Trust, Performance, and Value: Predicting Student Intentions to Adopt Digital Record Applications

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Notes	ABSTRACT
  How to cite: Gaffar, M. R., Pramono, T. D., Sutisna, M., Sayuti, A. M., & Setyoningrum, A. A. D. (2024). Trust, Performance, and Value: Predicting Student Intentions To Adopt Digital Record Applications. Khizanah Al-Hikmah : Jurnal Ilmu Perpustakaan, Informasi, Dan Kearsipan, 12(2). Retrieved from https://journal.uin-alauddin.ac.id/index.php/khizanah-al-hikmah/article/view/49303 DOI: 10.24252/kah.v12i2a8 	This study examined the factors influencing student's intentions to adopt digital record applications in higher education, with a focus on performance expectancy, trust, effort expectancy, and perceived value. The research employed a quantitative approach, utilizing a survey of 243 undergraduate students in Bandung, Indonesia, to assess these factors. The results revealed that performance expectancy was the most significant predictor of students' adoption intentions, confirming that students were motivated to adopt digital tools that they believe will enhance their academic performance. Trust also played a crucial role, particularly in the context of data security and privacy, which were significant concerns in educational technology adoption. Interestingly, effort expectancy, which refers to the ease of use of digital applications, did not significantly influence adoption intentions, likely due to the increasing digital literacy among students. Perceived value was found to have a positive but less pronounced effect on adoption intentions. These findings suggested that the UTAUT framework, commonly used in technology adoption studies, may need to be adapted to incorporate demographic and contextual factors, especially trust-related variables, in environments where data privacy is critical. The study also has practical implications for educational institutions and policymakers. To encourage the adoption of digital record applications, institutions should emphasize the academic performance benefits of these tools and implement trust-building strategies, such as robust data security measures. **Keywords:** Digital records applications; technology accepatence; users' behaviors; UTAUT framework

1. INTRODUCTION

The rapid advancement of technology has significantly reshaped various aspects of academic life, particularly in the management and utilization of academic records. In higher education,

the transition to digital records has become a cornerstone for enhancing academic efficiency and effectiveness. Digital records, which encompass electronic notes, digital libraries, and online resources, provide students with substantial advantages, including easy access, efficient storage, and effective organization of materials (Tungpantong et al., 2022). The increasing adoption of digital tools by educational institutions necessitates that student develop the ability to adapt to these changes, which is crucial for managing their academic workloads effectively. This adaptability not only enhances performance but also reduces stress levels among students (Safonov & Mayakovskaya, 2020). Furthermore, digital records promote a collaborative learning environment by facilitating information sharing and interactive engagement, thus enriching the educational experience (Li & Wu, 2023).

Despite the myriad benefits associated with digital records, several challenges must be addressed to ensure equitable access and effective utilization. Issues such as digital literacy and the digital divide remain significant barriers (Tsang et al., 2021). In institutions that lack a dedicated digital archiving system, students often face difficulties in organizing and retrieving essential academic documents, leading to inefficiencies and increased stress (Akhmetshin et al., 2020). A study conducted at a South African university highlighted that student without centralized digital resources struggled to access their academic materials efficiently, which adversely affected their performance (Mabić & Garbin Praničević, 2021). Similarly, a case study from a U.S. university demonstrated that the introduction of a digital archiving system markedly improved students' ability to manage and retrieve academic records, ultimately resulting in better academic outcomes (Masaeva & Kagermazova, 2023).

Moreover, the advantages of digital records extend beyond individual students; they also enhance collaborative academic efforts. For instance, a digital system implemented in an Australian university setting facilitated document sharing for group projects, which significantly improved collaboration and student satisfaction (Li & Wu, 2023). These examples underscore the importance of adopting dedicated digital archiving applications to address organizational challenges and enhance academic outcomes. Consequently, implementing a tailored digital archiving application for undergraduate students is vital for improving their academic experience and mitigating inefficiencies associated with fragmented digital resources (Suwanroj et al., 2019).

To effectively tackle the challenges associated with adopting digital tools, it is essential to examine factors such as performance expectancy, effort expectancy, trust, and perceived value. Research indicates that trust in the reliability and security of digital applications significantly influences students' willingness to adopt new technologies, as evidenced by studies on mobile learning platforms in Southeast Asia (Goulart et al., 2022). Additionally, performance expectancy which is defined as the belief that an application will enhance academic success, has been linked to higher adoption rates in digital education systems across Europe (Ussarn et al., 2022). By investigating these factors, this study aims to identify and analyze the key determinants of students' intentions to adopt digital record applications in Indonesia, thereby contributing valuable insights to the literature on technology adoption in educational contexts.

2. METHODS

This research seeks to investigate the factors influencing intention to use digital record application. The study utilized a quantitative methodology to achieve its research objectives. Participants were selected using purposive sampling, targeting Indonesian undergraduate

students in Bandung City. All participants are college students residing in Bandung City and belong to Generation Z. Data collection was carried out through an online survey conducted from April to May 2024, yielding 243 valid responses as seen in the following table. The survey utilized closed-ended questions rated on a 5-point Likert scale, adapted from validated instruments used in previous studies (Indrawati et al., 2020; Rafdinal & Senalasari, 2021).

Table 1. Respondent demographics

Variable		Frequency	%
Gender	Male	97	40
	Female	146	60
Age	14-29	243	243
Domicile	Bandung City	243	243
Occupation	College Student	243	243

In this study, a questionnaire with five variables is used. Four variables are independent variables and one variable is a dependent variable. The first independent variable is trust which is a critical factor influencing individuals' intentions to utilize technology. Research has shown that trust significantly impacts behavioral intentions towards adopting various technologies, such as online shopping (Gefen et al., 2003), blockchain technology (Farooq et al., 2024), mobile banking (Kim et al., 2009), e-commerce platforms (Chen et al., 2021), telemedicine (Gallardo et al., 2024), and food delivery apps (Goyal et al., 2023). The second one is Performance expectancy which is also a critical factor influencing individuals' intentions to adopt and use technology. It is defined as the belief that performance will improve with the use of technology (Farooq et al., 2024; Gefen et al., 2003; Kim et al., 2009). Effort expectancy, which refers to the degree of ease associated with the use of technology will become the third independent variable. Effort expectancy has a significant influence on individuals' intention to adopt and use new technologies. A study found that in the context of mobile banking, ease of use was a significant predictor of users' intention to adopt these services, suggesting that reducing the perceived complexity of the technology can enhance adoption rates (Ooi et al., 2018). Perceived Value will be the last independent variable. Perceived Value is often described as the consumer's overall assessment of the utility of a product (Lin et al., 2005). The proposed model can be seen in following figure.
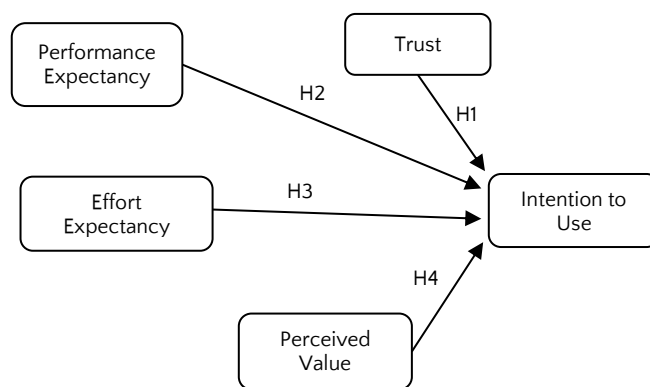

Figure 1. Proposed model

The analysis of the proposed model was carried out using Partial Least Squares-Structural Equation Modeling (PLS-SEM), which encompassed two primary stages: the measurement model and the structural model. The measurement model analysis focused on assessing validity and reliability, while the structural model analysis included path analysis. Lastly, the model's predictive capability was evaluated by analyzing the R^2 values of the dependent variables. The process of data analysis is illustrated in the following figure. The process of data analysis is illustrated in the following figure.
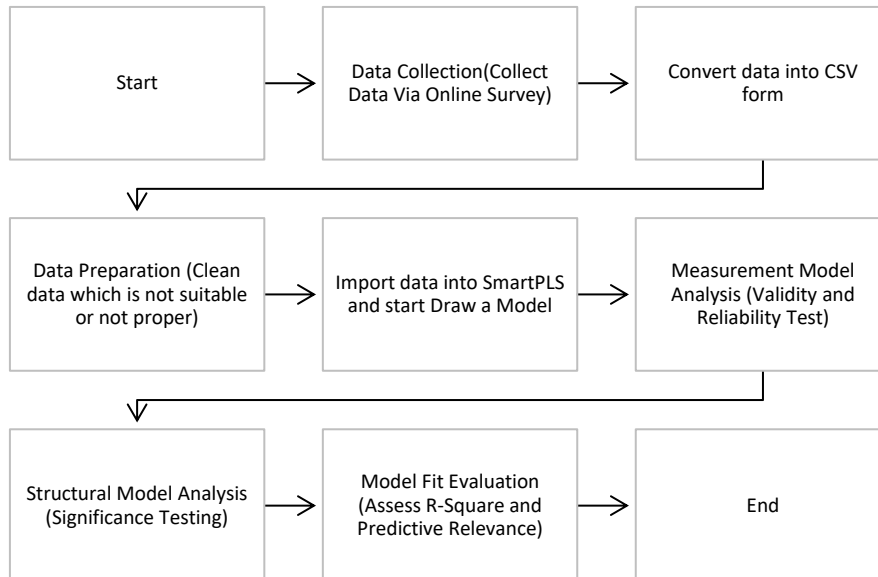

Figure 2. Data analysis flow

3. RESULTS AND DISCUSSION

Measurement Model

The measurement model was employed to evaluate the validity and reliability of the constructs within the model. Convergent validity was determined using the Loading Factor (LF) and Average Variance Extracted (AVE). A model is deemed valid if each item has an LF value greater than 0.5 and an AVE value above 0.5 (Hair et al., 2019). Reliability was evaluated through Composite Reliability (CR) and Cronbach's Alpha (CA). A model is considered reliable if each item has a CR value exceeding 0.7 and a CA value above 0.7 (Hair et al., 2019). The findings indicate that the model is both valid and reliable.

The results of the validity and reliability assessments are presented in Table 2.

Table 2. Validity and reliability test result

Construct/Item	Loading Factor	CA	CR	AVE
Trust		**0.854**	**0.900**	**0.696**
Trust1	0.739			
Trust2	0.754			
Trust3	0.909			
Trust4	0.917			
Performance Expectancy		**0.875**	**0.914**	**0.727**

Construct/Item	Loading Factor	CA	CR	AVE
PE1	0.762			
PE2	0.888			
PE3	0.886			
PE4	0.869			
Effort Expectancy		**0.836**	**0.890**	**0.670**
EE1	0.841			
EE2	0.888			
EE3	0.777			
EE4	0.762			
Perceived Value		**0.914**	**0.933**	**0.698**
PV1	0.822			
PV2	0.852			
PV3	0.840			
PV4	0.810			
PV5	0.841			
PV6	0.849			
Intention to Use		**0.821**	**0.892**	**0.735**
Int1	0.856			
Int2	0.831			
Int3	0.883			

Structural Model

In the structural model phase, SEM-PLS was used to examine the relationships between variables. Furthermore, SEM-PLS provided the R^2 value, which signifies the model's predictive power. The bootstrapping method was employed to derive the values at this stage of the structural model. The outcomes of the path analysis are presented in Table 3.

Table 3. Hypotheses testing result

Hypothesis	β	t-value
H1: Trust -> Intention to Use	0.237	3.871**
H2: Performance Expectancy -> Intention to Use	0.487	7.324**
H3: Effort Expectancy -> Intention to Use	0.013	0.194
H4: Perceived Value -> Intention to Use	0.104	1.828*

**significant at p < 0.01, *significant at p < 0.05

Table 3 reveals that performance expectancy has the greatest influence on the intention to use. Trust also positively affects the intention to use, while perceived value, although having a smaller effect, still contributes positively. Interestingly, effort expectancy does not impact the intention to use. The model demonstrates moderate predictive power, with the intention to use variable having an R^2 value of 0.393.

The investigation into the factors influencing students' intentions to adopt digital record applications reveals that performance expectancy is the most significant predictor of such intentions (β = 0.487, p < 0.01). This finding aligns with the established understanding that

students are more likely to adopt technology when they perceive it will enhance their academic performance. The results are consistent with the Unified Theory of Acceptance and Use of Technology (UTAUT) model, which identifies performance expectancy as a crucial determinant of behavioral intention (Venkatesh et al., 2003). Recent studies have corroborated this relationship across various domains, including e-learning and healthcare, where perceived performance benefits significantly influence user adoption (Harerimana & Mtshali, 2021; Saleh et al., 2022; Zhao et al., 2021). These findings underscore the critical role that performance expectations play in shaping students' decisions regarding technology use.

Trust also emerged as a vital factor in the adoption of digital record applications ($\beta = 0.237$, $p < 0.01$). The significance of trust is consistent with findings from technology adoption studies in e-commerce and mobile banking, where reliability and security are paramount (Ramzani & Suleiman, 2019). In educational contexts, trust in the application's ability to protect sensitive information is particularly relevant, given rising concerns about data privacy. Research indicates that students' apprehensions regarding data protection and system reliability directly impact their intentions to use educational technologies (Rajeh et al., 2021). This suggests that incorporating trust-building features, such as robust data encryption and transparent data handling practices, is essential for fostering adoption among students.

Perceived value was found to have a positive but less significant effect on students' intentions ($\beta = 0.104$, $p < 0.05$). This aligns with the value-based adoption model, which posits that users are more likely to adopt technology when they perceive clear benefits (Lin et al., 2005). In the context of digital record applications, perceived value likely influences adoption due to potential academic benefits, such as improved record-keeping and productivity. However, studies in other contexts, such as consumer technology adoption, often report higher significance levels for perceived value, suggesting that students may prioritize academic utility and data security over other advantages of the technology (Bigirwa et al., 2022; Koyu et al., 2021).

In contrast, effort expectancy did not significantly affect adoption intentions ($\beta = 0.013$, $p > 0.05$). This non-significant result may be attributed to the increasing digital literacy among students, which diminishes the relevance of ease of use in educational settings (Twum et al., 2022). Advances in user interface design have also contributed to this trend, as many applications are intuitively designed to minimize cognitive load, making effort expectancy less salient (Okiridu & Ogwunte, 2020). This finding contrasts with previous studies involving older populations or less digitally literate users, where ease of use is often a significant factor (Morara et al., 2020).

The findings of this study suggest potential modifications to existing technology adoption models, particularly the UTAUT framework. Given that effort expectancy did not significantly influence students' intentions, it may be beneficial to adapt the model to incorporate demographic and contextual factors that could moderate the importance of ease of use. For instance, models could place greater emphasis on trust-related variables in contexts where data privacy is a significant concern, such as in educational or healthcare applications (Bahçekapılı, 2023; Eko et al., 2022). Additionally, incorporating dimensions of trust, such as data security and operational reliability, may provide a more accurate framework for predicting technology adoption in education-focused applications.

From a practical perspective, these findings have implications for educational practices and policies. Institutions aiming to implement digital record applications should focus on strategies that highlight the performance benefits of these tools, as students are likely

motivated by perceived academic advantages (Bessadok & Bardesi, 2023). Furthermore, integrating trust-building mechanisms, such as clear data protection policies and reliable customer support, could enhance adoption rates by addressing students' privacy concerns (Semlambo et al., 2022). Policymakers in education should prioritize the selection and promotion of applications that demonstrate both strong performance capabilities and stringent data security standards.

Despite the contributions of this study, several limitations warrant consideration. The relatively small sample size and its limitation to a specific of college student's domicile may affect the generalizability of the findings. Additionally, the reliance on self-reported data introduces potential biases, such as social desirability bias, which could influence participants' responses regarding their intentions to adopt digital applications (Faqih, 2019). Future research should aim to include a larger and more diverse sample across multiple college student's domicile and consider longitudinal studies to track changes in adoption behavior over time.

Finally, the types of digital record applications utilized by students may influence their intentions and behaviors. Applications directly related to coursework or academic tasks may align more closely with performance expectations than administrative tools.

4. CONCLUSION

This study highlights performance expectancy and trust as key determinants in students' adoption of digital record applications, emphasizing that perceived academic benefits and data security serve as significant motivators. Although perceived value contributes to adoption decisions, effort expectancy is found to be less influential, likely due to the high levels of digital literacy among students. These findings suggest potential refinements to technology adoption models by underscoring the importance of trust-related variables, particularly in educational contexts where data privacy is essential. From a practical perspective, institutions and policymakers are encouraged to prioritize the communication of performance advantages and integrate trust-building measures to foster adoption. However, the study acknowledges certain limitations, such as the restricted sample scope and reliance on self-reported data. Future research should address these limitations by employing broader, more diverse samples and exploring the adoption of specific types of applications in educational environments.

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