

# Financial Literacy and Financial Behaviour of University Students in Malaysia

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## ABSTRACT

This study aims to assess the financial literacy and financial behaviour of undergraduate students in Malaysia. A quantitative approach using questionnaires distributed to 339 respondents from public universities was conducted. Multiple regression, and linear regression were used to analyse the data. The findings have shown a significant relationship between financial literacy and financial behaviour, while students with high financial literacy tend to show well-managed financial behaviours such as future planning, prudent spending, and savings. Studies have found that only financial education and financial attitudes influenced financial literacy, and these findings support the Theory of Planned Behaviour (TPB) where good financial attitudes improve financial literacy and, in turn, trigger the students' desire to act in an orderly manner when it comes to financial matters. However, financial socialization could not support the Theory of Planned Behaviour (TPB) because the study found that financial socialization did not significantly affect the increment in financial literacy, thus causing students' financial behaviour to be less orderly organized. However, the element of financial literacy can serve as an extension of the Theory of Planned Behaviour (TPB) in upcoming research because, through financial literacy, theoretical abilities can be strengthened in predicting individual behaviour. Parents as the major socialization factor in students' life are advised to be actively involved in improving the students' financial literacy. An education policy that emphasizes the element of financial literacy is also very necessary to ensure that the next youth generation is more literate and act professionally in terms of finance.

**Keywords:** Financial literacy, financial behaviour, financial education, financial socialization, financial attitudes

## 1. INTRODUCTION

“It is well enough that people of the nation do not understand our banking and monetary system, for if they did, I believe there would be a revolution before tomorrow morning” - Henry Ford (Ford Motor Founder)

The world revolution will break out if individuals and communities have a deep understanding of finance. The financial system is crucial to be understood, studied, and refined because in such a case

that any changes and financial instability happen, these will affect individuals, society, and the world. In 2008, the world financial crisis occurred due to human greed in carrying out financial activities where individuals took advantage of the flexibility provided by financial institutions. The conditions needed by financial institutions in approving loans were not that strict, causing many consumers to secure loans at high-interest rates despite not being able to repay. Hence, this financial crisis proves that human behaviour and actions involving financial activities have a huge impact on the whole society.

Based on the report issued by the Malaysian Insolvency Department, a total of 84, 805 bankruptcy cases were administered for five years starting from 2015 until December 2019 (Malaysian Insolvency Department 2019). Murthy & Mariadas (2017) stated that bankruptcy occurs, especially among young people and new graduates due to the lack of skills in financial planning based on the poor financial behaviour shown by the new graduates. In fact, financial literacy is also a factor influencing bankruptcy (Selvanathan, Krisnan, & Wen 2016) because individuals who are weak in financial literacy are basically unable to make a sound decision when facing financial problems, thus causing difficulties in personal financial affairs and even driving individuals towards bankruptcy (Othman, Abdul Rahim, & Sabri 2015).

Individuals and communities with better financial literacy are able to use their existing financial knowledge and skills to take appropriate actions involving financial activities and will directly express planned and good financial behaviour. According to OECD (2013b), financial literacy is a knowledge and understanding related to financial concepts and risks as well as the skills, motivation, and confidence to use such knowledge in making accurate financial decisions to ensure that the financial well-being of individuals and society can be improved.

Several factors that influence financial literacy include financial education, financial socialization, and financial attitudes. Potrich et al. (2016) defined financial education as a process of developing human knowledge related to finance so that the choices and decisions made are accurate for personal financial management to succeed. According to Ward (1974), financial socialization is a process where individuals go through the environment in acquiring the skills, knowledge, and attitudes needed to maximize their role as consumers in the financial markets. Parrotta (1998), on the other hand, defined financial attitudes as the mental inclination of individuals in financial management, especially in making financial decisions.

High financial literacy as a result of financial education, financial socialization, and financial attitudes will produce individuals who are well-managed in terms of financial behaviour. Financial behaviour is the action taken in planning, managing, and controlling financial resources (Herawati et al. 2018). The Theory of Planned Behaviour (TPB) is the most suitable theory to be used as a basis in understanding the behaviour of individuals towards financial matters because the TPB acts as a tool to predict and explain the behaviour and actions of individuals. Based on the TPB, the desire of individuals to perform an action is driven by their attitude toward the behaviour, subjective norm, and perceived behavioural control.

Many studies have been conducted by previous researchers in determining financial literacy in Malaysia; however, these studies focus on different study populations, for example, Idris et al. (2016), Yong & Tan (2017), Kaur & Hassan (2018), Ab Rahman, S., Tajudin, A. & Ahmad Tajuddin (2018), Alekam, Md. Salleh, & Mohd Mokhtar (2018), Yong, Yew, & Wee (2018), and Ansar et al. (2019) on the financial literacy of the younger and working generation. Janor et al. (2016), Murugiah (2016), Kimiyaghalam & Yap (2017), and Mokhtar et al. (2018) examined the financial literacy of society in general and did not focus on any population.

Research on financial literacy involving university students in Malaysia has been conducted by several researchers such as Albeerdy & Gharleghi (2015), Jeyaram & Mazlina (2015), Yakob, Janor & Khamis (2015), Abdullah et al. (2017), Aladdin & Ahmad (2017), and Yahaya et al. (2019). Meanwhile, studies on the financial literacy of university students in 2015, 2017, and 2019 are mostly focused on university students in general and did not focus on undergraduate students. However, two studies conducted in 2015 by Jeyaram & Mazlina and Yakob, Janor, & Khamis were focused on undergraduate students in public universities.

Therefore, evidence related to financial literacy and financial behaviour among university students, especially undergraduate students is still needed. This can be further strengthened based on the report by the Department of Insolvency Malaysia (2019), by which the number of bankruptcy cases involving people aged 25 to 34 years is the third-highest with a percentage of 25.18%, while the young people under 25 years old is 0.57%. This shows the importance to assess financial literacy and student behaviour since these young people are in a phase of life changes in which finance is managed alone without parental supervision (Shim et al. 2009). Therefore, this study was conducted to assess the financial literacy and financial behaviour of public university undergraduate students in Malaysia for the year 2020.

### **Significance of The Study**

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## 2. LITERATURE REVIEW

### **Financial Literacy**

Respondents aged 18 to 45 years assume themselves as financially literate individuals; however, the fact is that the respondents are still weak in the mastery of financial literacy knowledge (Murugiah 2016). Kimiyaghalam & Yap (2017) conducted a study to assess financial literacy that covers basic finance and advanced finance (more complex financial knowledge such as investments and risks) and the researchers reported a decrease in scores from basic finance to advance finance. In general, there are several factors influencing financial literacy. Abdullah et al. (2017) stated that financial literacy is affected by the influence of family, personality, and financial knowledge, while Janor et al. (2016) stated that the financial literacy of university students is affected by gender and field of study. According to Albeerdy & Gharleghi (2015) and Isomidinova & Singh (2017), financial literacy is influenced by three main factors: financial education, financial socialization, and financial attitudes.

### **Financial Education**

Fan & Chatterjee (2018) stated that university students who are exposed to financial education showed an increase in test scores compared to students who were not given financial education, proving that financial literacy is significantly influenced by financial education. Lührmann, Serra-Garcia, & Winter (2018) found that financial education in the form of simulations develops students' understanding of interest rates; in fact, students change the method and date of payment to change the interest rate because the payment method determines the interest rate to be borne. Meanwhile, Kalwij et al. (2019) showed that the Money Week program increased the financial literacy score for both the treatment group and control group, but the Cash Quiz program further increased the financial literacy score by 0.32% for the treatment group. This proves that intervention through financial education improves financial literacy. The Finanzas en mi Colegio program as a medium of financial education in schools is also effective in improving students' financial knowledge, self-skills, and CGPA. Besides, the knowledge of teachers who received financial-related training also increased by 14% compared to teachers in schools who did not receive economic education (Frisancho 2019).

H<sub>1</sub>: There is a significant relationship between financial education and financial literacy.

### **Financial Socialization**

Wagner (2015) found a positive relationship between learning through financial socialization with budget and savings by which the financial behaviour is better if individuals are involved in social learning more often. Thus, the observation of parents, friends, and family members who carry out financial activities help students acquire knowledge and skills directly (Bowen, 2002). As indicated by Mohamed (2017), the frequency of respondents in observing social environments and interacting

with parents during the learning process since childhood showed a positive relationship and affects financial knowledge. Discussions and interactions related to finances between children and parents are a major influence on financial knowledge, attitudes and financial behaviour (Agnew 2018). Therefore, the following hypotheses were constructed to determine the relationship between financial socialization and financial literacy.

H<sub>2</sub>: There is a significant relationship between financial socialization and financial literacy.

### **Financial Attitudes**

Financial attitudes have a significant positive impact on the financial literacy of university students; hence, the higher the financial attitudes shown, the higher the financial literacy score of the students (Albeerdy & Gharleghi 2015). Rai, Dua, & Yadav (2017) found that the financial attitudes of women involved in employment in both the private sector and the government are very closely related to the level of financial literacy. According to Aydin & Selcuk (2018), the development of programs that is specially designed to enhance financial knowledge and inculcate financial attitudes by policymakers and educational institutions are able to form individual skills to manage finances while improving individual financial attitudes through participation in programs, financial seminars, and financial-related basic courses.

H<sub>3</sub>: There is a significant relationship between financial attitudes and financial literacy.

### **Financial Behaviour**

Financial literacy has a significant impact on financial behaviour. According to Gutter (2015), financial knowledge is a determining factor in the formation of individual financial behaviour. As supported by Susanti (2013), financial literacy has a positive impact on students' financial behaviour. Financially literate students have the skills to make decisions about short-term personal finance, but the financial behaviour shows that the confidence and actions on the short-term financial decisions made are inaccurate (Paskelian et al. 2019). According to Zulaihati, Susanti, & Widyastuti (2020), financial literacy also has a positive impact on the behaviour of savings, expenditure, short-term planning, and long-term planning.

H<sub>4</sub>: There is a significant relationship between financial literacy and financial behaviour.

### **Theory of Planned Behaviour**

The Theory of Planned Behaviour (TPB) introduced by Icek Ajzen in 1985 is an advanced model of the Theory of Reasoned Action (Ajzen 1985). This theory is used to predict, explain, and understand human behaviour. Based on this theory, individual desire is a major factor in determining a person's behaviour because there lies a motivation that motivates the individual to strive and put seriousness in achieving and performing an action (Ajzen 1991). Ajzen (1991) stated that the desire to perform an action is due to the three determining factors:

1. Attitude towards behaviour: Individual assessment of behaviour in terms of whether it is a positive or negative assessment.

2. Subjective norms: Social factors that can pressure and influence individuals in terms of whether they want to do or not do a behaviour.
3. Perceived behavioural control: Individual perception of behaviour in terms of whether it is difficult or easy to implement and individual perception of the obstacles or challenges that exist in realizing the behaviour based on past experience.

Lajuni et al. (2018) in their study used the Theory of Planned Behaviour (TPB) to examine financial literacy and financial behaviour. Financial attitudes and literacy were seen to influence the desire to make changes in financial behaviour among undergraduate students in Malaysia; however, this study is unable to support the theory that subjective norms and perceived behavioural control can influence the desire of individuals to put an action (Lajuni et al. 2018). Although the findings may not fully support the theory, Lajuni et al. (2018) stressed that the use of the Theory of Planned Behaviour has a great potential in determining the desire of individuals to perform a financial-related action. In fact, the researchers stated that financial literacy is an important element as an extension of the Theory of Planned Behaviour.

Satsios & Hadjidakis (2018) successfully supported the Theory of Planned Behaviour (TPB) by proving that the attitudes towards behaviour, subjective norms, and perceived behavioural control have a direct positive effect on the desire and behaviour of saving money. The study found that a high positive attitude leads to a greater desire to make savings, thus supporting the TPB where attitudes are the determinant of money-saving behaviour. Subjective norms are also the main determinant of desire in performing an action; individuals influenced by the beliefs and thoughts of the surrounding situation were seen to have a desire to make financial savings and express it through behaviour (Satsios & Hadjidakis 2018).

### **3. METHODOLOGY**

#### **Conceptual Framework**

Figure 1 shows the conceptual framework of this study, which is built based on the Theory of Planned Behaviour and past studies. Fan & Chatterjee (2018) and Ergün (2018) reported a significant relationship between financial education and financial literacy, while Alberdy & Gharleghi (2015) and Isomidinova & Singh (2017) explained the strong relationship between financial socialization and financial literacy, and Loke (2015) and Bir (2016) indicated that financial attitudes have a significant relationship with financial literacy. Furthermore, Herawati et al. (2018) and Zulaihati, Susanti, & Widyastuti (2020) found that financial literacy and financial behaviour are significantly related to each other. Based on the Theory of Planned Behaviour, socialization and individual attitudes are the contributing factors to a person's desire to perform an action (Ajzen 1985).

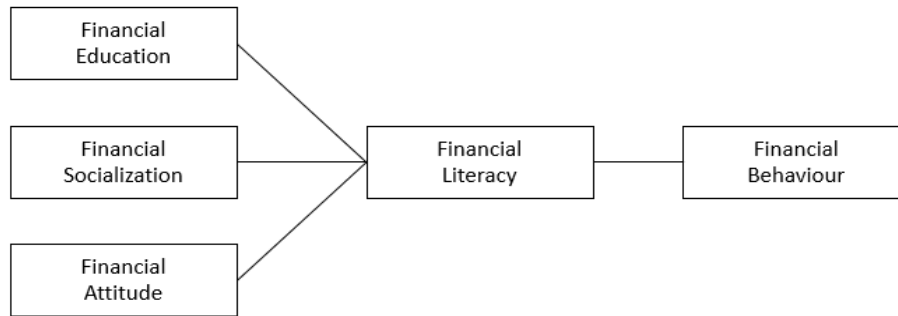


Figure 1: Conceptual Framework

### Population And Sample

The sampling technique used in this study is random sampling. The survey method in the form of questionnaires was conducted online through email and Google Forms. The research population includes public university students, while the study sample entails undergraduate students. However, due to time constraints, the sample size includes 339 respondents.

### Instrument

The instrument was adapted from previous studies such as OECD (2016), Mokhtar et al. (2018), Shim et al. (2010), ANZ Banking Group (2015), Yong, Yew, & Wee (2018), Khatun (2018), and Dangol & Maharjan (2018). Part A of the questionnaire is related to the respondents' demographics, while Part B involves financial education, financial socialization, financial attitudes, financial literacy, and financial behaviour. Questionnaires were distributed via email and Google Forms; and, only 339 questionnaires were returned.

Pallant (2005) stated that validity refers to the ability of an instrument or test to measure data or things that need to be measured, while reliability refers to the stability and consistency of the instrument used in measuring a concept (Hair et al. 2006). Pallant (2007) stated that internal reliability typically uses Cronbach's alpha value as a testing indicator. Cronbach's alpha value above 0.6 is considered acceptable (Pallant, 2005); however, Kaplan & Saccuzo (1997) and Stangor (1998) stated that the instrument has a high internal validity if the alpha value is 0.70. Therefore, the accepted Cronbach's alpha value for this study was 0.70

### Data Analysis

A normality test including correlation and multiple regression analyses were conducted in this study. Descriptive statistics were used to describe the demographics of the respondents, as well as the central tendency and central distribution of the data collected. Measurements in descriptive statistics such as range, mean, median, standard deviation, skewness, and kurtosis provide clear information to researchers on how the respondents responded to the questions in the survey and how well their responses are measured (Sekaran 2003). To examine the relationships among variables, the researchers used a multiple and simple linear regression to obtain a comprehensive explanation of the research model and to evaluate the relative contribution of each variable studied in research (Pallant 2005). If

there is one dependent variable, then the multiple regression analysis is used to test each hypothesis for the research model (Hair et al. 2006).

#### 4. RESULT

##### Correlation Analysis

Correlation is an inference analysis used to evaluate the relationship between two variables. The strength of the relationship between the two variables is seen through the correlation coefficient value between 0 and 1. The value of 0 indicates no correlation, while 0.1-0.3 indicates a weak correlation, 0.4-0.6 indicates a moderate correlation, 0.7-0.9 indicates a strong correlation, and 1 indicates a perfect correlation (Danceys & Reidy 2004). The current study used Pearson’s correlation analysis because the data were normal.

Table 1: Correlations of Financial Literacy with Financial Education, Financial Socialization, Financial Attitudes, and Financial Behaviour.

	<b>Correlation coefficient (r)</b>	<b>Significant Value</b>
Financial Education	.766*	0.001
Financial Socialization	.135	0.221
Financial Attitudes	.727*	0.001
Financial Behaviour	.755*	0.001

\*Significant at P<.05

Based on Table 1, the relationship between financial education and financial literacy is significant since the correlation coefficient value is positive (0.766), indicating a strong positive relationship. This finding explains that the increase in financial education positively affects financial literacy; however, the findings showed an insignificant relationship between financial socialization and financial literacy because the significant value is 0.221, which is above the level of 0.05. Hence, the correlation between the two variables cannot be explained. The correlation between financial attitudes and financial literacy was also found to be positive with a correlation coefficient value of 0.727, and likewise indicating a strong positive relationship; thus, improving financial attitudes will improve financial literacy. Additionally, based on Pearson's correlation, financial literacy with financial behaviour showed a significant positive relationship with a correlation coefficient value of 0.755, which denotes a strong relationship; thus, improving financial literacy positively influences financial behaviour.

##### Regression Analysis

Regression analysis has the same purpose as correlation analysis, which is to evaluate the relationship between variables; however, regression analysis is more detailed because it can be used to predict possible changes to the dependent variables in the event of changes to independent variables. This study used multiple regression to study the relationship between the dependent variable (financial literacy) and independent variables (financial education, financial socialization, financial attitudes), including linear regression for the relationship between the dependent (financial behaviour) and independent (financial literacy) variables.



Table 2: Multiple Regression of Financial Literacy with Financial Education, Financial Socialization, and Financial Attitudes.

Model	Unstandardized Coefficients		Standardized Coefficients	t-stat.	Sig.
	Beta	Std. Error	Beta		
Constant	0.124	0.344		0.374	0.703
Financial Education	0.450	0.087	0.502	6.001	0.001
Financial Socialization	0.033	0.033	0.063	0.956	0.326
Financial Attitudes	0.489	0.071	0.622	6.557	0.001

Dependent variable: Financial Literacy

The model used to determine the beta value of the standardized coefficient is outlined as follows and the model shows how each independent variable (financial education, financial socialization, financial attitudes) affects the dependent variable (financial literacy):

$$\text{Financial Literacy} = 0.124 + 0.502 \text{ Financial Education} + 0.063 \text{ Financial Socialization} + 0.622 \text{ Financial Attitudes}$$

Based on the multiple regression analysis results, financial education has a positive effect on the financial literacy of university students ( $p = 0.001$ ,  $t = 6.001$ ,  $\beta = 0.502$ ). If financial education increases by 1 unit, then the financial literacy of university students will increase by 0.502; hence, this study found a significant relationship between financial education and financial literacy. The findings are also in line with previous studies, such as by Kalwij et al. (2019), Lührmann, Serra-Garcia, & Winter (2018), and Fan & Chatterjee (2018). The level of financial literacy among young people is increasing and the impact of financial education on financial literacy is twice as great as the success of other educational interventions aimed at improving student performance. Furthermore, this is also possible because formal financial education is more structured and orderly in terms of achieving the objective of improving financial literacy through more objective curriculum statistics.

Financial socialization was found to have no influence on the financial literacy of university students ( $p = 0.326$ ,  $t = 0.956$ ,  $\beta = 0.063$ ); hence, there is no relationship between financial socialization and financial literacy and this finding is in line with the Pearson correlation's analysis result that the relationship between the two variables is not significant. However, these findings are not in line with previous studies, such as by Wagner (2015) and Mohamed (2017) and Agnew (2018), which reported a strong positive relationship between financial socialization and financial literacy. Additionally, the Planned Behavioural Theory stating that an individual's desire to perform an action is due to social factors is also unsupported (Ajzen 1985). This is likely to happen because university students today are more focused on social media such as Facebook, Instagram, YouTube, and many more. However, the current study only looks at students' financial socialization based on environmental influences such as parents and friends; therefore, financial socialization through social media should be of focus in studying financial socialization with financial literacy.

Financial attitudes have a significant positive effect on financial literacy ( $p = 0.001$ ,  $t = 6.557$ ,  $\beta =$

0.622). This finding proves a relationship between financial attitudes and financial literacy; if there is an increase in 1 unit for financial attitudes, then financial literacy will increase by 0.622. Additionally, this finding is in line with the studies conducted on students by Albeerdy & Gharleghi (2015), Rai, Dua, & Yadav (2017), Aydin & Selcuk (2018), Lajuni et al. (2018), and Satsios & Hadjidakis (2018), which stated that financial literacy is influenced by individual financial attitudes. Furthermore, the finding also supports the Theory of Organized Behaviour, which states that individual attitudes influence the desire to take action (Ajzen 1985). This is because attitude is an element that takes a long time to be formed and nurtured in order to be able to guide one's actions in a positive or negative situation. Thus, a positive attitude towards financial matters and issues will improve financial literacy and ultimately shape individuals who behave wisely in terms of financial matters.

Table 3: Linear Regression between Financial Literacy and Financial Attitudes

Model	Unstandardized Coefficients		Standardized Coefficients	t-stat.	Sig.
	Beta	Std. Error	Beta		
Constant	0.171	0.433		0.300	0.811
Financial Literacy	0.400	0.091	0.711	7.500	0.001

Dependent variable: Financial Behaviour

The linear model used to explain the relationship between the independent variables (financial literacy) and the dependent variable (financial behaviour) is as follows:

$$\text{Financial Behaviour} = 0.171 + 0.711 \text{ Financial Literacy}$$

Based on the linear regression analysis results, financial literacy has a positive and significant influence on financial behaviour ( $p = 0.001$ ,  $t = 7.500$ ,  $\beta = 0.711$ ). This proves a relationship between financial literacy and financial behaviour, which means that if 1 unit of financial literacy increases, then financial behaviour is predicted to increase by 0.711. Furthermore, this finding is in line with previous studies, such as by Susan (2018), Paskelian et al. (2019), and Zulaihati, Susanti, & Widyastuti (2020). This is because financial literacy significantly affects the financial behaviour of the respondents, where individuals with a good understanding and knowledge related to financial concepts tend to act better in making future savings. High financial literacy also leads to positive financial behaviour shown by the respondents, for example, making price comparisons while buying, a budget to achieve financial goals, short-term financial planning, and long-term financial planning.

#### 4. CONCLUSION AND RECOMMENDATIONS

In conclusion, financial literacy has a significant influence on the financial behaviour of public university students in Malaysia. Student financial literacy can be improved through financial education and financial attitudes; however, financial socialization does not contribute to the increase in financial literacy. As such, financial education has the biggest influence on financial literacy over financial attitudes and this serves as a benchmark for educational policy designers that the financial literacy of the community, especially university students can be improved through financial education. Therefore, the authorities, whether the government or financial institutions such as Permodalan Nasional Berhad (PNB), Bank Negara Malaysia (BNM), Credit Counseling & Management Agency (AKPK), and others should intensify their functions and efforts towards

producing a literate and skilled society in financial affairs. Education will indirectly cultivate positive and good financial attitudes, and individuals are also encouraged to jointly cultivate and improve attitudes so that better financial attitudes can be developed. Parents, in particular, should play as many roles as possible in cultivating children's financial knowledge and skills at an early age because this study proves that the involvement of minimal social factors does not help improve the financial literacy of public university undergraduate students, but rather parents as a major social factor.

In addition, student financial behaviour can be predicted through the Theory of Organized Behaviour. Based on this theory, individual behaviour and actions can be expected through attitudes, perceptions, and social factors. However, this study is only able to enhance the notion of attitudes where financial attitudes are seen to improve financial literacy and influence the desire of individuals to act well in finance-related matters, but the study is not in line with the theory that social factors may influence financial behaviour. Nonetheless, the Theory of Planned Behaviour is still relevant to be used as an extension in future studies to determine financial behaviour through financial literacy. The use of more up-to-date and accurate analysis methods such as Structural Equation Modelling (SEM) is also recommended for future studies in order to make the findings more accurate. Furthermore, a greater number of respondents involving a diverse population is also proposed so that the findings of the studies can generally reflect financial literacy and financial behaviour in Malaysia.

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