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INTEGRATING ISLAMIC MARKETING EDUCATION TO BUILDING CONSUMER LITERACY AND ENTREPRENEURIAL MINDSET IN PESANTREN

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ABSTRACT

Globally, Islamic educational institutions face increasing pressure to respond to digital economic transformations while maintaining Islamic ethical and pedagogical foundations. This study aims to examine the role of Islamic Marketing Education (IME), integrated with the Unified Theory of Acceptance and Use of Technology (UTAUT), in enhancing consumer literacy and fostering an entrepreneurial mindset among *santri* in Indonesian Islamic boarding schools (*pesantren*). Using a quantitative cross-sectional survey design, data were collected from 350 *santri* and analyzed through Partial Least Squares–Structural Equation Modeling (PLS-SEM) using SmartPLS version 4. The results demonstrate that IME has a positive and significant effect on consumer literacy, entrepreneurial mindset, and core UTAUT constructs, including performance expectancy, effort expectancy, social influence, and facilitating conditions. In addition, entrepreneurial mindset and UTAUT variables significantly predict *santri*' intention to use e-commerce, while consumer literacy acts as a moderating factor that supports reflective, value-based decision-making and mitigates uncritical technology adoption. The study concludes that integrating Islamic pedagogical approaches with technology acceptance frameworks effectively strengthens digital readiness without compromising Islamic moral principles. These findings imply that Islamic education, particularly within *pesantren* contexts, should systematically incorporate ethically grounded digital entrepreneurship and consumer literacy to prepare students for responsible participation in the contemporary digital economy.

Keywords: Consumer Literacy, Entrepreneurial Mindset, Islamic Marketing Education, Pesantren, Technology Acceptance

INTRODUCTION

Islamic educational institutions worldwide are increasingly confronted with the challenge of responding to rapid digital and economic transformations while preserving their religious, ethical, and pedagogical foundations. As digital technologies reshape patterns of production, consumption, and entrepreneurship, faith-based educational settings are expected not only to transmit moral values but also to equip students with the competencies required to participate responsibly in the digital economy. Within this global context, *pesantren* occupy a strategic position, as they serve simultaneously as centres of religious learning, moral formation, and community empowerment.

In Indonesia, *pesantren* play a vital role in the national Islamic education landscape by integrating religious instruction with moral and intellectual development (Sukman et al., 2025). Historically recognised as enduring institutions of Islamic learning, *pesantren* cultivate spiritual discipline, ethical awareness, and intellectual resilience, preparing *santri* to assume leadership

roles within their communities and the broader society (Lathifah et al., 2025; Sutomo et al., 2024). Over time, their educational mandate has expanded beyond traditional religious instruction to include the promotion of a *sharia*-based economy and the strengthening of community self-reliance (Sopian et al., 2025). In response to evolving educational and socioeconomic demands, many *pesantren* have begun integrating digital technologies and creative economy initiatives, including e-commerce (García Jurado et al., 2021) and digital marketing, to reinforce entrepreneurial ecosystems within Islamic education (Cao et al., 2025).

Despite these developments, scholarly attention to how *pesantren* systematically integrate Islamic Marketing Education (IME) with technology-adoption frameworks remains limited. The Unified Theory of Acceptance and Use of Technology (UTAUT) offers a well-established explanation of behavioural intention through constructs such as performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatakrishnan et al., 2023). However, most UTAUT-based studies are situated in secular or commercial environments, overlooking the distinctive moral, ethical, and pedagogical dimensions of Islamic learning contexts. Positioning UTAUT within IME provides a more holistic analytical lens for understanding how *santri* engage with e-commerce in ways that reflect Islamic values, ethical consumption, and faith-based educational objectives (Harahap et al., 2023; Nugroho et al., 2023).

Existing research on technology acceptance in Islamic education, particularly regarding e-commerce adoption in pesantren, remains underdeveloped. Although UTAUT has been applied in Islamic educational settings, such as digital education management (Chen et al., 2021) and general ICT acceptance (Celik, 2016), empirical studies that integrate IME, technology adoption, and entrepreneurial mindset development remain scarce. Within the Indonesian context, several pesantren have developed digital economic capacities through e-commerce platforms, digital marketing initiatives, and entrepreneurship incubators (Syaharuddin et al., 2025). Prior studies document increased institutional revenue, the emergence of santripreneur programmes, and the use of e-commerce applications in pesantren operations (Cuellar Fernández et al., 2021), yet these studies rarely engage with marketing education or technology-acceptance theory in a systematic manner (Treiblmaier & Sillaber, 2021).

Recent studies on entrepreneurship development in *pesantren* have largely emphasized business incubation, vocational training, and character education, while paying limited attention to technology-acceptance constructs such as performance expectancy, effort expectancy, social influence, and facilitating conditions (Sharma et al., 2025). Research conducted in *pesantren* such as Darul Muttaqien in Kendal and Sunan Drajat demonstrates the effectiveness of entrepreneurship education in fostering economic independence but overlooks students' technological readiness and digital adoption behaviour (Mawaddatul Ulya & Muhammad Fajrul Khairullah, 2024), a pattern also evident in studies focusing on entrepreneurial culture and business model innovation without technology-acceptance perspectives (Mohammad & Ahmad, 2024; Fata & Mnongya, 2025). Although digital entrepreneurship training increases student participation, the psychological and behavioural predictors of technology use remain underexplored (Cahyo et al., 2025; Munawar & Khasanah, 2025). Addressing this gap, the present study proposes an integrated IME–UTAUT framework that links IME with technology-adoption behaviour through the mediating role of entrepreneurial mindset and the moderating role of consumer literacy, thereby advancing Islamic education scholarship and offering practical insights for developing an ethically grounded, *pesantren*-based digital economy.

METHOD

A quantitative cross-sectional survey design was employed to test a structural model explaining how IME influences *santri*' intention to use e-commerce in *pesantren*, with entrepreneurial mindset as a mediating variable and consumer literacy as a moderating variable. The model was

theoretically grounded in UTAUT and operationalized as a reflective higher-order construct comprising four first-order reflective dimensions: performance expectancy, effort expectancy, social influence, and facilitating conditions. This reflective–reflective higher-order specification follows established methodological guidelines for modelling complex multidimensional constructs while maintaining robust psychometric properties (Hair & Alamer, 2022; Sarstedt, 2019).

Data were collected through structured questionnaires administered both online and in person to *santri* and teachers from *pesantren* in West Java, Central Java, and East Java, Indonesia. Non-probability sampling was used to select institutions actively engaged in digital entrepreneurship initiatives, resulting in a final sample of 350 respondents, which exceeds the minimum requirements for PLS-SEM analysis using SmartPLS version 4. Measurement items for IME, UTAUT dimensions, consumer literacy, entrepreneurial mindset, and intention to use e-commerce were adapted from validated scales (Hunt, 2015; Venkatesh et al., 2003) and assessed using a five-point Likert scale. Ethical procedures were strictly observed, including informed consent, confidentiality assurances, and institutional approval, and the instrument was pilot-tested prior to full-scale data collection to ensure clarity and reliability.

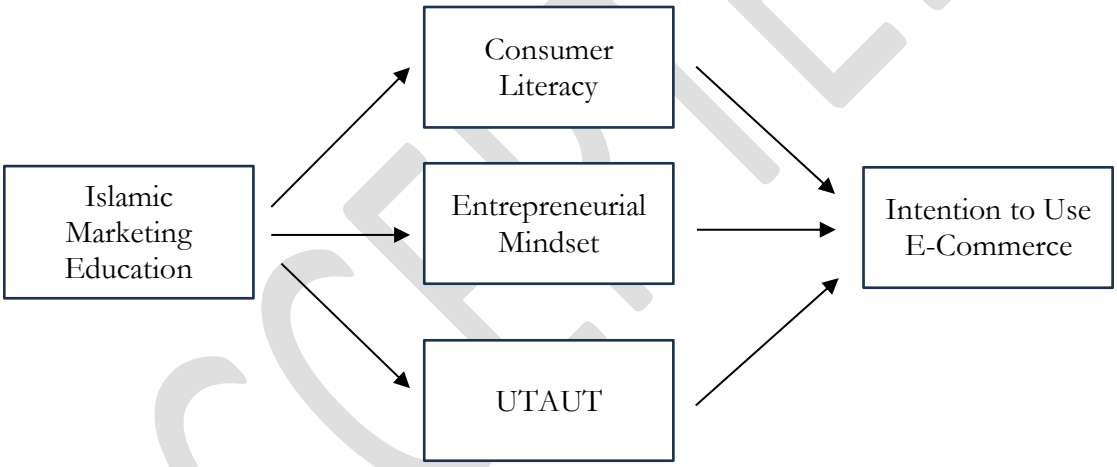

Figure 1. Research Framework

The conceptual framework integrates IME with UTAUT to explain *santri*' intention to use e-commerce in *pesantren* contexts, positioning IME as a core pedagogical construct that shapes consumer literacy, entrepreneurial mindset, and technology-acceptance beliefs. Entrepreneurial mindset and the UTAUT construct are hypothesised to directly influence students' intention to use e-commerce, while consumer literacy moderates the relationship between IME and e-commerce intention. To test these relationships, seven hypotheses were formulated and analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS version 4, following established methodological guidelines (Hair & Alamer, 2022; Huit et al., 2018). The analysis involved evaluating the measurement model for reliability and validity and assessing the structural model through bootstrapping, effect sizes, predictive relevance, and hierarchical component modelling for the reflective higher-order UTAUT construct, ensuring robust estimation of the proposed relationships.

RESULTS AND DISCUSSION

This section presents the results of the empirical analysis conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with SmartPLS version 4 to test the proposed research model. The analysis focuses on evaluating the measurement model to ensure reliability and validity, followed by an examination of the structural model to assess the direct, indirect, and moderating relationships among IME, consumer literacy, entrepreneurial mindset, UTAUT, and students' intention to use e-commerce in *pesantren*. The findings provide empirical evidence to address the study objectives and test the hypothesised relationships.

Table 1 presents the demographic profile of the 350 respondents included in this study, covering gender, age, educational level, and regional origin. The distribution reflects the typical characteristics of *pesantren* communities in Indonesia and provides a relevant context for interpreting the subsequent analysis.

Table 1. Summary of Demographic Sample

Respondent Characteristics	Category	Total(n)	(%)
Gender	Male Students	209	60%
	Female Students	141	40%
Age	15–18 years old (Islamic Senior High School)	123	35%
	19–22 years old (College Students)	134	38%
	23–25 years old (Senior Students)	70	20%
	>26 years old (Teachers/ Staff)	23	7%
Educational level	Madrasah Aliyah	176	50%
	Diploma	54	15%
	Bachelor's Degree (S1)	111	32%
	Master's Degree (S2)	9	3%
Origin of Islamic Boarding School/Region	East Java	132	38%
	West Java	106	30%
	Center Java	76	22%
	Outside of Java	36	10%

Overall, the demographic profile indicates that the sample adequately represents the diversity of *pesantren* communities in Indonesia in terms of gender, age, educational background, and regional distribution. The dominance of respondents aged 15–22 years reflects the core population of *santri* who are actively engaged in formal and non-formal learning processes and are at a critical stage for developing entrepreneurial orientation, consumer literacy, and technology-adoption behaviour. The inclusion of senior students, teachers, and staff enriches the data by incorporating more experienced perspectives on educational practices and digital engagement within *pesantren*. Furthermore, the representation of respondents from both Java and non-Java regions strengthens the external relevance of the findings, allowing the results to be interpreted as reflective of broader Islamic boarding school contexts rather than a single institutional or regional setting.

Measurement Model Assessment

The measurement model was evaluated to ensure the adequacy of the reflective constructs prior to structural model testing by assessing indicator reliability, internal consistency

reliability, and convergent validity. Indicator reliability was examined through outer loading values, while internal consistency and convergent validity were assessed using Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE). As reported in Table 4, all measurement indicators associated with Islamic Marketing Education (IME), Consumer Literacy (CL), Entrepreneurial Mindset (EM), Intention to Use E-Commerce (INT), and the four first-order dimensions of the UTAUT construct, performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC), exhibited outer loadings exceeding the recommended threshold of 0.70. This indicates that each indicator reliably represents its corresponding latent construct. Overall, these results confirm that the measurement items demonstrate satisfactory indicator reliability, supporting the validity of the reflective measurement model used in this study.

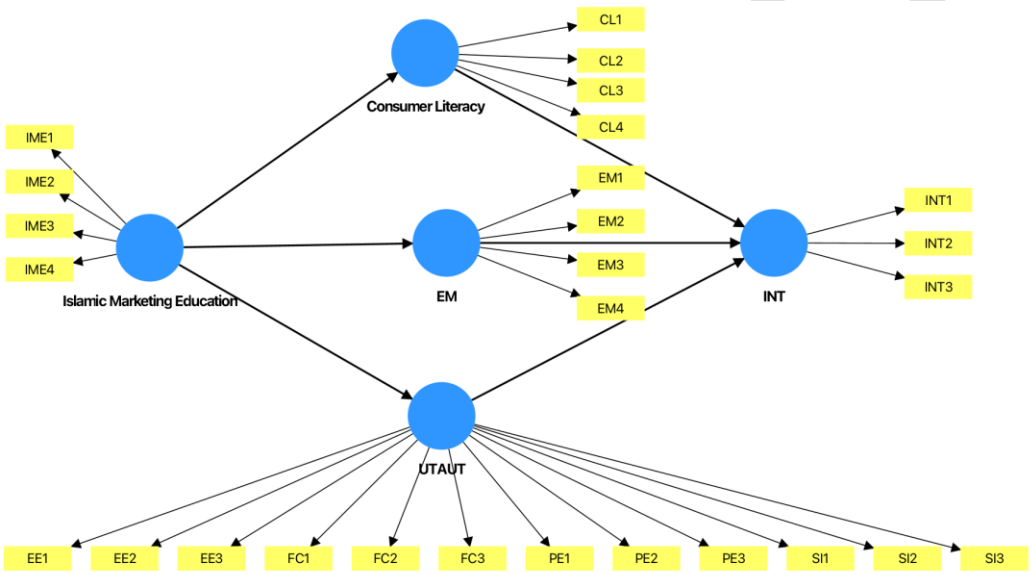

Figure 2. Description of the Measurement Model

Figure 2 illustrates the conceptual structure of the measurement model, showing the relationships between latent constructs and their observed indicators, including the reflective–reflective hierarchical specification of the UTAUT construct.

The internal consistency reliability of the constructs was assessed using Cronbach's Alpha and Composite Reliability, both of which produced values well above the recommended thresholds. Cronbach's Alpha coefficients ranged from 0.846 to 0.966, indicating a high level of internal consistency across all measurement scales, as all values exceeded the minimum acceptable criterion of 0.70. Similarly, Composite Reliability values ranged from 0.909 to 0.970, further confirming the strong reliability of the constructs and the consistency of the indicators in measuring their respective latent variables. Convergent validity was also established, as the Average Variance Extracted (AVE) values for all constructs exceeded the recommended threshold of 0.50, with values ranging between 0.714 and 0.773, indicating that a substantial proportion of variance in the indicators was captured by the latent constructs. For the higher-order UTAUT construct, reliability and validity assessments were conducted at the first-order level, performance expectancy, effort expectancy, social influence, and facilitating conditions, in accordance with its reflective–reflective hierarchical component structure. Collectively, these

results confirm that all constructs meet established reliability and convergent validity criteria, supporting their suitability for subsequent structural model evaluation.

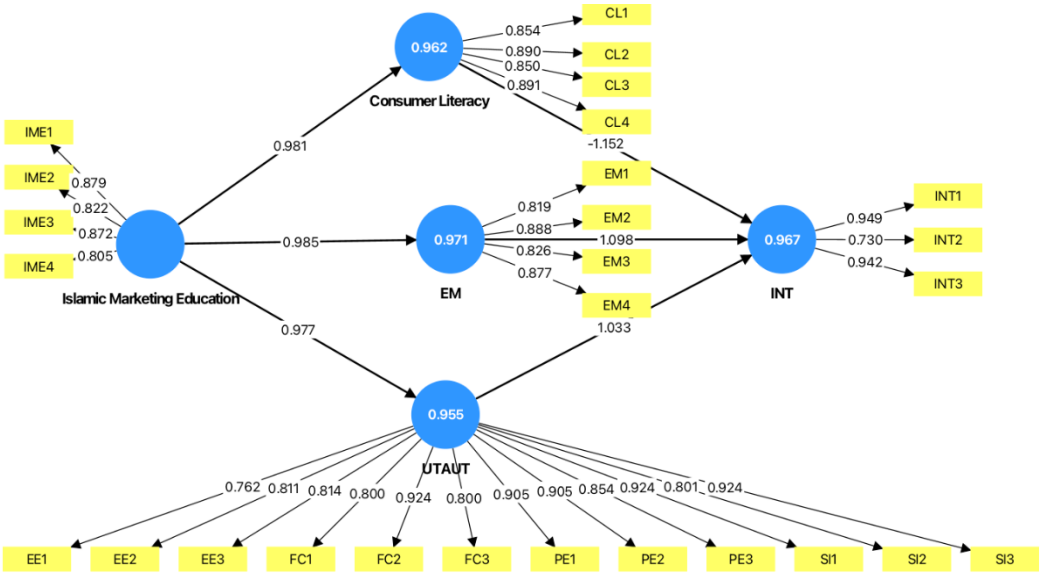

Figure 3. Measurement Model

Figure 3 presents the estimated measurement model generated using SmartPLS version 4, illustrating the standardized relationships between indicators and their corresponding latent constructs. The figure confirms that all indicators load appropriately on their respective constructs, supporting the robustness of the measurement model. A comprehensive summary of the measurement model evaluation, including reliability and validity statistics, is provided in Table 2.

Table 2. Summary of PLS Analysis Result

Variable	Measurement Items	OL	CA	CR	AVE
Islamic Marketing Education (IME) (X1)	IME1: Islamic Curriculum	0.879	0.866	0.927	0.760
	IME2: Integration of Sharia Values	0.822			
	IME3: Role of Ustadz	0.872			
	IME4: Practical Experience	0.805			
Consumer Literacy (CL) (Z1)	CL1: Consumer Knowledge	0.854	0.895	0.910	0.773
	CL2: Halal awareness	0.890			
	CL3: Critical attitude	0.850			
	CL4: Security awareness	0.891			
Entrepreneurial Mindset (EM)	EM1: Opportunity orientation	0.819	0.876	0.909	0.714
	EM2: Creativity	0.888			

Variable	Measurement Items	OL	CA	CR	AVE
(Z2)	EM3: Resilience	0.826			
	EM4: Islamic values	0.877			
UTAUT – Performance Expectancy (PE) (Z3)	PE1: Improved Results	0.905			
	PE2: Market Reach	0.905			
	PE3: Efficiency	0.854			
UTAUT – Effort Expectancy (EE) (Z3)	EE1: Simple to Learn	0.762			
	EE2: User-Friendly	0.811			
	EE3: Quick Mastery	0.814	0.966	0.914	0.728
UTAUT – Social Influence (SI) (Z3)	SI1: Ustadz's Support	0.924			
	SI2: Support from Friends	0.801			
	SI3: Family support:	0.924			
UTAUT – Facilitating Conditions (FC) (Z3)	FC1: Internet Infrastructure	0.800			
	FC2: Devices	0.924			
	FC3: Training	0.800			
Intention to Use E-Commerce (INT) (Y)	INT1: Intention to use	0.949			
	INT2: Planned use	0.730	0.846	0.970	0.729
	INT3: Recommendation	0.942			

Beyond demonstrating statistical adequacy, the measurement results also provide insight into how educational practices are structured within *pesantren*. The strong measurement properties of IME indicate that this construct is coherently represented by indicators reflecting curriculum integration, the incorporation of *sharia* values, the pedagogical role of *ustadz,* and experiential learning activities. These indicators suggest that IME in *pesantren* is not limited to theoretical instruction but is embedded in value-oriented teaching practices and practical entrepreneurial exposure, reinforcing its role as a foundational pedagogical mechanism for shaping students' ethical and economic orientations.

Similarly, the robust measurement performance of Consumer Literacy (CL) and Entrepreneurial Mindset (EM) highlights the capacity of *pesantren* to cultivate competencies that are essential for ethical engagement in the digital economy. High-loading indicators related to halal awareness, critical evaluation, and security consciousness reflect the development of reflective and responsible consumption behaviour among *santri*. At the same time, indicators capturing creativity, resilience, opportunity orientation, and adherence to Islamic values demonstrate that entrepreneurial thinking is actively fostered within the *pesantren* environment. The four UTAUT dimensions, performance expectancy, effort expectancy, social influence, and facilitating conditions, further indicate that students' acceptance of e-commerce is shaped by both individual perceptions and supportive social and institutional contexts. Collectively, these results suggest that IME, supported by favourable technology-acceptance beliefs, provides a coherent foundation for strengthening consumer literacy and entrepreneurial mindset within *pesantren*.

Descriptive Statistics

Table 3 presents the descriptive statistics, including means and standard deviations, for the principal variables examined in this study. Islamic Marketing Education (IME) recorded a mean score of 4.069 (SD = 0.676), indicating a high level of perceived exposure to Islamic marketing–related educational practices among respondents. Consumer Literacy showed the highest mean value (M = 4.082, SD = 0.974), followed by Entrepreneurial Mindset (M = 4.062, SD = 0.935) and the UTAUT construct (M = 4.023, SD = 0.979). Intention to Use E-Commerce also demonstrated a relatively high mean score (M = 4.005, SD = 0.911).

Table 3. Summary of Descriptive Statistics

Variable	Mean	Standart Deviation
Islamic Marketing Education	4.069	0.676
UTAUT	4.023	0.979
Consumer Literacy	4.082	0.974
Entrepreneurial Mindset	4.062	0.935
Intention to Use E-Commerce	4.005	0.911

Overall, all constructs recorded mean values above 4.00 on a five-point Likert scale, indicating generally positive perceptions among respondents. The standard deviation values suggest moderate variability in responses, reflecting differences in individual experiences across *pesantren*. The relatively high mean for IME indicates that respondents perceive the integration of Islamic values, marketing-related content, and pedagogical practices as well established within *pesantren*. Similarly, the high mean scores for consumer literacy and entrepreneurial mindset suggest that *pesantren* environments actively foster ethical awareness, critical evaluation, independence, and initiative. Together, these descriptive results highlight the potential of IME to support the development of consumer literacy, entrepreneurial orientation, and digital readiness, reinforcing the role of *pesantren* as strategic settings for integrating Islamic educational values with contemporary digital competencies.

Direct Effect

To examine the proposed structural relationships among Islamic Marketing Education, consumer literacy, entrepreneurial mindset, technology acceptance, and intention to use e-commerce, a direct effect analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM). This analysis aimed to determine the strength, direction, and statistical significance of each hypothesised path in the model. Bootstrapping with 5,000 resamples was applied to estimate path coefficients, t-statistics, and p-values, with statistical significance assessed at the 0.05 level. The results of the direct effect analysis are presented in Table 4.

Table 4. Direct Effect

Path	Original Sample	Sample Mean	Standart Deviation	T-Statistic	p-value	Result
IME -> CL	0.981	0.981	0.004	249.561	0.000	Significant
IME -> EM	0.985	0.985	0.006	167.790	0.000	Significant
IME -> UTAUT	0.977	0.977	0.003	353.012	0.000	Significant
UTAUT -> INT	1.033	1.029	0.093	11.109	0.000	Significant
CL -> INT	-1.152	-1.144	0.136	8.439	0.000	Significant
EM -> INT	1.098	1.094	0.088	12.429	0.000	Significant
UTAUT -> INT	1.033	1.029	0.093	11.109	0.000	Significant

As reported in Table 4, Islamic Marketing Education (IME) demonstrates strong and statistically significant direct effects on Consumer Literacy (CL), Entrepreneurial Mindset (EM), and the UTAUT construct, indicating that IME functions as a key antecedent variable within the model. Furthermore, Entrepreneurial Mindset and UTAUT both show positive and significant direct effects on intention to use e-commerce (INT), while Consumer Literacy exhibits a significant negative direct effect on intention. Collectively, these results confirm that all hypothesised direct relationships are supported by the data and meet the established significance criteria, thereby validating the structural model and providing a robust empirical basis for further interpretation and discussion.

Indirect Effect

To further examine the underlying mechanism through which Islamic Marketing Education (IME) influences students' intention to use e-commerce, an indirect effect analysis was conducted using Partial Least Squares–Structural Equation Modeling (PLS-SEM). This analysis assessed whether the relationship between IME and intention to use e-commerce (INT) is transmitted through the Unified Theory of Acceptance and Use of Technology (UTAUT). The significance of the indirect effect was evaluated using a bootstrapping procedure with 5,000 resamples. The results of the indirect effect analysis are presented in Table 5.

Table 5. Indirect Effect

Path	Original Sample	Sample Mean	Standart Deviation	T-Statistic	p-value	Result
IME > UTAUT -> INT	0.961	0.961	0.011	88.401	0.000	Significant

As shown in Table 5, Islamic Marketing Education has a strong and statistically significant indirect effect on intention to use e-commerce through UTAUT ($\beta = 0.961$, $t = 88.401$, $p < 0.001$). This result confirms that UTAUT serves as a significant mediating variable in the relationship between IME and students' intention to adopt e-commerce, thereby supporting the hypothesised mediated pathway in the structural model.

The findings demonstrate that IME plays a central role in enhancing consumer literacy among *santri*, confirming the pedagogical value of integrating Islamic ethical principles into marketing education. From a theoretical perspective, IME functions as a value-oriented instructional framework that shapes not only technical knowledge but also moral reasoning in consumption practices. This result is consistent with previous studies showing that education grounded in ethical and religious values strengthens individuals' ability to critically evaluate online information and make informed consumption decisions (Antara, Musa, & Hassan, 2016). Similarly, Cuellar-Fernández et al. (2021) emphasize that higher digital literacy increases confidence and vigilance in online transactions. Within the *pesantren* context, IME facilitates the development of halal-conscious, critical, and ethically responsible digital consumers by embedding Islamic business ethics, such as honesty (*ṣidq*), trustworthiness (*amānah*), and halal assurance, into marketing and consumption education. This finding underscores the capacity of IME to align digital literacy development with Islamic moral frameworks, reinforcing the normative goals of Islamic education in contemporary digital environments (Rosowulan et al., 2025; Siregar et al., 2025).

The significant influence of IME on entrepreneurial mindset further highlights the transformative role of Islamic pedagogy in shaping students' entrepreneurial orientation. Drawing on the resource-based and value-based perspectives of entrepreneurship education,

IME equips *santri* with opportunity recognition, creativity, resilience, and value-driven judgment rooted in Islamic principles. This finding aligns with prior research demonstrating that Islamic-based entrepreneurship education fosters creativity and perseverance among young entrepreneurs (Mujiatun et al., 2023) and that entrepreneurship education grounded in ethical principles supports the formation of a sustainable entrepreneurial mindset (Treiblmaier & Sillaber, 2021). In *pesantren*, entrepreneurial learning is not merely instrumental but is embedded within spiritual and moral cultivation, enabling students to pursue economic activities as a form of ethical responsibility (*ibādah*). Consequently, IME contributes to the formation of *santripreneurs* who combine business competence with moral commitment, strengthening the long-term sustainability of entrepreneurial engagement.

The positive effect of IME on the UTAUT higher-order construct indicates that Islamic marketing pedagogy also strengthens students' technology-acceptance beliefs, including performance expectancy, effort expectancy, social influence, and facilitating conditions. From a framework perspective, this finding suggests that IME operates as an antecedent that enhances the psychological and social mechanisms underlying technology adoption. This result is consistent with studies showing that educational approaches integrating ethical values and technological exposure increase learners' motivation and confidence in adopting digital technologies (Hassan et al., 2023; Ismail et al., 2024). Ates and Polat (2025) similarly demonstrate that value-oriented pedagogical practices reinforce key UTAUT dimensions by enhancing intrinsic motivation. Within *pesantren*, IME serves a dual function: reinforcing Islamic business ethics while simultaneously enhancing technological readiness through the role of *ustadz* as moral role models and the availability of entrepreneurship-oriented learning environments. This finding confirms that technology acceptance in Islamic education is shaped not only by functional considerations but also by moral legitimacy and institutional support.

Interestingly, consumer literacy exhibits a negative relationship with intention to use e-commerce, suggesting that higher literacy levels are associated with increased caution toward digital transactions. From a behavioural reasoning perspective, students with strong evaluative skills may be more sensitive to potential risks, security concerns, and ethical issues, which can suppress immediate adoption intentions despite adequate digital competence. This pattern is consistent with prior studies indicating that heightened digital literacy increases scrutiny and risk awareness, often delaying technology adoption (Khan et al., 2025), and that awareness of security threats can reduce e-commerce intention even among highly competent users (Oktaviani et al., 2024). In the *pesantren* context, this finding implies that consumer literacy supports responsible and reflective behaviour rather than impulsive adoption. Therefore, literacy initiatives should be complemented by trust-building strategies, halal certification mechanisms, and transparent digital ecosystems to ensure that informed caution does not lead to disengagement from ethical e-commerce participation.

The positive effect of an entrepreneurial mindset on intention to use e-commerce highlights the importance of psychological and attitudinal factors in digital adoption. Students who demonstrate opportunity orientation, creativity, and resilience are more inclined to integrate digital platforms into their entrepreneurial activities. This finding supports previous research indicating that a value-driven entrepreneurial mindset enhances willingness to adopt digital technologies in business contexts (Hasan et al., 2023; Sharma et al., 2025). Treiblmaier and Sillaber (2021) similarly identify creativity and resilience as critical drivers of e-commerce adoption. Within *pesantren*, entrepreneurial mindset functions as a motivational bridge between ethical education and digital engagement, suggesting that fostering innovation-oriented attitudes grounded in Islamic values is essential for encouraging technology-based entrepreneurship.

The significant indirect effect of IME on intention to use e-commerce through UTAUT confirms that technology acceptance serves as a primary mechanism translating Islamic

marketing pedagogy into behavioural intention. By emphasizing *sharia*-oriented curriculum content, ethical marketing principles, entrepreneurial practice, and guidance from *ustadz*, IME enhances students' perceptions of usefulness, ease of use, social legitimacy, and facilitating conditions. These enhanced perceptions, as conceptualized within the UTAUT framework, subsequently lead to stronger intentions to adopt e-commerce platforms (Amankwaa et al., 2019). This finding aligns with research demonstrating that value-integrated and technology-supported educational environments increase students' digital readiness and motivation (Bulto et al., 2025; Rauf et al., 2024) and that performance expectancy and effort expectancy are critical links between instructional experiences and technology adoption intentions (Feng et al., 2025).

Collectively, these findings demonstrate that IME supplies foundational ethical values and competencies, UTAUT clarifies the mechanisms underlying digital adoption, and the entrepreneurial mindset determines the intensity of engagement with e-commerce. Theoretically, this study extends the UTAUT framework by situating it within an Islamic educational and entrepreneurial context, thereby addressing the moral and institutional dimensions often absent in technology-adoption research. Practically, the findings offer *pesantren* a strategic framework for integrating Islamic marketing education, digital literacy, and entrepreneurship training, enabling them to function as incubators for digitally empowered and ethically grounded *santripreneurs* who can respond to contemporary economic challenges while upholding Islamic values.

CONCLUSION

This study concludes that IME functions as a core pedagogical mechanism for shaping *santri*' readiness to engage ethically with the digital economy in *pesantren*, operating through both entrepreneurial and technological pathways. The results demonstrate that IME significantly strengthens consumer literacy, entrepreneurial mindset, and technology-acceptance beliefs, while intention to use e-commerce is directly driven by entrepreneurial mindset and UTAUT and indirectly mediated by UTAUT. At the same time, the negative effect of consumer literacy on intention indicates that increased critical awareness may foster caution rather than uncritical adoption, highlighting the ethical reflexivity cultivated within Islamic education. Together, these findings show that technology adoption in *pesantren* is not merely a function of perceived usefulness or ease of use but is deeply embedded in Islamic ethical values, social influence, and institutional support. By integrating *sharia*-based marketing principles, digital entrepreneurship education, and supportive learning environments, *pesantren* can prepare students for responsible and value-driven participation in the digital economy. Despite limitations related to cross-sectional design, self-reported data, and regional scope, this study offers a robust empirical foundation for future longitudinal and mixed-methods research to further advance context-sensitive models of technology adoption within diverse Islamic education settings.

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