Financially Sustainable Future, Are Tertiary Students Ready?

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ABSTRACT

Financial literacy is closely linked to the Sustainable Development Goals (SDGs) as it can empower individuals and communities to achieve economic growth, reduce poverty, and improve overall well-being. Moreover, financial literacy can also promote financial inclusion, which is essential for achieving SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth). By providing access to financial services and promoting financial education, individuals and communities can better participate in economic activities and benefit from economic growth. Therefore, financial literacy is an important component of the SDGs, as it can contribute to achieving several of the goals, including SDGs 1, 4 (Quality Education), 8, and 10 (Reduced Inequalities). This study investigated the extent of financial literacy among Malaysian university students. The study used an independent t-test to investigate the difference in students' financial literacy based on demographic, academic discipline, program level, and financial management courses attended. The relationship between those variables and students' financial literacy was tested using the PLS-SEM approach. The study documented that financial management courses helped students to become more financially literate. By promoting financial education and empowering students with financial skills, we can help to achieve several of the goals.

Keywords: Financial literacy, financially sustainable future, financial decision, Sustainable Development Goals (SDGs).

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INTRODUCTION

A collection of 17 interlinked global goals, the Sustainable Development Goals (SDGs) are designed to be a "blueprint to achieve a better and more sustainable future for all" (UN SDG). The United Nations General Assembly adopted these goals in 2015 to address global challenges such as poverty, inequality, climate change, and many more. These SDGs are included in a UN Resolution called the 2030 Agenda. Of these 17 goals, SDG 1, SDG 4, and SDG 18 are closely linked to the importance of Financial Literacy. Respectively, they are to ensure inclusive and equitable quality education including Financial Literacy, and to implement and vitalize global partnerships for sustainable development.

Specifically, SDG 4 ensures "inclusive and equitable quality education" and promotes "lifelong learning opportunities for all". This goal has 10 targets and its sixth is related to youth and adult literacy and numeracy. The 5th OECD-GFLEC global policy research symposium, which took place on May 18th, 2018 (OECD, 2018), presented several key takeaways as follows:

1. Financial literacy is an important part of the policy mix for financial stability.

2. Financial literacy can contribute to global economic growth and sustainable development

3. Financial education initiatives can aid in the achievement of broader economic and social goals.

4. Globally, much progress has been made in financial education, but there are still many difficulties ahead, including financial digitalization, finetuning interventions to reach vulnerable audiences, and dealing with the effects of demographic transition.

This study investigated the extent of financial literacy among Malaysian university students in the context of SDG 4's sixth target which envisages a minimum proficiency level in literacy and numeracy, which is equivalent to the level achieved upon successful completion of basic

education.' (https://sdg4education2030.org/the-goal) (SDG4, 2030). Tertiary programs may provide support and education on financial understanding; therefore, their students should be financially literate. However, statistics showed an increasing trend of financial distress among fresh graduates which motivated this study to investigate factors associated with financial literacy among university students in Malaysia. This study also aimed to examine whether there was a difference in financial literacy among respondents based on their background. Financial literacy is an important part of a well-rounded education. Therefore, the findings of this study can become an input for the university to design their curriculum and extra curriculum that could support SDG 4.6's target.

The following section provides a critical review of past literature. The collection of data and the methodology used are explained in the subsequent section, which is followed by a discussion of the findings.

LITERATURE REVIEW

A strong understanding of financial literacy allows for better financial decisions that can improve day-to-day life. At the macro level, financial literacy can result in stronger family balance sheets, which lead to a stronger overall economy, hence helping the nation in achieving SDG (Freedman & Dursi, 2016). Financially literate students can not only manage money with more confidence, but will also have a better chance of handling the inevitable ups and downs of their financial lives by understanding how to prevent and manage issues as they arise (McGurran, 2021).

Garg and Singh (2017) analyzed how factors such as age, gender, marital status, and income influenced the financial literacy level of youth. The study revealed that financial literacy among adolescents was worryingly low in most parts of the world. Socioeconomic and demographic factors influenced financial literacy level and its dimensions (financial knowledge, financial attitude, financial behaviour). In the context of age, studies by Lusardi and Tufano, (2009)' Alessie et al. (2009), and Lusardi et al. (2010) revealed that generally, young adults and older adults displayed lower financial literacy (Lusardi & Mitchell, 2011; Allgood & Walstad, 2013; Jariwala, 2013). Both younger and older adults possessed low

financial knowledge about the basic financial concepts, inflation, interest compounding and risk diversification (Lusardi & Mitchell, 2011; Allgood & Walstad, 2013). Their low financial knowledge in these areas detered them from making proper financial planning (Alessie et al., 2009; Allgood and Walstad, 2013). However, Filipiak and Walle (2015) found a significant positive relationship between age and financial knowledge in which older people were more positive towards financial planning compared to youngsters (Lusardi & Mitchell, 2011).

Thabet et al. (2019) reported that financial literacy is associated with two socio-demographic variables namely age and marital status. Thapa (2015) conducted a study on three demographic variables (gender, income, age) reported that income and age affected financial literacy among students. Another common assumption is older people have better financial knowledge and literacy than younger ones. However, this may not always be true in this era. The younger generation has greater financial information exposure from peer groups and media specifically. Based on this assumption, a survey on financial literacy by age was conducted in 2017 by Jakpat, a market research company in Jakarta (Jakpat, 2017). Results from the survey revealed that there was no difference among respondents' age segments regarding their financial literacy. However, most older respondents in the survey were more likely to own many more types of financial products compared to the younger ones.

The previous study also found that gender was another factor that could explain the differences in financial literacy in many countries (Garg & Singh, 2017; Lusardi & Mitchell, 2011; Cole et al., 2009; Chen & Volpe, 2002; Calamato, 2010; Edwards et al., 2007). However, Kutlu Ergün (2018) and Filipiak and Walle (2015) found that financial literacy was not significantly predicted by gender in India. The study reported that involvement in taking financial decision determined their financial literacy level, and the root cause behind lower level of financial knowledge among women relative to men was mainly nurture and not nature. Kimiyaghalam and Yap (2017) as well as Ibrahim et al. (2009) documented no significant differences in the level of financial literacy between men and women.

Kenayathulla et al. (2020) studied the level of financial literacy among undergraduate students in selected public and private institutions,

in the areas of financial knowledge, behaviour, and attitudes. The research also analysed whether there were differences in terms of financial literacy by socioeconomic status or by gender. Findings revealed that while these students had a high level of financial knowledge and behaviour, their financial attitude was still at a moderate level. Results also indicated that students did not differ in financial literacy by gender or socioeconomic status. Findings from a study on financial literacy among SMEs by Thabet et al. (2019) presented several implications that are applicable to other groups including university students. The first one is training. Low financial literacy may lead to numerous negative consequences in one's life. The findings of this study indicated that improving awareness probably via training on the positivity of managing finance may lead to better literacy. The training instills better attitude and behaviour towards financial management.

Rosacker et al. (2009) studied 41 first-year business school students in the United States, who had participated in a short financial literacy training program. The findings revealed that the training benefited these freshmen business students substantially. Niederjohn and Schug (2006) used a pre and post-test design to measure the changes in student financial knowledge and attitudes of secondary students who were taught lessons from the "learning, earning, and investing" curriculum. The findings suggested that this program was effective when economics teachers used it with some formal training materials. Varcoe et al. (2005) analyzed the effectiveness of the "money talks: should I be listening?" curriculum on the financial knowledge and behaviour of participants using this series. The findings indicated that through short training sessions, behaviour and preferences were changed in a positive direction, knowledge improved, and students appeared to have responded in ways to make their money go further.

In looking at the relationship between financial education, financial literacy, and financial outcomes, Gartner and Todd (2005) evaluated a randomized credit education plan for first-year college students. However, there were no statistically significant differences that could be observed between the control and treatment groups in their credit balances or timeliness of payments. Servon and Kaestner (2008) exploited random variation in a financial literacy training and technology assistance program and found virtually no differences between the control and treatment groups in a variety of financial behaviours, although they suspected that the program was implemented imperfectly.

A study by Lantara and Kartini (2015) was designed to investigate the level of financial literacy among undergraduate and graduate students in Gadjah Mada University, Indonesia. Results from the study indicated that students taking business majors had a significantly better average score of correct answers compared to the non-business major students. The findings indicated that academic disciplines and education levels were positively associated with the probability of having a higher score for financial literacy. The results supported the findings of previous empirical studies as in Chen and Volpe (1998) in the U.S. They found that business majors had a better score compared to non-business majors. This finding is not surprising because the curriculum content of business majors gives students more opportunities to strengthen their knowledge in financial and other related courses.

Altintas (2011), on the other hand, carried out a study to expose the relationship between financial literacy and gender, class rank, academic discipline, and several other factors relating to financial matters and literacy. Contrary to the expectations and the findings of related literature, participants' educational background or academic discipline does not have a significant impact on their overall financial knowledge. In contrary to the above findings, the level of financial literacy of Turkish students exposed that academic discipline did not affect the level of financial literacy of students. Mändmaa (2019) who carried out an analysis on the factors influencing university students' financial literacy indicated in her report that students with an economic academic discipline have better financial literacy than students who do not learn in the economic direction. She further explained that the low level in financial knowledge of students of non-economic academic disciplines could be explained by lack of exposure to financial education. To improve, topics on economics and personal finances should be introduced in all academic disciplines.

DATA

Collection of Data

Data on Malaysian university students were collected through an electronic survey using Survey Monkey. A total of 812 questionnaires were

found to be valid and usable for the purposes of analysis. There were four sections that made up the questionnaires, namely demographic, students' financial literacy, peer effect, and parents' effect. The first section was on the demographic data of the respondents including age, academic discipline, and attendance at a financial-related short course.

The second section presented the students' financial literacy. This study investigated two dimensions of financial literacy, namely Financial Knowledge and Financial Confidence. The study employed the "Big Three" financial literacy questions (Lusardi, 2019) to assess the financial knowledge level of the respondents. The score is calculated based on the number of correct answers (from zero to three) (Lyons & Kass-Hanna, 2021). The second section also included questionnaires to ascertain individuals' subjective judgments of their financial literacy level (Perry & Morris, 2005), also known as Financial Confidence. Respondents were asked to self-assess their knowledge related to financial matters by scoring their level of agreement with statements on fundamental and advanced financial knowledge. Among the questions asked were the ability to make a priority list of the consumption needs and the concept of the time value of money (present value).

The third section contained questions designed to ascertain peer influence. Following Dangol and Maharjan (2018), peer influence is the impact that peers have on each other's financial attitudes, behaviors, and knowledge which can influence financial confidence among students. The respondents were asked to score their level of agreement with statements related to friends' involvement in their personal financial decision (Churchill & Moschis, 1979; Dangol & Maharjan, 2018; Jorgensen, 2007). The questions asked were whether the students followed their friends' advice on saving money safely and whether they discussed financial management issues with their friends.

The fourth section contained questions designed to ascertain the parents' influence. This study defined parents' influence as the impact that the parents have on their children's financial attitudes, behavior, and knowledge, which can affect their financial confidence. The respondents were asked to score their level of agreement with statements related to parents' involvement in their personal financial decision (Norvilitis &

MacLean, 2010; Shim et al., 2010). Among the questions asked were whether the students discussed with their parents every financial decision and advised them to manage finances wisely.

METHODOLOGY

Independent T-test

This study aimed to ascertain the current level of financial literacy of Malaysian university students and the factors influencing the financial literacy of university students. The difference in students' financial literacy based on their background, namely, gender, ethnicity, short course attended, academic discipline, and program level was examined using the Independent t-test.

Partial Least Square-Structural Equation Model (PLS-SEM)

This study employed the PLS-SEM to examine the associations among the variables under study. The first model tested the relationship between Financial Knowledge and gender, age, finance course, academic discipline, peer influence, and parental influence. The second model tested the relationship between Financial Confidence and gender, age, finance course, academic discipline, peer influence, and parental influence.

Chin et al. (2003) stated that the survey data were not normally distributed. Therefore, following Qureshi et al. (2023), this study used the PLS-SEM using SmartPLS 4.0 as the statistical tool to estimate the measurement and structural model as it dismisses normality assumptions. The first step involved estimating the factor loadings, construct reliabilities, and convergent and discriminant validity. The second step encompassed estimating the path coefficients and the overall goodness-of-fit of the model by examining the R-squared.

Full Collinearity Testing

The data collected in this study was tested for the presence of common method bias as they were acquired from a single source. Full Collinearity Testing was used to examine the common method bias as prescribed by

Kock and Lynn (2012) as well as Kock (2015) by regressing all variables against a common variable. The data is free from common method bias if the VIF value was less than or equal to 3.3. Table 1a and Table 1b report the findings from Full Collinearity Testing for Financial Knowledge and Financial Confidence. As depicted in Table 1a and Table 1b, all the VIF values for Financial Confidence and Financial Knowledge ranged between 1.021 and 1.212. The findings showed no evidence of bias from the single source data.

Table 1a: Full Collinearity Testing- Model 1 (DV- Financial Knowledge)

Variable	FNC	GDM	AGE	SHC	AFB	PRI	PEI
VIF	1.212	1.030	1.081	1.073	1.087	1.247	1.073

Note: *FNC* is financial confidence, *GDM* is a dummy variable that denotes gender (1 male, 0 female), *AGE* is the age of respondent, *SHC* is a dummy variable for attending a financial-related course (1 attended, 0 otherwise), *AFB* is a dummy variable for respondents' academic discipline (1 for Accounting, Finance and Business Studies, 0 otherwise), *PRI* is parental influence, and *PEI* is peer influence.

Table 1b: Full Collinearity testing- Model 2 (DV- Financial Confidence)

Variable	FNC	GDM	AGE	SHC	AFB	PRI	PEI
VIF	VIF	1.106	1.021	1.115	1.052	1.090	1.155

Note: FKN is financial knowledge, GDM is a dummy variable that denotes gender (1 male, 0 female), AGE is the age of respondent, SHC is a dummy variable for attending a financial-related course (1 attended, 0 otherwise), AFB is a dummy variable for respondents' academic discipline (1 for Accounting, Finance and Business Studies, 0 otherwise), PRI is parental influence, and PEI is peer influence.

RESULTS AND DISCUSSION

Descriptive Statistics

Table 2a presents a summary of the composition of the data from 812 respondents among university students in Malaysia.

Table 2a: Composition of Respondent

Variables	Descriptions	N	%
Gender	Male	206	25.37
	Female	606	74.63
Ethnic	Malay	778	95.81
	Others	34	4.19
Programme Level	Undergraduate	779	95.94
	Postgraduate, Professional	33	4.06

Academic Disciplines	Finance related	576	70.94
	Others	236	29.06
Father's Education	Tertiary Education	381	46.92
	Others	431	53.08
Mother's Education	Tertiary Education	341	42.00
	Others	471	58.00
Parents' Monthly Income	Below RM5,000	469	57.76
	RM5,000 and above	343	42.24
Attending Course on Financial Management	Yes	260	32.02
	No	552	67.98

Table 2b summarizes the mean score for Financial Literacy. There were two dimensions of Financial Literacy used in this study, namely Financial Knowledge (based on 'the 3 big questions' that measure technical competency) and Financial Confidence (based on own perception of personal financial management). Financial Knowledge was measured based on the correct answer given to the three questions asked, with each correct answer worth one mark. Financial Confidence was measured using Likert scales ranging from Strongly disagree (1) to Strongly agree (5). As shown in the table, on average 8.87% of the respondents were able to answer all of the questions correctly, which indicated a strong financial knowledge. Around 35.1% of the respondents managed to answer at least two of the three questions correctly. Therefore, around 64.9% managed to answer either one of the questions correctly or none. 26.48% of the respondents gave the wrong answer to all of the questions. The results on Financial Confidence showed a mean score of 3.1246 out of a total score of 5. Overall, the findings indicated that Malaysian university students had low to moderate levels of financial knowledge.

Table 2b: The Mean Score for Financial Literacy

Financial Literacy		Mean
Financial Confidence		3.1246
Financial Knowledge	1 correct answer	38.42%
	2 correct answers	26.23%
	3 correct answers	8.87%
	No correct answer	26.48%

A similar study by Ergun et al. (2018) documented a moderate level of financial literacy among university students in Estonia, Germany, Italy, Netherlands, Poland, Romania, Russian Federation, and Turkey with an overall mean of the correct answer of 72.2%. In Malaysia, Rubayah et al. (2015) also found a moderate level of financial literacy among Universiti Kebangsaan Malaysia's students. The results shown by this study suggested that more financial courses should be provided in university education programmes in Malaysia to improve their students' financial well-being. Furthermore, with more Malaysian university students depending on education loans to finance their education, a high level of financial literacy is needed, thus, financial-related courses should be made compulsory.

Independent T-test

Table 3 presents the results on the difference in Financial Literacy between gender, university programs, race, academic discipline, and a short course in Financial Management. In general, the study documented that there was no significant difference in financial literacy levels among Malaysian students for both gender and race. However, the study found that the program level and academic discipline do matter.

As shown in Table 4, postgraduate students possessed a significantly higher score of financial literacy than those from the undergraduate program with a 1% confidence level. The findings suggested that postgraduate students are more knowledgeable about personal finance.

Similar findings were also seen for academic disciplines and those who attended short courses on financial management. The results suggested that the training program that those students participated had benefited them substantially. The same can be concluded for students from the finance-

related program. Students from Accounting and Finance disciplines showed a significantly higher level of financial literacy than those in other disciplines at a 1% significance level. These students had a better average score of correct answers compared to non-finance-related programs. This finding was expected because the curriculum content of finance-related majors gives students more opportunities to strengthen their knowledge in financial and other related courses. Another explanation is that other disciplines may not have a compulsory financial management course, hence resulting in a lack of exposure to financial education.

Table 4: Independent Sample T-test for Financial Literacy Score

Category	Group	N	Mean	t	Sig.
Gender	Male	206	1.2184	0.78393	0.43331
	Female	606	1.1601		
Program Level	Undergraduate	779	1.1579	-2.55550	0.01079**
	Post-graduate Professional	33	1.5758		
Race	Others	34	1.4706	1.56443	0.12674
	Malay	778	1.1620		
Academic Discipline	Others	236	0.8559	-6.59837	0.000***
	Accounting Finance & Business	576	1.3056		
Short-Course in Financial Management	Yes	260	1.3615	3.99051	0.000***
	No	552	1.0870		

***Note**: ***, ** and * denote 1%, 5% and 10% significance level*

Partial Least Square-Structural Equation Model (PLS-SEM)

Measurement model assessment

This study employed the two-step technique prescribed by Anderson and Gerbing (1998) to test the models. Firstly, the validity and reliability of the instrument used were assessed based on the measurement model by Hair et al. (2019) and Ramayah et al. (2018). Secondly, the structural model was assessed to verify the proposed hypotheses. Lastly, the convergent and discriminant validity of the measurement model was evaluated.

Convergent Validity

Convergent validity is the degree to which two items measuring the same construct load heavily on that construct. Loadings, average variance extracted (AVE), and composite reliability (CR) were applied to determine the convergent validity. Following Hair et al. (2017), the measurements are valid and reliable if the value for the loading is at least 0.5, the CR is equal to or higher than 0.7, and the AVE is not lower than 0.5.

As shown in Table 5a the AVE and CR values exceeded 0.5 and 0.7, respectively for Model 1 (Financial Knowledge). The loadings were acceptable with only three loadings below 0.708 (Hair et al., 2019). Therefore, the measurement was valid and reliable. For Model 2 (Financial Confidence), both the CR and the AVE showed a value higher than 0.5.

Table 5a: Measurement Model- Model 1 (DV- Financial Knowledge)

Variable	Item	Loading	CR	AVE
Financial Knowledge	FKN	SIM	NA	NA
Gender (male)	GDM	SIM	NA	NA
Age	AGE	SIM	NA	NA
Short Course (FM)	SHC	SIM	NA	NA
Academic Discipline	AFB	SIM	NA	NA
Peer Influence	PEI1	0.928	0.907	0.665
	PEI2	0.896		
	PEI3	0.842		
	PEI4	0.785		
	PEI5	0.581		
Parents Influence	PRI3	0.993	0.777	0.555
	PRI6	0.534		
	PRI7	0.629		

Note: *PEI6, PRI1, PRI2, PRI4, PRI5* and *PRI8* were deleted due to low loadings. SIM = Single Item Measure and NA = Not Applicable

As suggested by Hair et al. (2019), the value for loadings was acceptable with five loadings recording a value below 0.708. Just like Model 1, the measurement for Model 2 was also valid and reliable as shown in Table 5b.

Table 5b: Measurement Model - Model 2 (DV- Financial Confidence)

Variable	Item	Loading	CR	AVE
Financial Confidence	AK1	0.802	0.85	0.535
	AK2	0.754		
	AK3	0.83		
	BK1	0.661		
	BK2	0.583		
Gender (male)	GDM	SIM	NA	NA
Age	AGE	SIM	NA	NA
Short Course (FM)	SHC	SIM	NA	NA
Academic Discipline	AFB	SIM	NA	NA
Peer Influence	PEI1	0.841	0.916	0.65
	PEI2	0.844		
	PEI3	0.884		
	PEI4	0.873		
	PEI5	0.795		
	PEI6	0.55		
Parents Influence	PRI1	0.749	0.892	0.543
	PRI2	0.779		
	PRI3	0.692		
	PRI4	0.596		
	PRI5	0.706		
	PRI6	0.819		
	PRI7	0.795		

Note: *BK3* and *PRI8* were deleted due to low loadings. SIM = Single Item Measure and NA = Not Applicable

Discriminant Validity

Discriminant validity shows how well a test measures if two constructs are conceptually distinct or unrelated. Henseler et al. (2015) proposed the HTMT ratio which was later modified by Franke and Sarstedt (2019) to measure discriminant validity. The HTMT values should be less than or equal to 0.85 for stricter criteria and less than or equal to 0.90 for more lenient criteria. Table 6a and Table 6b summarize the HTMT ratios for Model 1 (Financial Knowledge) and Model 2 (Financial Confidence) respectively. As shown in the Tables, the HTMT ratios were all less than the tighter

threshold of 0.85 for both models. These values of lower than 0.85 signified that the respondents were aware and understood that the constructs were distinct for both models.

Table 6a: Discriminant Validity Heterotrait–Monotrait Ratio (HTMT) – Model 1 (DV- Financial Knowledge)

	AFB	AGE	FKN	GDM	PEI	PRI	SHC
AFB							
AGE	0.113						
FKN	0.221	0.203					
GDM	0.101	0.055	0.028				
PEI	0.023	0.090	0.043	0.030			
PRI	0.099	0.163	0.058	0.084	0.430		
SHC	0.149	0.154	0.139	0.018	0.062	0.052	

Note: *FKN* is financial knowledge, *GDM* is a dummy variable that denotes gender (1 male, 0 female), *AGE* is the age of respondent, *SHC* is a dummy variable for attending a financial-related course (1 attended, 0 otherwise), *AFB* is a dummy variable for respondents' academic discipline (1 for Accounting, Finance and Business Studies, 0 otherwise), *PRI* is parental influence, and *PEI* is peer influence.

Table 6b: Discriminant Validity Heterotrait–Monotrait Ratio (HTMT) – Model 2 (DV- Financial Confidence)

	AFB	AGE	FinConf	GDM	PEI	PRI	SHC
AFB							
AGE	0.113						
FNC	0.227	0.135					
GDM	0.101	0.055	0.079				
PEI	0.024	0.102	0.28	0.04			
PRI	0.067	0.161	0.295	0.081	0.396		
SHC	0.149	0.154	0.224	0.018	0.057	0.046	

Note: *FNC* is financial confidence, *GDM* is a dummy variable that denotes gender (1 male, 0 female), *AGE* is the age of respondent, *SHC* is a dummy variable for attending a financial-related course (1 attended, 0 otherwise), *AFB* is a dummy variable for respondents' academic discipline (1 for Accounting, Finance and Business Studies, 0 otherwise), *PRI* is parental influence, and *PEI* is peer influence.

In conclusion, the results of the convergent and discriminant validity showed that the instruments used in this study were both valid and reliable.

Structural Model Assessment- Hypothesis testing

This study tested for the normality of data by assessing multivariate skewness and kurtosis, as proposed by Hair et al. (2017) and Cain et al. (2017). Results from Mardia's multivariate skewness and kurtosis Financial Knowledge showed a beta coefficient of 10.9823 with a $p<0.001$ and a beta coefficient of 77.0115 with $p<0.001$ respectively. The Mardia's multivariate scores for Financial Confidence were $\beta = 11.0886$ ($p< 0.01$) and $\beta = 80.6744$ ($p< 0.01$) for skewness and kurtosis. Based on the findings, the study rejected the null hypothesis of normally distributed data.

Following Hair et al. (2019), this study showed the values of path coefficients, standard errors, t-values, and p-values for the structural model using the 5,000-sample re-sample bootstrapping method (Ramayah et al., 2018). According to Hahn and Ang (2017), p-values are inadequate to examine the significance of a hypothesis and a combination of several criteria (p-values, confidence intervals, effect sizes) should be employed. Table 7a and Table 7b report the results of the study based on those criteria. The R^2 for Model 1 was 0.096.

The study showed that gender, age, attended a short course in financial management, academic discipline, parental influence, and peer influence explained 9.6% of Malaysian students' financial knowledge.

Table 7a: Hypotheses Testing- Model 1 (DV- Financial Knowledge)

Hypothesis	Relationship	Std. Beta	Std. Dev.	t-value	p-value	BCI LL	BCI UL	f^2
H1	GDM ->FKN	0.072	0.082	0.877	0.190	-0.066	0.203	0.001
H2	AGE -> FKN	0.148	0.036	4.138***	0.001	0.086	0.205	0.022
H3	SHC -> FKN	0.176	0.075	2.363***	0.001	0.056	0.303	0.007
H4	AFB -> FKN	0.418	0.073	5.756***	0.001	0.291	0.532	0.038
H5	PEI -> FKN	0.072	0.074	0.974	0.165	-0.144	0.122	0.005
H6	PRI -> FKN	-0.068	0.056	1.230	0.109	-0.12	0.106	0.004

Note: 95% confidence interval was used with bootstrapping of 5,000. Note: *FKN* is financial knowledge, *GDM* is a dummy variable that denotes gender (1 male, 0 female), *AGE* is the age of the respondent, *SHC* is a dummy variable for attending a financial-related course (1 attended, 0 otherwise), *AFB* is a dummy variable for respondents' academic discipline (1 for Accounting, Finance and Business Studies, 0 otherwise), *PRI* is parental influence, and *PEI* is peer influence.

The results showed a significant positive relationship between financial knowledge and age, academic discipline as well as whether those students

have attended a financial management course at a 1% confidence level. The gender, parental influence and peer influence of the students did not have any significant impact on their financial knowledge.

Similar findings were observed for students' financial confidence. The R^2 of 0.1750 reflected that the factors namely age, gender, academic discipline, parental influence, peer influence, and whether they had attended a short course in financial management explained 17.50% of their financial confidence.

As shown in Table 7a, age does matter in determining financial literacy among university students. The results were positive and significant, which indicated the older the students, the more financially savvy they were. The findings also suggested that the students became more financially confident with age as depicted in Table 7b. A plausible explanation is age is a proxy for financial experience, and the more financial experience the student has, the higher his/her financial knowledge and confidence is. Consequently, the more financially literate he/she becomes. This study supports the earlier study by Thapa (2015), Filipiak and Walle (2015) as well as Thabet et al. (2019) which reported that age was a strong predictor of financial literacy.

Table 7b: Hypotheses Testing- Model 2 (DV- Financial Confidence)

Hypothesis	Relationship	Std. Beta	Std. Dev.	t-value	p-value	BCI LL	BCI UL	f2
H1	GDM -> FNC	0.182	0.079	2.308***	0.011	0.052	0.312	0.007
H2	AGE -> FNC	0.092	0.038	2.389***	0.008	0.030	0.158	0.010
H3	SHC -> FNC	0.305	0.068	4.508***	0.001	0.188	0.411	0.023
H4	AFB -> FNC	0.410	0.072	5.687***	0.001	0.290	0.526	0.040
H5	PEI -> FNC	0.144	0.038	3.793***	0.001	0.080	0.204	0.022
H6	PRI -> FNC	0.231	0.035	6.521***	0.001	0.166	0.285	0.055

Note: *FNC* is financial confidence, *GDM* is a dummy variable that denotes gender (1 male, 0 female), *AGE* is the age of respondent, *SHC* is a dummy variable for attending a financial-related course (1 attended, 0 otherwise), *AFB* is a dummy variable for respondents' academic discipline (1 for Accounting, Finance and Business Studies, 0 otherwise), *PRI* is parental influence, and *PEI* is peer influence.

Besides age, this study also found that financial background had a positive association with the level of financial literacy among university students. The study documented that both academic discipline and attendance for financial management courses were significantly associated with the level of financial literacy at a 1% significant level. One plausible explanation is that students with accounting and financial backgrounds are more familiar with the financial concept, hence will be more financially

confident and financially knowledgeable. The results also indicated that the training program that those students participated had benefited them substantially. The same can be concluded for students from the finance-related program. The findings were consistent with Mändmaa (2019) who found that academic discipline is a predictor of financial literacy among students.

CONCLUSION

In summary, the findings implied that financial management courses can help students to become more financially literate. Topics on accounting, economics, and personal finances should be introduced in all academic disciplines. Therefore, the study suggested that financial literacy-related courses be made compulsory in all undergraduate programs in Malaysian universities either as part of the academic curriculum or part of the extra curriculum. Given the current trend of loan default among fresh graduates, the government and the university need to take more aggressive action to increase financial literacy among Malaysian university students. Overall, students' financial literacy is an important component of the SDGs. By promoting financial education and empowering students with financial skills, we can help to achieve several of the goals, including SDG 1, 4, 8, and 10.

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