

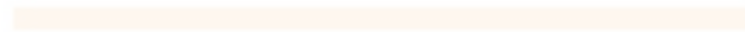
**FINANCIAL LITERACY, FINANCIAL ATTITUDE  
AND FINANCIAL BEHAVIOR AMONG  
MATRICULATION COLLEGE STUDENTS  
IN KELANTAN**

**ABD RAHIM BIN MOHD ARIS**

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# Financial Literacy, Financial Attitude And Financial Behavior Among Matriculation College Students In Kelantan

by,

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A thesis submitted in fulfillment of requirement for the degree of

Master of Business Administration

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**UNIVERSITI MALAYSIA KELANTAN**

2018

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## **Literasi Kewangan, Sikap Kewangan Dan Kelakuan Kewangan Antara Pelajar Kolej Matrikulasi Di Kelantan**

### **ABSTRAK**

Objektif kajian ini adalah untuk mengkaji tahap dan hubungan ke atas literasi kewangan, sikap kewangan dan tingkah laku kewangan di kalangan pelajar kolej matrikulasi di Kelantan. Objektif juga ingin mengkaji korelasi antara celik kewangan dengan sikap kewangan dan tingkah laku kewangan. Persoalan masalah wujud adalah disebabkan kewujudan kebankrapan sebanyak 1.19% di kalangan remaja. Ia berdasarkan rekod Jabatan Insolvensi dari tahun 2012 hingga 2016. Ia menjadi penunjuk literasi kewangan untuk penyelidikan projek. Penyelidik menggunakan soal selidik yang disesuaikan dengan Rangka Kerja Pengembangan Baseline Literasi Kewangan: Analisa Perbandingan Antarabangsa Pertama untuk menganalisis hubungan pembolehubah yang berlainan dalam celik kewangan. Soal selidik ini berdasarkan 7 soalan untuk sikap kewangan, 11 soalan untuk tingkah laku kewangan dan 4 soalan mengenai celik kewangan. Penyelidikan kumpulan sasaran adalah antara pelajar Kolej Matrikulasi Kelantan pada umur 18 tahun. Teknik pensampelan mudah rawak telah dipilih sebagai persampelan rawak untuk saiz sampel 320 responden. Persoalannya berdasarkan skala tujuh likert dan menggunakan korelasi Pearson. Penyelidikan menemui hubungan positif antara celik kewangan dan sikap kewangan yang rendah. Hubungan didapati celik kewangan dan tingkah laku kewangan yang signifikan pada hubungan tetapi pada hubungan negatif. Berdasarkan hasil analisa, adalah dicadangkan agar institusi itu sendiri mendidik pelajar dengan mewajibkan sukatan pelajaran tentang celik kewangan untuk semua pelajar. Media sosial seperti facebook, instagram, twitter adalah medium yang boleh digunakan dan ia merupakan salah satu cara terbaik untuk memberikan maklumat mengenai literasi kewangan sekarang ini pada golongan muda.

## **Financial Literacy, Financial Attitude And Financial Behavior Among Matriculation College Students In Kelantan**

### **ABSTRACT**

The objective of the study is to investigate the level and relation on the financial literacy, financial attitude and financial behavior among matriculation college students in Kelantan. The objective also wants to examine the correlation between financial literacy with financial attitude and financial behavior. The problem arise because of the existence the bankruptcy of 1.19% among the young age. It based on the record of the Department of Insolvency from 2012 until 2016. It will be the indicator the financial literacy for the project research. The researcher uses the questionnaire is adapted from Framework for Development of Financial Literacy Baseline Surveys: a First International Comparative Analysis as to analysis the connection of different variables in financial literacy. The questionnaire based on 7 question for financial attitude, 11 question for financial behavior and 4 question on financial literacy. Target group research was among Kelantan matriculation College students on age of 18 years old. Simple random sampling technique has been choosing as random sampling for the sample size 320 respondents. The question based on seven point likert scale and uses Pearson's correlation. The research find out the positive connection between financial literacy and financial attitude in low significance. For financial literacy and financial behavior significant on the relation but on the negative connection. Based on the result , it recommend that the institution itself educate the student by make compulsory to the syllabus on financial literacy for everybody . Social media such as facebook , instagram , twitter for medium to the young age one of the best way to give information the the young age nowadays.

## CHAPTER 1

### INTRODUCTION

#### 1.1 Overview

The research prepared to examine financial literacy level of the Kelantan Matriculation College students in identifies the financial attitudes and financial behavior. Nowadays in Malaysia, the issue of debt is one of the issues that are quite popular due to the problem of economic imbalances at the moment. Adolescent and youth cannot be separated from burdened with this issue. While adolescents and youth still have economic stability are not strong, but they are still struggling with debt problems, particularly related to the National Higher Education Fund Corporation (PTPTN). PTPTN which is a financial entity that provides facilities for issuing loans to students of all majors and levels of study.

The main problem faced by this body is a breach of repayment by the borrower (Utusan Online, 2013). Based on the statement above, it is why the percentage of teens or youth (35 years and under) the bankrupt has been increasing every year. According to records of the Department of Insolvency, bankruptcy of 97.215 cases recorded in the country from 2012 until 2016. (Daily News Online, 2016).The results of the total, 22,581 cases or 23 per cent, involving the young adult category, or Gen Y, aged between 25 to 34 years declared bankruptcy, in addition to as much as 1,157 cases involving those aged under 25 years.

Among the main reasons for the bankruptcy that is found from the results of a study by the department showed the consequences of failure to settle hire purchase loans involving 26,801 cases, or 27.6 per cent, followed by personal loans 22.153 cases, or 22.8 percent and housing loans 18,819 cases, or 19.4 per cent. They declared bankrupt due to weakness in control of their finances because of lack of financial literacy knowledge and debt burden in excess of their opinions.

## 1.2 Background of The Study

Financial education is very important nowadays. It not only for those who are working and get a salary every month should know how to manage their money but the college students also have to know the important of financial education or financial literacy in nowadays. College is will be the first place that should be significant on trained the young generation to make decision by their own regarding the financial decision. The ability of the young people to manage their money and practice during their college year , will be capability to be manage their money well until they are old.

Lack of the financial education or financial literacy is being identified as one of the reason the students can't complete their education. During the college, the students have to experience real life situation on their own skill. This will expose to challenge and opportunity to polish their life skills. The lack of the financial literacy especially on the financial attitudes and financial behavior will gives an impact towards the bankruptcy in a young age and the project paper is created due to create awareness and to avoid bankruptcy among the youngster in an age of 18 years olds.

Kelantan Matriculation College (KMC) is a college that the researcher uses for the sampling. KMC is located in Kok Lanas under Ministry of Education on foundation program. KMC offer science stream and accounting stream. The students in KMC is 1,926 students where 1,461 in science stream and 265 in accounting streams. If we look into the gender, the male student is around 467 students and 1,259 students is a female students. The foundation program will take for the 10 month where all the students have to stay in the hostel provided. The subject been offer for the science stream is mathematic, biology, physic, chemistry and computer science.

Science stream have three modules where they can choose whether to take either physic or biology for module two and three where it replace with science computer. For accounting stream, four subject offer which is mathematic, accounting, business management and economy. The student has to complete two semesters in 10 months and will award by the cumulative grade point average for every semester. After they complete 10 months foundation program, based the average point for two semester academic performance, they will proceed to the degree level which been offer.

The students receive an allowance as pocket money RM 250 every month for 10 month of the program in KMC. The students have use the allowance money for the purpose of daily expenses and for cost of material needed for the courses. The issue is regarding the financial attitudes and financial behavior is to know what they are think of the knowledge used by the them in spending or organized their money or pocket money. The research wanted to measure knowledge of financial attitudes and financial behavior that gives an impact to the financial literacy.



Finally, it measure the students in the age of teenager 18 years old will gives impact to the bankruptcy in Malaysia because of the lack of financial literacy. The impact financial attitudes and financial behavior on financial literacy can create awareness and to avoid the students to become bankrupt in young age.

### 1.3 Problem Statement

The knowledge of the students regarding the financial literacy is very important. It is the way how the students organize their money during their study. The way of they organize and spending habit showed how they we reacted after they graduated. It will give an impact on the bankruptcy in early ages if they not spending and organize well in the early stages.

For the students of KMC received the pocket money as allowance every month RM 250 for the 10 month. Based on interview a few students, they mentioned that the allowance that they received always overspending every month. They spend their allowance money or pocket money buy a food, top up, material for courses and others. Unfortunately, their allowances have finished before end of month.

The research done to overview the knowledge of the students on in financial attitude and financial behavior that will be impact to the financial literacy of the students. It will explore how the students think regarding about the planning, spending, saving and some of the calculation related to the government policy. The financial literacy is the important to look the readiness of the students on the understanding the three dimension.



They have a difficulty of well spending behavior of pocket money. For students, the pocket money that has been provided RM250 per month is not enough to cover their lives in college although they do not have to pay the rent, personal loans, hire purchase, bills for electrical or water compared to those who have career that has more dependents. It will come worst because these students have yet to step into the working world and do not have responsibility for the management of the family again, but they still have problems of financial management. It showed the students the students did not know how to spend and organize their pocket money well enough.

The problem arises as the problem statement which the bankruptcy on the young age is an indicator for the financial literacy. It based on the records of the Department of Insolvency , bankruptcy of 97,215 cases have been recorded in the country from 2012 until 2016 ( Berita Harian Online,2016) . Based on the records , 22,581 cases or 23% involved of young adult category or Gen Y (Age 25-34 years) and 1.19% or 1,157 cases involved under 25 years olds on bankruptcy. The age of 18 years to 24 years still in process of learning in University or college and just started their worked. Unfortunately based on the records, they are also involved with the bankruptcy in early age.

The project research is to look as a whole on the level of financial literacy of matriculation students in Kelantan. Is the students really organize, spend and saving the money which they get every month as a pocket money. Is the students understood the important on the control, manage and budget of the pocket money every month. Is the students really follow what they planned, make a saving every month, compares the price before buy or buy on impulse.

The project research also wants to look if there is the connection between the financial attitudes on the financial literacy. The project also tries to find out is there are connection between financial behavior that gives impact to financial literacy. The level of important of knowledge regarding financial attitudes and financial behavior on spending, organize and saving the money gives which gives an impact to the knowledge and understand of financial literacy of matriculation students in Kelantan. The result of level and connection will showed how far they are educated on the organize, spending and saving the financial.

The good impact of understanding will not give a negative impact on knowledge understanding regarding the financial literacy. Positive impact on understanding to financial literacy will create awareness of students in early age to involve with bankruptcy. The project research will help to reduce or to create awareness about bankruptcy in early ages. It contributes the literature to the others in research regarding the bankruptcy in early age.

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#### 1.4 Research Questions

The research that been conduct for the students of Matriculation College are to identify a few question as below that influence the financial literacy on the financial attitudes and financial behavior among matriculation College students in Kelantan.

Question no. 1:

What is the level financial literacy among matriculation college students in Kelantan?

Question no.2:

What is the level of financial attitude among matriculation college students in Kelantan?

Question no.3:

What is the level of financial behavior among matriculation college students in Kelantan?

Question no.4:

What is the relationship between financial attitude and financial literacy among matriculation college students in Kelantan?

Question no.5:

What is the relationship between financial behavior and financial literacy and among matriculation college students in Kelantan?

### 1.5 Research Objectives

The discussion on research questions, this paper has measure fives objectives to be achieved using the suitable techniques;

Objective no. 1:

To examine the level of financial literacy among matriculation college students in Kelantan.

Objective no.2:

To measure the level financial attitude among matriculation college students in Kelantan.

Objective no.3:

To identify the level financial behavior among matriculation college students in Kelantan.

Objective no.4:

To examine the relationship between financial attitude and financial literacy among matriculation college students in Kelantan.

Objective no. 5:

To examine the relationship between financial behavior and financial literacy among matriculation college students in Kelantan.

Hypothesis:

H1: There is a relationship between financial attitude and financial literacy among matriculation college students in Kelantan.

H2: There is a relationship between financial behavior and financial literacy among matriculation college students in Kelantan.

#### 1.6 Scope of Study

The research that been conducted is among the students of Kelantan Matriculation College. The research been done to the 320 sample students from both course accounting and science. The population of the students is 1,920 students. The location of the respondent is around the Kok Lanas which easier to get the information for the researcher to get data. The scope of students based on the experience on the previous school either boarding school or daily school. It also focused on scope of the worked experienced after Sijil Pelajaran Malaysia (SPM) and the family background on the location whether urban or rural. The students of Kelantan Matriculation College will be good respondent related to the research done.

### 1.7 Limitation of the Study

Limitation of the study is to get the commitment of the respondent. The respondent might not give the best response in relation of study and did not concentrated because the respondent was busy with the course work and preparation for the final exam. In other hand, the cost of preparing the questionnaire is very high based on the questionnaire delivered. Some of the students did not return back the questionnaire been given.

Time constraint between the researchers on time frame of the study given. This because of the duty of co-work of the researcher gives a limitation to the time on research to be done. Duration time is too short to make a research and to get feedback from the respondents.

### 1.8 The important and Significance of the research

The research of the project paper is to look awareness of the bankruptcy in young ages. The scope of the study based on the matriculation students in Kelantan. This is because the student is on the age of 18 years and 19 years old that related to the research. The significance of the project research will contribute the literature to third party or others researcher who doing the research on the same field on the future. The research may be a guide to the future research that been done. The research also can be significance as a part of the body of knowledge of the content in the syllabus that been teach in matriculation.

The result of the research will be able to identify and measure the level of the student on the financial. Significance to the research that will be to amend or to enhance on syllabus that gives impact to the financial literacy to the students in matriculation financial attitude, financial behavior or financial knowledge. If it significance to the body content ok knowledge in matriculation, it also can be part of the development toward education industry.

It may help the industry about the awareness on the bankruptcy. It will be educate in the education industry how important the financial literacy. As conclusion it will be a measurement develop the education to the young age starts from primary school. The ministry of education may develop a syllabus that can educate the young age due to the problem statement arise. Indirectly, it will help the education industry to educate the students about the important things on saving, spending and budget and other related to the organize money. At the end, the awareness of the students since the primary, will avoid them and educate them from being a bankruptcy on the early ages.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Defining Financial Literacy

A case study of Kelantan Matriculation College (KMC), the research is tried to understand about the impact of financial attitudes and financial behavior on financial literacy of the matriculation college student in the Kelantan. The study base on the literature review try to explore the similarity with the research of theory been made. The research wants to know the similarity on the knowledge of financial literacy that gives impact on financial behavior and financial attitudes of matriculation college student in Kelantan.

The Financial Literacy is often can be described as the capability of someone to know about how the money work, how they growth the money, how they manages and invest it or even tough expends it. The important to understand financial literacy principles such as financial ratio, financial statement, financial analysis, budgeting and others.

Financial literacy have been defined by Stradling ,Noctor and Stoney and (1992) as ,

*“...the ability to make informed judgments and to take effective decisions regarding the use and management of money...”*



The following definition of review of studies research since 2000, Remund (2010) stated that:-

*“Financial literacy is a measure of the degree to which one understands key financial concepts and possess the ability and confidence to manage personal finances through appropriate, short-term decision-making and sound, long-range financial planning, while mindful of life events and changing economic conditions”*

This benefit was previously identified by Lines and Schagen (1996),

*“...where the individual would benefit from a palette of abilities and attitudes such as a comprehension of money management concept, knowledge of financial institutions and attitudes which enable effective and responsible management of financial affairs...”*

Based on Financial Literacy Assessment Framework PISA 2012, definition by OECD (2012) state:-

*“Financial literacy is knowledge and understanding of financial concepts and risks, and the skills, motivation and confidence to apply such knowledge and understanding in order to make effective decisions across a range of financial contexts, to improve the financial well-being of individuals and society, and to enable participation in economic life”*

According to O'Brien and Fear (2009),

*“Financial literacy is fundamental for young adults when they are exposed to an array of financial products and services where they need to choose whilst embarking on their own major financial life cycle events such as acquiring a job, earning their first salaries , secure student loan or managing their credit card spending's. In addition, lifestyle aspirations spurred on by the influence of advertising and the media are also likely to increase young people's reliance on debt”*

The management of financial literacy needs to be learned and applied by each society especially among students is very important so that when they get a job soon, they can manage their finances properly.

Exposure to financial literacy be absorbed when students do not have an income and a heavy responsibility again so that when the time they are skilled and able to manage their financial flows based on their income. In other words, the level of financial knowledge among youth needs implemented to help them manage or handle their finances after working independently with their own income. (Bulletin IPPBM, 2011).

Based to Mandell (2008),

*“Financial literacy is defined as “the ability of people to make financial decisions in their own best short- and long-term interests”*

According on the Yang and Kezar (2010),

*“Financial literacy is both an important skill and a critical intellectual competency’ and ‘an essential component of a college degree”*

Similar to Vitt et al.(2000),

*“Financial literacy can be generally defined as a person’s ability to understand, analyses, manage, and communicate personal finance matters”.*

According to, Early Childhood Development and Youth Affairs, The Ministerial Council for Education (MCEECDYA) identify financial literacy as,

*“... the application of knowledge , understanding, skills and values in financial contexts and the related decisions that impact on self , others , the community and the environment...”*

It similar what been stated on Hogarth ,Hilbert & Beverly(2003),

*“...often results in financial behaviors varying greatly from recommended guidelines , which in turn contributes to low levels of financial well-being...”*

According to Chardin (2011),

*“...financial literacy is more than a simple measure of knowledge, reflecting also a set of behaviors and skills allowing to make appropriate individual financial decision...”*

Two distinct dimensions be divides in financial literacy stated by Houston (2010):

- i. The knowledge dimension which includes the inventory of financial knowledge acquired through education and/or experience specifically related to essential personal finance concepts and products;
- ii. The application dimension, reflecting the ability and confidence to efficiently apply to knowledge.

Hence, the financial knowledge is part of financial literacy, but it is not equivalent to it. In related to the research, two independent variable to be test on Kelantan Matriculation College students which give an impact to the knowledge of financial literacy. The independent variable involved are :-

- i. Financial attitude
- ii. Financial behavior

## 2.2 The Importance of Financial Literacy

Based on the Chardin (2011) and Willians (2007) :-

*“The recent financial crisis and the present turbulent global financial environment lived in the developed countries have highlighted the importance of financial capability, not just from an individual perspective, but also from a global and economic perspective.”*

Based on the Jappelli ( 2010) ,

*“Financial literacy is important not only at an individual level , influencing households decision about investment and borrowing in financial markets, but also from at a global level , having consequences for the stability of the overall economy. On the debt side , it is important the existence of a minimum level of knowledge and skills to consider and choose among different loan possibilities and credit instruments, as well as to identify possible situations of predatory lending. The author presents also a macro perspective, saying that the economic literacy contributes to the good working of markets and policies. Looking at the asset side, the growing number and complexity of financial products and services available, the innovation and the financial markets deregulation since the end of 80’s have highlighted the lack of economic literacy of individuals, evidenced by the poor risk diversification, inefficient portfolio allocation and low saving rates”*

According to Welch and Braunstein (2002) mentioned

*“...consumers help to create a more competitive and efficient market ,given that knowledgeable consumers demand for products that best respond to those demands...”*

The opinion on Welch and Braunstein (2002) view protect that the behavior of the consumer facing on the financial weakness because of the weakness on organizing , planning , spending on the financial literacy itself. As the student in matriculation in Kelantan showed that the financial behavior of the spending, the organizing the money and planning will lead them to the better financial literacy. They know how to use on the right way of the money allowance given to them.

The argument of The OECD(2006) presents that

*“ The financial literacy can be an important contribute to the economic growth, helping to reduce poverty in all economies and attenuating the volatility of financial markets. Cole et al. also refer to general equilibrium effects resulting from higher financial literacy: improve risk-sharing, reduce economic volatility, improve intermediation and spend overall development. This can lead to a higher financial services sector competition, resulting this in a more efficient allocation of capital within society”*

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### 2.3 Determinants of Financial literacy

The empirical studies measures the different opinion on the level of understand financial literacy of personal and the general of the people.

According Delavande et al.(2008) measured

*“...the incentives to acquire financial knowledge depend on the level of the private resources, suggesting that individuals with more resources available for investment tend to have higher incentives to acquire knowledge...”*

Monticone (2010) also found that

*“... the financial wealth has an exogenous effect on financial knowledge, stating that households endowed with larger financial assets are more likely to invest in financial knowledge...”*

There are a few others factor such as age and degree of risk aversion been identified on determinants of financial literacy. The person who don't like to change to better way or in a simple way without any reason on financial knowledge will end with nothing for long term saving.



In relation to Jappelli and Guiso (2008) :-

*“...risk averse investors and older households tend to be less financially sophisticated, as well as low-income and low-education individuals...”*.

Based on the authors like Jappelli (2010) and Huston (2010) define to financial literacy as:-

*“...being similar to a human capital production, according to which people accumulate financial knowledge combining ability and effort, and having financial education as a fundamental input. These authors also point the cognitive ability as being an important determinant of the level of financial literacy...”*.

In similar to Knight & Knight, (2000) ;Borden et al (2008) ;Lyons,(2008); Eckel & Grosman,(2002),

*“ The students have inadequate knowledge and skills to manage their finances. They fail to make correct financial decisions and experience a high level of financial strain and problem”*

The student especially matriculation student must have enough financial knowledge in order to make any decision on the financial. The student may spending wisely or otherwise it will end to the bad financial management , don't have any saving , make use of the money not on the proper manner where the student will buy anything based on their feel and not on the budget.



## 2.4 Measure Financial Literacy

Huston (2010) argues that :-

*“a well-designed financial literacy measurement instrument, able to capture personal finance knowledge, skills and behaviors, can be an important to insight on how well financial education improves the level of human capital required to behave properly in order to enhance financial well-being”*

On the empirical studies of the research, a few research have been done on the identify on level of the financial literacy. The measurement is based on the instrument been done on many study in financial behavior with the financial knowledge in order to identify the correlation to the level of financial literacy. There were a researched that been developed by Atkinson and Messy (2012) toward the survey on questions and instrument on financial knowledge, financial behavior and financial attitude in 14 countries. The survey itself related to the financial literacy as the organize of money, financial planned or the main of the financial product. The survey that been implemented will give an impact on the financial literacy itself to the respondent and the end of the result will find out the level of understand on the financial behavior and financial attitude toward the financial literacy.

The framework of the instrument includes three main aspects:

- i. Financial literacy – the instrument or question focusing on the financial calculation on the interest , saving and the time value of the money.
- ii. Financial Behaviors- the instrument or the question more relevant on the behavior of the financial such as expenses of utilities, decision on purchase or not, payment on time, saving and budget.
- iii. Attitudes- the instrument or question based on the individuals’ attitudes with several aspects to be consider in financial aspects, such as the respondent thinking on the important thing regarding how to organize money , future planning in financial, measure the important or not important with certain statements, to identify their preference.

This research been developed using the seven point likert scale in three aspects of the component to indicate of the financial literacy. Besides that, it also identifies or measured correlation of the financial literacy to the two components which is financial behavior and financial attitudes. The empirical studies on the past research and instrument been used on this research. This research using the three component of the research as the same as the previous research that have been developed. It been a reference of the student in matriculation college in Kelantan on the instrument that been developed.

The OECD's framework that have been used on the previous research also includes extra variables for an analysis of that are related to financial literacy level such as gender , course , working experience , past school , family background in term of location and family income.

Similar to Abreu and Mendes (2010) measured:-

*“the level of financial literacy has great interest to educators, policymakers , employers and researchers, allowing them to notice when a lack of financial knowledge and skill results in welfare-reducing financial decisions.”*

Based on the Huston (2010) , the policy that been set up or approach to identify the financial literacy is of hardly connected, can be measured the barriers to financial well-being and it help to make better and effective financial choice . The instrument that been developed of the to identify the knowledge of the matriculation student college in Kelantan on three sector which is financial literacy, financial attitude and financial behavior. The result of the three sector in relation or connected to the financial literacy will reveal the level of understand on the financial knowledge of the students. The level of the students itself may create the awareness and educate the students in order to avoid the indicator of the problem of this research which is to avoid bankruptcy in young age.

## 2.5 A Theoretical Framework for Financial Literacy

The conventional economic approach to store and decide is that individuals who are fully rational and informative will take less than their income at high income time, and he will save on supporting consumption when the income falls (eg after retirement). Many studies have shown how lifecycle optimization processes can be shaped by consumer preferences (eg risk aversion and discount rates), economic environment (eg returns on investment risk and lack of liquidity), and the net benefit of social security (eg the availability and generosity of charitable schemes and Social Security earnings), among other features.

Theoretical model of measuring the major factors of consumer behavior and the economic environment implicitly assumes that people can implement and conclude that savings and spending plans, all of which require expertise in dealing with financial markets, knowledge of purchasing power, and the ability to perform complex economic calculations. As shown below in more detail, in the real world, only a handful of people with beneficial financial knowledge are conducive to creating and implementing complex plans. Moreover, acquiring such knowledge is likely to come at a cost.

In that regard, researchers and policymakers have begun to raise the extra view into the gap between modeling and reality, to better evaluate where theory can be enriched, and how the bottom line can be a better target. While there are great theories of empirical work and theory on the education economy, attention is less addressed to the question of how people obtain and use financial literacy.

However, in recent years, some authors have started exploring the decision to acquire financial literacy and the relationship between financial knowledge, savings and investment behavior including Delavande, Rohwedder, and Willis (2008), Jappelli and Padula (2011), Hsu (2011), and Lusardi, Michaud, and Mitchell (2013).<sup>5</sup> A study by Delavande, Rohwedder, and Willis (2008) presents a two-savvy consumer savings model and easy portfolio allocation across safe bonds and risk stocks, allowing the acquisition of human capital in the form of financial knowledge (À la Ben-Porath, 1967, and Becker, 1975).

This work is of the opinion that individuals will opt optimally to invest in financial knowledge to gain access to high return assets: these exercises help them identify better assets and / or hire financial advisors who can reduce investment spending. Hsu (2011) uses the same approach in an intra-home environment where husbands expertise in the acquisition of financial knowledge, but women are predicted to increase the acquisition of financial knowledge when it becomes relevant, as before their husband's death.

Jappelli and Padula (2011) also consider the two-way model but symbolize a multi-period life cycle model with periodically defined financial literacy. They predict that literacy and financial wealth will be closely linked to the life cycle, with both rising up to retirement and falling thereafter. They also suggest that, in countries with lower Social Satisfaction benefits, there will be fewer incentives to save and accumulate wealth and, on the contrary, less grounds for investing in financial literacy.

Each of these studies represents a useful theoretical achievement, but none of which incorporates loan constraints, mortality risk, demographic factors, stock market returns, and shock and health shocks, all now standard in the theoretical saving model. These deficiencies are corrected in Lusardi, Michaud and Mitchell's multi-period models (2011, 2013), which calibrate and simulate a dynamic lifecycle approach in which individuals not only select capital market investments but also invest in financial knowledge

## 2.6 Financial Attitude

Financial attitude refers to attitudes toward money (Garmen et al., 1997) and attitude towards money is divided into positive and negative attitudes (Furham & Okamura, 1999). There are a few researcher refer money as financial (Cutler & Devlin, 1996). Financial attitude influence the way of they spending and control on the money or matter on financial (Fiona et.al 2012)

In this research, the level of financial literacy among matriculation college student can be measure through financial knowledge , financial attitudes and financial practice. Definition on the financial literacy may be difference meaning many point of view especially in financial management (Godwin et al. 1986).

Many definition been translate or been measured, it prove that there is a significance on the financial management (Jodi et al. 1998). The understanding of the financial on the inflation, rate on return, hire purchase investment and risk management is a part of the example of the financial knowledge.

There is a study reported that college / university students still do not have enough financial knowledge (Tahira 1987; Justin 2003). The financial stance for the purpose of this study can also be defined as a financial principle for creating and maintaining value when making any decision and resource management.

The definition of attitude is the psychological tendency expressed to evaluate certain entities with little support or protest (Eagle& Chaiken , 1993). Attitudes can also be defined as the views or reactions that one indicates to a person. Therefore, financial attitudes can be regarded as the psychological tendency shown when evaluating recommended financial management practices at some level agreeing or disagree (Jodi et al. 1998).

Financial Attitude only one study in the financial management research literature examined the impact that attitudes have on financial satisfaction (Godwin, 1994). Attitudes toward planning did not predict satisfaction. Financial management practices are financial planning that can help identify how to prepare budgets, spend and make savings. Financial planning involves a dynamic process and requires continuous monitoring in order for financial position to be controlled (Noraihan Mamat Zambi et al., 2013). Therefore, financial practices can be seen as how one feels and acts in money management.

Money is a multidimensional concept and has been studied based on socioeconomic and cultural diversity (Taneja, 2012). According to Fazli, Hayhoe and Goh (2006), money can be symbolized as beliefs, attitudes, ethics and social status. Different perspective of money is given by each individual to make individual attitudes different. In addition, attitude toward money is also different to gender.



According to Fazli, Hayhoe and Goh (2006), there are differences in attitude towards money between men and women, especially the attitude of obsession and the power of money. However, positive attitude towards money can produce a smart individual who is planning on finances and is able to manage the debt well. This is explained by the study of Sim and Shung (2004), which shows that positive attitude toward money can help young people to understand the financial aspects more deeply in terms of savings, use and investment.

## 2.7 Financial Behavior

In related to by Robb & Woodyard (2011) stated :-

*“...the individual’s financial well-being is dependent on their actions, besides the external influences of politic and economic forces. Increasingly the critical importance of understand the relationship between knowledge and personal financial issues...”*

Dimensions of financial literacy can be used to predict financial or revenue behavior, not necessarily mean that individuals will behave in a way that many masters, policy makers or educators consider optimum (Huston, 2010) who are more concerned that the presence of skills and more information will bring to the improvement of the corrupted financial behavior, as noted by Braunstein and Welch (2002).



Other factors, such as behavioral tendencies, self-control problems, family, peers, economics, community and institutional influences can determine the nature of individual decisions (Huston, 2010). However, it is generally recognized that the level of financial knowledge is an important determinant of individual's financial behavior, mostly subjective knowledge, is measured by a self-assessed individual's degree of knowledge (Robb and Woodyard, 2011).

Financial shortcomings are a great reason for financial errors made by individuals (Mak and Braspenning, 2012). There is evidence that financial literacy affects planning behavior, which increases wealth holdings after controlling socio-economic demographic factors (Lusardi and Mitchell, 2007). It also measures that financial literacy facilitates the accumulation of wealth, by increasing the profitability of investing in the stock market and having a more diverse portfolio (Guiso and Jappeli, 2008; Abreu and Mendes, 2010; van Rooij et al., 2012). In addition, financial literacy has important consequences for debt results. Lusardi and Tufano (2009) find evidence that less literate users tend to trade in a high way, bear higher costs and use expensive loans. Individuals also tend to have lower debt and higher credit likelihood.

## 2.8 Stress on Financial Literacy

Stress can be related to a state of the worry and mental tension which give impact on the life , study , work, etc. It also causes strong feelings of anxiety and worry which lead to pressure or physical force. In the research base on the college students, the financial stress caused by the finances itself. The pressure or stress come from not capable to manage the money, not be able to make a saving, overspending behavior and at the end, the money is not enough for them.

Financial stress is a subjective term that expresses uncomfortable feelings as a result of individual disabilities fulfilling the needs and needs of life. This financial stress is often associated with estimates as well as feeling anxiety and fears of financial (Tedeschi & Calhoun,2004) .Financial stresses can influence how individuals act primarily in planning loan / debt recruitment.

Davis and Mantler (2004) found that there was a link between financial stress and depression and anxiety as it was unable to manage money and debt well. Slagel et al., (2007) found that financial stress caused young workers to be unable to get rid of debt problems because they were unable to make good financial decisions.

Based on Davis & Manter (2004),

*“Financial stress is the unpleasant feeling that one is unable to meet financial demands , afford the necessities of life , have sufficient funds to make ends meet”.*

Similar to Northern et al.,2010 ,

*“Financial stress may be defined as the inability to meet one’s financial obligations , but can also include psychological or emotional effects”*

Those student who have a financial stress is feel not satisfaction on their life of necessities, don’t have sufficient fund and it will effect to the psychological or emotional effects. When it effect the emotion, it will make their life miserable and will not focus on the study. The students not been disorganize on the money management and it will lead to the waste of the money or overspending the money.

Refer to Hayhoe et. Al (2000),

*“The number of good financial behaviours was negatively associated with number of financial stressors”*

Similarity to Hayhoe , Turner, Bruin , Lawrence , and Leach (2000) ,

*“Spending habit differences among college students and included financial stress as a variable in their model. Financial stress was measured by summing the number of positive responses to seven financial stressors, such as “not able to save for an emergency” and “not able to pay utilities.”*

Based on Northern, Ross, Niebling & Heckert (1999) O'Brien & Goetz,(2010) ,

*“Research regarding sources of stress confirms the influential role that personal financial problems play in the lives of college students. Financial difficulties are often cited among college students as sources of stress”*

The effected on the financial stress by the previous research is the life styles and spending behaviour of the students. The students spending more than they need using the pocket money. On the area of the KMC students, the students mostly spending their money not on the necessities such as the phone top up. When the use of pocket money spending not on the priority on the studies, it will gives a stress to the student when they don't have enough money by the end of the month. The stress is one of the effect why that the student can't manage themselves on the better way. They will used the money to buy something not priority and wasteful.

According to Trombitas (2012) ,

*“...the survey focusing specifically on financial stress found that four of the five most common stress among students related to their personal finance...”*

Based to American College Health Association (2013) :

*“College students frequently experience financial stress. According to a recent national survey , 35 per cent of students said their finances were ‘traumatic’ or ‘very difficult’ to handle”.*

Similar to Fosnacht, 2013,

*“ A predecessor to this study that about 70 percent of first year undergraduates surveyed evidenced financial stress”.*

Four type of student can be related to the financial stress. The First group is group of no impact on financially stressed where the students concerned regular expenses and paying for college, but never change behaviour due to finances. Low impact on financially stressed will be the the second group more on concern about money and try to find work and borrowing to anybody more. The third group financially stressed, medium impact where the group not involves in activities due to lack of money, try to find work and believe financial will effect to the academic performance. The high impact which the fourth group financially stressed where students not involving in activities, not buying academic material and investigating turn down. They believe the impacted to the academic performance.

The research also identify the fifth group which not financially stressed, comprised of the students did have enough money to support their regular expenses and not have to worry anything about the paying to college. The research have investigated that the financial stress among the college students gives an impact to students in terms of suffer from suicidal thought ,depression or anxiety ( Eisenberg , Golberstein , McPherson,2012 ; Gollust & Hefner, 2007) and while others to their self-esteem related to physical appearance (Crocker & Luhtanen ,2003 ). The financial stress also make the academic performance become lower. ( Ross , Cleland & Macleod,2006 )

The students usually stress on the academic and it shows that only nine per cent of students mentioned that the financial worries give impact on their academic performance. It also shows that 70 % of the first year student facing the financial stress. Only 35% of the college student trauma and difficult to face the financial stress. Based on the previous study show that when the student has the effect on the financial stress, indirectly it will effect to the academic performance of the students.

## 2.9 Implications Lack of Financial Literacy Knowledge

According to research by Che Ismail (2001) conducted on students of Kolej Universiti Tun Hussien Onn, that students should be given guidance and exposure to financial management and in generating well organize on spending habits. This shows that most students have little exposure to good financial management habits. If this is not been avoid, it can cause problems on an individual such as the issue of indebtedness.

The study conducted by Lusardi and Tufano (2009) states that the lack of knowledge of individuals affects their willingness to take personal loans and credit cards without realizing the consequences that will be covered later. Those are not be able to pay, will be causes to bankruptcy in the young age. It will give negative impact and disaster to the youngster that been declare bankruptcy where they suppose free of any debt arise. According to research by Jogensen & Savla (2010) stated that the lack of knowledge of financial will effect the positive decision how they control the finance expenses toward the year.

Because of that , the knowledge regarding the financial literacy for individual should be evaluate and be test in order to choose the best method for absorption the knowledge. According to the Corney and Hoiles (2009) , the research that have been tested on the young worker in Australia , stated the level of financial problem arise because of the practice that they usually to apply it. According the past research that been test showed that the positive practice in manage the financial have a significant with the well manage financial.(Zaimah, 2010). It shows that the lack of the financial literacy will give an impact to the individual prosperity and at the end give a stress.

The problem on lack of financial literacy also gives an impact to the student especially on focus on study. It referred to the research by Christina & Irwan (2000) showed 78% of the college student not afford to bought revision book and it will interrupt the learning process . The problem don't have any revision book will interrupt the learning process as the student will less attention for study. (Dr. Charles Smith, 2001).

As conclude that the book revision is the subject that very important in learning process which give a good effect on the learning process. Those college student who have a knowledge in the financial literacy, they know how to spend their money well. They know how to cash saving base on the financial understanding. At the end, the college student that has a financial literacy will be able to perform well in the academic performance if they don't have any problem regarding the financial problem or stress on it. They will be able to get a good result or GPA end of the semester. The student will be educate and aware about the bankruptcy on the early age. The prevention on the early age may give benefit the student in long term duration.



## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3.1 Research Framework.

In this chapter, we measure the methodology used in our research: the survey method, the design of questionnaire, the sample, the implementation of the survey, the pilot test to the questionnaire and the methods used to report and the results to be analyze. The research used a quantitative method by using the questionnaire as main instruments to answer the entire questions objective in related to look the level of understanding on financial literacy among the Kelantan Matriculation College students.

The questionnaire and instrument is adapted from PISA 2012, Financial Literacy Assessment Framework. An addition instrument used in some studies is the financial literacy – attitude, behavior and knowledge questionnaire, which uses a liker scale to analyze respondent attitudes and behaviors. This particular instrument was elaborated by Shockey (2002). The questionnaire been modified to suit with the need of this research. The theory on PISA 2012 , Financial Literacy Assessment Framework itself agreed the natural link to the financial literacy, financial attitude, financial behavior and financial knowledge.



The theory of past research stated that high level of understanding on financial attitudes and financial behavior gives an positive impact to the financial literacy knowledge. Meanwhile the knowledge of the financial application in financial knowledge gives a medium impact to the student. Not every student know how to calculate the simple accounting calculation for example saving with the interest and the value of money as mentioned in question or instrument 19 until 22.

Financial literacy can build up the resilience, skill and confidence level which the college students should have it to become more creative and successful learners, productive, involved individual. Financial literacy give a way to young adults to design their way in order to promote equity and excellent. To create the impact on relationship between financial attitudes and financial behavior to financial literacy, the research framework has been developing.

Following diagram shows in figure 3.1, how financial attitude and financial behavior affect the financial literacy among students in Kelantan Matriculation College. Two independent variable which is financial attitude and financial behavior will be test to see the respondent views and the correlation between both independent variables toward to the dependent variable which is financial literacy.

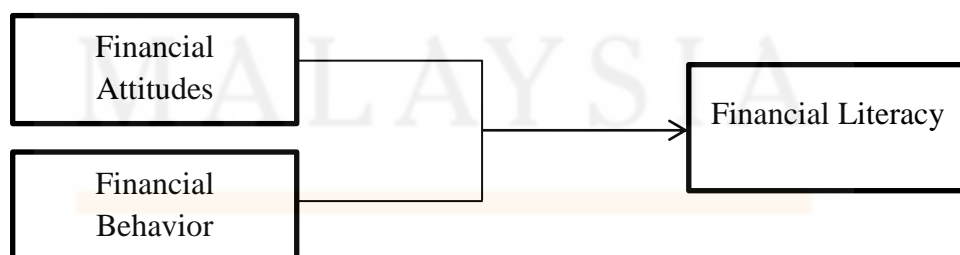


Figure 3.1: Research framework

### 3.2 Research Design Sampling Population

This research can be considered as a quantitative research to quantify the problem by data can be transformed into useable statistics or way of generating numerical data from a sample to the population of interest. The study used descriptive-correlational research method and the research going to use PISA 2012 , Financial Literacy Assessment Framework . The model confirmed that there is a correlation to financial literacy, financial attitude and financial behavior on past research.

The population related is based on Kelantan Matriculation College. The sample of this research will analyses the level of financial literacy among students in KMC. In terms of sampling methodology, this study had used convenience sampling methodology. The sample of 320 among matriculation students in Kelantan. The sampling is on both the accounting streams and science streams.

Refer to the Fraenkel & Wallen, 2006 is that the correlational research describes the relationships variables. The relationship between two or more correlation design. The research method will measure whether financial attitude and financial behavior will be related to financial literacy in matriculation students in Kelantan. The correlation that the research wants to see is the correlation between financial attitude and financial behavior toward to the financial literacy.

### 3.3 Data Collection Method

Quantitative data collection methods include various forms of questionnaires. The analysis of quantitative research is often deductive approach where data precise measurement, mathematical formula and testing hypotheses in order to match the research with the existing theory. Quantitative research use statistical data where findings are conclusive and usually descriptive in nature and the end result will be used to suggest as a final result of the research.

In relation on the research of the examining financial literacy, A case study of Kelantan Matriculation College (KMC), The research are going to use the quantitative research. Simple random sampling is going to utilize to get study sample. Both self-construct and adapt questionnaire will be used in this research. The study is going to use descriptive –correlational research method. The information collected is considered to be primary data using survey. A set of questionnaires will be handed-out face to face among matriculation students in Kelantan.

Before the implementation of the survey, it was conducted a pilot test, with a small sample, to test reliable to the questions to the respondents. Data analysis for the pilot test was carried out during the fourth weeks of October 2017 with 30 college students. The sample was composed by 8 men, 22 women in areas of accounting and science. The pilot test only use 30 data from college students which based on the Isaac & Michael (1995) and Hills (1998) that stated the range for the pilot test between 10 – 30 respondents.

The instrument that can be accepted through Cronbach's alpha test is more than 0.70 (Gordon, 2005). When the Cronbach's alpha more than 0.70, it showed that the instrument or the questions can be reliable and validity for the use of the research. The pilot test for the researched showed that the reliability on Cronbach's for more for financial attitude (0.701) and dimension financial behavior (0.766).

It means that the instrument or questions can be part of the research instrument where the reliable and validity have been tested and approved. The research was transparent and is valid use for the research. It showed that the research instrument is good and reliable to use for the research.

Target group research was among matriculation college students in Kelantan. The population for the research 1,900 students. Stratified random sampling technique has been choosing as random sampling. The stratified random sampling technique have been choose because of research population not scattered on gender, course, worked experienced and family background. The sample size 320 respondents based on Small-Sample Techniques through research by Robert V. Krejcie and Daryle W. Morgan (1970) "Determining sample size for research activities".

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### 3.4 Research Instrument

The questionnaire will be the instruments of the study. The instruments that been used adapted from PISA 2012, Financial Literacy Assessment Framework , Financial Literacy Baseline Surveys: a First International Comparative Analysis ( Kempson, 2009) – OECD and Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey for Financial Literacy-OECD INFE (2011) .

It been used for the instrument for the research with the suitable to the need of research. The model have been choose because of the significant similarity to the research that been made and the empirical study .The questionnaire was designed into two parts. The first part to analyze the level of understanding on financial literacy by three dimension which financial attitude (7 items), financial behavior (11 items) and basic financial literacy (4 items) . The second part information related to the respondents demographic. Questionnaire in the list of instrument as shown in table 3.1.

Table 3.1: Questions Related to Financial Attitude, Financial Behavior and

Financial Literacy

| Financial Literacy                 |   |
|------------------------------------|---|
| <u>Level of Financial Attitude</u> |   |
| <b>01.</b>                         | It is important to control monthly expenses.                  |
| <b>02.</b>                         | It is important to establish financial targets for the future |
| <b>03.</b>                         | It is important to save money on a monthly basis.             |

- 04.** The way I manage my money today will affect my future.
- 05.** It is important to have and follow a monthly expense plan.
- 06.** It is important to stay within a budget.
- 07.** It is important to invest regularly to achieve targets in the long term.

Level of Financial Behavior

- 08.** I worry about how best to manage my money.
- 09.** I take notes and control my personal expenses (e.g., expense and revenue spreadsheet ).
- 10.** I establish financial targets for the long term that influence the managing of my expenses.
- 11.** I follow a weekly or monthly plan for expenses.
- 12.** I go more than one month without balancing my expenses.
- 13.** I am satisfied with the way I control my finances.
- 14.** I save monthly.
- 15.** I save so I can buy something expensive
- 16.** I compare prices when buying something.
- 17.** I analyze my financial situation before a major purchase.
- 18.** I buy on impulse.

Level of Basic Financial Literacy

**19.** Imagine you have RM 100.00 in the savings account and the interest received rate is 10% a year. After 5 years, how much money will you have in this account?

- a. More than RM 150.00
- b. Exactly RM 150.00
- c. Not Sure
- d. Less than RM 150.00
- e. Do not know

**20.** Imagine you bought a calculator RM 60.00 after GST. How much the original price before GST?

- a. More than RM 57.00
- b. Exactly RM 57.00
- c. Not sure
- d. Less than RM 57.00
- e. Do not know

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21. Imagine Kamal inherits RM 10,000.00 today and Razak inherits RM 10,000.00 in three years. According to the time value of money, who is going to be wealthier?

- a. Kamal
- b. Razak
- c. Not sure
- d. They are equally as wealthy
- e. Do not know

22. Imagine you have RM 50 . You spend RM 20 to buy a book . The cost not included GST. How much will be the balance you buy it.

- a. More than RM 30.00
- b. Exactly RM 30.00
- c. Not sure
- d. Less than RM 30.00
- e. Do not know

#### **Part Four : Demographic Survey**

1. Gender – Male or Female
  2. Course – Accounting or Science
  3. Previous School – Daily School or Boarding School
  4. Work Experienced – Yes or No
  5. Family background on location and family income.
-



### 3.5 Data Analysis And Interpretation

The instrument and questionnaire level of understanding on financial literacy among Kelantan matriculation college students was adapted on instrument used seven point likert scale on Statistical Package for the Social Sciences (SPSS) version 16. The data analysis will be use software SPSS to analyze questionnaire for evaluation in order to obtain result. The seven likert scale based on the answered given on preference of the students in table 3.2.

Table 3.2: Seven Point Likert Scale

- 
- |                                |
|--------------------------------|
| 1. Strongly disagree           |
| 2. Disagree                    |
| 3. Somewhat disagree           |
| 4. Neither agrees nor disagree |
| 5. Somewhat agree              |
| 6. Agree                       |
| 7. Strongly agree              |
- 

The preferences can showed the level of understanding of the students itself. In process of analysis of data received, descriptive analysis have been done to look the mean of each level of in financial attitude , financial behavior and financial literacy. The research divided into three level as showed in table 3.3 for the purpose of descriptive date interpretation on financial attitude, financial behavior and financial literacy.

Table 3.3: Level of Understanding (adapted by Nik Mohd Rahimi, 2004)

| Mean Score   | Level  |
|--------------|--------|
| 5.01 to 7.00 | High   |
| 3.01 to 5.00 | Medium |
| 1.00 to 3.00 | Low    |

Meanwhile, the level of financial literacy based on the percentage of corrects answer as a whole in question 19 to question 22 and it been interpreted to the seven point likert scale in order to get related descriptive mean score and correlation to financial literacy by using SPSS. The scale likert interpreted the percentage as shown in table 3.4.

Table 3.4: Interpretation Percentage On Seven Point Likert Scale For Financial Literacy

| Likert Scale | Percentage   |
|--------------|--------------|
| 1            | 0 % - 14%    |
| 2            | 15% to 29%   |
| 3            | 30% to 43%   |
| 4            | 44% to 57%   |
| 5            | 58 % to 71%  |
| 6            | 72% to 85 %  |
| 7            | 86 % to 100% |

The total numbers of 320 respondent details will be key into SPSS one by one, and then the individual data will analyzed on a group basis. In this research paper, the statistic will include both descriptive and inferential statistic. Quantitative research use statistical where findings are conclusive and usually descriptive in nature and the end result will be used to suggest as a final result of the research This study employed Pearson's correlation test and Cronbach's alpha test to examine the connection between the variables.

## CHAPTER 4

### ANALYSIS OF RESULT

#### 4.1 Respondent Demographic Profile

320 respondents involved with the research where 25 % is a male respondent and the 75% among the female respondent where 60.9% of respondents from the rural area and 39.1 from urban area. The research has equally respondent for the course for accounting and science without considered their knowledge in financial literacy. This is because there is a respondent have a basic in accounting even tough in science stream and vice versa. 70% of the respondent was come from the daily school where most of it still depend on the parents for their expenses while 30% was stayed in hostel by themselves more independent.

60% of them are not worked during waiting for the SPM result and 40 % of them worked during the waiting SPM result for the satisfaction or to make saving for their study. 39.1 % of the respondent live in city which more challenging on the cost of living compared to 60.9% of respondent was live in rural area. Family income showed that 61.2% of the respondents came from parent income less than RM 2,000 , 22.8% less than RM 5,000 , 11.9% less than RM10,000 and 4.1% more than RM 10,000.

The income family showed that respondent alert about to spend the money and only been focused on the important matters due to the low income per capita for family.. Detail information can be referred on table 4.1.

Table 4.1: Respondent Demographic Profile

| Demographic               | Frequency | ( % ) |
|---------------------------|-----------|-------|
| <i>Gender</i>             |           |       |
| Male                      | 80        | 25    |
| Female                    | 240       | 75    |
| <i>Course</i>             |           |       |
| Accounting                | 160       | 50    |
| Science                   | 160       | 50    |
| <i>Previous School</i>    |           |       |
| Daily School              | 224       | 70    |
| Boarding School           | 96        | 30    |
| <i>Worked Experienced</i> |           |       |
| Yes                       | 128       | 40    |
| No                        | 192       | 60    |
| <i>Family Background</i>  |           |       |
| <i>Location</i>           |           |       |
| Urban                     | 125       | 39.1  |
| Rural                     | 195       | 60.9  |
| <i>Family Background</i>  |           |       |
| <i>Family Income</i>      |           |       |
| Less than RM2,000         | 196       | 61.2  |
| Less than RM5,000         | 73        | 22.8  |
| Less than RM10,000        | 38        | 11.9  |
| More than RM10,000        | 13        | 4.1   |

Table 4.2 showed the level of the financial attitude, financial behavior and financial literacy among matriculation college students in Kelantan. The table showed high level of level financial attitudes on the mean score 6.3554 and for the financial behavior shows most of the students on the high level on the mean score of 5.0315. Financial literacy showed medium level where two or more questions correctly answered for level of financial literacy on mean score 3.5656.

Table 4.2: Level Of Descriptive Financial

|                     | Mean   | Std. Deviation | Level  |
|---------------------|--------|----------------|--------|
| Financial literacy  | 3.5656 | 1.93031        | Medium |
| Financial Attitude  | 6.3554 | 0.52644        | High   |
| Financial Behaviors | 5.0315 | 0.76190        | High   |

#### 4.2 Analysis On The Level Of Financial Attitude

Table 4.3 showed that the questions on item 1 until item 7. The mean score for the question 1 until question 6 gave a result of mean score 6.00 and above. Question 7 showed the mean score of 5.8813. The total level of the financial attitude on the mean score of 6.3554.

It show that level of financial attitude among matriculation college student in Kelantan still in high level of understand as stated in interpreted in table 3.3. Based on the respondent answered, it shows the respondent highly understand the important of the financial toward the attitudes on planning and organize the money.

Table 4.3: The Level Of Financial Attitude

| Item  | Mean   | Std.<br>Deviation | Level |
|---|--------|-------------------|-------|
| 1. It is important to control monthly expenses.                             | 6.6594 | 0.55953           | High  |
| 2. It is important to establish financial targets for the future            | 6.5469 | 0.68412           | High  |
| 3. It is important to save money on a monthly basis                         | 6.3937 | 0.71348           | High  |
| 4. The way I manage my money today will affect my future.                   | 6.3562 | 0.84056           | High  |
| 5. It is important to have and follow a monthly expense plan.               | 6.3125 | 0.74856           | High  |
| 6. It is important to stay within a budget.                                 | 6.3375 | 0.77490           | High  |
| 7. It is important to invest regularly to achieve targets in the long term. | 5.8813 | 1.11063           | High  |
| Total   | 6.3554 | 0.52644           | High  |

#### 4.3 Analysis On The Level Of Financial Behavior

Table 4.4 showed that the questions on item 8 until item 18. The total mean score for the level of financial behavior is 5.0135. The question 8, 9, 10, 14, 16 and 17 gave a result of mean score 5.00 and more. The analysis for the item interpreted as high level of understand on financial behavior. For question 11, 12, 13, 15 and 18 gave a result of mean score more than 3.00 to 5.00 and it interpreted as medium level of the financial behavior. As a result for the level of financial behavior for total score mean in the high level for respondent of matriculation students college in Kelantan which interpreted in table 3.3. Based on respondent answered, it shows the respondent highly manage and spending the money wisely.

Table 4.4: The Level Of Financial Behavior

| Item   | Mean   | Std.<br>Deviation | Level  |
|--|--------|-------------------|--------|
| 8. I worry about how best to manage my money.  | 5.3500 | 1.54433           | High   |
| 9. I take notes and control my personal expenses(e.g.,<br>Expense and revenue spreadsheet).        | 5.3531 | 1.27318           | High   |
| 10. I establish financial targets for the long term that<br>influence the managing of my expenses. | 5.2906 | 1.28650           | High   |
| 11. I follow a weekly or monthly plan for expenses.  | 4.9406 | 1.45988           | Medium |



|   |        |         |        |
|---|--------|---------|--------|
| 12. I go more than one month without balancing my expenses.                   | 4.3719 | 1.84913 | Medium |
| 13. I am satisfied with the way I control my finances.                        | 4.8719 | 1.57543 | Medium |
| 14. I save monthly  | 5.1469 | 1.43413 | High   |
| 15. I save so I can buy something expensive.                                  | 4.6250 | 1.80125 | Medium |
| 16. I compare prices when buying something.                                   | 5.9594 | 1.13711 | High   |
| 17. I analyze my financial situation before a major purchase (academic books) | 5.5031 | 1.40085 | High   |
| 18. I buy on impulse.   | 3.9344 | 1.89010 | Medium |
| Total   | 5.0315 | 0.76190 | High   |

#### 4.4 Analysis On The Level Of Financial Literacy

The analysis to identify level of financial literacy on question 19 to question 22 in table 4.5. The analysis based on the answer correct answer for all questions and been interpreted on percentage as in table 3.4. Based on the items no 19, the answered for the questions is more than RM 150.00. It showed 94 respondent or 29.4 % students managed to answers correctly, 65% answered incorrectly and 5.6% did not know the answers for it. For question 20, the answered for the correct one is less than RM57.00 where 177 respondent or 55.3% of student gave correct answered while 43.5% gave incorrect answered 1.2 % did not know the answered.

Based on the question 21 showed that 81 respondent or 25.3% of student gave correct answered while 69.4% gave incorrect answered 5.3 % did not know the answered. For question 22 , 194 respondent or 60.6% of student gave correct answered while 36% gave incorrect answered 3.4 % did not know the answered. The analysis showed on based on each questions.

Table 4.5: Level of Financial Literacy

| Questions | % Correct | % Incorrect | % Do not Know |
|-----------|-----------|-------------|---------------|
| 19        | 29.4      | 65          | 5.6           |
| 20        | 55.3      | 43.5        | 1.2           |
| 21        | 25.3      | 69.4        | 5.3           |
| 22        | 60.6      | 36          | 3.4           |

Question 19

|                        | Frequency | Percent | Cumulative Percent |
|------------------------|-----------|---------|--------------------|
| a. More than RM 150.00 | 94        | 29.4    | 29.4               |
| b. Exactly RM 150.00   | 133       | 41.6    | 70.9               |
| c. Not Sure            | 42        | 13.1    | 84.1               |
| d. Less than RM 150.00 | 33        | 10.3    | 94.4               |
| e. Do not know         | 18        | 5.6     | 100.0              |
| Total                  | 320       | 100.0   |                    |

## Question 20

|                       | Frequency | Percent | Cumulative Percent |
|-----------------------|-----------|---------|--------------------|
| a. More than RM 57.00 | 64        | 20.0    | 20.0               |
| b. Exactly RM 57.00   | 49        | 15.3    | 35.3               |
| c. Not Sure           | 26        | 8.1     | 43.4               |
| d. Less than RM 57.00 | 177       | 55.3    | 98.8               |
| e. Do not know        | 4         | 1.2     | 100.0              |
| Total                 | 320       | 100.0   |                    |

## Question 21

|                                | Frequency | Percent | Cumulative Percent |
|--------------------------------|-----------|---------|--------------------|
| a. Kamal                       | 81        | 25.3    | 25.3               |
| b. Razak                       | 92        | 28.8    | 54.1               |
| c. Not Sure                    | 81        | 25.3    | 79.4               |
| d. They are equally as wealthy | 49        | 15.3    | 94.7               |
| e. Do not know                 | 17        | 5.3     | 100.0              |
| Total                          | 320       | 100.0   |                    |

## Question 22

|                       | Frequency | Percent | Cumulative Percent |
|-----------------------|-----------|---------|--------------------|
| a. More than RM 30.00 | 15        | 4.7     | 4.7                |
| b. Exactly RM 30.00   | 67        | 20.9    | 25.6               |
| c. Not sure           | 33        | 10.3    | 35.9               |
| d. Less than RM 30.00 | 194       | 60.6    | 96.6               |
| e. Do not know        | 11        | 3.4     | 100.0              |
| Total                 | 320       | 100.0   |                    |

The project research did analysis for based on the correct answered for each respondent. It will be the indicator for the level of financial literacy. The table 4.6 analysis showed that only a few students which 15 students (4.69 % ) be able to answer all 4 questions correctly , 73 students (22.81 % ) be able to answer 3 questions correctly , 94 students (29.38%) be able to answer 2 questions out of 4 questions and 79 students ( 24.69%) to answer correct at least 1 question. 59 students (18.44) did not answered correctly all questions.

The correct respondent answered as the indicator for the financial literacy has been converted to the SPSS by interpreted in seven likert scale as in table 3.4. As a result the mean score for the financial literacy 3.5656 as in table 4.2. The interpreted as in table 3.3 as medium of understand on the financial literacy. Most of the respondents less understand on the time value of the money as question 19 and question 21.

Table 4.6 : Interpreted Correct Answered To Seven Likert Scale

| Correct     | Person | %     | Seven Point<br>Likert Scale |
|-------------|--------|-------|-----------------------------|
| All correct | 15     | 4.69  | 86% - 100%                  |
| 3 correct   | 73     | 22.81 | 72% - 85%                   |
| 2 correct   | 94     | 29.38 | 44%-57%                     |
| 1 correct   | 79     | 24.69 | 15%-29%                     |
| No correct  | 59     | 18.44 | 0%-14%                      |
| Total       | 320    | 100   |                             |

#### 4.5 Analysis On Correlation Of Financial Literacy With Financial Attitude And Financial Behavior.

Table 4.7 showed the correlation between the independent variable which is financial attitude and financial behavior to dependent variable which is financial literacy. The pearson's correlation between financial attitude to the financial literacy in positive of 0.063 and the significance 0.262. The pearson's correlation between financial behavior to the financial literacy negative correlation 0.169 and the significance 0.002.

Table 4.7: Pearson's Correlation

|          |                     | Attitude | Behavior | Literacy |
|----------|---------------------|----------|----------|----------|
| Attitude | Pearson Correlation | 1        | 0.258**  | 0.063    |
|          | Sig. (2-tailed)     |          | 0.000    | 0.262    |
|          | N                   | 320      | 320      | 320      |
| Behavior | Pearson Correlation | 0.258**  | 1        | -0.169** |
|          | Sig. (2-tailed)     | 0.000    |          | 0.002    |
|          | N                   | 320      | 320      | 320      |
| Literacy | Pearson Correlation | 0.063    | -0.169** | 1        |
|          | Sig. (2-tailed)     | 0.262    | 0.002    |          |
|          | N                   | 320      | 320      | 320      |

\*\* Correlation is significant at the 0.01 level (2-tailed)

Table 4.8 : The analysis been interpreted on Cohen (1988) that suggested to follow the guide on the correlation between variables.

|                 |    |                   |        |
|-----------------|----|-------------------|--------|
| r= 0.10 to 0.29 | or | r= -0.10 to -0.29 | low    |
| r= 0.30 to 0.49 | or | r= -0.30 to -0.49 | medium |
| r= 0.50 to 1.0  | or | r= -0.50 to -1.0  | high   |

## CHAPTER 5

### DISCUSSION AND CONCLUSION

#### 5.1 To Examine The Level Of Financial Literacy

The research led us to important conclusion about the levels of financial literacy of the Kelantan matriculation college students. The research can be conclude that the Kelantan matriculation college students more understanding on the financial attitude and financial behavior that give impact to the financial literacy.

The level of financial literacy showed on table 4.5 based on the questions 19 to 22. It showed the mean of 3.5656 as in table 4.2 with the level of medium knowledge of financial literacy. The result been analysis based on the correct answered of respondent using the percentage and interpreted suited with the seven point likert scale. The result showed that less than 30 % of respondent get the correct answered on question 19 and 21. It showed that the respondent very weak on the calculation on time value of money.

The respondent didn't know that the present values of money nowadays are higher value compare to previous year. Time value will be slightly increased year by year. More than 50 % of question 20 and 22 can be answered correctly and the question more the calculation of interest on 6 % on Goods Service Tax .

The respondent highly understand and aware toward the GST been used in the expenses whether the price before GST or after GST. The social environment such as multimedia electronic and social media gives big impact about the knowledge to the respondent. There are a few respondent did not answered well because of they did not know how to calculate as the respondent more on the science stream. The respondent felt that the GST not very important to know. Most of the students are really like to spend in whatever they received the money. They never bother to educate themselves on the knowing anything relying on GST. Self-learning should be implement to their soul in order to understand regarding the financial literacy.

## 5.2 To Measure The Level Of Financial Attitude

The level of financial attitude showed that the overall mean 6.3554 on level of financial attitude and it interpreted as high level of understand. It based on the question 1 until questions 7 as shown in table 4.3. Most of the questions excluded question 7 gave a mean of more than 6.000. The respondent give positive understand where there were alert and aware about how to control the monthly expenses.

The respondent know how to organize their money well. They know how to use wisely pocket money received every month amount RM250 for eat and to buy a stationery which is important. They are alert on how to control the allowance pocket money.



The instrument on the level of control monthly expenses become the highest mean 6.6594 of understands in financial attitude among matriculation college students in Kelantan. It showed that the respondent are organize on spending and saving of the money. They manage to control their money on the proper way.

The respondent also showed high level of understand of matriculation students in Kelantan that have their own plan on the future especially when they are planning on going to further studies. Most of the students also alert about the important on manage the money during their study, the way they manage the money, it will effect on the future. If the organize spending the money not in the proper way, it will effect when they are in working environment. The money for saving as financial targets is for the use in future planning likes to buy the academic book during the degree level which is expensive.

It also showed that the students have knowledge on saving every month. They know that it is important to make saving in the bank for future purposes and for better leaving in future. Their concerned nowadays, will give a benefit to the future. The students of Kelantan Matriculation College students agreed that if they want to organize well their expenses, they have to plan and follow it correctly. The important of plan the expenses, will organize their budget and will not buy anything which are not important.

The lowest mean 5.8813 in financial attitude is the less knowledge the respondent know regarding the investment. The student still not enough knowledge in term of invest and growth their money such as fixed deposit and others. They still lack of knowledge on how to invest money. It is because most of them are thinking of study only and not about think money growth or invest.

The student should be educate on how to invest the money in proper way and what type of benefit they will get. It help in the future. The students also alert that the level of understand when they spending their pocket money, they have to spend within a budget that they have plan. As overall the matriculation college students have high level of financial attitude.

### 5.3 To Identify The Level Of Financial Behavior

Table 4.4 showed the level of understanding and important things on financial behavior based on the question 8 to question 18. The result of the overall financial behavior on the financial behavior based on the interpretation is high level on mean 5.0315. The result stated that the respondent on matriculation college students in Kelantan on the way they spent, plan and expense. It showed the students were alerts on the manage or spend their money wisely. The high awareness of the students will make the student precaution in whatever they want to buy. The students also have high level of understanding on control the personal expenses. The students have their own journal or spread sheet which included the list of revenue and list of expenses.

The students more careful on the spend the expenses from the revenue of pocket money or parent. In term of the financial targets on planning for the long terms that effects on the managing the expenses. The students have their own target for something using their money that they be able to control and manage their expenses. The research showed that the respondent managed to balance their money for every month before the next month.

Therefore the student be able to manage their expenses in whatever they would like to buy including the last month saving. The students still not satisfy on the way they control their finance. It is because of the many factor influences on the student on to spend. A certain on allowances that they received every month can be a saving for the students. The students not sure whether they spend the money for the buy something expensive. Something the students feel that sometimes they wanted to have something that beyond what they have and at same time they worried that the money can be used for others more important.

As usual , the respondent showed that compare to find out the lowest cost that gives a same quality as the high cost is a moral on consumer behavior when buying something need by customer. It also showed that the student like to analyze their money wisely before they decided to buy something such academic book. The students realize the important of the financial behavior on spending the money on the right way. They used to make comparable and analyze the thinks that they want to buy. The best option that they can have where the cost is minimal. In term of buy follow instinct, the students will be more careful on buy something. They used to plan, analyze and control their expenses before they want to buy it and not base on the instinct or impulse.

#### 5.4 To Examine The Relationship Between Financial Attitude And Financial Literacy

The correlation between financial attitude and financial literacy showed in table 4.7. Method of Pearson's Correlation showed there is a positive on low level correlation and it low significant to the hypothesis which measure the correlation between attitude test and literacy test as in table 4.8.

It showed that  $p=0.063$  is more than  $0.05$  that have a correlation between the financial attitude and financial literacy(  $r=0.263$  ,  $p=0.063$  ,  $p > 0.05$  ). It been discussed that the knowledge of financial attitude in understand of planning, manage, organize and saving the money have a relationship with the knowledge of the financial literacy on the low level of correlation. It measured that significant of correlation financial literacy and financial attitude among matriculation students in Kelantan.

The positive negative meaning when the level of understanding on the managing the money give an impact on the financial literacy of the students. Unfortunately, the correlation on low level, the correlation may be effected by other factors such as the policy of the government. The low level of understanding of the student gives an impact of low financial knowledge.

### 5.5 To Examine The Relationship Between Financial Behavior And Financial Literacy

The correlation between financial attitude and financial literacy showed in table 4.7. Method of Pearson's Correlation showed there is negative on high level correlation and it low significant to the hypothesis which it measured the correlation between behavior test and literacy test as in table 4.8.

It showed that  $p = -0.169$  is more than  $-0.05$  that have a correlation between the financial behavior and financial literacy in the negative ( $r = 0.002, p = -0.169, p > -0.05$ )

It been discussed that the knowledge of financial behavior on spending and saving significance with relationship of the financial literacy on the low level of correlation.

The negative correlation meaning that less knowledge of the financial literacy give significant to the knowledge of financial behavior on the spending behavior , organize the money and saving of the money. Even though, the students have a high level of control and spend their money on correlation, the students are still having a low knowledge on the calculation and time value of the money.

## 5.6 Recommendation

Based on the result of the impact on financial behavior and financial attitude to the financial literacy, it could be suggest that the government through ministry of education should be able to be more seriously on the financial management. One of the way to create the subject or syllabus since standard one how to manage or plan their money wisely. The education to the young age that implement in early age may help or reduce the bankruptcy in young age.

In other hand, this research may also become a literature to others who have similarity on the research. These project research will contribute the literature to third party or others researcher who doing the research on the same field on the future. More research been done will shows that how seriously the bankruptcy among the youngster. The research will give an idea to the researcher and it will overcome or solution to the problem statement arise.

As result to the matriculation college student in Kelantan , the institution itself will take an action to educate or to give a basic knowledge to all students such as seminar , pillow talk , quizzes , games and other that related to the knowing of the financial literacy. The exposure to the non-financial students will have clear view to them and it may create awareness to them.

## 5.7 Conclusion

The impact of financial literacy to the financial attitude and financial behavior on previous research based on Financial Literacy Baseline Surveys: a First International Comparative Analysis (Kempson, 2009) – OECD and Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey for Financial Literacy-OECD INFE (2011) gives a similar result where the higher level of understanding the financial attitude and financial behavior. The model confirmed that there is a correlation to financial attitude and financial behavior on past research.

The Kelantan matriculation college students high level of understand of financial attitude and financial behavior. In other hand, KMC student had low understand on the financial literacy where on the application and calculation matters regarding the basic financial knowledge. The lower understand of the financial literacy on how to calculate the expenses rates, taxes or time value will give negative impact on the financial. The hypothesis showed the relationship between financial literacy and financial attitude on the positive way. Relationship between financial literacy and financial behavior give a negative significant correlation.

Bankruptcy in early age is indicator to the problem statement of the research that related to the way the matriculation college students on organize their pocket money in Kelantan. Lack of knowledge will lead to the bankruptcy in early ages.



Based on the result of research, it showed that more financial literacy will be cover inside the syllabus and the information through the social media. It will be one of the way to educate the students to be more alert on the financial.

The awareness and concerned on the matters will help the students to be educate about the financial. The awareness of the students on the knowledge of financial literacy may reduce the level of bankruptcy to the young generation. The knowledge on financial literacy can help the young generation especially the college students or University students to manage their money well on cash management, financial record and saving plans for their own good.

The knowledge in the young generation create awareness to the important of financial literacy and It give an impact on the reducing the bankruptcy in young ages. The positive impact on financial literacy will give positive outcome about the awareness. If the knowledge on the financial literacy have been expose since the primary school, it will create highly awareness toward the young generation and it may lead the minimize of bankruptcy among the young age.

In the future, the research also can be suggest to expand on research the correlation on the relationship on the demographic survey such as the correlation between gender , course , family income , work experience and other for future research. The correlation of the financial literacy, financial attitude and financial behavior will help the level of understanding and also the way youngster to organize and control their money. As a result it may create and educate the youngster to become alert about over spending on financial. As they been educated, it may avoid the bankruptcy been happened among the youngster.



## REFERENCES

- Abreu, M.: mendes,V.(2010). Financial Literacy and Portfolio Diversification. *Quantitative Finance*. Vol. 10 n.5.p.515-528
- Agensi Kaunseling dan Pengurusan Kredit (APPK) (2011), accessed retrieved June 24, 2013.“ Waspada dengan skim cepat kaya” from [http://www.bnm.gov.my/documents/6\\_Ringgit\\_Newsletter.pdf](http://www.bnm.gov.my/documents/6_Ringgit_Newsletter.pdf)
- Albeerdy, M. I., & Gharleghi, B. (2015). Determinants of the Financial Literacy among College Students in Malaysia. *International Journal of Business Administration*, 6(3), p15.
- American College Health Association. (2013). National College Health Assessment II: Reference Group Data Report Spring 2013. Hanover, MD: American College Health Association.
- Atkinson, A.; Messy,F.(2012). Measuring Financial Literacy: Results of the OECD/International Network on Financial Education (INFE) Pilot Study. *OECD Working Papers on Finance, Insurance and Private Pensions*. OECD Publishing.15.
- Bennett, D., McCarty, C., & Carter, S. (2015). The Impact of Financial Stress on Academic Performance in College Economics Courses. *Academy of Educational Leadership Journal*, 19(3), 25.
- Bodvarsson, O. B., & Walker, R. L. (2004). Do parental cash transfers weaken performance in college? *Economics of Education Review*, 23(5), 483-495.
- Braunstein, S.; Welch,C.(2002). Financial Literacy: an overview of practice, research, and policy, *Federal Reserve Bulletin*. n. Nov. p.445-457
- Chardin, T.(2011). Weathering the Storm: Tax as a component of Financial Capability. *Australasian Accounting Business & Finance Journal*. Vol 5. N. 2. P.53-68
- Che Ismail, Che Rugayah (2001) *Pengurusan kewangan pelajar: satu tinjauan awal kepada keperluan kaunseling kewangan*. Masters thesis, Kolej Universiti Teknologi Tun Hussein Onn.
- Clark, T.B.(2007).*The complete financial handbook: Step-by-step instructions to take control of your financial future*. Ocala, Florida: Atlantic Publishing Group, Inc.

- Cole, S.; Paulson, A.; Shastry, G.(2012). Smart Money: The Effect of Education on Financial Behavior. Harvard Business School. *HBS Working Paper Series*. No.09-071
- Davis,C.G. ,& Manter, J.(2004). The consequences of financial stress for individuals , families and society Retrieved November 4,2013 from [http://www.pfeef.org/research/efd/Consequences-Fin-Stress-for-individuals-Families-and -Society.pdf](http://www.pfeef.org/research/efd/Consequences-Fin-Stress-for-individuals-Families-and-Society.pdf)
- Dowling, N.A., Corney, T., & Hoiles, L. (2009). Financial management practices and money attitudes as determinants of financial problems and dissatisfaction in young male Australian workers. *Journal of Financial Counseling and Planning*, 20(2), 5-13.
- Dr. Charles Smith (2001). Running Out Of Money Before Graduation.Black Issues in Higher Education. Vol. 18, Issue 8
- Eckel, C.,& Grossman, P. (2008). Forecasting risk attitudes: An experimental study using actual and forecast gamble choices. *Journal of Economic Behaviour and Organization (In press)*
- Fazli, M.S. Hayhoe,C R, & Goh,L.A (2006) Attitude , values and belief towards money, gender , and working sector comparison . *Pertanika Journal Social Science and Humanity*. 14(2):121-130
- Fear, J. & O'Brien, J. (2009) Where does buck stop? Community attitudes to over-lending and over-spending. *Australasian Accounting Business and Finance Journal*, 3(1) , 3-12.
- Fosnacht, K., & Dong, Y. (2013). Financial Stress and its Impact on First-Year Students' College Experience. *Assoc. for Study of Higher Education, St. Louis*.
- Freankel, J.R., & Wallen, N. E. (2006). *How to design and evaluate research in education*. Boston: MacGraw-Hill
- Guiso, L.; Jappelli, T. (2008). Financial Literacy and Portfolio Diversification. European University Institute. *Economics Working Papers*. European University Institute.
- 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),113-133
- Heckman, S., Lim, H., & Montalto, C. (2014). Factors related to financial stress among college students. *Journal of Financial Therapy*, 5(1), 3.

- Hilgert, M., Hogarth, J., & Beverly, S. (2003, July). Household financial management: the connection between knowledge and behavior. *Federal Reserve Bulletin*, 309-322.
- Hill-Besinque, K., Wong, W., Louise, S., & Rho, J. (2000). Prediction of success rate in the California stated Board Pharmacy Licensure Examination. *American Journal of Pharmaceutical Education*, 65, 50-53.
- Houston, S. (2010). Measuring Financial Literacy. *Journal Of Consumer Affairs*. Vol 44. n.2. p.296-316.
- INFE, OECD (2011). Measuring Financial Literacy: Questionnaire and Guidance Notes for conducting an Internationally Comparable Survey of Financial Literacy. *Periodical Measuring Financial Literacy: Questionnaire and Guidances Notes for conducting an Internationally Comparable Survey of Financial Literacy*. OECD. (n. Issue). Document Number. p. Pages
- Jappelli, T. (2010). Economic Literacy: An International Comparison. *Economic Journal*. Vol.120 .n. 548. P. F429-F451
- Joo, S. (2008). Personal financial wellness. In J. J. Xiao (Ed.), *Handbook of Consumer Finance Research* (pp. 21-33). USA: Springer
- Joo, S.-H., Durband, D. B., & Grable, J. (2008). The academic impact of financial stress on college students. *Journal of College Student Retention: Research, Theory & Practice*, 10(3), 287-305.
- Jorgensen, B. L., & Savla, J. (2010). Financial literacy of young adults: The importance of parental socialization. *Family Relations*, 59, 465–478.
- Kapoor, J., Dlabay, L., & Hughes, R. (2004). *Personal finance*. USA: Mcgraw-Hill/Irwin
- Kempson, E. (2009). Framework for the Development of Financial Literacy Baseline Surveys: a First International Comparative Analysis. OECD Publishing,
- Kezar, A., & Yang, H. (2010) The importance of financial literacy. *About Campus*, 14(6), 14-21, Retrieved April 19, 2011 , from [www.onlinelibrary.wiley.com](http://www.onlinelibrary.wiley.com)
- Letkiewicz, J.C., Lim, H., Heckman, S.J., Bartholomae, S., Fox, J.J., & Montalto, C.P. (in Press). The path to graduation: Factors predicting on-time graduation rates. *Journal of College Student Retention: Research, Theory and Practice*.

- Lusardi, A. ; Mitchell, O. (2007). Baby Boomer retirement security: The roles of planning, financial literacy, and housing wealth. *Journal of Monetary Economics*. Vol.54. n. 1. P. 205-224
- Lusardi, A. ; Mitchell, O.; Curto, V. (2010). Financial Literacy among the Young. *Journal of Consumer Affairs*. Vol. 44. N. 2. P.358-380
- Lusardi, A. ; Tufanio, P. (2009). Debt Literacy, Financial Experiences, and Over indebtedness. National Bureau of Economic Research, Inc, NBER Working Papers: 14808
- Lyons, A. (2004). A profile of financially at-risk college students. *Journal of Consumer Affairs*, 38(1), 56-80
- Mandell, L., & Klein, L. S. (2009). The impact of financial literacy education on subsequent financial behavior.
- Noctor, M., Stoney, S., & Stradling, R. (1992). *Financial Literacy*. A report prepared for the National Westminster Bank, London.
- Norasmah Othman. (2002). Keberkesanan Program Keusahawanan Remaja Malaysia. Tesis Doktor Falsafah. Fakulti Pengajian Pendidikan. Universiti Putra Malaysia
- Northern, J.J., O'Brien, W.H., & Goetz, P.W. (2010). The development, evaluation, and validation of a financial stress scale for undergraduate students. *Journal of Student Development*, 51(1), 79-92
- OECD (2006). Improving Financial Literacy: Analysis of Issues and Policies. *Financial Market Trends*. Vol.2005 (n. 2)
- OECD (2012). PISA 2012 Financial Literacy Assessment Framework.
- Quinn, K., & Steiner, K. 2009. *St. Norbert College paper usage: Who cares about that?* Unpublished manuscript.
- Razafimahasolo, M., Borromeo, R., Sausa, L., Carpizo, R., & Sabado, J. (2016). Impact of Financial Literacy on Level of Stress and Academic Achievement Among College Students. *Adventist University of the Philippines*, 22.
- Remund, D. (2010). Financial Literacy Explicated: The Case for a Clearer Definition in an Increasingly Complex Economy. *Journal of Consumer Affairs*. Vol. 44. N. 2. P. 276-295
- Robb, C.; Woodyard, A. (2011). Financial Knowledge and Best Practice Behavior. *Journal of Financial Counseling & Planning*. Vol.22. n. 1. p.60-70

- Robert V. Krejcie , Daryle W. Morgan (1970) Determining Sample Size for Research Activities , *Educational and Psychological Measurement*
- Schagen, S., & Lines, A. (1996). *Financial Literacy in Adult Life : A Report to the NatWest Group Charitable Trust* .Slough, Berkshire: National Foundation for Educational Research
- Shockey, S.S. (2002),” Low-wealth adult’s financial literacy: money management behavior and associates factors, including critical thinking”, Unpublished doctoral dissertation, The Ohio State University (AAT3039524)
- Sigue, S. P. (1990). Learning style, personality type and academic achievement in undergraduate students. *Academic Journal*, I(7), 23-31
- Sim, O.F. & Shuang,T.Y.(2004) , Money attitude , saving behavior and consumption patterns among young urban consumers in Malaysia. An ethnic and gender comparison. *Malaysian Journal of Consumer and Family Economic* (MACFEA).7:16-28
- Slagel,S.L., Newman,B.M. ,& Xiao, J.J (2007). Credit Card Debt Reduction and Developmental Stages of the Lifespan. *TCAI Working Paper*, May 2006.
- Small-sample Techniques. *The NEA Research Bulletin*, Vol. 38 (December ,1960) p.99
- Sohn, S. H., Joo,S. H., Grable, J. E., Lee, S., & Kim, M. (2012). Adolescents’ financial literacy: The role of financial socialization agents, financial experiences, and money attitudes in shaping financial literacy among South Korean youth. *Journal of Adolescence*, 35, 969–980.
- Taneja, R.M. (2012) Money attitude- An abridgement *International Refereed Research Journal*.111(3).
- Trombitas, K.S. (2012). Financial Stress: An Everyday Reality for College Students. Inceptia. Lincoln, NE. Retrieved from [https://www.inceptia.org/PDF/Inceptia\\_FinancialStress\\_whitepaper.pdf](https://www.inceptia.org/PDF/Inceptia_FinancialStress_whitepaper.pdf)
- Williams, O.; Satchell, S. (2011). Social welfare issues of financial literacy and their implications for regulation. *Journal of Regulatory Economics*. Vol 40. n. 1. p.1-40
- Wisconsin’s Model Academic Standards for Personal Financial Literacy. (2006). Madison: Wisconsin Department of Public Instruction.
- Xiao, J., Tang, C., & Shim, S. (2009). *Acting for happiness: Financial behavior and life satisfaction of college students*. USA: Springer



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.* Washigton, DC: Fannie Mae Foundation.

Zaimah, R. (2010). Pengaruh pengetahuan, tingkah laku dan pembuatan keputusan kewangan ke atas kesejahteraan kewangan pekerja sektor awam yang berkahwin. Tesis Doktor Falsafah, Universiti Putra Malaysia.



## **APPENDIX- A: Questionnaire**



Malaysian Graduate School Of Entrepreneurship & Business  
MASTER OF BUSINESS ADMINISTRATION

### **FINANCIAL LITERACY, FINANCIAL ATTITUDES AND FINANCIAL BEHAVIOR AMONG MATRICULATION COLLEGE STUDENTS IN KELANTAN**

I am conducting a research to evaluate the impact of financial literacy on financial attitude , financial behavior and basic financial knowledge among matriculation college student in.

Questions have four parts related to financial attitude, financial behavior, financial knowledge/ literacy and demographic survey.

Hopefully you could spend a little time to meet the needs of the researcher to give truthful evidence without influenced by any interest. It would be appreciated if you could complete this questionnaire .All questions must be answered by tick / the selected answer. All information, feedback and form of answer given shall be confidential. Your cooperation will contribute greatly to this study. Thank you.

Please tick / to the most appropriate answer.

1. Strongly disagree   2. Disagree   3. Somewhat disagree  
 4. Neither agree or disagree  
 5. Somewhat agree   6. Agree   7. Strongly agree

|  | Question   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|--|--|---|---|---|---|---|---|---|
| <b><u>Part One : Questions related to financial attitude</u></b> |  |   |   |   |   |   |   |   |
| 1  | It is important to control monthly expenses.                             |   |   |   |   |   |   |   |
| 2  | It is important to establish financial targets for the future            |   |   |   |   |   |   |   |
| 3  | It is important to save money on a monthly basis                         |   |   |   |   |   |   |   |
| 4  | The way I manage my money today will affect my future.                   |   |   |   |   |   |   |   |
| 5  | It is important to have and follow a monthly expense plan.               |   |   |   |   |   |   |   |
| 6  | It is important to stay within a budget.                                 |   |   |   |   |   |   |   |
| 7  | It is important to invest regularly to achieve targets in the long term. |   |   |   |   |   |   |   |



Please tick / to the most appropriate answer.

1. Strongly disagree    2. Disagree    3. Somewhat disagree

4. Neither agree or disagree

5. Somewhat agree    6. Agree    7. Strongly agree

|   | Question   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|--|---|---|---|---|---|---|---|
| <b><u>Part Two : Questions related to financial behaviour</u></b> |  |   |   |   |   |   |   |   |
| 8   | I worry about how best to manage my money.   |   |   |   |   |   |   |   |
| 9   | I take notes and control my personal expenses(e.g., expense and revenue spreadsheet).      |   |   |   |   |   |   |   |
| 10  | I establish financial targets for the longterm that influence the managing of my expenses. |   |   |   |   |   |   |   |
| 11  | I follow a weekly or monthly plan for expenses.  |   |   |   |   |   |   |   |
| 12  | I go more than one month without balancing my expenses.                                    |   |   |   |   |   |   |   |
| 13  | I am satisfied with the way I control my finances.   |   |   |   |   |   |   |   |
| 14  | I save monthly.  |   |   |   |   |   |   |   |
| 15  | I save so I can buy something expensive .  |   |   |   |   |   |   |   |
| 16  | I compare prices when buying something.  |   |   |   |   |   |   |   |
| 17  | I analyze my financial situation before a major purchase                                   |   |   |   |   |   |   |   |

|   |                   |  |   |  |  |  |  |  |
|---|-------------------|--|---|--|--|--|--|--|
| 18  | I buy on impulse. |  |   |  |  |  |  |  |
| <b><u>Part Three :</u></b><br><b><u>Questions related Financial</u></b><br><b><u>Knowledge/Literacy</u></b>   |                   |  | <b><u>Kindly circle the appropriate answer.</u></b>   |  |  |  |  |  |
| 19. Imagine you have RM 100.00 in the savings account and the interest received rate is 10% a year. After 5 years, how much money will you have in this account?  |                   |  | a. More than RM 150.00<br>b. Exactly RM 150.00<br>c. Not Sure<br>d. Less than RM 150.00<br>e. Do not know |  |  |  |  |  |
| 20. Imagine you bought a calculator RM 60.00 after GST. How much the original price before GST?   |                   |  | a. More than RM 57.00<br>b. Exactly RM 57.00<br>c. Not sure<br>d. Less than RM 57.00<br>e. Do not know    |  |  |  |  |  |
| 21. Imagine Kamal inherits RM 10,000.00 today and Razak inherits RM 10,000.00 in three years. According to the time value of money, who is going to be wealthier? |                   |  | a. Kamal<br>b. Razak<br>c. Not sure<br>d. They are equally as wealthy<br>e. Do not know                   |  |  |  |  |  |
| 22. Imagine you have RM 50 . You spend RM 20 to buy a book . The cost not included GST. How much will be the balance you buy it.                                  |                   |  | a. More than RM 30.00<br>b. Exactly RM 30.00<br>c. Not sure<br>d. Less than RM 30.00<br>e. Do not know    |  |  |  |  |  |

**Part Four : Demographic Survey****1. Gender**☐

Male

☐

Female

**2. Course**☐

Accounting

☐

Science

**3. Previous School**☐Daily  
School☐Boarding  
School**4. Work Experienced**☐

Yes

☐

No

**5. Family Background***i. Location*☐

Urban

☐

Rural

*ii. Family Income*☐Less than  
RM 2,000☐Less than  
RM5,000☐Less than  
RM 10,000☐More than  
RM 10,000

Thank you for your cooperation

## APPENDIX B: Level of Significance

### Level of Significance

| df  | Level of significance for one-tailed test |       |        |        |        |         |
|-----|---|-------|--------|--------|--------|---------|
|     | .10                                       | .05   | .025   | .01    | .005   | .0005   |
|     | Level of significance for two-tailed test |       |        |        |        |         |
|     | .20                                       | .10   | .05    | .02    | .01    | .001    |
| 1   | 3.078                                     | 6.314 | 12.706 | 31.821 | 63.657 | 636.619 |
| 2   | 1.886                                     | 2.920 | 4.303  | 6.965  | 9.925  | 31.598  |
| 3   | 1.638                                     | 2.353 | 3.182  | 4.541  | 5.841  | 12.941  |
| 4   | 1.533                                     | 2.132 | 2.776  | 3.747  | 4.604  | 8.610   |
| 5   | 1.476                                     | 2.015 | 2.571  | 3.365  | 4.032  | 6.859   |
| 6   | 1.440                                     | 1.943 | 2.447  | 3.143  | 3.707  | 5.959   |
| 7   | 1.415                                     | 1.895 | 2.365  | 2.998  | 3.499  | 5.405   |
| 8   | 1.397                                     | 1.860 | 2.306  | 2.896  | 3.355  | 5.041   |
| 9   | 1.383                                     | 1.833 | 2.262  | 2.821  | 3.250  | 4.781   |
| 10  | 1.372                                     | 1.812 | 2.228  | 2.764  | 3.169  | 4.587   |
| 11  | 1.363                                     | 1.796 | 2.201  | 2.718  | 3.106  | 4.437   |
| 12  | 1.356                                     | 1.782 | 2.179  | 2.681  | 3.055  | 4.318   |
| 13  | 1.350                                     | 1.771 | 2.160  | 2.650  | 3.012  | 4.221   |
| 14  | 1.345                                     | 1.761 | 2.145  | 2.624  | 2.977  | 4.140   |
| 15  | 1.341                                     | 1.753 | 2.131  | 2.602  | 2.947  | 4.073   |
| 16  | 1.337                                     | 1.746 | 2.120  | 2.583  | 2.921  | 4.015   |
| 17  | 1.333                                     | 1.740 | 2.110  | 2.567  | 2.898  | 3.965   |
| 18  | 1.330                                     | 1.734 | 2.101  | 2.552  | 2.878  | 3.922   |
| 19  | 1.328                                     | 1.729 | 2.093  | 2.539  | 2.861  | 3.883   |
| 20  | 1.325                                     | 1.725 | 2.086  | 2.528  | 2.845  | 3.850   |
| 11  | 1.363                                     | 1.796 | 2.201  | 2.718  | 3.106  | 4.437   |
| 12  | 1.356                                     | 1.782 | 2.179  | 2.681  | 3.055  | 4.318   |
| 13  | 1.350                                     | 1.771 | 2.160  | 2.650  | 3.012  | 4.221   |
| 14  | 1.345                                     | 1.761 | 2.145  | 2.624  | 2.977  | 4.140   |
| 15  | 1.341                                     | 1.753 | 2.131  | 2.602  | 2.947  | 4.073   |
| 16  | 1.337                                     | 1.746 | 2.120  | 2.583  | 2.921  | 4.015   |
| 17  | 1.333                                     | 1.740 | 2.110  | 2.567  | 2.898  | 3.965   |
| 18  | 1.330                                     | 1.734 | 2.101  | 2.552  | 2.878  | 3.922   |
| 19  | 1.328                                     | 1.729 | 2.093  | 2.539  | 2.861  | 3.883   |
| 20  | 1.325                                     | 1.725 | 2.086  | 2.528  | 2.845  | 3.850   |
| 21  | 1.323                                     | 1.721 | 2.080  | 2.518  | 2.831  | 3.819   |
| 22  | 1.321                                     | 1.717 | 2.074  | 2.508  | 2.819  | 3.792   |
| 23  | 1.319                                     | 1.714 | 2.069  | 2.500  | 2.807  | 3.767   |
| 24  | 1.318                                     | 1.711 | 2.064  | 2.492  | 2.797  | 3.745   |
| 25  | 1.316                                     | 1.708 | 2.060  | 2.485  | 2.787  | 3.725   |
| 26  | 1.315                                     | 1.706 | 2.056  | 2.479  | 2.779  | 3.707   |
| 27  | 1.314                                     | 1.703 | 2.052  | 2.473  | 2.771  | 3.690   |
| 28  | 1.313                                     | 1.701 | 2.048  | 2.467  | 2.763  | 3.674   |
| 29  | 1.311                                     | 1.699 | 2.045  | 2.462  | 2.756  | 3.659   |
| 30  | 1.310                                     | 1.697 | 2.042  | 2.457  | 2.750  | 3.646   |
| 40  | 1.303                                     | 1.684 | 2.021  | 2.423  | 2.704  | 3.551   |
| 60  | 1.296                                     | 1.671 | 2.000  | 2.390  | 2.660  | 3.460   |
| 120 | 1.289                                     | 1.658 | 1.980  | 2.358  | 2.617  | 3.373   |
| ∞   | 1.282                                     | 1.645 | 1.960  | 2.326  | 2.576  | 3.291   |

Source: Adopted from Fisher and Yates (1974)