparisons. Descriptive statistics are calculated for each item to summarize the key characteristics of the data. The sample size (N=140) is consistent across all items, providing a standard basis for comparison. For each item, the minimum and maximum values are presented, which highlight the range of the data by showing the smallest and largest observed values. The mean value is also provided, offering a measure of central tendency that reflects the average score for each item. Additionally, the standard deviation is reported, indicating the degree of variation or spread in the data. A higher standard deviation suggests more variability among responses, while a lower standard deviation indicates that the values are clustered more closely around the mean.

Pearson Correlation

The values of r range from -1 to 1, indicating that a perfect correlation exists, -1 indicates a perfect negative relationship, and 0 indicates no linear relationship (Sedgwick, 2012). In this

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table, all correlations are positive and statistically significant at the 0.01 level, with p-values less than 0.001 that show there are relationships between the variables.

Table 2: Pearson correlation

	DV	PE	EE	SI	FC
Adoption of Interactive Digital Learning Tools (DV)	1				
Performance Expectancy (PE)	.762**	1			
Effort Expectancy (EE)	.618**	.719**	1		
Social Influence (SI)	.639**	.731**	.629**	1	
Facilitating Condition (FC)	.690**	.812**	.735**	.722**	1
****Correlation is significant at the 0.01 level (2-tailed).**					

Table 2 shows that the correlation between Adoption of Interactive Digital Learning Tools and the other variables is generally strong. The correlation coefficient measures how strongly two variables are related, with higher values indicating a stronger relationship. According to Obilor and Amadi (2018), a larger correlation indicates a stronger relationship, while a smaller p-value signifies a more significant relationship. All the correlations in this table are statistically significant, as the p-values are less than 0.001, meaning these results are highly unlikely to have occurred by chance.

The strength of the relationships ranges from moderate to strong. The highest correlation is between Performance Expectancy and Facilitating Condition (r =0.812), indicating a very strong relationship. This suggests that these two variables are closely connected. On the other hand, the weakest correlation is between Dependent Variable and Effort Expectancy (r =0.618), but even this is a moderate positive relationship.

Looking at individual variables, Dependent Variable has strong relationships with Performance Expectancy (r=0.762) and Facilitating Condition (r=0.690). Similarly, Performance Expectancy shows strong connections with all other variables, especially Facilitating Condition (r =0.812) and Social Influence (r =0.731). Facilitating Condition stands out as it has strong positive correlations with all variables, indicating its importance in the dataset. Overall, the results show reliable relationships between the variables, as all correlations are statistically significant and moderately to strongly positive.

Regression Analysis Findings

The values of r range from -1 to 1, indicating that a perfect correlation exists, -1 indicates a perfect negative relationship, and 0 indicates no linear relationship (Sedgwick, 2012). In this table, all correlations are positive and statistically significant at the 0.01 level.

Table 3: Result of Multiple Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	0.986	.248		3.970	<.001
Performance Expectancy (PE)	.492	.095	.511	5.158	<.001

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Effort Expectancy (EE)	.072	.074	.076	.969	.334
Social Influence (SI)	.097	.064	.123	1.509	.133
Facilitating Condition (FC)	.132	.102	.129	1.290	.199
R Square	.605				
Adjusted R Square	.594				
Std. Error of the Estimate	.33818				
F value	55.579				
Significant	<.001				

The multiple regression analysis in Table 3 evaluates how four factors which are Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions relate to the adoption of interactive digital learning tools among accounting students. Here is an explanation of the results for each hypothesis.

The overall model is statistically significant. The R Square value of 0.605 means that 60.5% of the variation in the adoption of digital learning tools can be explained by these four factors. Additionally, the F-value is 55.579, with a significance level of less than 0.001, showing that the model as a whole is reliable for explaining the relationships.

Looking at the individual factors, Performance Expectancy has a strong and significant relationship with the adoption of digital learning tools. Its standardized coefficient (Beta) is 0.511, and the p-value is less than 0.001, indicating a highly significant result. This means students are more likely to adopt interactive digital learning tools if they believe the tools will improve their performance. Therefore, the first hypothesis (H1) is supported. For Effort Expectancy, the results are different. Its Beta value is very small (0.076), and the p-value is 0.334, which is not statistically significant. This means the ease of using the tools does not have a meaningful impact on students' adoption. As a result, the second hypothesis (H2) is not supported. Similarly, Social Influence does not show a significant relationship. Its Beta value is 0.123, and the p-value is 0.133, which is above the threshold for significance. This indicates that peer or social pressure does not strongly influence students' decisions to adopt these tools. Thus, the third hypothesis (H3) is not supported. Finally, Facilitating Conditions also fail to show a significant relationship. Although its Beta value is 0.129, the p-value is 0.199, which means the availability of resources or support does not significantly impact students' adoption of digital learning tools. Consequently, the fourth hypothesis (H4) is not supported.

As a result, only Performance Expectancy is a significant predictor of the adoption of interactive digital learning tools among accounting students. This suggests that students are more likely to use these tools if they believe the tools will help them perform better. The other factors like Effort Expectancy, Social Influence, and Facilitating Conditions do not have a significant impact in this study.

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Table 4: Summary of Hypothesis Result

Hypothesis	Beta Coefficient	t	p-Value	Result
***H1**: There is a significant relationship between Performance Expectancy and Adoption of Interactive Digital Learning Tools among accounting students.*	.511	5.158	<.001	*Supported*
***H2**: There is a significant relationship between Effort Expectancy and Adoption of Interactive Digital Learning Tools among accounting students.*	.079	.969	.334	*Not Supported*
***H3**: There is a significant relationship between Social Influence and Adoption of Interactive Digital Learning Tools among accounting students.*	.123	1.290	.133	*Not Supported*
***H4**: There is significant relationship between Facilitating Conditions and Adoption of Interactive Digital Learning Tools among accounting students.*	.129	1.364	.199	*Not Supported*

The study surveyed 150 accounting students from Politeknik Mukah's Department of Commerce, focusing on those starting in the 2024/2025 academic year. The number of participants exceeded the required responses, indicating strong engagement. Factor analysis confirmed that the survey questions effectively capture students' decisions regarding interactive digital learning tools, while reliability tests ensured consistent results. Regression models also met key assumptions, including normality, linearity, and the absence of multicollinearity, confirming their accuracy.

Further analysis revealed that Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC) are distinct constructs, with PE emerging as the most significant predictor of digital tool adoption. This suggests that students are more likely to adopt digital learning tools when they perceive a clear academic benefit. In contrast, EE, SI, and FC did not significantly influence adoption, indicating that ease of use, peer influence, and available support play lesser roles in students' decisions.

These findings align with the Unified Theory of Acceptance and Use of Technology (UTAUT), which posits that PE is often a strong determinant of technology adoption. The low influence of EE, SI, and FC suggests that students prioritize academic outcomes over external motivators. This may be due to their increasing familiarity with digital tools, reducing concerns about ease of use, while social influence may have limited relevance in personal academic decision-making.

Given that Performance Expectancy is the key driver of adoption, institutions should emphasize the academic benefits of digital learning tools, such as improved learning efficiency and outcomes. Strategies such as integrating digital tools into coursework, providing evidence of their effectiveness, and offering targeted training can enhance adoption. Since EE, SI, and FC have minimal impact, focusing solely on ease of use, peer influence, or institutional support may not be effective. Instead, educational institutions and developers should prioritize showcasing tangible academic improvements to encourage widespread adoption

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Discussion

For Performance Expectancy (RQ1), the study found a significant positive relationship with the adoption of interactive digital learning tools among accounting students at Politeknik Mukah. Students reported high mean scores for items such as PE1 (4.59) and PE2 (4.53), indicating that they believe these tools help improve academic performance. The regression analysis confirmed this relationship with a Beta of 0.511 and a p-value of less than 0.001. This finding aligns with previous research by Kumar et al. (2019), Mujalli and Almgrashi (2022), and Mahande and Malago (2019), which emphasized that students are more inclined to adopt technologies they perceive as beneficial to their learning outcomes.

However, for Effort Expectancy (RQ2), the results revealed no significant relationship with technology adoption, despite relatively high mean scores (e.g., EE5 = 4.48). The regression analysis showed a Beta of 0.076 and a p-value of 0.334, suggesting that ease of use is not a strong predictor of adoption. This supports earlier findings by Decman (2020) and Teo (2022), who noted that digital-native students are already familiar with technology, so ease of use becomes less relevant compared to factors like usefulness, engagement, or content quality.

Similarly, Social Influence (RQ3) was not found to significantly affect adoption, with a Beta of 0.123 and a p-value of 0.133. Although students gave moderately high ratings (e.g., SI4 = 4.31), these results suggest that peer or lecturer opinions have limited impact on students' decisions. This is consistent with the findings of Abbad (2021) and Leong et al. (2021), who indicated that today's learners rely more on their own evaluations than on social pressure when adopting new technologies.

Finally, Facilitating Conditions (RQ4) also showed no significant relationship with adoption, even though students agreed that they had sufficient access to resources and support (e.g., FC4 = 4.52). The regression result, with a Beta of 0.129 and a p-value of 0.199, indicates that having infrastructure and assistance alone does not ensure adoption. This conclusion echoes research by Nurkhin (2020), Almaiah et al. (2022), and Dwivedi et al. (2023), which suggest that motivation, trust, and practical relevance are also essential factors influencing technology use. Overall, the findings highlight that while performance expectancy drives adoption, effort expectancy, social influence, and facilitating conditions are not significant predictors in this context.

Conclusion

In conclusion, performance expectancy significantly influences students' adoption of digital learning tools, while effort expectancy, social influence, and facilitating conditions do not. This highlights the need for tools to clearly demonstrate value, especially in helping accounting students grasp complex concepts and prepare for technology-driven careers.

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