

Title: **Exploring the Impact on Islamic Financial Literacy: A Moderating Model Using a Structural Equation Modelling Approach**

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Exploring the Impact on Islamic Financial Literacy: A Moderating Model Using a Structural Equation Modelling Approach

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Abstract

This study examined the factors influencing Intention (IT) toward Islamic financial literacy by integrating three theories. Theory of Planned Behaviour (TPB) involves several constructs including Attitude (ATT), Subjective Norm (SN), and Perceived Behavioural Control (PBC). Social Learning Theory (SLT) comprises the construct including Observational Knowledge (OK); and Goal Setting Theory (GST) contains the construct including Goal Commitment (GC). This study employs a quantitative approach, using a cross-sectional survey and random sampling to select respondents. Accordingly, 379 respondents from a Malaysian public university were gathered at the end of the study. The construct was analysed using Partial Least Squares Structural Equation Modelling (PLS-SEM) through SMARTPLS4. The findings of this study revealed that ATT ($\beta = 0.112, p = 0.039$), SN ($\beta = 0.144, p = 0.027$), PBC ($\beta = 0.278, p < 0.001$), and OK ($\beta = 0.124, p = 0.009$) significantly influenced students' IT toward Islamic financial literacy. Additionally, GC moderated the relationship between SN and IT ($\beta = 0.140, p = 0.029$). Furthermore, the model explained 60.6% variance when R-squared indicates the value of 0.606, with SRMR being 0.072, and achieved a satisfactory model fit. This study's finding encourages promoting Islamic financial literacy through educational programmes, social observation, and motivational strategies. Overall, future research should explore SLT or GST as a whole to strengthen Islamic financial literacy.

Keywords: goal setting theory, islamic financial literacy, malaysia, social learning theory, theory of planned behaviour, university students

Introduction

Malaysia is known as a global leader in Islamic finance, and, according to Abdullah et al. (2018), it is one of the pioneers in this field. Most Malaysians, with a value 65% population practicing Islam *sunni* as their faith, live in a country with their fellow Muslims. In particular, "Islamic financial literacy" implies the *Sharī'ah* concept of understanding the prohibition elements (*riba, gharar, maisir*) in financing transactions. Thus, enhancing "Islamic financial literacy" is highly needed to prevent people from engaging in excessive spending or falling into prohibited practices. To improve "Islamic financial literacy," an educational platform is needed. As such, Turkey launched Islamic finance programmes as a compulsory subject for university students, with positive outcomes.¹

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¹Ismail Durak, Mehmet Akif Öncü, and Osman Kartal, "Measuring Islamic Financial Literacy and Discovering Its Relations with Entrepreneurship among University Students in Turkey," *Bilimname* 2020, no. 42 (November 2, 2020): 215–242, <https://doi.org/10.28949/bilimname.819736>.

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Moreover, Aisyah et al. (2023) proposed educating Muslims about Islamic finance in secondary schools to motivate and enhance their knowledge of Islamic finance.² As stated, Patrisia et al. (2023) noted that the younger generation has less awareness of financial literacy and is mostly unfamiliar with fundamental Islamic financial concepts.³ “Islamic financial literacy” emphasises lawful (*halal*) or unlawful (*haram*) transactions. At the same time, “Islamic financial literacy” teaches us simplicity in life, or living within our means.⁴ Islamic financial literacy also reminds us of our responsibility to commit to Islamic social finance, such as *zakat*, *hibah*, and *sedekah*, among others. In addition, enhancing “Islamic financial literacy” may improve financial health.⁵

However, Malaysia is still struggling to enhance society’s understanding of Islamic financial literacy. To address this issue, this study developed a theoretical framework comprising three theories: Theory of Planned Behaviour (TPB), Social Learning Theory (SLT), and Goal Setting Theory (GST). This situation underscores the obligation to improve educational environments. Islamic finance can help prevent excessive spending and encourage people to take better care of their financial health.⁶ Earlier studies have demonstrated that different elements may influence behavioural Intentions (IT) related to “Islamic financial literacy.”⁷ A certain study has indicated the Theory of Reasoned Action (TRA) towards the IT constructs.⁸ However, most studies have employed the TPB to examine how Attitudes (ATTs), Subjective Norms (SNs), and Perceived Behavioural Control (PBC) influence students’ ITs to participate in Islamic finance. Moreover, this study applied SLT to measure the level of observation knowledge of students about “Islamic financial literacy.” Essentially, SLT is one of the most important theories used to estimate Observation Knowledge (OK) in society.⁹

²Sitti Aisyah, M. Ikhsan Harahap, Nurbaiti Nurbaiti, and Mustapa Khamal Rokan, “The Factors Influencing Behavioural Intention Fintech Lending (Paylater) among Generation Z Indonesian Muslims and Islamic Consumption Ethics Views,” *Journal of Islamic Economics* 7, no. 1 (June 30, 2023): 01–1, <https://doi.org/10.30983/es.v7i1.6233>.

³Dina Patrisia et al., “Generation Z’s Financial Behaviour: The Role of Islamic Financial Literacy,” *ISRA International Journal of Islamic Finance* 15, no. 2 (May 23, 2023): 20–37, <https://doi.org/10.55188/ijif.v15i2.540>

⁴Herlina Yustati, Heri Junaidi, and Asnaini Asnaini, “The Level of Islamic Financial Literacy and Islamic Financial Inclusion of Students in the Islamic Capital Market,” *Ekombis Review: Jurnal Ilmiah Ekonomi Dan Bisnis* 12, no. 1 (January 9, 2024): 837–844, <https://doi.org/10.37676/ekombis.v12i1.5072>; Achmad Zainul Rozikin and Irmadatus Sholehah, “Islamic Financial Literacy, Promotion, and Brand Image towards Saving Intention in Sharia Bank,” *Iqtishadia* 13, no. 1 (June 15, 2020): 95, <https://doi.org/10.21043/iqtishadia.v13i1.6489>

⁵M. Kabir Hassan and Sirajo Aliyu, “A Contemporary Survey of Islamic Banking Literature,” *Journal of Financial Stability* 34 (February 2018): 12–43, <https://doi.org/10.1016/j.jfs.2017.11.006>.

⁶Nurul Izzah and Sri Sudiarti, “Generation Zs Level of Muslim Understanding on Sharia Capital Market,” *Al-Masharif: Jurnal Ilmu Ekonomi dan Keislaman* 10, no. 1 (2022): 54–69.

⁷Nurul Huda, Nova Rini, and Yosi Mardoni, “The Analysis of Attitudes, Subjective Norms, and Behavioral Control on Muzakki’s Intention to Pay Zakah,” *International Journal of Business and Social Science* 3, no. 22 (January 1, 2012): 271–279; Icek Ajzen, “The Theory of Planned Behavior,” *Organizational Behavior and Human Decision Processes* 50, no. 2 (December 1991): 179–211, [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T).

⁸Martin Fishbein and Icek Ajzen, “Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research,” *Philosophy and Rhetoric* 10, no. 2 (March 1975): 130–132.

⁹Albert Bandura, *Social Foundations of Thought and Action: A Social Cognitive Theory* (Englewood Cliffs, NJ, USA: Prentice Hall, 1986).

The purpose of this study is to assess the relationships among constructs and their impact on students' ITs related to "Islamic financial literacy." The findings of this study contribute in three important ways to the body of knowledge. First, it seeks to understand the components of students' concerns towards "Islamic financial literacy," which, in turn, contributes to enhancing "Islamic financial literacy." Second, the research aims to assess students' concerns about financial literacy. Lastly, the findings of this study may help educational institutions, government representatives, and decision-makers to promote "Islamic financial literacy" effectively.

2. Literature Review

2.1. The Definition

The notion of "Islamic financial literacy" emphasises financial management among people, especially Muslims, to manage their finances in accordance with *Sharī'ah* law, without overspending, and by understanding the relationship between necessity and desire. *Maqasid Sharī'ah* apply to three basic needs in Islam: *daruriyat*, *hajiyyat*, and *tahsiniyat*. The crucial thing to fulfil is *daruriyat*. If people cannot fulfil the *daruriyat* level, it may affect their lives.¹⁰ Other than that, "Islamic financial literacy," teaches us the significance of social welfare, also known as Islamic social finance, such as *sadaqah*, *zakat*, *hibah*, and other forms of charitable giving, by helping people fulfil their basic needs.¹¹ In addition, "Islamic financial literacy" guides us in applying Islamic finance in our daily lives, resulting in both spiritual and financial consequences for individuals and communities.¹²

2.2. Theory of Planned Behaviour and Islamic Finance

The TPB has been widely applied to explain individuals' behavioural ITs within Islamic finance contexts.¹³ In particular, ATT, SN, and PBC are central determinants that shape behavioural IT.¹⁴ Within Islamic finance, ATT has consistently emerged as a crucial predictor of IT. For example, Amin et al. (2011) demonstrated that custom positive ATTs significantly influenced their ITs to engage in Islamic personal financing. Equivalently, in another study by Sayuti et al. (2020), all TPB items were observed to be significant.¹⁵ However, Ali et al. (2017) noted that only ATT is significant for IT in home financing.¹⁶ As stated by Pitchay et al. (2019), SN is the strongest factor influencing decision-

¹⁰Hanudin Amin, Abdul-Rahim Abdul-Rahman, and Dzuljastri Abdul-Razak, "An Integrative Approach for Understanding Islamic Home Financing Adoption in Malaysia," *International Journal of Bank Marketing* 31, no. 7 (October 7, 2013): 544–73, <https://doi.org/10.1108/ijbm-02-2013-0008>.

¹¹Hanudin Amin et al., "Determinants of Customers' Intention to Use Islamic Personal Financing," *Journal of Islamic Accounting and Business Research* 2, no. 1 (April 19, 2011): 22–42, <https://doi.org/10.1108/17590811111129490>.

¹²Fahad Choudhry et al., "Health Literacy Studies Conducted in Australia: A Scoping Review," *International Journal of Environmental Research and Public Health* 16, no. 7 (2019): 1112, <https://doi.org/10.3390/ijerph16071112>.

¹³Muniaty Aisyah, Umiyati Umiyati, and Leis Suzanawaty, "The Impact of Islamic Financial Literacy on Islamic Financial Planning of Islamic University Students," *JPS (Jurnal Perbankan Syariah)* 6, no. 1 (April 28, 2025): 22–40, <https://doi.org/10.46367/jps.v6i1.2223>.

¹⁴Putri Muningsgar et al., "The Role of Islamic Financial Literacy in Shaping Economic Behavior: Evidence from Generation Z," *Diponegoro Journal of Economics* 14, no. 2 (August 18, 2025): 81–97, <https://doi.org/10.14710/djoe.48925>.

¹⁵Khadijah Muhammad Sayuti, Hanudin Amin, Dzuljastri Abdul Razak, and Hamid Rizal, "Receptiveness of Islamic Home Financing among Malaysians: A Revisit," *International Journal of Business and Society* 21, no. 2 (July 21, 2020): 784–802, <https://doi.org/10.33736/ijbs.3294.2020>.

¹⁶Muhammad Ali, Syed Ali Raza, Chin-Hong Puah, and Mohd Zaini Abd Karim, "Islamic Home Financing in Pakistan: A SEM-Based Approach Using Modified TPB Model," *Housing Studies* 32, no. 8 (March 15, 2017): 1156–77, <https://doi.org/10.1080/02673037.2017.1302079>.

making.¹⁷ This finding, supported by Noh et al. (2025), suggests that community sentiment is the main factor in influencing human IT.¹⁸ In contrast to other studies, Sayuti and Amin (2022) reported that PBC is the most significant factor in influencing.¹⁹ Overall, this study finds that TPB theory is the appropriate framework for measuring Islamic financial literacy and IT.

2.3. Social Learning Theory in Islamic Finance

SLT was developed by Albert Bandura in 1977. This theory emphasises the importance of gaining knowledge through observation and social communication. However, this theory is based on observing people around us and assessing whether their reasoning is sufficient to accept the result.²⁰ Another study affirms that observation affects human decision-making.²¹ Amin et al. (2011) indicated that new customers' IT is shaped by the observed feedback from previous customers. Meanwhile, Widiastuti et al. (2022) and Chai et al. (2019) highlighted that observation may influence people's adoption IT.²²

These findings were in line with the SLT definition, as Muslims tend to transmit knowledge through communication by sharing their financial experiences. This is supported by Franzoni and Allali (2018) who discovered that Muslims have the morality to encourage one another to participate in Islamic finance. Accordingly, Islamic financial literacy may be enhanced through observation and knowledge, especially among youth and adults.

2.4. Goal Setting Theory in Islamic Finance

GST was developed by Locke and Latham. This theory presents the goal as the main item to be achieved. This theory has five elements: clarity, challenge, commitment, task complexity and

¹⁷Anwar Allah Pitchay, "Factors Influence Intention of Management of Shariah-Compliant Companies to Participate in Islamic Voluntary Charity," *International Journal of Islamic and Middle Eastern Finance and Management* 15, no. 5 (January 25, 2022): 967–985, <https://doi.org/10.1108/imefm-11-2019-0466>.

¹⁸Yeayoung Noh and Na Young Ahn, "Millennials' Perceived Value and Intention to Purchase Athleisure Products: The Mediating Role of Desire for Conspicuous Consumption," *International Journal of Sports Marketing and Sponsorship* 26, no. 3 (January 7, 2025): 548–567. <https://doi.org/10.1108/ijmsms-06-2024-0122>

¹⁹Khadijah M. Sayuti and Hanudin Amin, "Islamic Mortgage Adoption: Examining the Moderating Effects of Islamic Altruism," *Journal of Islamic Marketing* 13, no. 8 (September 29, 2021): 1728–1750, <https://doi.org/10.1108/jima-11-2018-0219>

²⁰Hasnol Salleh et al., "Role of Islamic Values and Financial Attitudes on Setting Financial Goals: An Exploratory Study of Bruneian Muslims," *Journal of Islamic Accounting and Business Research*, May 20, 2025, <https://doi.org/10.1108/jiabr-01-2025-0027>.

²¹Raditya Sukmana and Budi Trianto, "The Effect of Islamic Financial Literacy on Business Performance with Emphasis on the Role of Islamic Financial Inclusion: Case Study in Indonesia," *Journal of Islamic Marketing* 16, no. 1 (2025): 166–192, <https://doi.org/10.1108/jima-07-2022-0197>.

²²Tika Widiastuti, Sri Ningsih, Ari Prasetyo, Imron Mawardi, Sri Herianingrum, Anidah Robani, Muhammad Ubaidillah Al Mustofa, and AUFAR Fadlul Hady, "Developing an Integrated Model of Islamic Social Finance: Toward an Effective Governance Framework," *Heliyon* 8, no. 9 (September 2022): e10383, <https://doi.org/10.1016/j.heliyon.2022.e10383>; Shijun Chai, Yang Chen, Bihong Huang, and Dezhu Ye, "Social Networks and Informal Financial Inclusion in China," *Asia Pacific Journal of Management* 36, no. 2 (March 19, 2018): 529–63, <https://doi.org/10.1007/s10490-017-9557-5>.

feedback.²³ In finance, goal setting is one factor to encourage self-discipline in achieving financial health.²⁴ Islamic financial literacy enhances knowledge about Islamic finance products and services, and enhances financial health through motivation theory.²⁵ Correspondingly, Goal Commitment (GC) strives for a clear vision to integrate and develop Islamic financial literacy.²⁶ Furthermore, Hanif (2014) stated that mostly Islamic financial institutions adopted this theory to enhance Islamic financial literacy within the society.²⁷ Hence, GC, as proposed in GST, serves as a motivational factor that can strengthen individuals' efforts to enhance Islamic financial literacy and sustain Islamic financial practices.

2.5. Integrating the Three Theories

TPB, SLT, and GST theories provide a solid foundation for Islamic financial literacy. Each is well-connected to enhance the Islamic financial literacy context. TPB items reflect cognitive evaluations that influence readiness to act. In the context of Islamic financial literacy, positive ATTs toward Islamic finance, perceived social approval, and self-confidence in managing finances in accordance with the *Sharī'ah* collectively strengthen the IT, thereby enhancing one's literacy.²⁸ SLT, on the other hand, extends this understanding by emphasising the significance of OK learning that occurs through observing others' behaviours, values, and practices. As human beings, we tend to seek knowledge from a senior, a role model, or someone with experience. This social learning process fortifies the understanding of Islamic financial principles.²⁹ Following this, GST introduces the motivational component through the concept of GC. This theory strengthens human motivation to make people committed to achieving their goals. For example, to achieve financial health, they are

²³Edwin A. Locke and Gary P. Latham, "Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35-Year Odyssey," *American Psychologist* 57, no. 9 (2002): 705–17, <https://doi.org/10.1037//0003-066x.57.9.705>.

²⁴Zamroni Alpiyan Muhtarom, et al., "The Urgency of Islamic Investment Literacy in Managing Muslim Personal Finance," *Journal of Accounting, Management, and Economic Development* 1, no. 1 (2025): 23–33.

²⁵Hassan and Aliyu, "A Contemporary Survey of Islamic Banking Literature," 12–43.

²⁶Ferdiana Dwi Analia and Titing Widyastuti, "Analysis of Community Saving Interest in Bank Mega Syariah through Islamic Banking Literacy and Family Environment with Trust in Islamic Banking as an Intervening Variable," *GoodWill Journal of Economics, Management, and Accounting* 5, no. 1 (2025): 17–30; Mahmoud Ahmad Mahmoud et al., "Factors Influencing the Islamic Fintech Acceptance: Moderating Role of Islamic Financial Literacy," *Journal of Islamic Accounting and Business Research*, Advance online publication, April 29, 2025, <https://doi.org/10.1108/jiabr-08-2024-0322>.

²⁷Muhammad Hanif, "Differences and Similarities in Islamic and Conventional Banking," *International Journal of Business and Social Sciences* 2, no. 2 (2014): 166–75.

²⁸Wang Jingyi and Syed Kamaruzaman Bin Syed Ali, "A Systematic Review of the Relationships Between Attitude, Subjective Norms, Perceived Behavioral Control, and Exercise Intention," *The Open Public Health Journal* 18, no. 1 (June 23, 2025): 1–12, <https://doi.org/10.2174/0118749445394456250605043155>; Ismah Osman et al., "The Dilemma of Millennial Muslims towards Financial Management: An Islamic Financial Literacy Perspective," *Journal of Islamic Marketing* 15, no. 1 (March 31, 2023): 59–78, <https://doi.org/10.1108/jima-09-2021-0283>.

²⁹Lee Chin Yeef, and Kelvin Lee Yong Ming. "Islamic Financial Literacy Education on Innovative Retirement Financial Product," *International Journal of Islamic Thought* 27 (2025): 117–124; Asylbek Moldakmatov et al., "Islamic Principles of Finance: Features and Prospects of Their Use in Central Asia," *International Journal on Culture, History, and Religion* 7, no. S11 (September 9, 2025): 765–90, <https://doi.org/10.63931/ijchr.v7isi1.339>.

required to have money management skills.³⁰ As a whole, TPB contributes directly to IT. Meanwhile, SLT emphasises the observation of IT, which strengthens all the items constructed in Islamic financial literacy.³¹ This integrated framework thus offers a holistic explanation of how cognition, social influence, and motivation are connected to promote Islamic financial literacy.

3. Methods

This study employed a cross-sectional survey using simple random sampling to determine factors influencing the IT of Islamic financial literacy among public university students in Malaysia. A Systematic Literature Review (SLR) guided by the PRISMA framework, using the Scopus, Web of Science, and ScienceDirect databases, was used to identify relevant constructs and validated measurement items. This research instrument used the I-CVI expert validation technique, with two academicians in Islamic finance, one in methodology, one in language, and two in the content of the questions. It must be noted that all items with an index below 0.7 were removed.³² The survey method aligns with the analytical requirement of Partial Least Squares Structural Equation Modelling (PLS-SEM).

4. Results

Table 1. Demographic Profile

	Category	Frequency	Percentage
Gender	Female / Perempuan	218	57.5%
	Male / Lelaki	161	42.5%
Age	19–20 years / 19–20 tahun	102	26.9%
	21–23 years / 21–23 tahun	103	27.2%
	24–26 years / 24–26 tahun	109	28.8%
	27 years and above / 27 tahun dan ke atas	65	17.2%
	UITM – KL	77	20.3%
University	Universiti Islam Malaysia (UIA)	68	17.9%
	Universiti Kebangsaan Malaysia (UKM)	78	20.6%
	Universiti Malaya (UM)	72	19.0%
	Universiti Putra Malaysia (UPM)	84	22.2%
Monthly Expenses (RM)	< RM 200	91	24.0%
	RM 200–300	60	15.8%
	RM 301–400	72	19.0%
	RM 401–500	79	20.8%
	RM 501 and above / RM 501 ke atas	77	20.3%

Table 1 presents the demographic profile. In terms of gender distribution, female respondents accounted for 57.5% of the total sample (218 participants), while male respondents accounted for

³⁰Doni Sevaztianne F. Dimaunahan et al., “Financial Literacy and Sustainable Planning Assessment among Filipino Millennials,” *Acta Psychologica* 259 (July 24, 2025): 105334, <https://doi.org/10.1016/j.actpsy.2025.105334>.

³¹Zahid Bashir, Muhammad Sabeeh Iqbal, and Muhammad Aamir, “Millennial Muslims and Islamic Financial Literacy,” in *The Routledge Handbook of Islamic Economics and Finance*, ed. Hussain Mohi-ud-Din Qadri, M. Ishaq Bhatti, and Mohd Azmi Omar (London: Routledge, 2025), 385.

³²Isabel B. Rodrigues et al., “Development and Validation of a New Tool to Measure the Facilitators, Barriers and Preferences to Exercise in People with Osteoporosis,” *BMC Musculoskeletal Disorders* 18, no. 1 (December 2017): 540, <https://doi.org/10.1186/s12891-017-1914-5>.

42.5% (161 participants). A total of 379 university students participated in this study. They were selected using G*Power to ensure an adequate sample size for reliable statistical analysis. The respondents were drawn from several major public universities in Malaysia and were distributed to fairly represent different demographic groups. In particular, female respondents formed the majority with 218 participants (57.5%), while male respondents accounted for 161 participants (42.5%). In addition, age was fairly spread across groups, with 102 students (26.9%) aged 19 to 20 years, 103 students (27.2%) aged 21 to 23 years, 109 students (28.8%) aged 24 to 26 years, and 65 students (17.2%) aged 27 years and above. Accordingly, participants were selected from UiTM-KL (20.3%), UIA (17.9%), UKM (20.6%), UM (19.0%), and UPM (22.2%). At the same time, monthly expenses ranged from less than RM 200 to RM 501 or more, reflecting a diverse and representative sample aligned with the study's criteria. Table 2 below presents the data distribution for normality testing.

Table 2. Data Distribution

Variable	Skewness	Kurtosis	Result
Intention	1.015	0.384	Normal
Attitude	1.168	1.362	Normal
Perceived Behavioral Control	0.322	-0.392	Normal
Subjective Norms	1.029	0.768	Normal
Observational Knowledge	0.334	-0.359	Normal
Goal Commitment	0.123	-0.877	Normal

Normality was assessed prior to statistical analysis. Based on the results, the skewness and kurtosis of all items were within an acceptable range, indicating that the values ranged from -0.3 to 1.3 for all the items were distributed normally. This study used the threshold of -2 .³³ This data meets all the requirements and may proceed to be analysed using statistical inference. Table 3 below presents the findings of the HTMT ratio.

Table 3. Construct Validity and Reliability

Constructs	Loading	CA	AVE	CR	VIF	
Attitude (ATT)	ATT1	0.742				
	ATT2	Deleted				
	ATT3	0.585				
	ATT4	Deleted	0.763	0.516	0.841	2.851
	ATT5	0.781				
	ATT6	0.769				
	ATT7	0.701				
Goal Commitment (GC)	GC1	Deleted				
	GC2	Deleted				
	GC3	Deleted				
	GC4	0.780	0.772	0.592	0.853	1.436
	GC5	0.790				
	GC6	0.738				
Intention (IT)	IT1	0.751				
	IT2	0.758	0.836	0.503	0.876	1.186

³³Joseph F. Hair, et al., *Multivariate Data Analysis*, 7th ed. (Upper Saddle River, NJ: Pearson Education, 2019), 102–410.

	Constructs	Loading	CA	AVE	CR	VIF
	IT3	0.644				
	IT4	0.718				
	IT5	0.684				
	IT6	0.728				
	IT7	0.673				
	OK1	0.798				
	OK2	Deleted				
Observational Knowledge (OK)	OK3	Deleted				
	OK4	Deleted	0.671	0.603	0.819	1.916
	OK5	Deleted				
	OK6	0.826				
	OK7	0.700				
	PBC1	0.816				
	PBC2	Deleted				
Perceived Behavioral Control (PBC)	PBC3	Deleted				
	PBC4	Deleted	0.678	0.605	0.820	2.260
	PBC5	Deleted				
	PBC6	0.836				
	PBC7	0.671				
	SN1	0.756				
	SN2	Deleted				
Subjective Norm (SN)	SN3	Deleted				
	SN4	0.780	0.802	0.558	0.863	3.480
	SN5	0.744				
	SN6	0.720				
	SN7	0.733				

Table 3 presents the measurement model used to assess the reliability and validity of all constructs used in this study. This evaluation involved examining the indicator loadings, internal consistency reliability, convergent validity, and multicollinearity among the indicators. According to Hair et al. (2021), the item loadings should be greater than 0.70. This study deleted items with loadings below 0.50. In particular, the items involved are ATT2, ATT4, GC1-GC3, OK2-OK5, PBC2-PBC5, and SN2, SN3. The remaining items ranged from 0.586 to 0.836, indicating all the values to be acceptable for the constructs. For internal consistency, Cronbach's alpha and Composite reliability were evaluated. As stated by Kline (1999), Cronbach's alpha should be greater than 0.5, and this study's values range from 0.671 to 0.836, exceeding the accepted threshold. It must be noted that composite reliability should be above 0.70, and the values 0.819 to 0.876 in this study indicate that all are acceptable.³⁴ The convergent validity of the constructs was assessed using the Average Variance Extracted (AVE). The AVE values ranged from 0.503 to 0.605, surpassing the recommended value of 0.50.³⁵ This finding suggests that more than half of the variance in each set of observed indicators was accounted for by the corresponding latent construct, confirming adequate convergent

³⁴Hair et al., *Multivariate Data Analysis*, 102–410.

³⁵Claes Fornell and David F. Larcker, "Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics," *Journal of Marketing Research* 18, no. 3 (August 1981): 382–88, <https://doi.org/10.2307/3150980>.

validity. Furthermore, multicollinearity was assessed using the Variance Inflation Factor (VIF) to ensure that there was no redundancy among the indicators. Hair et al. (2021) recommended that VIF values should be below 5.0. In this study, the VIF values ranged from 1.186 to 3.480, confirming that the data did not suffer from multicollinearity. This ensures that the indicators of each construct operate independently and provide unique information about the latent variable. Generally, the findings from the measurement model assessment demonstrate that all constructs in this study, ATT, GC, IT, OK, PBC, and SN, are reliable and valid. Additionally, the result indicated that the measurement model is satisfactory and can be used for further analysis in the structural model.

Table 4. HTMT Ratio

	ATT	GC	IT	OK	PBC	SN	GC x ATT	GC x SN	GC x PBC
ATT									
GC	0.581								
IT	0.782	0.472							
OK	0.778	0.410	0.738						
PBC	0.864	0.487	0.829	0.844					
SN	0.870	0.512	0.805	0.794	0.859				
GC x ATT	0.437	0.060	0.464	0.333	0.373	0.530			
GC x SN	0.556	0.086	0.559	0.366	0.413	0.659	0.704		
GC x PBC	0.327	0.048	0.398	0.228	0.224	0.346	0.530	0.578	
GC x OK	0.302	0.082	0.374	0.211	0.231	0.319	0.419	0.490	0.628

The HTMT results in Table 4 demonstrate that all constructs meet the acceptable thresholds for discriminant validity. Most construct pairs yield HTMT values well below 0.85, while a few slightly higher correlations, such as ATT-PBC (0.864) and ATT-SN (0.870), remain below 0.90, which is still acceptable under the liberal criterion.³⁶

These findings confirm that each latent variable, ATT, GC, IT, OK, PBC, and SN, is empirically distinct. The results also indicate that the interaction (moderating) variables (e.g., GC × ATT, GC × SN, GC × PBC, GC × OK) demonstrate very low correlations (< 0.70) with other constructs. This suggests no multicollinearity issues and confirms valid discriminant validity for the moderation model.

Thus, the HTMT results confirm that the measurement model is valid and that the constructs effectively capture unique aspects of Islamic financial literacy IT among Malaysian university students. This aligns with the theoretical underpinnings of the TPB by Ajzen (1991) and GST by Locke and Latham (2002).³⁷ Table 4 outlines the results of the constructs along with the reliability.

³⁶Jörg Henseler, Geoffrey Hubona, and Pauline Ash Ray, "Using PLS Path Modeling in New Technology Research: Updated Guidelines," *Industrial Management & Data Systems* 116, no. 1 (February 2016): 2–20.

³⁷Putu Gede Subhaktiyasa, "PLS-SEM for Multivariate Analysis: A Practical Guide to Educational Research Using SmartPLS," *EduLine: Journal of Education and Learning Innovation* 4, no. 3 (August 1, 2024): 353–65, <https://doi.org/10.35877/454ri.eduline2861>; T. Ramayah, Jacky Cheah et al., "Partial Least Squares Structural Equation Modeling (PLS-SEM) Using SmartPLS 3.0," *An Updated and Practical Guide to Statistical Analysis* 1, no. 1 (2018): 1–72.

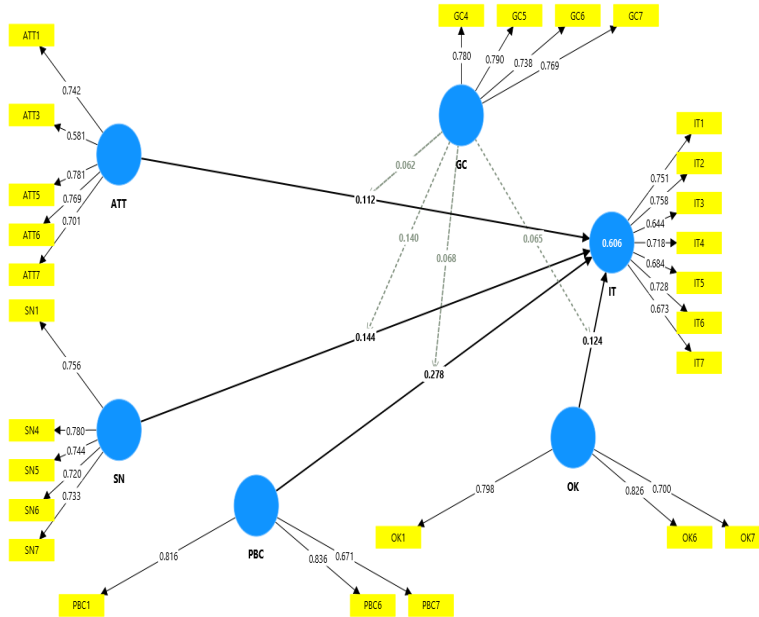


Figure 1. Statistical Model

Table 5. Structural Model Path

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	t statistics ((O/STDEV))	p values
ATT -> IT	0.112	0.114	0.054	2.061	0.039
OK -> IT	0.124	0.122	0.047	2.626	0.009
PBC -> IT	0.278	0.276	0.048	5.770	0.000
SN -> IT	0.144	0.145	0.065	2.218	0.027
GC x SN -> IT	0.140	0.135	0.064	2.184	0.029
GC x ATT -> IT	0.062	0.065	0.053	1.159	0.246
GC x PBC -> IT	0.068	0.068	0.040	1.691	0.091
GC x OK -> IT	0.065	0.068	0.045	1.443	0.149

Table 5 explained the structural model analysis to test the hypothesis. ATT ($\beta = 0.112, t = 2.061, p = 0.039$) has a significant relationship with Islamic financial literacy, suggesting that students with a more favorable ATT toward Islamic finance are more likely to enhance their financial literacy. Similarly, OK ($\beta = 0.124, t = 2.626, p = 0.009$) indicated a significant relationship toward Islamic financial literacy, highlighting that students who learn by observing are more likely to engage in Islamic financial practices. Among the predictors, PBC ($\beta = 0.278, t = 5.770, p < 0.001$) is the strongest relationship, indicating that students' confidence in their ability to manage financial matters based on Islamic principles is the strongest predictor of their behavioural IT. SN ($\beta = 0.144, t = 2.218, p = 0.027$) also revealed a significant relationship toward Islamic financial literacy, suggesting that social influence from family, peers, or religious groups encourages students to enhance their Islamic financial literacy.

Regarding the moderating effects of GC, only one interaction term, GC \times SN \rightarrow IT ($\beta = 0.140, t = 2.184, p = 0.029$), is statistically significant. This indicates that the relationship between SN and IT is strengthened when students evince higher GC, implying that goal-oriented students are more

responsive to social encouragement in improving their Islamic financial knowledge. However, the other moderation paths $GC \times ATT$ ($p = 0.246$), $GC \times PBC$ ($p = 0.091$), and $GC \times OK$ ($p = 0.149$) are insignificant and do not moderate these relationships. All in all, the findings partially support the proposed hypotheses. Furthermore, all significant relationships align with TPB, SLT, and GST and integrate cognitive, social, and motivational factors to enhance students' IT toward Islamic financial literacy.³⁸ The results were also supported by previous studies that emphasised the roles of financial knowledge, behavioural control, and goal orientation in shaping financial ITs and behaviours.³⁹ Table 6 below summarises the final model fit.

Table 6. Model Fit

	Estimated model
SRMR	0.072
R^2	0.606

Table 6 outlines the result of model fit testing, with an SRMR value of 0.072, and the R^2 value is 0.606.⁴⁰ This suggests that the model fits this study and is acceptable.⁴¹ According to Cohen's (1988) guidelines, values of 0.26 and above are considered large. In essence, this model is a good fit and explains behavioural IT in Islamic financial literacy.

5. Conclusion

This study examined the determinants of IT toward Islamic financial literacy among Malaysian university students by integrating TPB, GST, and SLT. The results revealed that all direct predictors, ATT, SN, PBC, and OK, significantly influenced students' IT toward Islamic financial literacy. However, only one moderating effect (GC and SN) was significant. Remarkably, all TPB items are significant. ATT indicates that people are more likely to engage in financial learning behaviour through financial programmes and education. For SN, indicated social expectations encourage students to improve their Islamic financial literacy. Similarly, the significance of OK from SLT asserts that students who learn by observing others' financial behaviours are more likely to adopt those practices. Here, the strongest predictor, PBC, reflects students' confidence in their financial management skills and serves as an enabler of behavioural IT towards Islamic financial literacy.

In addition, this study revealed that GC significantly moderated the relationship between SN and IT toward Islamic financial literacy. However, it did not significantly moderate the relationships involving ATT, PBC, OK, and IT toward Islamic financial literacy. This suggests that the motivational influence of GC operates primarily through social influences, rather than through other factors such as ATT, SN, PBC and OK. In other words, when students are highly committed to

³⁸Sunanda Kapoor, "The Role of SmartPLS in Optimizing Statistical Analysis: A Case Study Approach" (paper presented at the 5th International Conference on Innovative Research in Applied Science, Engineering and Technology [IRASET], Fez, Morocco, May 15–16, 2025); Jun-Hwa Cheah, Francesca Magno, and Fabio Cassia, "Reviewing the SmartPLS 4 Software: The Latest Features and Enhancements," *Journal of Marketing Analytics* 12 (December 8, 2023): 97–107, <https://doi.org/10.1057/s41270-023-00266-y>.

³⁹Ade Gunawan et al., "Factors Affecting the Financial Well-Being of Islamic University Students in Indonesia: The Mediating Role of Financial Behavior," *Investment Management & Financial Innovations* 22, no. 2 (2025): 65–76, [http://dx.doi.org/10.21511/imfi.22\(2\).2025.06](http://dx.doi.org/10.21511/imfi.22(2).2025.06).

⁴⁰Christian M. Ringle, Dirceu Da Silva, and Diógenes De Souza Bido, "Structural Equation Modeling with the Smartpls," *Revista Brasileira de Marketing* 13, no. 02 (May 1, 2014): 56–73, <https://doi.org/10.5585/remark.v13i2.2717>.

⁴¹Thurasamy Ramayah et al., "Testing a Confirmatory Model of Facebook Usage in SmartPLS Using Consistent PLS," *International Journal of Business and Innovation* 3, no. 2 (2017): 1–14.

achieving their financial goals, they are more responsive to social encouragement or expectations from family, peers, and lecturers. Such social reinforcement aligns with their personal goals, thereby amplifying their IT to enhance Islamic financial literacy. Conversely, GC does not appear to strengthen relationships through personal beliefs, confidence, or observational learning, as these factors are more internally determined. From the perspective of GST, this indicates that while GC enhances persistence and determination, its effect is most powerful when social influences are present. This ultimately underscores the significance of social support systems in motivating students toward Islamic financial literacy.

Overall, these findings demonstrate the complementary roles of cognitive (ATT, PBC, SN, OK) and motivational (GC) factors in shaping students' behavioural IT toward Islamic financial literacy. This study contributes to theory by providing empirical support for an integrated TPB, GST, SLT model, and clarifying how GC interacts with SNs toward Islamic financial literacy. In practice, the results suggest that universities and policymakers should promote goal-driven financial programmes, incorporate peer and community-based learning, and strengthen students' confidence in managing finances in accordance with *Shari'ah* principles. Overall, future research should explore SLT or GST as a whole to strengthen ITs toward Islamic financial literacy among Malaysian youth.

Authors Contribution

Siti Noraisyah Binti Norizan: data curation, formal analysis, investigation, resources, writing-original draft, review and editing. **Nashirah Binti Abu Bakar:** data curation, formal analysis, investigation, resources, writing-original draft, writing-review and editing.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

Data Availability Statement

The data associated with this study is not available due to ethical, legal, or commercial restrictions.

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The authors used AI-assisted tools (Scopus AI and Scite) solely for literature search, citation analysis, and summarizing prior studies. All intellectual content, data analysis, interpretation, and conclusions are the authors' own work. The use of AI did not influence the study's results or findings.

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