

FINANCIAL LITERACY: A STUDY AMONG THE UNIVERSITY STUDENTS

Noor Azizah Shaari

Faculty of Business & Finance, UTAR.

Nurfadhilah Abu Hasan

Faculty of Business & Finance, UTAR

Ramesh Kumar Moona Haji Mohamed

Faculty of Business & Finance, UTAR

Mior Ahmad Jafri Md Sabri

Quest International University

Abstract

This research seeks to examine the financial literacy among university students. The study is used primary data by questionnaires and the sample consisted of 384 students and the target population of the study is from local Universities of Malaysia. Convenience sampling method is used in collecting the data and the results compiled by using SPSS software system. The result comprises of reliability, and multiple linear regression analysis. There are five independent variables such as age, gender, business major and non-business major, spending habit and year of study whereby the dependent variable is the financial literacy. The results revealed that the spending habit and year of study have a significant positive relationship with the financial literacy, whereby the age and gender are negatively associated with the financial literacy. Finally, the limitation and recommendation are included to help further researchers to have a better finding of the result.

Keywords: AGE, GENDER, SPENDING HABIT. YEAR OF STUDY & FINANCIAL LITERACY.

1.0 Introduction

Financial literacy is defined as ones' "knowledge of facts, concepts, principles, and technological tools that are fundamental to being smart about money." (Garman & Gappinger, 2008) Meanwhile, Mason and Wilson (2000) defined financial literacy as a "meaning-making process" in which individuals use a combination of skills, resources, and contextual knowledge to process information and make decisions with knowledge of the financial consequences of that decision.

The importance of financial literacy has been arising with the deregulation of the financial markets and the easier access to credit as financial institutions compete strongly with each other for market share, the rapid growth in development and marketing of financial products, and the government's encouragement for people to take more responsibility for their retirement incomes (Beal & Delpachitra, 2003; Abraham & Marcolin, 2006). In addition, financial literacy can prevent the university students engaged in extensive debt especially credit card debt.

In order to enhance the financial capability, Bank Negara Malaysia has embarked on the following three-pronged approaches which include developing and disseminating educational materials on financial products and services through booklets and websites, promoting financial education to students in collaboration with the Ministry of Education and financial institutions and conducting financial educational outreach program to various target groups, including university students, through strategic partnerships with other organizations. (Lian, 2008)

Recently, there are around 21 public universities and 52 private universities and colleges in Malaysia and these results in a tremendous increase in the number of students. Hence, our government had introduced an educational loan offered under the National Higher Education Fund (PTPTN) as an alternative to lessen the parents' burden for supporting the cost of education. In addition, most of the students enjoy their first experience of financial independence during their university life and this means that they are responsible in their own financial decision making. Since they have expanded purchasing power, this had made the university or college students one of the important customer market segments. However, Malaysia as a part of the developing countries has lower financial literacy level compared to other countries and this is further supported by the minimal percentage of the society knowledge on items like saving, investing and budgeting.

The main objective of this study is to examine the financial literacy level among students form the local Universities in year 2010. Since most of the Universities students live apart from their parents, hence they make financial decision on whether to save, spend or invest based on their financial knowledge. By assessing the

financial literacy level of the students, we can understand better about the financial habits and behaviors of the students.

2.0 Review of Literature

2.1 *Development of Financial Literacy*

One thing is clear from the literature: there is no simple, clear-cut and universally agreed upon definition of what financial literacy is. From the Workforce Investment Act of 1998, it defines the literacy as the ability of individual to read, write and speak and compute and solve a problem at level of proficiency necessary to function on the work. This is a broader view of literacy than just an individuals' ability to reads and writes.

The definition of literacy and applying it to finances, financial literacy defined as the ability to read, interpret and analyze, manage the money, communicate about the personal financial condition that affect material well-being, compute, develop independent judgments, and take actions resulting from those processes in order to thrive in our complex financial world (Vitt et al., 2000). It includes the ability to discern financial choices, discuss money and financial issues without (or despite) discomfort, plan for the future, and respond competently to life events that affect everyday financial decisions, including events in the general economy.

This study is mainly focus on the student's personal financial literacy, and there was a group of studies, which participants answered questions related to general financial knowledge through the questionnaire survey. (Manton et al, 2006; Chen & Volpe, 1998; Jones, 2005;) Besides that, we also look into the student's demographic variable including social background, financial attitude, financial knowledge and family sophistication (Chen & Volpe, 1998; Ibrahim, Harun, & Isa, 2009). The independent variables used in the previous studies are academic discipline, class rank, education, work experience, and own income (Chen & Volpe, 1998).

Financial literacy can have important implications for financial behavior. For instance, people with low financial literacy are more likely to have problems with debt (Lusardi & Turfano, 2009), less likely to participate in the stock market (Rooij, Lusardi, & Alessie, 2007), less likely to choose mutual funds with lower fees, less likely to accumulate wealth and manage wealth effectively and less likely to plan for retirement (Lusardi & Mitchell 2006). Financial literacy is a crucial component to financial decision-making, and many young people desperately wish they had more financial knowledge: there are 84% of college students said they needed more education on financial management topics, 64% would have liked to receive information about financial management topics in high school, and 40% would have liked to receive such information as college freshmen..

In previous study of the analysis of personal financial literacy among students, it is concluded that students are lack of knowledgeable about personal finance (Chen & Volpe, 1998). On the other hand, it shows that there is insufficient lessons provided by the institutions and implied that students are less knowledgeable in financial literacy. General studies show that people having higher education levels will have higher level of financial literacy, although many studies conducted specifically targeting for university students have actually revealed that the level of financial literacy is still low. Apart from that, Beal and Delpachitra (2003) found that freshman in Australia financial literacy was very poor. Consistently, this result is similar to Chen and Volpe (1998) who reveals that although the financial literacy is very low, for the whole population of higher education, the individual is expected to get a better financial professional knowledge and skills by education than those who were less educated.

2.2 *Academic Courses*

In this study, academic courses are one of the independent variables (IV) in which business major and non-business major students, and years enrolled are used as indicator to be investigated in order to determine the relative significance of financial literacy among students in university compared with the previous researchers. Based on previous studies and the intent of the courses themselves, this study would expect to observe a positive correlation between financial education received and financial

knowledge. Similarly, higher levels of financial knowledge are expected to correlate with improved financial decisions. Fox and Bartholomae (1999).

2.3 *Business Major and Non-Business Major*

The student's major courses studies in university are one of the element indicators for academic courses which significant impact on their knowledge to personal financial literacy. There is a relationship between financial courses taken in college and students' knowledge of investment (Peng, Bartholomae, Fox, & Cravener, 2007). According to Beal and Delpachitra (2003), Chen & Volpe (1998), Volpe, Chen, & Pavlicko (1996), Peng et al. (2007), and Robb & Sharpe (2009) have indicated that business majors are more knowledge about personal finance than non-business majors. The educational background made an impact on the average financial knowledge score, with business majors and students with higher class rank scoring better on the test of financial knowledge.

As university students take on higher levels of personal financial responsibility, their interest in personal finances heightens and learning takes place. It is also more likely that college age students are experiencing more challenges with finances as they pay bills, use credit cards, workings, savings, budgeting monthly expenses, and manage student debt. As university students face more financial challenges in conjunction with relevant instruction, the learning process may be enhanced (Peng et al., 2007).

The findings concluded that non-business majors are more likely to be less knowledgeable about personal financial than business majors particularly in finance and accounting.(Chen & Volpe, 1998; Volpe et al., 1996) and Beal and Delpachitra (2003) found out students with higher interest in financial matters, a greater level of directed reading and more attractive listening to financial reports on the media shown a better score in the test even though they were at the first year in the university who were undertaking business studies.

2.3.1 *Year Enrolled*

A first-year student is typically a 19-21 year old, which this group people they are more susceptible to a lower financial literacy compared to the seniors students in college. In general, positive relationships have also been found between personal financial literacy and level of education, participants with a higher level of education, attending full time or graduating from a 4-year college have a higher level of personal financial literacy, although the university students have low level of financial literacy. (Chen & Volpe, 1998; Fogarty & MacCarthy, 2006; Mandell & Klein, 2009) Besides, as seniors are more likely to have more life experience with financial products and were significantly demonstrated better finance attitude, behaviors than first year students.Marsh(2006); Chen & Volpe, 1998; KeyBank & Harris Interactive, 2006; Mandell & Klein, 2009)

Since the 1997-98 academic years, the JumpStart Coalition for Personal Financial Literacy has run surveys to measure financial literacy. As a result, there were never exceeded 60 % of students who have personal financial literacy and worst in the year 2008, there is a decline of 48.3 % of personal financial literacy. Other researchers have also found that college freshmen have low scores on tests of financial knowledge. Manton et al. (2005) found that college freshmen were able to answer only about 35% of financial knowledge questions correctly. Using a six-question scale of credit knowledge to evaluate financial knowledge, Jones (2005) reported that, on average, incoming freshmen gave correct answers only 56% of the time.

One of the reasons is the high school seniors are reluctant to deal with finances when they graduate. The emphasis in the high school curriculum is on preparation for college or on the acquisition of skills to obtain a job and to earn an income rather than personal financial literacy. (Manton, et al., 2006) There is nearly one-third (32%) of the 1,003 college students surveyed asserted that they were "not at all" or "not very well prepared" for managing their money on campus during their freshman year

2.3.2 Investment

Investment is the commitment of money or capital to purchase financial instruments or other assets in order to gain profitable returns in the form of interest, income, or appreciation of the value of the instrument. An investment involves the choice by an individual or an organization such as a pension fund, after some analysis or thought, to place or lend money in a vehicle, instrument or asset, such as property, commodity, stock, bond, financial derivatives (e.g. futures or options), or the foreign asset denominated in foreign currency that has certain level of risk and provides the possibility of generating returns over a period of time (Beal & Delpachitra (2003).

2.3.3 Factors influencing investment decisions of students

Recently, high school curriculum takes less consideration upon the effectiveness of using the income in dealing with financial matter such as bank accounts, investments, mutual funds, mortgages, credit cards, loans, insurance and taxes. Others have argued that young people cannot borrow and thus do not have wealth to invest in stocks. However, there are a large number of those with a university degree that does not participate in the stock market. Besides, the researcher found out that stock market participation increases with age, and normally stock's ownership is focused on those in 40 years old and older (Nag,2007).

Prior research has shown that students are not receiving sound education on financial investments and as a result have inadequate knowledge on investing . A test score has been implemented by Manton et al. (2006) and Rooij et al. (2007), the result shown that more than 50% of the students reported not knowing the main purpose of a mutual fund and the definition of a blue chip stock, indicate there is a low level of understanding concerning financial concepts dealing with investing, saving, borrowing, inflation, and risk diversification especially the freshman students. (Chen & Volpe, 1998; Lusardi & Mitchell 2006, 2007a; Lusardi, Mitchell, & Curto, 2009; Lusardi & Tufano 2009; Rooij et al., 2007).

The low correct response rates, particularly to the inflation and risk diversification questions, and the large "don't know" response rate was particularly troubling, as previous research has found that "don't know" answers identified respondents with lack knowledge of basic financial concepts (Lusardi & Mitchell, 2006, 2007a; Lusardi et al., 2009;) and (Rooij et al., 2007)

2.3.4 Saving Habits

According to Comeau & Rhine (2000) who suggested that there is a critical need for children begins instilling a "culture of saving" in the early age and also exert that financial educators should conduct the reasons to save instead of the ways to save. In addition, young generation rarely practice basic financial skills, such as budgeting, frugal spending, developing a regular savings plan, or planning for long term requirements (Pillai, Carlo, & D'souza, 2010). Therefore, education institutions play vital roles in nurturing and educate students related to financial knowledge such as providing High School Financial Planning Program (HSFPP) and through HSFPP, students had changed their saving and spending habits in three month time (Danes, Huddleston, & Boyce, 1999).

Nowadays, young people especially student always a high amount of student loans or credit card debt, and such early entanglements can hinder people's ability to accumulate wealth (Lusardi, Mitchell, & Curto, 2009). Besides, students who were completely unprepared to embrace the financial stresses of high education and debt have led to the changes of attitude of Americans toward debt (Cummins et al, 2009). A survey done by Pillai et al. (2010), it shows that 40% respondents felt that being financially literate would navigate them on adopting the best investment approach (22%) and maintain healthy spending habits (17%). Plus, some of the respondent replied that financial literacy would save them from a crisis or help them in buying the right kind of insurance. Hence, it is important that youth should aware of the financial literacy.

Some studies show that many college students do not keep a written budget (Henry, Weber, & Yarborough, 2001). Meanwhile, female college students would keep a budget rather than male college students (Henry et al., 2001) as well as to use recommended financial practices such as shopping with a list, planning spending, and saving regularly. Therefore, students with higher financial literacy could

able to make a wise budgeting in their daily expenditures. Consequently, a higher level of financial knowledge shows that a higher level and regular source of income as well as a higher saving rate (Danes, 1994).

2.4 Demographic

In our models of personal financial literacy contain a set of demographic control variables. Since factors such as age, race, gender and family background are known to associate with financial knowledge, these items are included in this model as alternate explanations beyond formal education, experience, and financial aids factors. Few researchers found that male scored better in the financial knowledge compared to the female. In the age area, younger age respondents will have lower financial literacy because they do not have enough experiences or knowledge in such age. Family background (Lusardi et al., 2009) also quite important and related to the personal financial knowledge. Family with higher income and better educated are tend to have better financial literacy.

2.4.1 Gender

There are few researches carried out to test on the difference between the gender and their financial literacy. These include Chen & Volpe (1998), Danes & Haberman (2007), Manton et al. (2006), Micomonaco (2003), Peng et al. (2007) and Volpe et al. (1996), who found out that male scored better in the financial knowledge compared to the female. However, there is also a different finding in which Ibrahim et al. (2009) found out that there is no difference between the level of financial knowledge between males and females students.

The males responded "Don't know" more than selecting the incorrect answer on nine of the 20 questions while the females responded "Don't know" rather than selecting an incorrect answer on thirteen of the 20 questions. The nine questions for the males were common to the thirteen questions for the females. On all of these 9 questions there was a higher percentage of "don't know" response by the females than males (Manton et al., 2006). Examples are like investment, insurance and personal loans areas (Micomonaco, 2003), but females know more about issues covered in the section of overall financial management knowledge (Volpe et al., 1996).

2.4.2 Age

Based on the previous researches, there is a positive relationship between the age and the college students' financial literacy. From 18 to 24 years young adults usually having a higher degree of demographic diversity and instability, with many living away from home for the first time. Moreover, many of these groups gain a new independence and a greater sense of financial responsibility. The acquisition of knowledge seems to increase with age and experience. The results generally show that the younger the age will tend to have the lower financial literacy. Chen & Volpe (1998), Micomonaco (2003), and Chen et al. (1996) who found out lack of financial literacy between those aged 18-24 and this is not a only a result of insufficient financial-based education at the school level. The reason for the low level of knowledge can be attributed to the young ages of 18 to 22 years old of the participants or below 30 as majority of them are in a very early stage of their financial life cycle. (Chen & Volpe, 1998) At this stage of the cycle, they are exposed to a limited number of financial issues related to general knowledge, savings and borrowing, and insurance. During this period, most of their incomes are spent on consumption rather than investment.

2.5 Money Management

In order to achieve a quality life as a working adults, money management skill play an important role because students spending habits in campus will influence the way they manage money throughout their lives (Ibrahim et al., 2009). Students were found lacking of money management skill due to the lacking of financial knowledge especially degree student in Kedah campus (Ibrahim et al., 2009). In the freshman year, there are 32% of college students doubted about their capability of managing their money in campus. Besides, there are around 20% of college students claims that they have a better way to manage their money on campus. As a result, money management considered as one of the independent variable that could affect the financial literacy level.

2.5.1 Spending Habit

In a new trend, there is an increase in the number of college students borrowing to finance high education. Plus, for future research is needed to determine the attitudes and spending habits of university students' change during the time they spend in the university setting.

The attitude of young adults toward spending plays a vital role in sustainability perspectives of their finance and is a significant variable in financial prudence (Pillai et al., 2010). If students have the idea of managing their finances, there will be less default rate on their student loan debt (Cummins et al., 2009). Besides, students with high financial literacy enable them to decrease their chances of bankruptcy, receiving government assistance (Huston et al., 2003) and making poor consumer decision (Hayhoe, Leach, Turner, Bruin, & Lawrence, 2000).

According to the Roy (2003) who found out that the measures of financial literacy should reflect on individual circumstances and agreed that financial literacy was about people being informed and confident decision making in all aspects including spending habits. In addition, young people tend to spend their income immediately on consumption goods, thus neglect the long term personal finances (Greenberger & Steinberg, 1986). Among those young people, females generally tend to have a higher mean score compare with male especially in the affordability to spend, emergencies saving, ability to meet wants, current financial situation, and amount saved (Sabri et al, 2008).

There are several symptoms of insufficient personal financial literacy which also include irresponsible overspending on consumption (Beal & Delpachitra, 2003). Nowadays, many students unable to manage their income in a proper manner because once they hold abundant of money, they simply spend it out and treated as necessary expense in fact it was not (Ibrahim et al., 2009).

Besides, a college educated students generally spends more income on housing, reading, and education instead of spending more on food, clothing, cyber cafe etc. Hence, there is a need to improve the financial literacy among the students who have a mass spending pattern and training related to the financial literacy is highly recommended and it should be conducted from high schools, colleges and universities (Davidson, 2006).

Financial decisions are highly influenced by financial knowledge (Chen & Volpe, 1998) which is parallel with the research by Peng et al. (2007), they found out that student with higher levels of financial literacy made good spending decision in a hypothetical circumstances. In order to avoid any debt and wasteful spending which lead to financial soundness, financial prudence could enlighten the future among the youth and generate wealth (Pillai et al., 2010). Plus, students with less financial knowledge most probably will make flaws on financial decision (Chen & Volpe, 1998). On the other hand, young adults nowadays are materialistic and simply buy assets rather than saving their income for the future and all the statement above are subscribe to the epicurean philosophy of "Life is to enjoy" (Pillai et al., 2010). A finding concluded that many students were lack of basic consumer financial principles of earning, saving, spending, and investing. Eventually, people lack of financial literacy raises concerns about their financial futures and their ability to be effective consumer.

2.6 Gaps in Financial Literacy Research

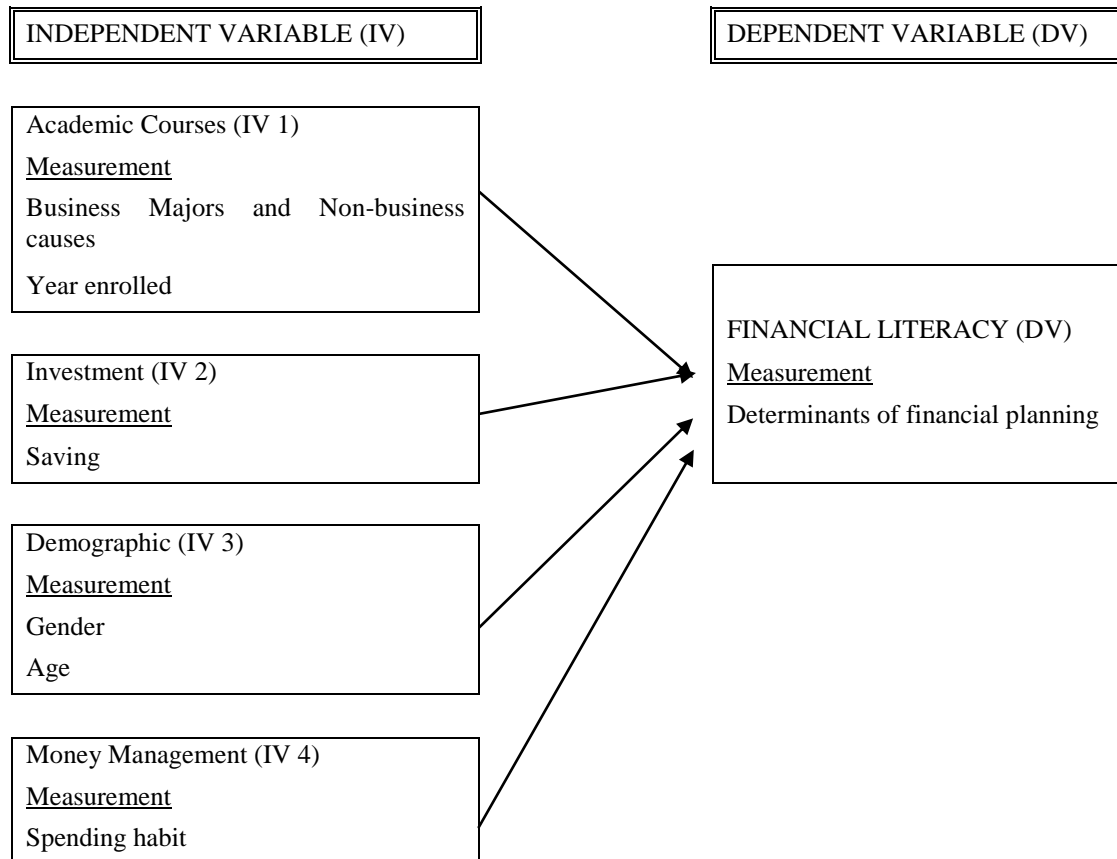
Researches of financial literacy targeting university students have shown that, students with the business major are more financially literate than other major. Furthermore, fewer attempts have been made to compare financial literacy levels of students from different faculties. Most of the related research conducted so far only use dichotomous variable to represent the major areas of courses, but it is important to acknowledge the students participation in study and comparisons against several disciplines and year of study.

Research reveals the main source of financial knowledge, although the details of obtaining such information have been overlooked. For example, a respondent may indicate that their main source of

financial knowledge is from the school, but are likely to get financial knowledge from many other important sources, both direct and indirect such as family background, investment, and saving.

2.7 Conceptual Framework

Figure 2.1: Proposed Conceptual Framework



Source: Developed for the research.

Figure 2.1 show the proposed conceptual framework for current research. It is modified to fit into the purpose of this study. From the Figure 2.1, the independent variables (IV) included five dimensions (Academic Courses, Financial Aids, Investment, Demographic and Money Management). The measurements of each variable were stated below each of the independent variables. The dependent variable (DV) to be tested is the financial literacy. In this study, the five variables will be used to test the relationship of financial literacy on university students.

3.0 Methodology

3.1 Research Design

Quantitative research is conduct through using the large scale of survey research, using the methods like questionnaires. In this research, university students are treated as target population in order to complete this research.

3.2 Data Collection Methods

This data collection method consists of two sources, which are primary sources and secondary sources. In this case, our studies only use the primary data.

3.3 Sampling Design

3.3.1 Target population

The main target population for this study of financial literacy among university students will be the university students in Malaysia. The population of university students is more then 100000.

3.3.2 Sampling Technique

In this research we used convenience sampling due to the high accessibility for the research. Plus, this technique is considered easiest, cheapest and least time consuming.

3.3.4 Sampling Size

There are 2500 questionnaires forms have been distributed to University students in order to retrieve data in this quantitative research.384 samples were collected.

3.4 Research Instrument

In the study, there are few types of scale questions in quantitative research such as likert scale, importance scale and etc. Among those scale, likert scale is recommended in the questionnaires

3.5 Scale Measurement

Cronbach’s Alpha reliability test is used to range the coefficient that result from all the possible combination of split halves. How well a set of items measures a single one-dimensional latent construct is measured by Cronbach’s Alpha (Malhorta & Peterson, 2006). The coefficient varies from 0 to 1, and value of 0.6 or less generally shows that unsatisfactory internal consistency reliability. Cronbach’s Alpha will increase if the average inter-item correlation increases.

The alpha coefficient is considered as having a strong reliability when it is between 0.8-1.0. When the alpha coefficient is between 0.6-0.8, it considered as moderately strong in term of reliability. When is below 0.6, it is considered weak.

Table 3.5.1 Rules of thumb about Cronbach’s Alpha Coefficient Size

Alpha Coefficient Range	Strength of Association
<0.60	Poor
0.60 to <0.70	Moderate
0.70 to <0.80	Good
0.80 to <0.90	Very good
0.90>	Excellent

Source: Hair, Babin, Money, Samouel, (2003), *Essential of business research methods*, United States of American : John Wiley & Sons, p172

3.6 Multiple Linear Regressions

This is used to test the significance of relationship between all IVs and DV. It shows us the effect an independent variable has on the dependent variable when one of the independent variable is varied, while other remains fixed. Besides, it is use to create a model equation in order to examine the effect of independent variables towards dependent variable.

$$Y = a + bX_1 + cX_2 + dX_3 + eX_4 + fX_5 + g$$

Y= Value of the dependent variable, which is financial literacy

a = Constant; equals the value of Y when the value of all independent variables are equal to zero

b ,c ,d, e, f = The slope of regression line

All X= Independent Variables.

X₁= Age

X₂= Spending habit

X₃= Gender

X₄= Faculty

X₅= Year of study

g = Random term associated with each observation

4.0 Results

4.1 Internal Reliability Test

Table 4.11: Reliability Test

Number	Construct	Cronbach's alpha	Number of items
1	Spending Habit	0.766	2
2	Investment	0.607	7
3	Money Management	0.639	10

Source: Developed for the research

Cronbach's alpha is employed to check the reliability of the total 14 items that used in the measurement of the 3 constructs. The Cronbach's alpha for all the examined constructs obtained is above 0.6 which indicates the satisfactory internal-consistency reliability (Malhotra, 2004) as the minimum requirement for further analysis hence all the constructs for this research are considered stable and consistent. Hence the relationship between the measurements of the items in the scale can be determined significantly.

4.2 One Way ANOVA

Table 4.2.1 Respondent's Age

ANOVA

Financial Literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4.129	5	.826	2.603	.025
Within Groups	93.268	294	.317		
Total	97.397	299			

Source: Developed for the research

Based on the table 4.2.1, it show that F statistic is 2.603 and the significance value is 0.025, which is less than the 0.05 at the 5% significance level, so there is a significant difference between the financial literacy level and the respondent's age. Therefore, H₀ was rejected.

Table 4.2.2: ANOVA test between the Financial Literacy Level and the Respondents' Business Major and Non-Business Major

ANOVA

Financial Literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1.687	1	1.687	5.253	.023
Within Groups	95.709	298	.321		
Total	97.397	299			

Source: Developed for the research

Based on the table 4.24, the F-statistic is 5.253 and the significance value is 0.023, which is less than 0.05 at the 5% significance level, so there is significant difference between financial literacy level and

the respondent's faculty. Therefore, H_0 was rejected. There is a relationship between financial courses taken in college and students' knowledge of investment (Peng et al., 2007)

Table 4.2.3: ANOVA test between the Financial Literacy Level and the Respondent's Gender

ANOVA

Financial Literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.283	1	.283	.868	.352
Within Groups	97.114	298	.326		
Total	97.397	299			

Source: Developed for the research

Based on the table 4.26, the F-statistic is 0.868 and the significance value is 0.352, which is more than 0.05 at the 5% significance level, so there is no significant difference between the financial literacy level and the respondent's gender. Therefore, H_0 was accepted.

Table 4.24: ANOVA test between the Financial Literacy Level and the Respondent's Spending Habit

ANOVA

Financial Literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.741	6	1.124	3.631	.002
Within Groups	90.656	293	.309		
Total	97.397	299			

Source: Developed for the research

Based on table 4.28, the F-statistic is 3.631 and the significance value is 0.002, which is less than 0.05 at the 5% significance level, so there is a significant difference between the financial literacy level and the respondent's spending habit. Therefore, H_0 was rejected.

A research shown that financial literacy is beneficial for individuals and family (Fox,1999) by stimulating the opportunity for students to save, invest, get out of debt, spending less than they income, and living on a budget.

Table 4.2.5: ANOVA test between the Financial Literacy Level and the Respondent's Year of Study

ANOVA

Financial Literacy

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3.917	3	1.306	4.134	.007
Within Groups	93.480	296	.316		
Total	97.397	299			

Source: Developed for the research

Based on the table 4.29, the F-statistic is 4.134 and the significance value is 0.007, which is less than 0.05 at the 5% significance level, so there is a significant difference between financial literacy level and the respondent's year of study. Therefore, H_0 was rejected.

In general, positive relationships have also been found between personal financial literacy and level of education, participants with a higher level of education, attending full time or graduating from a 4-year collage have a higher level of personal financial literacy, although many studies conducted specifically targeting university students have low level of financial literacy. (Chen & Volpe, 1998; Fogarty & MacCarthy, 2006; Mandell & Klein, 2009)

4.3 Multiple Linear Regression Analysis

Table 4.3.1 Multiple linear regression analysis between the Financial Literacy Level and all independent variables (Model Summary)

Model Summary ^b					
Model		R	R Square	Adjusted R Square	Std. Error of the Estimate
dimension0	1	.259 ^a	.067	.060	.533

a. Predictors: (Constant), B3YearOfStudy, money management, parents education, B2Faculty, spending habit

b. Dependent Variable: Financial Literacy.

Source: Developed for the research

The coefficient of determination (r square) is 0.067 for the examined regression line could significantly account for 6.7% of the total variations in the financial literacy. Meanwhile 93.3% of the variations of financial literacy could not be presented by the equation. Thus, financial literacy is not very much affected by the five IVs.

Table 4.3.2: Multiple linear regression analysis between the Financial Literacy Level and all independent variables (ANOVA)

ANOVA ^b						
Model		Sum Squares	of df	Mean Square	F	Sig.
1	Regression	4.559	5	.912	2.888	.015 ^a
	Residual	92.838	294	.316		
	Total	97.397	299			

a. Predictors: (Constant), B3YearOfStudy, A2gender, B2Faculty, spending habit, A1age

b. Dependent Variable: Financial Literacy

Source: Developed for the research

F value at 2.888 is significant at the 0.01. The overall regression model with the 5 IVs is good model to explain financial literacy.

Table 4.3.3: Multiple linear regression analysis between the Financial Literacy Level and all independent variables (Coefficients)

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.871	.170		11.013	.000
	A1age	-.013	.028	-.033	-.451	.652
	spending habit	-.085	.044	-.125	-1.955	.052
	A2gender	.039	.067	.034	.580	.563
	B2Faculty	.045	.028	.100	1.603	.110
	B3YearOfStudy	.131	.048	.196	2.706	.007

a. Dependent Variable: Financial Literacy

Source: Developed for the research

This table examines which of the five IVs will influence the most in financial literacy among the respondents. Year of study has the strongest impact on financial literacy. It is concluded that year of study has the strongest predictor to financial literacy among all the IVs.

Thus, the determinant of financial literacy can be summarized by the following equation:

$$\text{Financial literacy} = 1.871 - 0.013\text{age} - 0.085 \text{ spending habit} + 0.039 \text{ gender} + 0.045 \text{ faculty} + 0.131 \text{ year of study}$$

From the equation, if one unit of year of study increased, it will leads to an increase of 0.131 in financial literacy.

Besides, if one unit of gender increased, it will also leads to an increase of 0.039 in financial literacy.

While one unit of age increased, it will leads to a decrease of 0.013 in financial literacy.

Furthermore, one unit of spending habit increased will leads to a 0.085 decrease in financial literacy.

Lastly, one unit of faculty increased will leads to a 0.045 increased in financial literacy.

In conclusion, the multiple linear regression results show that there is significant impact on financial literacy when the IVs are regressed together.

5.0 Discussion

5.1 Multiple Regression Analysis

$$\text{Financial literacy} = 1.871 - 0.013\text{age} - 0.085\text{ spending habit} + 0.039\text{ gender} + 0.045\text{ faculty} + 0.131\text{ year of study}$$

From the equation above, the result showed that there are positive relationships among the three constructs which includes gender, faculty and year of study. In addition, the other two constructs which are age and spending habit have a negative relationship with the financial literacy level of the university students.

5.2 Discussions of Major Findings

Table 5.2.1: Results of tested of Hypotheses

Hypothesis	Accepted/Rejected	Significant level	Expected sign
H1: There is a significant relationship between financial literacy and age.	Accepted	0.025	Negative
H2: There is a significant relationship between financial literacy and spending habit.	Accepted	0.023	Negative
H3: There is a significant relationship between financial literacy and gender.	Rejected	0.352	Positive
H4: There is a significant relationship between financial literacy and respondents' business major and non-business major.	Accepted	0.002	Positive
H5: There is a significant relationship between financial literacy and year of study.	Accepted	0.007	Positive

Source: Developed for the research

5.2.1 Relationship between Financial Literacy Level and the Respondents' Age

H1: There is a significant relationship between financial literacy level and age.

Based on the findings from One Way Anova analyze table 4.24, there is a significant relationship between financial literacy level and the age. In the study of financial literacy, university students' age group between 18 to 24 were identified as being amongst of the demographic groups that consistently demonstrated a poor level of financial literacy, these findings is supported by Arnett (2000), Consumer and Financial Literacy (CFL) Treasury Taskforce (2004), Chen & Volpe (1998), Micomonaco (2003), Sherma (2004), and Volpe et al. (1996).

The previous authors mentioned there is a positive relationship between age and financial literacy (Chen & Volpe, 1998; Micomonaco, 2003; and Voipe et al., 1996), however the finding shows a negative relationship between age and financial literacy. The reason of this finding may be due to a

better exposure of the financial knowledge to the students from other sources such as their parents and their secondary education.

5.2.2 Relationship between the Financial Literacy Level and the Respondents' Spending Habit

H4: There is a significant relationship between financial literacy level and spending habit.

Based on the findings from One Way Anova analyze table 4.27, there is a significant relationship between financial literacy level and the respondents' spending habit. According to the Chen and Volpe (1998), Ibrahim et al. (2009), Davidson (2006), Beal & Delpachitra (2003), Morgan (2003) found out that the measures of financial literacy should reflect on personal spending habits. The growing power of young adults as consumer groups, especially for students they simply use it out on not necessary expenses, this spending pattern clearly shows the lacking of financial literacy among students.

In this study found out that there is a negative relationship between the financial literacy and respondents' spending habit, which are consistent with the Chen & Volpe (1998), Peng et al. (2007), Pillai et al. (2010), Varcoe et al. (2005) which mentions that student with higher levels of financial literacy made good spending decision in order to avoid any excessive debt and wasteful spending.

5.2.3 Relationship between the Financial Literacy Level and the Respondents' Gender

H3: There is a significant relationship between financial literacy level and gender.

Based on the findings from One Way Anova analyze table 4.26, there is not significant relationship between financial literacy level and the respondents' gender. There are few researches found out that there is not significant relationship between financial literacy level and the respondents' gender. Besides, male are more financial literacy compared to the female (Chen & Volpe, 1998; Danes & Haberman, 2007; Manton et al., 2006; Peng et al., 2007; Volpe et al., 1996).

However, there is a contradiction finding from Ibrahim et al. (2009) and found out that there is no difference between the levels of financial knowledge and the gender which is parallel with this finding. In Malaysia, the status of males and females are treated equivalently in many perspectives such as education level, occupations, and etc. In the current study, males and females have the same official educational level from elementary, secondary, college, university and etc hence all the lesson are well distributed to both genders eventually there is no difference between the levels of financial literacy and gender.

5.2.4 Relationship between Financial Literacy Level and Respondents' Business Major and Non-Business Major

H2: There is a significant relationship between financial literacy level and Respondents' Business Major and Non-Business Major.

Based on the findings from One Way Anova analyze table 4.25, there is a significant relationship between financial literacy level and the respondents' Business Major and Non-Business Major. This results is supported by Beal & Delpachitra (2003), Chen & Volpe (1998), Peng et al. (2007), Robb & Sharpe (2009) and Volpe et al. (1996), which mentions student's major courses studies in university are significant impact to personal financial literacy, and have indicated that business majors are more knowledge about personal finance than non-business majors.

The findings also found out that there is a positive relationship between Respondents' Business Major and Non-Business Major and financial literacy which indicate that students enrolled in business majors scored better on the test of financial literacy compare with non-business majors (Chen & Volpe, 1998; and Volpe et al., 1996). This finding is parallel with the previous findings because the students with business major exposed more to the financial related knowledge as there are financial related subject offered to the business major students compared with the non-business major students.

5.2.5 Relationship between the Financial Literacy Level and the Respondents' Year of Study

H5: There is a significant relationship between financial literacy level and year of study.

Based on the findings from One Way Anova analyze table 4.28, there is a significant relationship between financial literacy level and the respondents' year of study. Many of researchers have found that students' year of study have the significant to measure financial literacy, especially for college freshmen have low level of financial knowledge (Menton et al., 2005, 2006; Jones, 2005). Besides, positive relationships have also been found between personal financial literacy in this study. The level of education, participants with a higher level of education, attending full time courses have a higher level of personal financial literacy, although many studies conducted specifically targeting university students have low level of financial literacy. (Chen & Volpe, 1998; Fogarty & MacCarthy, 2006; Mandell & Klein, 2009) The reason for a higher financial literacy level for a senior year student is due to larger exposure to financial related knowledge compared to a college freshman.

6.0 Implication of the Study

6.1 Managerial Implications

Research has shown that financial literacy is beneficial especially for personal and families because it could alleviate the chances of bankruptcy, receiving government assistance (Huston et al., 2003) as well as making poor consumer decision (Hayhoe et al., 2000). Now a day, the young adults are materialistic and rather look first to the acquisition of physical asset rather than saving their income for the future (Pillai et al., 2010). Thus students have to be more aware and cautious of their actions such as spending habit and manipulate their fund in daily life.

A finding drawn from Jorgensen (2007) stated that a higher financial literacy among parents enable them to teach and model positive financial principles at home. Besides, this finding enable parents to have a deep understand of their children who encounter the issues of financial independence in their life. In addition, parents could manipulate the money inflow and outflow of their children.

This finding provided data that were important to administrators in business offices at high school, colleges and universities. Education within the high school setting can better prepare youth to encounter complex marketplace, earnings that do not meet spending goals, and easy access to credit places young adults at risk for future financial instability (Danes et al., 1999). Therefore, administrators in business offices able to prepare and modified effective courses, seminar, program and etc to increase the students' awareness of the financial literacy.

Finally, this study provides useful information to the researches especially who are doing research on the factors that will affect the impulsive buying behavior or the determinants that will affect the shopaholic in youth adults. As a result, the researchers will understand financial literacy could affect the buying behavior.

7.0 Limitations of the Study

Several limitations had been encountered during the research including small sample size, design of the questionnaires, limited resources, and limited geographic coverage.

Design of the questionnaires

Secondly, we encounter some problem when designing the questionnaire. The questionnaire played an important role in the research as it served as the main research instruments in this research study. Close-ended questions and scale response questions were used in this research questionnaire. However, this will restrict the respondents to reveal their opinion and perception. Besides that, 12 true and false questions had been set in order to examine the financial literacy level of university students. However, we had received some feedbacks that our questions were too general. As a result, this might affect in our accuracy of the examination of the financial literacy level.

Limited resources

Next, we had encountered difficulty in searching for journals and articles to support our literature review. The university's online journal database, OPAC is insufficient for us as some good journals were restricted to specific users. Therefore, we need to access to other sources of database in order to obtain more journals.

Although there are limitations encountered in the process of completing this research paper, it does not degrade the significance of the findings as it merely provides platforms for future research.

8.0 Recommendations for Future Research

Larger sample size

In future research, researchers can enlarge the sample size in order to reduce the potential bias and increase its accuracy. Besides that, researchers are recommended to distribute the questionnaires to a larger and diversify population in order to enhance the accuracy and reliability of the research. This include distribute the questionnaires equally among races and among the country's region where more comprehensive results could be obtained.

Enhance the design of questionnaires

More specific questions should be set as it reduce biasness and serve as a better indicator for examining the financial literacy level of the university students. In order to solve the issue of doubts and queries of respondents towards the questionnaires, future researchers are recommended to design a more comprehensive questionnaire with more variety of questions. For example, by including open-ended questions in the questionnaires, the respondents are able to reveal their opinions and perceptions. Besides, simplicity of questions is highly recommended as this will reduce the confusions occurred. In addition to that, simple English can be used in the questionnaires since some respondents might face some problems in understanding the questionnaires. Future researchers can also assist and guide the respondents in answering the questionnaires as to increase the preciseness of the research.

Including more variables

In addition, future researchers could include the variable such as the level of education to determine a more realistic benchmarks for the ongoing measurement of financial literacy as well as the attachment of the information about the type of educational attainment or level of performance in order to determine the effectiveness of the implementation of education strategy and make improvement in various places such as financial in schools, universities, colleges and workplace.

8.0 Conclusion

Overall, this research achieved its objective which is to examine the financial literacy level among University students in Malaysia. In summary, the overall results show that the financial literacy level of University students is moderate as 65.7% of the student scored 5-8 marks out of the 12 questions.

The hypotheses test revealed that five factors including age, spending habit, gender, faculty and year of study are significantly affect the financial literacy level. Besides that, some managerial implications are being described. Apart from that, this research study also includes the limitation in conducting the research. Finally, this research study has provided recommendations for this study for future improvement.

REFERENCES

- Beal, D. J., & Delpachitra, S. B. (2003). Financial literacy among Australian university students. *Economic Papers*, 22(1), 15. Retrieved from <http://ezproxy.upm.edu.my:2063/ehost/pdfviewer/pdfviewer?hid=8&sid=f74751f1-38ce-4d93-b42de7e2b4fc2c12%40sessionmgr12&vid=4>
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students *Financial Services Review*, 7(2), 22. Retrieved from http://www2.stetson.edu/fsr/abstracts/vol_7_num2_107.pdf
- Comeau, T. M., & Rhine, S. L. W. (2000). Delivery of financial literacy programs. *Consumer and Community Affairs Division*, 7, 12. Retrieved from <http://www.fluetschfinancialservices.com/Chicago%20Federal%20Reserve.pdf>
- Cummins, M. M., Haskell, J. H., & Jenkins, S. J. (2009). Financial attitudes and spending habits of university freshmen. *Journal of Economics and Economic Education Research*, 10(1), 136. Retrieved from <http://www.alliedacademies.org/Publications/Papers/JEEER%20Vol%2010%20No%201%202009.pdf#page=11>
- Danes, S. M. (1994). Parental perceptions of children's financial socialization. *Financial Counseling and Planning*, 5, 23. Retrieved from <http://6aa7f5c4a9901a3e1a1682793cd11f5a6b732d29.gripelements.com/pdf/vol-58.pdf>
- Danes, S. M., & Haberman, H. R. (2007). Teen financial knowledge, self-efficacy, and behavior: a gendered view. *Financial Counseling and Planning*, 18(2), 13. Retrieved from <https://www1067.sslldomain.com/afcpe/doc/7%202866%20Volume%2018%20Issue%202.pdf>
- Danes, S. M., Huddleston-Casas, C., & Boyce, L. (1999). Financial planning curriculum for teens: impact evaluation. *Financial Counseling and Planning*, 10(1), 14. Retrieved from <https://www1067.sslldomain.com/afcpe/doc/Vol1013.pdf>
- Davidson, I. B. (2006). Financial literacy important for future. *Montana Business Quarterly*, 44(3). Retrieved from http://www.accessmylibrary.com/coms2/summary_0286-33521732_ITM
- Fogarty, G. J., & MacCarthy, K. (2006). *Financial literacy: A psychologist's perspective on an emerging societal problem in Australia*. Paper presented at the 2006 Joint Conference of the Australian Psychological Society and the New Zealand Psychological Society, Auckland, New Zealand. http://eprints.usq.edu.au/1210/1/Conference_Paper_on_Financial_Literacy_2006.pdf
- Garman, E. T., & J.Gappinger, A. (2008). Delivering Financial Literacy Instruction to Adults. Retrieved from <http://6aa7f5c4a9901a3e1a1682793cd11f5a6b732d29.gripelements.com/pdf/10-book-review-rebecca-travnichek-192.pdf>
- Greenberger, E., & Steinberg, L. (1986). When teenagers work: the psychological and social costs of adolescent employment (Vol. 9, pp. 10). New York. Retrieved from http://ezproxy.upm.edu.my:2065/science?_ob=MImg&_imagekey=B6V98-4665HB5-5-1&_cdi=5892&_user=152286&_pii=0190740987900223&_origin=search&_zone=rslt_list_item&_coverDate=12%2F31%2F1987&_sk=999909995&wchp=dGLzVlz-zSkzV&md5=4844684ec82117c176f8e7fa73716833&ie=/sdarticle.pdf
- Hayhoe, C. R., Leach, L. J., Turner, P. R., Bruin, M. J., & Lawrence, F. C. (2000). Differences in spending habits and credit use of college students. *Journal of Consumer Affairs*, 34(1), 20. Retrieved from http://findarticles.com/p/articles/mi_hb3250/is_1_34/ai_n28784344/
- Henry, R. A., Weber, J. G., & Yarbrough, D. (2001). Money management practices of college students. *College Student Journal* 35(1), 6. Retrieved from <http://search.ebscohost.com/login.aspx?direct=true&db=aph&AN=5010948&site=ehost-live&scope=site>

- Huston, A. C., Miller, C., Richburg-Hayes, L., Duncan, G. J., Eldred, C. A., Weisner, T. S., . . . Redcross, C. (2003). New hope for families and children: five-year results of a program to reduce poverty and reform welfare. *Building knowledge to improve social policy*, 218. Retrieved from <http://www.mdrc.org/publications/345/full.pdf>
- Ibrahim, D., Harun, R., & Isa, Z. M. (2009). A study on financial literacy of Malaysian degree students *Cross-cultural Communication*, 5(4), 9. Retrieved from <http://cscanada.net/index.php/ccc/article/view/1142/1235>
- Jones, J. E. (2005). College students' knowledge and use of credit. *Journal of Financial Counseling and Planning*, 16(2), 9-16.
- Jorgensen, B. L. (2007). Financial literacy of college students: parental and peer influences. 89 Retrieved from http://scholar.lib.vt.edu/theses/available/etd-10162007-143627/unrestricted/Thesis_BJ2.pdf
- Lian, K. S. (2008). Youth Financial Literacy: Development, Delivery and Execution of Programmes. Retrieved from http://www.bankinginfo.com.my/_system/media/downloadables/youth-financial-literacy_development-delivery-and-execution-of-programmes.pdf
- Lusardi, A., & Mitchell, O. S. (2006). Financial literacy and retirement preparedness: evidence and implications for financial education *Business Economics*, 42(1), 10. Retrieved from <http://www.dartmouth.edu/~alusardi/Papers/Preparedness.pdf>
- Lusardi, A., Mitchell, O. S., & Curto, V. (2009). Financial literacy among the young: evidence and implication for consumer policy. *National Bureau of Economic Research*, 34. Retrieved from http://www.dartmouth.edu/~alusardi/Papers/Financial_literacy_young.pdf
- Malhotra, N. K. (2004). *Marketing Research: An Applied Orientation* (4th ed). NJ: Prentice Hall.
- Malhorta, N. K., & Peterson, M. (2006). *Basic Marketing Research : A decision-Making Approach*.
- Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior. *Journal of Financial Counseling and Planning*, 20(1), 10. Retrieved from http://www.usc.edu/dept/chepa/IDA/pays/publications/Impact_Financial_Literacy.pdf
- Manton, E. J., English, D. E., Avard, S., & Walker, J. (2006). What college freshmen admit to not knowing about personal finance. *Journal of College Teaching and Learning*, 3(1), 12. Retrieved from <http://www.cluteinstitute-onlinejournals.com/PDFs/200644.pdf>
- Mason, C. L. J., & Wilson, R. M. S. (2000). Conceptualising financial literacy. *Loughborough University*, 41. Retrieved from <https://dspace.lboro.ac.uk/dspace-jspui/bitstream/2134/2016/3/2000-7.pdf>
- Micomonaco, J. P. (2003). Borrowing against the future: practices, attitudes and knowledge of financial management among college students. 91. Retrieved from <http://scholar.lib.vt.edu/theses/available/etd-05052003-122728/unrestricted/MicomonacoETD.pdf>
- Nag .M .R. (2007). Financial Education for Inclusive Development. Retrieved from http://www.financialeducationsummit.org/2007/presentations/Rajat_Nag.pdf
- Peng, T.-C. M., Bartholomae, S., Fox, J. J., & Cravener, G. (2007). The impact of personal finance education delivered in high school and college courses. *Journal of Family and Economic Issues*, 28, 20. Retrieved from <http://ezproxy.upm.edu.my:2073/content/p212n15t59041117/fulltext.pdf>
- Pillai, R., Carlo , R., & D'souza , R. (2010). Financial prudence among youth. *Munich Personal RePEc Archive*, 22. Retrieved from http://mpira.ub.uni-muenchen.de/22450/1/MPRA_paper_22450.pdf
- Robb, C. A., & Sharpe, D. L. (2009). Effect of personal financial knowledge on college students' credit card behavior *Journal of Financial Counseling and Planning*, 20(1), 19. Retrieved from http://6aa7f5c4a9901a3e1a1682793cd11f5a6b732d29.gripelements.com/pdf/cliff_a._robb_deanna.l._s_harpe.pdf

- Rooij, M. v., Lusardi, A., & Alessie, R. (2007). Financial literacy and stock market participation. *National Bureau of Economic Research*, 48. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1024979
- Roy, M. (2003a). ANZ survey of adult financial literacy in Australia - final report (pp. 81). Melbourne: ANZ Banking Group. Retrieved from <http://www.anz.com/aus/aboutanz/Community/Programs/FinLitResearch.asp>
- Roy, M. (2003b). ANZ survey of adult financial literacy in Australia - telephone survey report (pp. 428). Melbourne: ANZ Banking Group. Retrieved from <http://www.anz.com.au/>.
- Sabri, M. F., MacDonald, M., Masud, J., Paim, L., Hira, T. K., & Othman, M. A. (2008). Financial behavior and problems among college students in Malaysia: Research and education implication. *Consumer Interests Annual*, 54, 5. Retrieved from <http://c22shijue.wikispaces.com/file/view/Article%2B3.pdf>
- Vitt, L. A., Anderson, C., Kent, J., Lyter, D. M., Siegenthaler, J. K., & Ward, J. (2000). *Personal finance and the rush to competence: Financial literacy education in the U.S.* Middleburg, VA: Institute for Socio-Financial Studies.
- Volpe, R. P., Chen, H., & Pavlicko, J. J. (1996). Personal investment literacy among college students: a survey. *Financial Practice and Education*, 6(2), 10. Retrieved from <http://maagblog.yzu.edu/financialliteracy/files/2009/03/volpe4.pdf>