

Analysing Technology Acceptance for Digital Learning in Islamic Education: The Role of Religious Perspective on ICT

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HIGHLIGHTS

- Three factors significantly influenced behavioural intention to utilize ICT in Islamic education, namely a religious perspective on ICT, personal innovativeness, and social influence.
- Religious perspective was the most effective on influencing behavioural intention among other factors.
- Religious perspective, facilitating conditions, and behavioural intention significantly affected actual ICT usage.
- Both effort and performance expectancies did not significantly affect behavioural intention to use ICT.
- The study's model explained 55.1% variance of behavioural intention and 54.0% of ICT usage behaviour.

ABSTRACT

Whether in general education or Islamic education, information and communication technologies (ICT) have shown to be effective in boosting learning and teaching processes. However, the optimal utilization of ICT in Islamic education is hardly observed, and its acceptance is rarely analysed. Therefore, the present study evaluated factors influencing individuals in Islamic education to adopt ICT based on the modified unified theory of acceptance and use of technology (UTAUT) model by incorporating two external factors: personal innovativeness and a religious perspective on the ICT aspect. The study employed a survey method to collect data from 225 valid respondents from Indonesia and applied a partial least squares-structural equation modelling (PLS-SEM) approach for analysis purposes. The study's findings suggest that three factors significantly influenced behavioural intention to utilize ICT in Islamic education. These factors are the religious perspective on ICT, personal innovativeness, and social influence, with the religious perspective being more effective factor on behavioural intention than other factors. Moreover, religious perspective, facilitating conditions, and behavioural intention significantly affected actual ICT usage. Both effort and performance expectancies did not significantly affect behavioural intention to use ICT. Besides that, personal innovativeness was found insignificant in influencing usage behaviour, however, it significantly affected effort expectancy, while religious perspective significantly influenced performance expectancy. Finally, the study's model explained 55.1% of behavioural intention and 54.0% of usage behaviour. The implications of the findings for practical and theoretical contributions are discussed in this paper.

Keywords ICT, Technology acceptance, UTAUT, Islamic education.



INTRODUCTION

All education systems, including Islamic education in all parts of the world, are facing dynamic challenges due to information and communication technologies (ICT) and globalization forces. Islamic education systems have evolved in a diverse and complex way, both in practice and institutionally, due to the struggles of Muslim minds and hearts since centuries ago (Hefner & Zaman, 2007; Olalekan Sanni, 2016) in the Muslim world, including in Indonesia. Islamic education in Indonesian history is argued to have distinctive features when contrasted to other parts of the Muslim world, especially from the arrival of European colonialists until after independence. The dynamics and dissemination of Islam in Indonesia have usually been going concurrently with Islamic education developments (Azra, 2018). That is, any kind of Islamic education institution (IEI) has been a vital component in developing Islam and contributing to the progress of Muslim society in Indonesia (Azra, 2014, 2018).

Traditionally, IEIs around the globe involve the teaching and learning of religious sciences, especially the Qur'an (both memorization and interpretation), hadith (the prophetic traditions), and fiqh (Islamic jurisprudence), among others. Even though the term "madrasa" in the Arabic language might mean any type of school, IEIs in many regions of the world are known as madrasas (Lukens-Bull, 2010). In Southeast Asia, particularly in Indonesia, there are various terms used for IEI, including *pesantren*, *pondok*, *surau*, and *pondok-pesantren*, with less or more differences (Asiah et al., 2022; Latief et al., 2021). However, all these institutions have the same core objective, which is to develop quality Islamic education across the country. In other words, all these IEIs share the common goal of integrating moral and Islamic values within modern curricula (Azra, 2018).

It is argued that Indonesian Islamic educational systems are considered among the most innovative, open to novel ideas, and adaptive to challenges since Muslim educators in Indonesia are willing to incorporate general studies besides religious sciences (Azra, 2014; C. Tan, 2014). For more than four decades, the momentum to modernize and reform IEIs in Indonesia has been observed (Azra, 2018). The modernization takes place in different approaches such as standardizing Islamic education curriculum to match national standards and integrating ICT to tackle the ongoing challenges of globalization and technological eruption (Daun & Arjmand, 2021; Hidayat et al., 2022; Rosidin, 2022). Whether in general education or Islamic education, ICT has been empirically found to improve the quality of the educational process (Latief et al., 2021; Susanto et al., 2022; UNESCO, 2020, 2021) when utilized effectively. Optimal use of ICT in Islamic education is crucial to enhance quality and effective learning activities. However, enhancing the quality of Islamic education through technological innovations requires an optimum adoption of ICT. Hence, investigating the perspective of individuals in Islamic education is essential (Susanto et al., 2022), especially in the technology acceptance research domain.

Research Problem and Objectives

The education process has transformed in response to the rapid but not culturally equal adoption of ICT. Due to the current technological eruption, it is always a serious challenge for some societies to adopt modernity while keeping their traditional social values (Hefner, 2011). The present technological revolution, especially in ICT, poses significant challenges to some societies defending their essential social and cultural values (Payvar, 2018; Schwab, 2016). Information technologies such as digital media involve different values and norms, and ICT adoption for educational purposes poses a challenge in the Muslim context due to the various digital content available on the Internet (Campbell & Evolvi, 2020; Payvar, 2018). Therefore, the social, religious, and cultural contexts might also pose challenges to the adoption of ICT in various contexts including in Islamic education.



Generally, IEIs are far behind to optimally utilize ICT in their educational activities (Hardaker, 2017; Hidayat et al., 2022) for sustainable Islamic education. Moreover, considering the current Islamophobia situation, orientalist and western media use digital platforms to spread false information about Islamic education institutions (Rust & Allaf, 2018; Sabic-El-Rayess, 2020) unless Islamic education scholars occupy these platforms to teach and disseminate true Islamic knowledge (Qazi et al., 2021). Ironically, based on the literature review and to the best knowledge of the authors, there are limited empirical studies that evaluate ICT acceptance in the Islamic education context, especially based on technology acceptance models such as the unified theory of acceptance and use of technology (UTAUT) model. Therefore, the present study intends to bridge the literature gaps by evaluating factors influencing ICT acceptance in the Islamic education context in Indonesia. Based on the research problem previously discussed, the study intends to fulfil the following research goals:

1. To assess factors that could influence Islamic education's individuals to accept ICT based on the modified UTAUT model.
2. To evaluate and comprehend Muslim viewpoints on the utilization of ICT in Islamic education.

LITERATURE REVIEW

Review on the UTAUT Model

Studying and explaining how individuals accept and utilize different technological innovations is continuously an intriguing topic, especially in the ICT research domain. Literature (Rondan-Cataluña et al., 2015) indicates that many theories explaining human intention and behaviour started to develop during the 20th century. However, earlier, many theories were developed for general contexts of behaviour, these theories include but are not limited to the Theory of Reasoned Action (TRA), Motivation Model (MM), Social Cognitive Theory (SCT), and the Theory of Planned Behaviour (TPB) (Ajzen & Fishbein, 1977; Bandura, 1986; Fishbein & Ajzen, 1975; Triandis, 1977). Later, other models started to emerge specifically focusing on ICT diffusion, adoption, and use. Such models include but are not restricted to the Model of PC Utilization (MPCU), Technology Acceptance Model (TAM), Innovation Diffusion Theory (IDT), and Combined TAM and TPB (C-TAM-TPB) model, (Davis, 1989; Moore & Benbasat, 1991; Rogers et al., 1983; Thompson et al., 1991; Venkatesh et al., 2003). All these models and theories were established to predict and explain human behaviour in the acceptance and use of different innovations.

Since there were many models for explaining human behaviour in different environments (Dwivedi et al., 2019), the situation has bewildered many researchers to adapt which model resulting in neglecting other models (Venkatesh et al., 2003). Consequently, after deep inspection and synthesizing eight precursor theoretical academic works on human psychology and behaviour as well as the ICT domain, the Unified Theory of Acceptance and Use of Technology (UTAUT) model was founded (Venkatesh et al., 2003). The eight synthesized theories are TRA, MM, SCT, MPCU, TPB, TAM, IDT, and C-TAM-TPB (Venkatesh et al., 2003). The UTAUT theory posits four main exogenous constructs which are theorized to predict and explain BI and actual usage of technology. These constructs are social influence (SI), performance expectancy (PE), facilitating conditions (FC), and effort expectancy (EE). Besides that, behaviour intention (BI) and usage behaviour (UB) are outcome variables theorized to be influenced by other factors. In addition, the main unique distinction of the UTAUT model from the previous models is its inclusion of four moderating variables, namely voluntariness, age, experience in using ICT, and gender, which enhanced the model's predictive power. The founders of the UTAUT model evaluated the eight models and compared them to the unified model using data from a longitudinal study. They found that its predecessors explained less than 53% of the variance on BI, meanwhile, UTAUT explained around 70% of the variance on BI to use technology (Venkatesh et al., 2003).



Earlier literature (Al-Nuaimi & Al-Emran, 2021; Scherer et al., 2019) confirmed that both UTAUT and TAM are prominent models that many studies have employed to investigate behavioural intention to use ICT in educational settings. Moreover, the UTAUT theory has been adopted by multiple studies using either of the three modification approaches; removing some variables, adding external variables, or doing both. However, other studies have adopted its original form but with different contexts or samples (Al-Nuaimi & Al-Emran, 2021; Dwivedi et al., 2019, 2020). Nevertheless, while there is a multitude of studies contributing to the significant utility of UTAUT in various contexts, there is always a need to systematically investigate and theorize other significant factors that apply to the specific context of technology utilization (Rondan-Cataluña et al., 2015) such as in Islamic education.

Research Variables, Conceptual Model, and Hypotheses

The current study employed the modified UTAUT model to evaluate ICT use in an Islamic education context. Based on the study's goals, the UTAUT model is modified by incorporating two external factors and dismissing the moderating elements of the original model. The proposed external variables are: Personal Innovativeness (PI) in ICT domain and Religious Perspective (RP) on ICT domain, as added independent variables positioned to influence the BI and UB. Figure 1 portrays the research conceptual model within which the structure of the UTAUT model is also depicted.

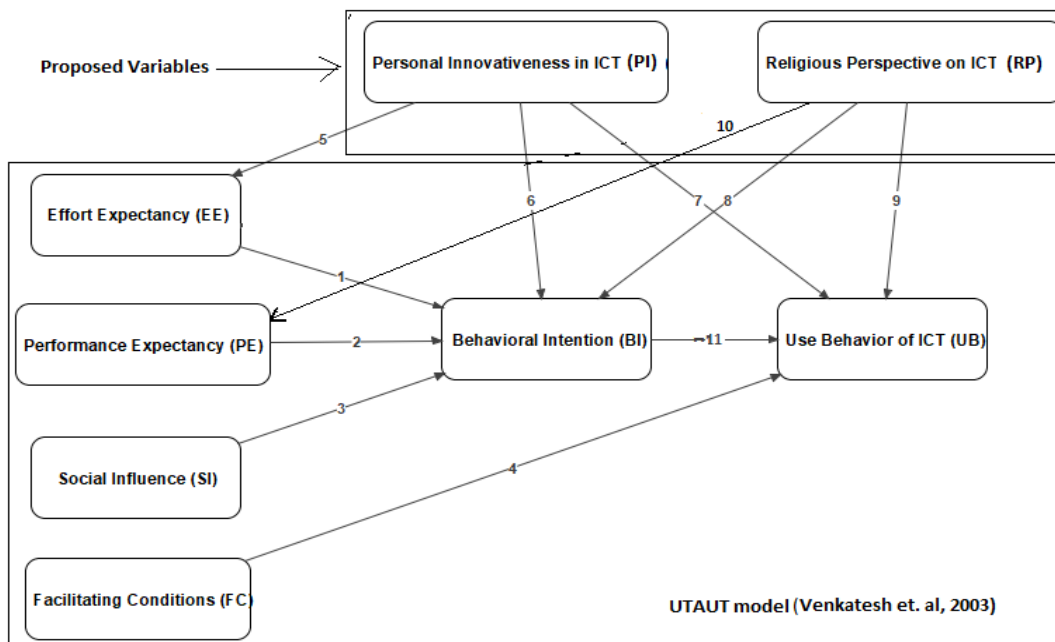


Figure 1: Research Conceptual Model

In the present study, there are four exogenous (Personal Innovativeness (PI), Religious Perspective (RP), Facilitating Conditions (FC), and Social Influence (SI)) and four endogenous (Effort Expectancy (EE), Behavioural Intention (BI), Performance Expectancy (PE), and Use Behaviour (UB)) constructs. EE refers to the belief of an individual that a technology is not difficult to utilize, while PE is referred to as an individual's belief that a technology provides benefits when using it, hence improving task productivity (Davis, 1989; Venkatesh et al., 2003). SI is defined as the feeling of an individual on how other people in a social circle perceive the usage of a particular technology (Ajzen, 1991; Davis et al., 1989; Venkatesh et



al., 2003). Meanwhile, FC refers to the person's belief that there exists physical and intellectual support from the surroundings to use a given technology (Davis, 1989; Davis et al., 1989).

Moreover, PI is described as a willingness characteristic of an individual to experiment with and try a particular technology (Agarwal & Prasad, 1998), heedless of how other people perceive it (Ngafeeson & Sun, 2015). As for the RP variable, it is defined as the perception of an individual about using ICT based on religious (Islamic) values. In this study, the constructs RP, EE, PI, PE, and SI are positioned to influence the BI variable. Meanwhile, FC, RP, PI, and BI are theorized to affect UB construct. Moreover, PI is positioned to affect EE, while RP is posited to influence PE. Besides that, earlier empirical studies have theorized and confirmed the relationships between the variables FC, SI, EE, PE, BI, and UB (Venkatesh et al., 2012, 2003; Venkatesh & Zhang, 2010). Besides that, other studies theorized the relationships between the constructs PI, BI, and UB (Agarwal & Prasad, 1997; Goldsmith, 2001), and RP with BI and UB (Abubakari & Priyanto, 2021; Ateeq-ur-Rehman & Shabbir, 2010). Accordingly, considering the variables relationships depicted in Figure 2, the present study also suggests the following hypotheses (H) based on the evidence from previous literature:

H1: *Effort expectancy (EE) significantly affects behavioural intention (BI) to use ICT in Islamic education.*

H2: *Performance expectancy (PE) significantly affects BI to use ICT in Islamic education.*

H3: *Social influence significantly affects BI to utilize ICT in Islamic education.*

H4: *Facilitating conditions (FC) directly and significantly affect ICT usage behaviour in Islamic education.*

H5: *Personal innovativeness (PI) has a significant influence on EE of using ICT in Islamic education.*

H6: *PI will significantly influence behavioural intention to use ICT in Islamic education.*

H7: *PI will significantly influence actual ICT usage behaviour in Islamic education.*

H8: *Religious perspective (RP) has a significant influence on PE of ICT usage in Islamic education.*

H9: *RP significantly influences BI to use ICT in Islamic education.*

H10: *RP significantly affects ICT usage behaviour in Islamic education.*

H11: *Behavioural intention significantly affects ICT usage behaviour.*

Related Studies on ICT Acceptance

Research on ICT acceptance has been conducted in various contexts including e-commerce, education, and e-health. A study (Ayaz & Yanartaş, 2020) applied the UTAUT model to analyse the acceptance of an electronic system for document management in a Turkish university and found that both social influence and performance expectancy significantly affected behavioural intention to utilize the system. However, the study found that effort expectancy did not significantly affect BI, similar to the findings of other researchers (Hasif & Ahmad, 2019; Salloum & Shaalan, 2019). Another study evaluated ICT acceptance in madrasa education and found that religious perspective on ICT was the highest predictor of behavioural intention to use ICT (Abubakari & Priyanto, 2021). The same study observed that personal innovativeness (PI) significantly influenced BI, supporting the findings of some earlier works (Farooq et al., 2017; Gbongli et al., 2019) in which PI significantly affected both EE and BI. Moreover, the study found an insignificant direct effect of facilitating conditions on ICT usage behaviour, similar to some other earlier studies (Isaac et al., 2019; Yang et al., 2019), but contrary to others, who found the significant influence of FC on UB (Hasif & Ahmad, 2019; Hoque & Sorwar, 2017; Venkatesh et al., 2012).

The previously discussed related studies and some others (Humaid & Sabri, 2019; Liebenberg et al., 2018; Lwoga & Komba, 2015; Mtebe & Raisamo, 2014; Muries & Masele, 2017; Raza et al., 2019; Rozmi et al.,



2019; Saleem et al., 2016) have either focused on other sectors or in a general education context. Except for a few researchers (Abubakari & Priyanto, 2021), there is generally limited ICT acceptance research focusing on the Islamic education context. Therefore, the current study intends to fill the gap by modelling ICT acceptance in Islamic education in Indonesia based on the modified UTAUT model.

METHODOLOGY

Research Design, Data Collection, and Sample

The study is based on a quantitative design approach; hence it implemented an online survey questionnaire to gather data from students and teachers from several Islamic education centres in Indonesia. The survey questionnaire was put into electronic form using Google Form and sent to different WhatsApp groups. Since it was challenging to contact research participants due to the pandemic scenario, a non-probabilistic data collection approach based on convenience and snowballing techniques was adopted. Data was gathered between July 2020 and February 2021. Further, the research sample consisted of 225 participants, and all data were valid. The sample was clustered based on five demographic variables; general education level, position, gender, Islamic centre location, and age. For the gender variable, most respondents were females (158 = 70.2%), and the remaining were males (67 = 29.8%). Meanwhile, the age of the majority (188 = 83.6%) was between 18 and 25, a few of them (19 = 8.4%) were below eighteen years old, and the rest were above 26 years old (18 = 8.0). As for the position, most of the participants were students (181 = 80.4%), and the rest were teachers (44 = 19.6%). Moreover, the education level of the majority was senior high school or equivalent (131 = 58.2%), a few of them were junior high school or below (15 = 6.7%), and the rest possessed a bachelor's degree or above (79 = 35.1%). Besides that, many research participants were located in Yogyakarta province (84 = 37.3%), followed by Central Java (39 = 17.3%), West Java (34 = 15.1%), and Banten (31 = 13.9%), while the rest were from other provinces (14 = 6.2%).

Research Instrumentation and Analysis Technique

Items of five variables, namely BI, EE, PE, FC, and UB were obtained from the study of the UTAUT model (Venkatesh et al., 2003). While measuring items for the PI variable were adopted from (Agarwal & Prasad, 1998), and items for RP were adopted from the recent related study (Abubakari & Priyanto, 2021). All research variables have four measuring items each, and all were measured using the 7-point Likert scale, with 7 = Strongly Agree to 1 = Strongly Disagree. Because all of the research participants were native Indonesian language speakers, the instrument was translated into that language. Finally, the pilot test was carried out involving 35 samples to verify the instrument's reliability and found the Alpha reliability coefficient of 0.953, which exceeds 0.7, the necessary minimum threshold (Cronbach, 1951), confirming that the instrument was reliable. Further, to check respondents' data consistency, the instrument reliability, and analyse demographic data, IBM-SPSS v.25 software was deployed. Using the program Smart-PLS v3.3.3 (Ringle et al., 2015), the partial Least Squares-Structural Equation Modelling (PLS-SEM) technique was employed to further analyse the data for model evaluation and test the research hypotheses.

ANALYSIS RESULTS

Measurement Model Analysis

Reliability and validity tests were carried out to evaluate the outer model. Convergent validity was evaluated using Average Variance Extracted (AVE) and factor loadings (FL) parameters. While the reliability test was based on Cronbach's alpha (CA) and composite reliability (CR). Meanwhile, discriminant validity was determined using both Heterotrait-Monotrait Ratio (HTMT) and Fornell-Larcker



criterion (FLC). After applying the PLS Algorithm using Smart-PLS software, all variables' items (except item RP3) had loading scores of more than 0.708, the minimum acceptable threshold for further analysis (Hair et al., 2019), confirming the factor loading criterion to be fulfilled. However, item RP3 has to be eliminated in order to achieve discriminant validity. Meanwhile, all of the loading scores for CA and CR were above the threshold score of 0.7 (Hair et al., 2017). Moreover, the AVE scores were also higher than 0.5, demonstrating that convergent validity is achieved (Hair et al., 2019). Table 1 summarizes the final results (after removing item RP3) of the measurement model, depicting the values of FL, CR, CA, and AVE.

Table 1: Item Loadings, Convergent Validity, and Reliability Results

Construct	Item	FL	CR	CA	AVE
Effort Expectancy (EE)	EE1	0.844	0.905	0.860	0.706
	EE2	0.885			
	EE4	0.867			
	EE5	0.758			
Performance Expectancy (PE)	PE1	0.831	0.905	0.859	0.704
	PE2	0.879			
	PE3	0.801			
	PE4	0.842			
Facilitating Conditions (FC)	FC1	0.835	0.880	0.819	0.646
	FC2	0.765			
	FC3	0.793			
	FC4	0.820			
Personal Innovativeness (PI)	PI1	0.880	0.921	0.886	0.744
	PI2	0.830			
	PI3	0.876			
	PI4	0.864			
Religious Perspective (PI)	RP1	0.841	0.880	0.796	0.709
	RP2	0.851			
	RP4	0.835			
Social Influence (SI)	SI1	0.802	0.869	0.805	0.625
	SI2	0.865			
	SI3	0.778			
	SI4	0.709			
Behavioural Intention (BI)	BI1	0.915	0.919	0.881	0.740
	BI2	0.919			
	BI3	0.822			
	BI4	0.775			
Use Behaviour (UB)	UB1	0.816	0.901	0.855	0.695
	UB2	0.840			
	UB3	0.855			
	UB4	0.823			

Furthermore, Discriminant validity was essential to be checked to verify if all research constructs are distinct from each other based on what they measure (Hair et al., 2017). The test results of discriminant



validity in this study conform to the requirements of the FLC and HTMT. Table 2 shows the results of HTMT and FLC, confirming that all FLC and HTMT requirements were achieved. The HTMT criterion is demonstrated by the fact that all scores (bracketed and italicized) fall below the maximum cut-off of 0.9 mark, with the highest score of the HTMT reported in Table 2 being 0.837, which is below the 0.85 (or 0.9) cut-off (Henseler et al., 2017). As for FLC, each construct's AVE square root scores (bolded values) are higher than the remainder of the cross-correlation scores with other variables (scores not bolded), proving that the FLC is met (Hair et al., 2019).

Table 2: Heterotrait-Monotrait Ratio and Fornell-Larcker Criteria Results

Construct	BI	EE	FC	PE	PI	RP	SI	UB
Behavioural Intention (BI)	0.860 (0)							
Effort Expectancy (EE)	0.516 (0.592)	0.840 (0)						
Facilitating Conditions (FC)	0.596 (0.692)	0.688 (0.822)	0.804 (0)					
Performance Expectancy (PE)	0.547 (0.614)	0.668 (0.782)	0.530 (0.624)	0.839 (0)				
Personal Innovativeness (PI)	0.587 (0.654)	0.681 (0.772)	0.707 (0.837)	0.546 (0.615)	0.863 (0)			
Religious Perspective (RP)	0.647 (0.759)	0.483 (0.589)	0.546 (0.665)	0.602 (0.723)	0.453 (0.528)	0.842 (0)		
Social Influence (SI)	0.543 (0.617)	0.444 (0.515)	0.522 (0.618)	0.558 (0.627)	0.568 (0.664)	0.456 (0.556)	0.790 (0)	
Use Behaviour (UB)	0.657 (0.729)	0.578 (0.674)	0.594 (0.693)	0.670 (0.776)	0.554 (0.623)	0.617 (0.728)	0.579 (0.688)	0.833 (0)

Structural Model Analysis

Structural model was assessed by using the path coefficients significance, predictive relevance (Q^2), and determination coefficients (R square, R^2) criteria, (Hair et al., 2019) determined by the blindfolding technique in PLS. Within a structural model, the Q^2 coefficient determines if the independent variables are pertinent in predicting a specific dependent variable. While the R^2 criterion illustrates how well a set of predictive variables can account for the variance of a particular dependent variable. Q^2 's values of 0.02, 0.15, and 0.35 are categorized as weak, moderate, and strong, respectively. R^2 values of 0.70, 0.50, and 0.25, on the other hand, signify high, moderate, and low, respectively (Hair et al., 2017). Table 3 presents the Q^2 and R^2 scores of analysed results.

Table 3 indicates that scores of Q^2 range from 0.248 to 0.383, implying that independent variables' predictive ability in the proposed model is eminently relevant (Hair Jr et al., 2017). While R^2 values range from 0.363 to 0.551, indicating that the model's predicting factors could account for the 55.1% variance of the BI variable and 54.0% of the UB variable. The values 0.551 and 0.54 of the R^2 are regarded as moderate values (Hair Jr et al., 2017). Finally, a PLS bootstrapping approach was employed using 5000 samples and 0.05 two-tailed significant level for analysing and checking if the path coefficients are significant. Table 4 portrays the path coefficients' scores and the achieved significance level.



Table 3: Determination Coefficients and Predictive Relevance Results

Variable	R Square (R ²)	Q ²
Behavioural Intention	0.551	0.383
Effort Expectancy	0.464	0.321
Facilitating Conditions		
Performance Expectancy	0.363	0.248
Personal Innovativeness		
Religious Perspective		
Social Influence		
Use Behaviour	0.540	0.353

Table 4: Results of T-Statistics, *P*-Significance Level, and Path Coefficients (β)

Hypothesis	Path	T Statistics (β /SD)	<i>P</i> Values	Standard Deviation (SD)	Path Coeff. (β)
H1	EE -> BI	0.528	0.597	0.083	0.044
H2	PE -> BI	0.486	0.627	0.073	0.036
H3	SI -> BI	2.775	0.006	0.062	0.173
H4	FC-> UB	2.236	0.025	0.079	0.176
H5	PI -> EE	16.022	0.000	0.043	0.681
H6	PI -> BI	2.968	0.003	0.086	0.254
H7	PI -> UB	1.766	0.077	0.074	0.131
H8	RP -> BI	5.760	0.000	0.071	0.411
H9	RP -> UB	2.687	0.007	0.099	0.265
H10	RP -> PE	9.908	0.000	0.061	0.602
H11	BI -> UB	3.225	0.001	0.094	0.303

Eight out of the eleven paths exhibit significant T-statistics scores (Bolded scores) with a significance level of less than 0.05, according to the path analysis results presented in Table 4. These paths are, SI -> BI (T = 2.775, *P* = 0.006); FC-> UB (T = 2.236, *P* = 0.025); PI -> EE (T = 16.022, *P* = 0.000); PI -> BI (T = 2.968, *P* = 0.003); RP -> BI (T = 5.760, *P* = 0.000); RP -> UB (T = 2.687, *P* = 0.007); RP -> PE (T = 9.908, *P* = 0.000); and BI -> UB (T = 3.225, *P* = 0.001). The remaining three paths were deemed insignificant since their *P*-values were more than the predefined 0.05 level. That is to say, eight research hypotheses (H3, H4, H5, H6, H8, H9, H10, and H11) are significantly accepted, while three hypotheses (H7, H2, and H1) were not supported.

FINDINGS AND DISCUSSIONS

The current study findings show four potential factors that could significantly explain and predict individuals' acceptance of ICT for digital learning in Islamic education. That is, the third hypothesis (H3) is supported, implying that social interactions can significantly influence an individual to adopt ICT facilities for digital learning in an Islamic education context. This situation can include the impact of potential Muslim leaders, who are admired and emulated by many Muslims for their excellent activities. That is to say, intention to utilize ICT in Islamic education would increase if an individual feels there is



social appreciation and support from their social groups which are significant to them. This finding is in line with other previous studies (Ayaz & Yanartaş, 2020; Hasif & Ahmad, 2019) in which SI was also found to significantly affect BI to utilize ICT resources in various contexts.

The hypothesis four (H4) is also affirmed, meaning that the availability of ICT resources has significant effects on individuals in Islamic education to use ICT for Islamic studies. This finding conforms to the findings of the previous mainstream studies (Bervell & Umar, 2017; Venkatesh et al., 2012, 2003) in which the factor FC was found to be significant and directly influencing ICT usage behaviour. Moreover, the fifth and sixth hypotheses were accepted, showing that individuals in Islamic education contexts are courageous, curious, and have daring behaviour to utilize ICT facilities for Islamic learning. The personality characteristic of personal innovativeness is shown in the literature on ICT adoption (Agarwal & Prasad, 1997, 1998) as a significant individual factor in predicting ICT adoption (Goldsmith, 2001). These findings of significant effects of PI on BI and EE correspond to the previous works (Farooq et al., 2017; Gbongli et al., 2019) in which it was found that a person with a high innovativeness trait was likely to use digital technologies despite the uncertainties, and they interact easily with digital contents (Abubakari et al., 2022; Bervell et al., 2020) and digital facilities (Mazman Akar, 2019; G. W.-H. Tan et al., 2014).

Moreover, the eighth, ninth, and tenth (H8, H9, and H10) hypotheses were significantly accepted, confirming that the perspective of individuals in the Islamic education context is positive toward ICT adoption in their academic activities. Earlier literature (Johan et al., 2020; Saleh et al., 2020) also found that religious-related factors are the best predictors of religious Muslim individuals' intention to utilize ICT for different purposes. These findings indicate that religious individuals are willing to adopt a particular technological innovation provided that they perceive a particular innovation is in line with Islamic values. Some researchers (Abubakari & Priyanto, 2021) found that religious perspective on ICT was the dominant factor in predicting intention to utilize ICT in Islamic education. Finally, the eleventh hypothesis (H11) was also significantly supported, indicating that the intention to utilize ICT in Islamic education, positively influenced the actual usage of ICT. This finding supports previous literature (Humaid & Sabri, 2019; Raza et al., 2019) which also found a significant correlation between BI and actual utilization of ICT facilities.

Nonetheless, personal innovativeness and the two UTAUT constructs (EE and PE) did not significantly affect individuals' intentions to use ICT resources in Islamic education. That is to say, ICT usefulness and ease of use did not influence research participants' intentions to utilize ICT in Islamic learning and teaching activities, rather other factors did. This finding contradicts some previous findings (Lwoga & Komba, 2015; Muries & Masele, 2017) in which EE was observed to significantly affect BI. However, the insignificant effect of EE on BI was previously realized by some earlier academic works (Ayaz & Yanartaş, 2020; Hasif & Ahmad, 2019; Salloum & Shaalan, 2019). Further, as supported with the present study's finding, PE was also found not to be significant by other studies (Abubakari & Priyanto, 2021; Mtebe et al., 2016; Rozmi et al., 2019), but contrary to other studies' findings (Liebenberg et al., 2018; Muries & Masele, 2017; Saleem et al., 2016). In addition, PI was also observed to not significantly influence the actual utilization of ICT resources in a previous study (Rosen, 2005), however contradicting the findings of other researchers (Farooq et al., 2017; Gunasinghe et al., 2018) who affirmed that PI significantly influenced UB of ICT. The insignificant effects of some variables such as PE and EE on BI could be caused by the presence of other conceptually-related factors especially FC and PI as argued by previous researchers (Venkatesh et al., 2003).

Finally, the present academic work provides a substantial theoretical contribution due to the fact that the modified UTAUT model can be applied as a basis for predicting ICT acceptance and use from an Islamic viewpoint. Future researches might use the study's findings to look into the variables that affect Muslims' acceptance and usage of ICT in various settings. Identifying other variables outside this study that could



influence ICT acceptance and usage for end-users is possible in future studies to obtain a better model. Furthermore, the findings provide highlights for the successful adoption of ICT facilities in Islamic education for practical implications. When planning to integrate ICT facilities, stakeholders in Islamic education and policymakers should consider the implications of the four factors: FC, PI, RP, and SI. Through da'wah, good word of mouth can be an excellent strategy to encourage Muslims to use ICT for Islamic education.

CONCLUSION AND RECOMMENDATIONS

To identify factors influencing ICT acceptance and use in Islamic education, the present study extended the UTAUT model with two variables: personal innovativeness in the IT domain and the religious perspective on ICT. Based on PLS-SEM analysis results, it can be concluded that the research objectives were fulfilled. First, the study discovered that Personal Innovativeness, Social Influence, and Religious Perspective on ICT strongly influenced behavioural intention (BI) to use ICT, with the RP variable having the greatest influence on BI. Meanwhile, the two UTAUT variables EE and PE had no significant influence on BI. Secondly, Personal Innovativeness had a substantial effect on BI but not significant on UB. Lastly, both RP and FC directly influenced the UB of ICT in an Islamic education context. Finally, the research variables accounted for 55.1% of variance of the BI variable and 54.0% of the UB variable. Therefore, the remaining proportion might be explained by other variables that were not considered in this study.

Nevertheless, it is important to take into account some of this study's limitations. To begin with, the study used a non-probabilistic sampling technique to gather data. As a result, not all members of the target demographic have had an equal chance to take part in the study. Second, the study did not consider the moderating effects of demographic variables such as experience, age, and gender as applied in the original UTAUT model. Moreover, the study is a cross-section, making it hard to conclude the causal-effect relationships between research variables. Thus, future studies can consider demographic factors to moderate the influence of independent variables on dependent constructs as well as implement probabilistic sampling and longitudinal approaches for logical generalization of the findings.

CONFLICT OF INTEREST DISCLOSURE

The authors declare that there are no any conflicts of interest to disclose.

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