



# **Students' Attitude to Educational Loan Repayments: A Structural Modelling Approach**

**By**

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## **Abstract**

Educational loan defaulting is a problem increasing on a worldwide scale. In Malaysia, the default rate is almost 50% in the case of loans advanced to students in higher education. With this in mind, for the first time, this study analyses this chronic problem in-depth with consideration to primary data collected from a cross-section of students currently studying in public universities in Malaysia. With help from the Theory of Planned Behaviour, the empirical analysis establishes that loan defaults are influenced by a complex interaction of personal-, social- and psychology-related variables: students' attitude, intention to repay loan, parental influence, perceptions that loan repayment will affect quality of life after graduation, perceptions towards loan agreement, and an awareness of loan repayment issues created by the media. This study succeeds in disentangling the precise impact of such variables in regard to loan defaults.

The findings are of great relevance to government-funding agencies, which can better plan the loan advancement and recovery process once they understand the true reasons behind defaults. The novel method utilised for the first time with the objective to study the default issue should also be useful to academic researchers seeking to conduct similar studies in the context of other countries. This study should also assist policy makers in planning long-term strategies in terms of assessing, designing and evaluating new loan schemes. Developing countries, such as Malaysia, face competing demands on their limited financial resources. An increase in the recovery rate will bring in funds that can be lent to additional students or used for strengthening educational infrastructure. These measures add useful value to the social and economic set-up of the country.

## **Dedication**

I would like to dedicate this thesis to my late father (Ismail Bin Bakar) and my late mother (Saudah Binti Hashim), whose love and support for me is second to none. Although both of you have been gone for two decades, and although none of us understand how to survive in this challenging world, your spirits have helped me to develop into who I am today. I pray Allah may always be with you both.

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## Declaration

This is to declare that:

- I am responsible for the work submitted in this thesis.
- This work has been written by me.
- All verbatim extracts have been distinguished and the sources specifically acknowledged.
- During the preparation of this thesis, some papers were prepared as listed below. The remaining parts of the thesis have not yet been published.

### *Journal Papers—Accepted*

1. **Ismail, S.**, Serguieva, A. & Singh, S., (2011), Attitude towards Educational Loan Repayment Model: Modified of Theory of Planned Behaviour, *Journal of Family Economic Issue*, Springer.
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Signature: \_\_\_\_\_

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## List of Abbreviations

AGFI	Adjusted Goodness of Fit Index
AMOS	Analysis of Moment Structure
AT	Attitude
BTS	Barlett Test of Sphericity
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CGPA	Cumulative Grade Point Average
CR	Critical Ratio
CV	Convergent validity
df	Degree of Freedom
DL ICL	Direct Loan Income Contingent Loans
DV	Discriminant validity
EFA	Exploratory Factor Analysis
FDSL	Ford Direct Student Loans
FoS	Field of Study
GDP	Gross Domestic Product
GFI	Goodness of Fit Index
GFI's	Government Financing Institutions
GNI	Gross National Income
GOF	Goodness of Fit
GSLP	Guaranteed Student Loan Programme
GSSLS	Government Subsidised Student Loan Scheme
HCC	Human Capital Contracts
HE	Higher Education
HEAL	Health Education Assistance Loans
HEC	Higher Education Commission
HECS	Higher Education Contribution Scheme
HEL	Higher Education Level
HES	Higher Education System

HL	Higher Learning
HRD	Human Resources Development
HRM	Human Resource Management
HSSC	Higher Secondary School Certificate
IC	Income Contingencies
ICETEX	Instituto Colombiano de Crédito Educativo y Estudios Técnicos en el Exterior
ICL	Income Contingent Loans
ICR	Income Contingent Repayment Scheme
IPTA	Public Universities
IPTS	Private Universities
IRD	Inland Revenue Department
LSFS	Local Student Finance Scheme
M	Mean
ML	Maximum Likelihood
MOE	Ministry of Education
MQA	Malaysian Qualifications Agency
MS	Marital Status
MSA	Measure of Sample Adequacy
MTL	Mortgage Type Loans
N	Number of Participants
NFI	Normed Fit Index
NHEFC	National Higher Education Fund Corporation
NLS	Non-means-tested Loan Scheme
NNFI	Non Normated Fit Index
NSFAS	National Student Financial Aid Scheme
PCB	Perceived Behavioural Control
PLUS	Parent Loans for Undergraduate Students
PMR	Lower Secondary Assessment
PNFI	Parsimony Normed Fit Index
RM	Malaysian Ringgit
RMSEA	Root Mean Square Error of Approximation

SDSL	Subsidized Direct Stafford Loan
SE	Standard Error
SEM	Structural Equation Modelling
Sig.	Significant
SLM	Student Loan Manager
SMC	Squared Multiple Correlations
SNPL	Study Now, Pay Later
SPM	Malaysia Certificate of Education
SPSS	Statistical Package for Social Sciences
SN	Subjective Norms
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
TLI	Tucker-Lewis Index
UK	United Kingdom
UPSR	Primary School Assessment
USA	United States of America
VIF	Variance Inflation Factor
$\alpha$	(Cronbach's) Alpha
$\rho$	Rho (Composite Reliability)
$\chi^2$	Chi square

## Legend

<b>Codes</b>	<b>Constructs Tested in this Study</b>	<b>Terms used Throughout this Study</b>
AW	Awareness of loan repayment issues created by media	Media awareness
PI	Parental influence	Parental influence
PQ	Perceptions that loan repayment will affect quality of life after graduation	Perceived quality
LP	Perceptions towards loan agreement	Perceived agreement
AT	Students' attitude towards loan repayment	Students' attitude
IR	Intention to repay loan	Intention

# **Chapter One: Introduction**

## **1.1 Introduction**

This chapter provides an outline of the study. This doctoral study is concerned primarily with students' attitude in the context of educational loans repayment. This study explores the antecedents of students' attitude and the impact of students' attitude on the intention to repay a loan, and how such factors integrate in one model. The antecedents are parental influence, awareness of loan repayment issues created by the media, perceptions towards loan agreement, and perceptions that loan agreement will affect quality of life after graduation. This chapter provides an overview of this study, followed by Section 1.2, which explains the background of the study; Section 1.3 states the significance of the study. The research aim and objectives are presented in Section 1.4, followed by Theoretical Foundation and Research Methodology. The Research Contributions form Section 1.6 and finally, the structure of the thesis in the form of chapter headings and outlines are given in Section 1.7.

## **1.2 Background of the Study**

Students take loans to enrol in higher education institutions. As borrowing has increased, concerns regarding students' ability to repay their loans have also increased. Furthermore, educational institutions around the world are presently struggling to cope with the growing problem of education debt. With this in mind, the present on-going recession and tight job market is making matters worse for students who have taken out loans and who are now unable to repay them (Dillon & Smiles, 2010).

Educational loans schemes operating in about 70 countries around the world (Shen & Ziderman, 2009). Loans schemes differ across countries in terms of the underlying objectives, organisational structure, sources of initial funding, student coverage, loan allocation procedures and collection methods (Ziderman, 2004). However, the similarities of all schemes across the countries are that they are highly subsidised by governments. Notably, such subsidies relate to the total loan disbursed to students, including the built-in



interest rate, which is incorporated into the design of the loan scheme, as well as the recovery of substantial repayment default by graduate students. Importantly, although there is a high default rate and the government has to subsidise to a large extent, educational loans are nevertheless important—particularly for middle- and low-income families seeking to attend postsecondary education. Nevertheless, it is important that policy makers measure the overall effectiveness of educational loan schemes contributing to high default rates. For example, in year 2001, defaulted student loans exceed US\$25 billion (Seifert & Worden, 2004).

An educational loan default is undoubtedly a growing problem. This area has received research attention in the last 30 years. However, only few multivariate studies using national databases have been undertaken. Much of the best research has been conducted a decade or more ago (Gross *et al.*, 2009, p. 20). Researches in the realm of educational loans have identified several factors contributing to defaults and repayments. These includes the characteristics of students as they begin college, such as family income, race/ethnicity, and students' college experiences in terms of the type of institution, field of study and educational outcomes. In addition, students' financial aid and the amount of debt they incur, such as students' employment and income after college, are said to be relevant factors. Relatively few studies have so far explored the relationship between students' attitudes towards debt and the likelihood of default, which is the underlying theme of this study.

A study relating to attitude is important in order to identify why students refuse to repay their loans—even if they have sufficient funds to make the repayments. As noted in the previous study by Abu Bakar *et al.* (2006), attitude related to loan defaults remains a major area for further investigation as 'willingness to repay' is more important than the 'ability to repay' (Orr, 1987; Volkwein & Szelest, 1995). Furthermore, attitude has been found to affect debt behaviour (Livingstone & Lunt, 1992), and literature concerning students' repayment behaviour exists spanning many years (Baum & O'Malley, 2003; Christman, 2000; Flint, 1997; Bean-Blossom & Rodriguez, 1989; Cross & Olinsky, 1984; Lee, 1982; Pedalino *et al.*, 1992). Importantly, however, the relationship between attitude

and behaviour is often noted as being weak in Western societies (Volkwein & Szelest, 1995; Baum & Schwartz, 1988).

In the 1990s, *attitude* was established as having an influence on students' experiences in college (Cabrera *et al.*, 1990). Subsequently, the research on educational loans repayment and default was expanded by Volkwein & Szelest (1995), who found that loan repayment and default behaviour were substantially predicted by the pre-college, college, and post-college characteristics of individual borrowers. Notably, pre-college characteristics include age, gender, race, parents' education, income and achievement in high school; college characteristics include degree completed, the choice of major, grade point average, and family support; whilst post-college characteristic includes educational attainment, highest degree earned, income, occupation, loan indebtedness, marital status, and the number of dependents. Further studies indicate that *attitude* is a further reason for dropout rate: approximately 70% of Black, Hispanic, and Asian university students and 43% of white students blame educational loan debt as a reason for dropping out (Williams-Harold, 1998). Yieh (1996), however, states that a negative attitude towards instalment borrowing has been identified amongst those borrowers who are African American, female, married and unemployed.

Research on *attitude* was extended further by Christman (2000), who states that attitude correlates with ignorance, dissatisfaction, and misconceptions regarding the potential consequences of failing to repay the loan. Woo (2002), on the other hand, found *attitude* to correlate with borrowers' delinquency, where delinquency refers to a debt or other financial obligation on which payment is overdue. Each period of delinquency has been found to increase the borrower's chances of default by 4.8%. The *attitude* research was expanded further by Baum & O'Malley (2003), who state that negative attitude occurs when graduates have to allocate higher amounts from their monthly salaries to repay the loan. Attitude correlating with exit counselling has also been further researched by Steiner & Teszler (2005), suggesting that those students who refused exit counselling were strongly likely to default. For example, borrowers at Texas A&M University who received exit counselling through in-person contact with a counsellor had a 1.3% default rate, whilst borrowers who did not receive in-person exit counselling had an 11.1% default rate.

Furthermore, McMillion (2004) has compiled literature reviews on educational loan defaults in which *attitude* has been found to be one of the factors associated with loan default.

Research on the topic of *attitude* has established that an understanding of attitudes and behaviours are important when predicting repayment and defaults (Abu Bakar *et al.*, 2006). Furthermore, Gross *et al.* (2009) compiled the factors relating to loan defaults and found that *attitude* was one of the default factors. Studies on attitude, though few, did, however, have a significant impact on educational loan literature, particularly in terms of predicting defaults and repayments. Therefore, it is important to investigate students' attitude towards educational loan repayment afresh. As stated previously, around 70 countries have so far implemented educational loan schemes. As a result, an in-depth understanding of default issues, which may escalate in future, would be of great value both in term of academic knowledge as well as being useful to policy makers.

Malaysia is one of 70 countries that distributed loans to students and suffers from a high default rate, as well. Government of Malaysia formed the National Higher Educational Fund Corporation (NHEFC) in 1997 for administering educational loans. The scope of the NHEFC includes public and private universities, as well as polytechnics, where students at all levels —diploma, first degree, master, doctorate and professional courses—are eligible to apply for loans. Between 1997 and 2008, around 1.57 million students registered for higher education studies in Malaysia, however 80% or 1.25 million students took these loans, amounting to Malaysian Ringgit (RM) 25.89 billion (£5.18 billion).

The following table (Table 1.1) presents the financial performance of NHEFC for seven years from 2003–2009. In the context of educational loans in Malaysia, NHEFC calculated default when the payment is due as stated in the loan agreement contract. The Table clearly shows the poor repayment collections as in 2009, approximately 50% have defaulted in repayments. Although the repayment has recently gone up in 2007 to 2009, it still remains a major problem for Malaysia. It is expected that the impact of recession will be fell in the coming two to three years. Presently, NHEFC considers higher repayment rate that we notice in 2009 still inadequate and unsustainable in the future.

Table 1.1: Financial Performance of NHEFC

Year	Total loan given in billion (RM)	Amounts repaid in million (RM)	Repayment Rate (%)
2003	2.0	1.0	0.05
2004	2.15	64.5	3.00
2005	2.0	136.0	6.80
2006	2.4	175.2	7.30
2007	2.8	968.8	34.60
2008	3.0	1,320.0	44.05
2009	2.9	1,464.0	50.67

Notes: RM = Malaysian Ringgit; £ = Pound Sterling; (£1≈RM5)

No. = number; % = per cent; 1 Million = 1 000 000; 1 Billion = 1 000 000 000

Source: NHEFC, 2010

Presently, this is a serious issue in the funding of Malaysian higher education, as stated by the Minister of Higher Education Malaysia, Khalid Nordin, as quoted in a press statement:

*'...If this default rate continues, it is estimated that the resulting deficit for NHEFC may be RM 42 billion (£8.2 billion) in the year 2020 (The Star, May 6, 2009).*

Accordingly, in order to lessen the problems associated with the non-repayment, it is imperative to study why students refuse to repay the loan, as well as underlying factors contributing to this refusal.

### 1.3 Significance of this Study

As established in many studies, defaults are often associated with students' background, failure to get a job, unemployment and income uncertainty, academic experiences, and institutional characteristics. There are few studies, which have focused on borrowers' attitudes towards loan repayment (e.g. Abu Bakar *et al.*, 2006; Christman, 2000; Livingstone & Lunt, 1992). The issue of attitude towards loans repayment is often

overlooked, both in literature and in practice; this is considerably disappointing as the question of attitude is of crucial importance when seeking to draw the final evaluation of a loan scheme. It is one thing to propose a loan scheme for a given target group, but another thing is to have an individual in these groups actually take advantage of these loans.

For most students, the decision to borrow creates a number of uncertainties during graduation, such as the task of getting a job in order to repay the loan and the high cost associated with the studies, which they may not be able to complete on the given period of the loan. Under such conditions, it is highly probable that attitude will play a major and significant role in the student's decision to repay. For the public policy maker, over-estimating and, the overly optimistic assumptions of students' willingness to repay may cause the entire scheme to be misplaced and the objective to remain unachieved.

Previous researches in a Western context have typically studied only one aspect causing default, such as the study on the attitude itself or the perceptions of impacts of loan after graduation (Baum & O'Malley, 2003; Zhou & Su, 2000). To the best of the researcher's knowledge at the time of publication, there is currently no study which investigates whether or not these factors are inter-related. As indicated by Schwartz (1999, p. 322), the common perception is that borrower attitudes are related to student loan default but that 'there has been no systematic study of borrower attitudes toward student loan default'. Essentially, a lack of research in a Western context on educational loan defaults is recognised, as stated by Gross *et al.* (2009):

*'...we are struck by the relative dearth of recent research on student loan default using large national data sets and rigorous statistical methods... a series of studies on student loan default have not been undertaken for more than a decade. The time has come to fill the gap' (p. 27).*

Likewise, research in a non-Western context on the attitude and perceptions of impacts of loans following graduation have been carried out by Abu Bakar *et al.* (2006); however, thus far, there are no studies surrounding the relationship between such factors. Therefore, this study argues the possibility of integrating these different factors into one model.

Despite the importance of borrowers' attitude, the literature on borrowers' attitude is nevertheless limited. As a result, relatively little is known concerning attitude and the measurement in terms of educational loans. Furthermore, there have also been no empirical studies investigating the relationship between *students' attitude* and *intention to repay the loan*, *students' attitude* and *parental influence*, as well as *students' attitude* and *perceptions that loan repayment will affect quality of life after graduation*. Importantly, little is known about the roles of *mass media* and *loan agreement* in this context, but how these factors relates with attitude requires further investigation. With this in mind, this study intends to consider how the factors mentioned *are related to each other in one model*. In addition, there are lacks of knowledge concerning the underlying theories in terms of explaining those factors in the educational loan literature. In particular, this study intends to answer the following research questions:

1. What is the relationship, if any, between students' attitude and intention to repay the educational loan?
2. Are the perceptions that loan repayment affects quality of life after graduation, parental influence, awareness of loan repayment issues created by the media, and perceptions towards loan agreement qualify as the antecedents of students' attitude in the context of educational loans repayment? How these factors integrate like a model?
3. Is the impact of the relationship in the students' attitude model direct? In other words, are there any mediating effects embedded within the relationships in the hypothesised model?
4. Is the Theory of Planned Behaviour can explain the students' attitude model? How?

This study will open up important questions, which have been previously unaddressed in the context of educational loans. The breadth of this study will extend the knowledge regarding factors affecting repayment and defaults. Attitude appears to be the main cause of this; therefore, there is the need for a more generalisable research model that systematically investigates the attitude antecedents and the impacts of students' attitude on the intention to repay the loan in a non-Western context.

## **1.4 Research Aim and Objectives**

This study aims to investigate the antecedents of students' attitude and the impact of students' attitude on the intention to repay the loan, and how these factors integrate in one model, amongst final-year undergraduate students in public universities in Malaysia. Based on this aim of study, five main research objectives are listed below:

1. To test the relationship between students' attitude and the intention to repay the loan.
2. To identify whether or not constructs of perceptions loan repayment affects the quality of life after graduation; parental influence; awareness of loan repayment issues created by the media; and perceptions towards loan agreement; are antecedents of students' attitude.
3. To develop a conceptual model consisting of constructs of students' attitude and intention to repay loan; perceptions loan repayment affects the quality of life after graduation; parental influence; awareness of loan repayment issues created by the media; and perceptions towards loan agreement.
4. To assess the mediation role in the proposed model; and
5. To empirically test the Theory of Planned Behaviour, explaining the students' attitude model.

By achieving the aforementioned objectives, it is expected that this study will help to add new knowledge relating to factors contributing to educational loan repayment. Thus, it is intended that the findings of this study will thereby offer practical insights to organisations providing loans, as well as policy makers with valuable information on factors in the form of a model that can signal a prediction of educational loan repayment/default.

## 1.5 Theoretical Foundation and Research Methodology

The study adopts a mixed methodology—quantitative and qualitative. By using both methods, the researcher is able to detect any potential problems with data and to accordingly confirm the validity of the findings (Baker, 1994; Deshpande, 1983). The qualitative method involves focus group discussions, semi-structured interviews and structured interviews, whilst the quantitative method involves a questionnaire survey. The research setting is in Malaysian public universities.

This study employs the Theory of Planned Behaviour to explain the relationships of the proposed model. The purpose is to investigate the antecedents of students' attitude and the impacts of students' attitude on the intention to repay the loan. Malaysia was selected as it allows the researcher to achieve this research goal. The unit of analysis for this study was students, which was consistent with past researches (Baum & O'Malley, 2003; Abu Bakar *et al.*, 2006). The students are final-year undergraduate students from public universities in Malaysia. Students from public universities have been selected as this represents the highest groups of borrowers taking loans from the National Higher Education Fund Corporation (NHEFC)—the biggest organisation providing loans in Malaysia.

There are four stages of data collection in this study. First, four focus group discussions and six semi-structured interviews are conducted in an attempt to verify constructs so as to generate the measurement items relevant to the constructs in the model following procedure recommended by Churchill (1979). Nvivo 8.0 software is used to code and extract information from the focus group discussions and semi-structured interview data. Second, a pilot survey is conducted in order to gather data to purify measurement scales. During this stage, the exploratory factor analysis and reliability analysis (using SPSS 15.0) are employed to validate the measurement scales for pilot survey. In addition, the content/face validity with fourteen (14) experts and validators is carried out. Third, the main survey is carried out in order to collect data for hypotheses-testing. For the main survey, exploratory factor analysis, confirmatory factor analysis, and structural equation modelling (using Amos 18.0) are adopted for statistical analysis. Fourth, the structured



interviews with six graduate students are conducted to cross-check the findings of the quantitative results. The results of the structured interviews are reported in Chapter Seven.

## **1.6 Research Contributions**

This section highlights the summary of contributions derived from this study. The contributions are ground-breaking in a variety of ways (the details are presented in Chapter 8).

### ***1.6.1 Contributions to Theory***

This study has developed a comprehensive theoretical model which examines the antecedents of students' attitude and the impact of students' attitude on the intention to repay loan amongst students in public universities in Malaysia. To the best of the researcher's knowledge, this is the first time such a theoretical model has been tested both empirically and theoretically. Previous studies present descriptively the constructs that affect educational loan repayment and defaults, such as attitude and perceptions that loan repayment will affect quality of life after graduation; this study for the first time establishes an integrative theoretical model comprising those two constructs with other constructs, namely parental influence, awareness of loan repayment issues created by the media, perceptions towards loan agreement, and the intention to repay the loan.

It is also the first time that the Theory of Planned Behaviour has been thoroughly and rigorously tested empirically with such a large database: although it was not a primary aim of this study, the researcher has shown that the Theory of Planned Behaviour can be extended further by incorporating the new evidence put forward, and subsequently validated through the use of empirical analysis. The subjective norms and perceived behavioural control represented by *parental influence* and *perceptions that loan repayment will affect quality of life after graduation* constructs were found to influence *students' attitude*, and have been validated in this study.

A contribute made when a set of new items for constructs of *perceptions towards loan agreement, awareness of loan repayment issues created by media, parental influence and intention to repay the loan*, has been developed from this study. In addition, a new item has also been introduced in the construct of *perceptions that loan repayment will affect quality of life after graduation*. A set of new items found in this study are useful in future theorisation processes because it is allied with the Theory of Planned Behaviour.

TPB is based on the principle of understanding the person's choice of behaviour and to further examine the person's overall intention relating to that behaviour (Ajzen, 1985, 1991). There are three main variables in the Theory: attitude, subjective norms and perceived behavioural control. Attitude refers to the strength of beliefs that the person holds towards a particular behaviour, whilst subjective norms refer to the perceived social pressures coming from important persons in his life that influence him to perform the behaviour. Perceived behavioural control refers to individuals' belief that they have control over certain factors that allow them to perform the behaviour (Ajzen & Fishbein, 1980). According to the theory, the stronger a person's attitude is and the greater is the approval from others and the greater are the person's capabilities, the stronger will be the person's intentions.

Although this study relies on Ajzen's (1991) theory of planned behaviour, which offers a comprehensive framework, we make further modifications on the antecedents and consequence of attitude and introduce a structure extending prior studies. We also instantiate the framework, thus attitude in the context of this study refers to students' positive and negative attitude towards loan repayment. Subjective norms in this study refer to parental influence and media awareness, whilst perceived behavioural control refers to perceived quality and perceived agreement. Our results suggest that the theory is capable of explaining the model in a non-Western setting. The results are verified and validated throughout the course of this study. The model provides a good fit to the data. Students' attitude is found as being the important predictor of the intention to repay loan following graduation.

This study contributes to the development and extension of the Theory of Planned Behaviour (TPB) in term of new paths that we have introduced in this study. The original TPB explains the relationship between attitude and behavioural intentions, between subjective norms and behavioural intentions, and between perceived behavioural controls and behavioural intention. This study adds the path linking subjective norms to attitude, and links perceived behavioural controls to attitude. These contributions are further explained below. The subjective norms are instantiated through media awareness and parental influence, and the perceived behavioural controls are instantiated through perceived quality and perceived agreement.

First, the addition of the paths from subjective norms to attitude, and from perceived behavioural control to attitude improve the model fit considerably. In the context of educational loans, for example, our study shows that without these links, students' intention to perform the action will be lower—irrespective of how favourable their attitudes are towards loan repayment. This result contributes to theory extension overall, and particularly in the context of educational loans.

Second, the significant path from subjective norms to attitude suggests that the positive attitude towards behaviour is affected by how significantly others influence the performance of the behaviour. In this study we were able to provide significant relationship between parental influence and students' attitude. Notably, however, although the theory did not explain the relationships, this study has indicated parental influence as having positive effects on students' attitude towards loan repayment. This result is a contribution in the context of educational loans.

Third, the significant path from perceived behavioural controls to attitude suggests that attitude towards behaviour is also affected by perceived difficulty to perform the behaviour. Our findings contribute to supporting the conclusion provided by Ajzen (1991), who—based on a review of sixteen (16) studies of prediction of intention using the TPB—concludes that the inclusion of perceived behavioural controls significantly improves the prediction of intention. We introduce an additional link in the structure, however. Also, though the theory did not explain the relationships, our study has established perceived

behavioural control in terms of predicting students' attitude towards loan repayment. This is evident when considering the significant relationship between perceived quality and students' attitude. This result contributes to extending the lower-level or sub-theory in the context of educational loans.

In addition, the multiple methods used in this study have also contributed to the extension of the theory of planned behaviour in the sub-context of educational loans. By using qualitative approach such as focus groups discussions and interviews, the new measurement scale items are developed to explain the parental influence, media awareness, perceived agreement and behavioural intention constructs, while the quantitative approach contributes to purifying and validating the hypotheses, thus subsequently confirming the new paths in the theory.

Finally, this study adds to the educational loans literature by applying the modified TPB to explain the model. It is the first study that explores actively and utilises the theory on an empirical basis with the aim of explaining the constructs in the students' attitude model, and to highlight accordingly the relationships between the constructs in the context of educational loan. Moreover, this is the first study that synthesises concepts from the TPB in an attempt to assess students' attitude in a holistic manner and in the specific country context (Malaysia).

### ***1.6.2 Contributions to Methodology***

For the first time, this study has approached the problem of educational loan default in a structured methodological manner. As stated previously, the researcher went through with focus groups discussions, semi-structured interviews, a pilot survey, a main survey, and structured interviews. The analysis used in the main stage of this study was structural equation modelling (SEM). As is well-known, the application of SEM involves a thorough investigation of data in pre-stages of checking and cross-checking before the application of the model.

The detailed questionnaire—which went through several iterations and pilot testing—is also included in the thesis, which should also prove to be useful for future researchers. Moreover, it is also for the first time that the Nvivo software has been used for the purpose of analysing qualitative survey data in the context of this study’s nature. This novel method can also be used for future research.

This study has also shown that mixed methods of qualitative and quantitative can be highly productive and may greatly contribute to our understanding of problems which are complex in nature in the context of educational loan repayments and defaults.

### ***1.6.2.1 Scale Development and Validation***

This study follows the procedure of systematic scale development outlined by Churchill (1979), in order to measure latent variables. The main objective of conducting a literature search is to identify the constructs of measurement scales. The researcher conducted a thorough literature review when conceptualising the constructs. The constructs in this study have been identified and integrated as concisely as possible. The review of the literature resulted in the identification of six (6) main constructs: students’ attitude, perceived quality, perceived agreement, media awareness, parental influence, and intention to repay loan.

This study employs a deductive approach complemented by an inductive perspective, whereby the deductive approach owes more to positivism whilst the inductive approach owes more to phenomenology (Saunders et al., 2009). The use of combined reasoning helps the researcher to formulate the conceptual model and refine it, and then to test the hypotheses and cross-check the findings. The study employs triangulation of data collection, which involves focus groups, semi-structured interviews, questionnaire surveys, and structured interviews (Moran-Ellis et al., 2006).

Focus group discussions and semi-structured interviews are used to generate new scale items and to accordingly refine existing scale items from the literature, in an attempt to achieve a deeper understanding of the constructs in the students’ attitude model, before

the survey is conducted. Furthermore, the use of focus group discussions and semi-structured interviews enables the researcher to gather a vast amount of data, which are useful in terms of identifying the different aspects of constructs not examined previously, and also in refining and validating the integrated model (Sekaran & Bougie, 2010). The combination of the methods of focus group discussions and semi-structured interviews is used to uncover the scale items for parental influence, perceived agreement, media awareness, and intention constructs, as well as to generate additional items for the students' attitude and perceived quality constructs. In this stage, thirty-six (36) items were identified in both qualitative studies to measure six (6) constructs.

The items generated from qualitative findings are combined with items from existing literature, and then subsequently translated into a survey design for the next quantitative phase.

Face- and content-validity were assessed prior to the pilot survey. The survey instrument was assessed through experts and experienced validators, as recommended by Hardesty & Bearden (2004), during the initial stage of research. Experts and validators were asked to comment on the lists of scale items (Hair et al., 2010). The process involves incorporating the opinion of experts experienced in dealing directly with the loan process with the opinion of academics (DeVellis, 2003). The other validators were selected owing to the fact that they were highly familiar with the topic, in an attempt to evaluate the measurement items, and to subsequently indicate whether or not the measures emerge to be face/logically valid, as suggested in Mowbray (2003). Face- and content-validity was assessed by academics, NHEFC officers, borrowers' parents and former NHEFC borrowers; as a result, nine (9) items were deleted and modified.

With regards to the pilot survey, data obtained from literature and qualitative studies was subjected to a further purification process, which involved evaluating scale reliability with a coefficient alpha ( $\alpha$ ) and item-to-total correlation, as well as exploratory factor analysis (EFA). The data obtained comprised 39 items measuring the six (6) constructs of the model. Moreover, the developed scales were subjected to two rounds of data reduction/item purification—EFA (one during pilot survey and another during main

survey) as well as the reliability test. The dimensionality of almost all constructs was found to be consistent with those reported in the literature. Importantly, it was acknowledged that EFA is the appropriate tool for identifying factors amongst multiple variables (Hair et al., 2010). Although thirty (30) items introduced previously are from qualitative studies and have not yet been established in other researches, EFA has nevertheless confirmed that the items represent the constructs.

Furthermore, during the pilot survey also, respondents suggested retaining the two languages (Malay and English) in this survey, which helped respondents coming from different ethnic backgrounds to understand the questions in the questionnaire.

The main survey data were examined and screened in order to prepare for subsequent quantitative analyses. Next, the Exploratory Factor Analysis (EFA) and a reliability test were performed in relation to overall measurement scales; overall items and constructs exhibiting high factor loadings and reliability. The resulting solutions were then re-assessed with the use of the Confirmatory Factor Analysis (CFA). Overall, the results show a high degree of reliability as well as high nomological, discriminant and convergent validity; although some items were deleted. In addition, the satisfactory fit indices with significant pathways in the hypothesised direction between the theorised constructs are evident.

Subsequently, Structural Equation Modelling (SEM) was used to test the hypotheses regarding the relationships between the constructs in the conceptual model, and to further assess the overall Goodness of Fit between the proposed model and the collected data set. Finally, the results of the mediation testing were presented. For the first time, the analysis used SEM in the main stage of this study. As is well-known, the application of SEM involves a thorough investigation of data in pre-stages of checking and cross-checking before the application of the model. This study presents the test results for the thirteen (13) hypotheses: ten (10) were accepted and three (3) rejected.

Next, the structured interviews were conducted in order to cross-check the quantitative findings. Follow-up structured interviews were utilised as a tool to establishing

and explaining the findings. Overall, both statistical findings and interview results support the propositions in the students' attitude model. The combination of focus groups discussions, semi-structured interviews, survey and structured interviews have been used for the first time to study in the context of educational loans. Such an attempt should therefore set a new standard for research conducted in this field.

### ***1.6.3 Policy Implications: Managerial Perspective of Contributions***

This study makes some very important policy recommendations based on the analysis of primary data concerning the reason behind educational loans default. It is considered that the primary user of policy recommendations will be the Malaysian government, which has spent RM 25.89 billion (£5.18 billion) on educational loans. With a 50% default rate, the loss of revenues that can be recycled into more productive users is clearly huge; therefore, it very much hoped that the recommendations put forward in this thesis will help the Malaysian government to understand one of the reasons behind loans default, which involves students' attitude and its antecedents and to thereby take corrective actions.

Although this study is based on Malaysian student data, the results should be widely applicable to most developing countries that advance educational loans and also have a high default rate. Furthermore, although this study has been conducted in the context of developing countries, it is very much hoped that Western scholars conducting similar studies in the context of developed nations will also consider the findings to be useful in several respects, such as the analysis on students' attitude and its antecedents contributing to educational loan repayment. Notably, the world is becoming global, and a large number of students from developing countries now study in the west. With this in mind, it is considered that this study will help scholars to understand the nature, characteristics and behaviour of students coming from non-Western countries to study in the Western countries.



Finally, owing to the fact that the study explicitly considers the role of parents and media in the context of educational loan repayment, it is considered that these two groups will find the results useful in the way in which repayment can be affected. Last but not least, students who are at the centre of this study should see the findings of this study in new lights and a fresh context; they may find their own perceptions concerning loan repayment in the collective fashion both informative and educational.

## **1.7 Thesis Structure**

This thesis comprises eight chapters, the first four of which are Introduction, Literature Review, Research Model & Hypotheses, and Setting of the Study. The next four chapters are Research Design & Methodology, Quantitative Analysis, Discussions, and Conclusions & Recommendations.

**Chapter 1—Introduction:** This chapter presents the summary of the study and contains: the background and significance of the study; research aim and objectives; theoretical foundation and research methodology; and contributions to theory, methodology and policy. In the final section, the thesis structure is presented.

**Chapter 2—Literature Review:** This chapter is composed of ten main sections providing a comprehensive review of the literature. The first section presents the introduction of the chapter followed by an overview of global educational loans. The third section describes the definition of repayment and defaults, whilst the fourth section discusses the factors of defaults and repayment, with the definition of attitude research following in Section Five. The theories of attitude research are demonstrated in Section Six, whilst Section Seven in this chapter discusses the research gaps. Finally, the research opportunities are presented, followed by a summary of the chapter.

**Chapter 3—Research Model and Hypotheses:** This chapter discusses the rationale of using the Theory of Planned Behaviour (TPB) in this study. The research model explaining by the TPB is subsequently highlighted. This chapter also demonstrates the process of the

development of the hypotheses to be tested in this study with the purpose of achieving the aim and objectives, and to thereby answer the research questions. The following section presents the testable research model, and hypotheses are presented finally.

**Chapter 4—Setting of the Study:** This chapter explains the context of the study. A brief review of the Malaysian profile is presented, followed by a detailed review of education in Malaysia. In the next section, higher education in Malaysia is discussed, including student enrolment, the cost of higher education, and student loan scheme. Finally, the challenge of higher education in Malaysia is discussed.

**Chapter 5—Research Design and Methodology:** This chapter discusses the methodology adopted in this study. A brief review of the epistemology in social research and two general approaches in theory construction—qualitative and quantitative methods—are presented first. The research design—including research setting and data collection procedure—is then further elaborated. The research design and its phases are described, as well as the data collection methods and the sampling techniques. Research methods and data analysis techniques employed in the study are also discussed. Moreover, the chapter demonstrates the process of developing measurements scales for the study. The preliminary outcomes of measurement scale development utilising literature search are also highlighted, followed by the findings from the qualitative study, as well as the findings of scale purification. Subsequently, data analysis techniques and related underlying assumptions are highlighted and described. In the final section, the structured interview process is presented.

**Chapter 6—Quantitative Analysis:** This chapter demonstrates the findings of the quantitative study. The results of the scale reliability and validity tests—with the use of exploratory factor analysis and confirmatory factor analysis—are presented subsequently, followed by structural equation modelling. In the final section, the chapter presents the outcomes of the hypotheses testing.

**Chapter 7—Discussions:** Findings reported in the previous chapter are discussed further on in this chapter. The outcomes of the scale development, i.e. qualitative findings, population, and sample issue and purification are first reviewed, with the results of the

hypotheses testing discussed. This chapter also presents the results of the structured interviews in an attempt to cross-check and verify the quantitative findings. Finally, the validated model, based on the Theory of Planned Behaviour, is presented.

**Chapter 8—Conclusions and Recommendations:** This summarises the results of this study and the thesis. It highlights contributions to the theory, methodology and policy. Limitations of this study are then explained. Finally, possible future research directions are described.

# Chapter Two: Literature Review

## 2.1 Introduction

This chapter reviews the literature on factors believed to contribute to educational loans default and repayments, and comprises eight sections. Section 2.2 presents an overview of global educational loans in developed and developing countries, followed by discussion of the definition of default and repayment terms in Section 2.3. In Section 2.4, the literature on factors influencing educational loan default and repayment is presented. The literature is divided into eleven (11) sub-sections: amount of loan borrowed, repayment type, unemployment and income uncertainty, students' background characteristics, institutional characteristics, academic experiences, parents' income and education, knowledge about loan agreement, awareness of education debt issues, perception towards loan repayment and attitude towards education debt. A summary table of research relating to educational loan repayment/default is also provided in this section. In Section 2.5, we discuss the attitude definitions, followed by essentials of theories of attitude research in Section 2.6. The research gaps are discussed in Section 2.7, and opportunities are summarised in the following section. The structure of this chapter is also shown schematically in Figure 2.1.

## 2.2 Overview of Global Educational Loans

Education has been identified as a productive investment economically and socially. Educational loans are financial assistance that a bank or agency lends to students to facilitate them pursuing their studies.

Importantly, education loans usually carry a lower rate of interest compared with commercial loans. Educational loan schemes for higher education have been established in over 70 countries around the world, including Malaysia. The purpose of this loan is to help students from poor families so that a nation is able to achieve a proper supply of educated professionals to run the various sectors of the economy (Woodhall, 1988; Ziderman, 2004; World Bank, 2007). Essentially, educational loans also relieve pressure on national budgets (Ziderman, 2004; Psacharopoulos *et al.*, 1986).

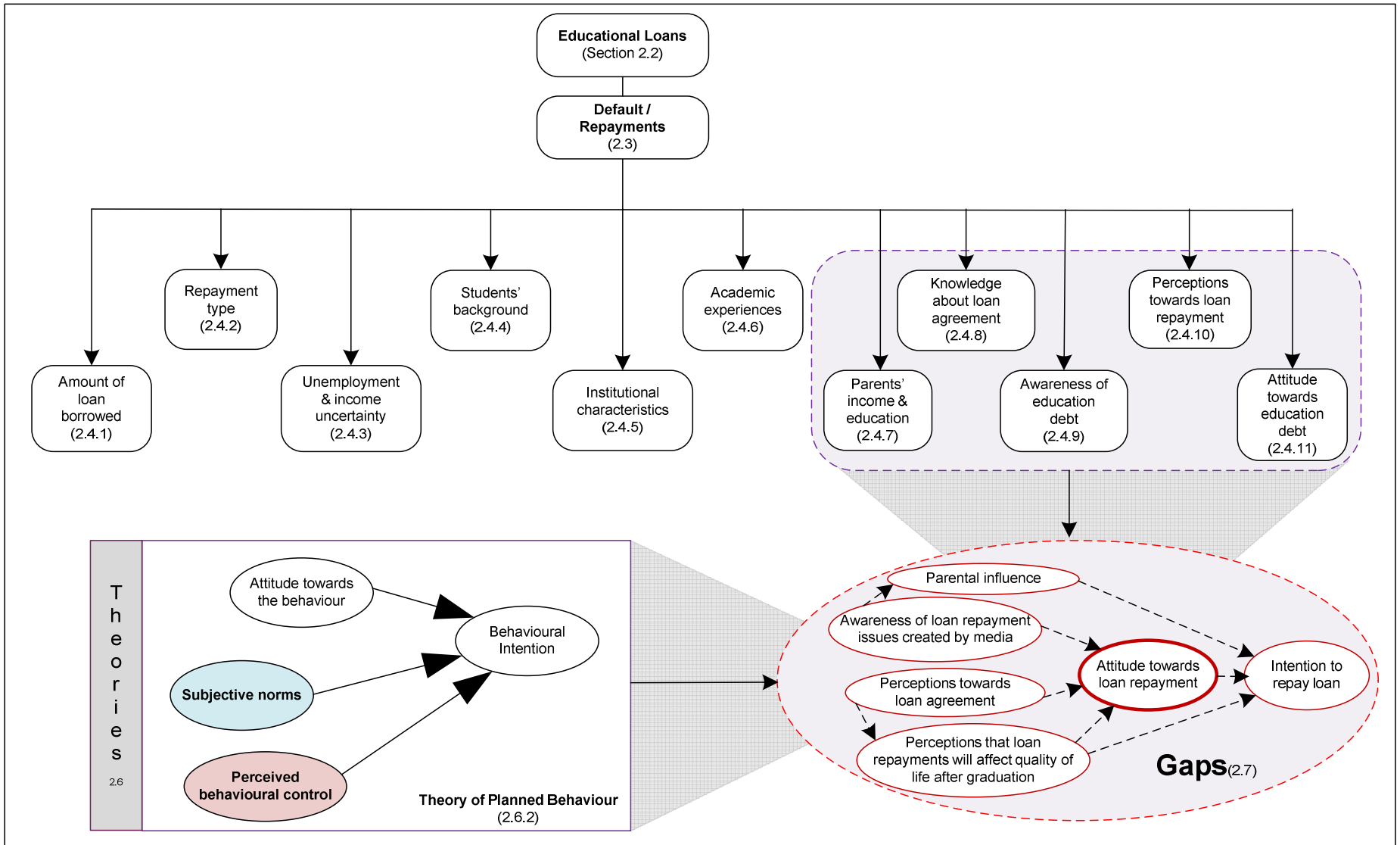


Figure 2.1: Schematic Views of Sections of this Chapter

Table 2.1: Countries with Educational Loans and Repayment Rate

Countries	Region	Loan Schemes	Repayment Rate*
(1)	(2)	(3)	(4)
Nigeria	Africa	-	10.88
Russia	Europe	-	11.73
Egypt	Africa	-	11.95
Latvia	Europe	-	24.63
Indonesia	Asia	-	27.56
Kenya	Africa	-	27.93
Thailand	Asia	-	30.08
Ethiopia	Africa	-	35.24
Germany	Europe	-	38.23
Ghana	Africa	-	39.13
Jamaica	Americas	-	47.55
Estonia	Europe	-	47.73
Mexico	Americas	-	49.01
South Africa	Africa	-	50.47
Norway	Europe	-	56.61
<b>Malaysia</b>	<b>Asia</b>	-	<b>56.67</b>
New Zealand	Australasia	-	58.88
Mauritius	Africa	-	59.36
Japan	Asia	Category 1	64.55
China	Asia	-	64.63
Sweden	Europe	-	64.63
Denmark	Europe	-	64.76
Hong Kong	Asia	NLS	64.77
Philippines	Asia	-	66.01
Hong Kong	Asia	LSFS	69.20
Belgium	Europe	-	69.75
South Korea	Asia	-	72.48
USA	Americas	DL ICL	73.48
Australia	Australasia	-	74.30
Singapore	Asia	-	77.17
USA	Americas	SDSL	79.69
Vietnam	Asia	-	80.11
India	Asia	-	80.23
USA	Americas	Perkins loan	81.49
USA	Americas	FDSL	82.88
Colombia	Americas	-	83.17
Japan	Asia	Category 2	85.00
Taiwan	Asia	-	86.60
United Kingdom	Europe	-	87.81
Finland	Europe	-	90.33
Netherlands	Europe	-	98.45
Canada	Americas	-	99.04
Namibia	Africa	-	99.79
Czech Republic	Europe	-	108.37**

Notes: (i) \*principal plus interest.

(ii) \*\*present value of the total principal plus interest exceeds the present value of the original loan disbursement.

(iii) Some countries have more than one loan schemes (e.g. Japan: Category 1 & Category 2).

Source: Adapted from Shen & Ziderman, 2009

It is noteworthy to highlight that educational loan schemes differ between countries in terms of the design and operation of the scheme as a whole, as well as repayment (Ziderman, 2004; Woodhall, 2002). For example, countries such as the United Kingdom (UK), Australia, New Zealand and the United States of America (USA), have all introduced schemes to provide all qualified students with the opportunity to pursue in higher education (Ziderman, 2004). Moreover, in countries such as China, the Republic of Korea, the Philippines, Thailand and Malaysia, the major objective is for social needs, which aims to help students from poor and disadvantaged backgrounds (Ziderman, 2004). The main problem with educational loans in many countries is a low repayment rate, as depicted in Table 2.1. Importantly, in the case of Malaysia, the repayment rate is around 50%.

### **2.3 Defining Repayments and Default**

Default occurs when borrowers fail to repay their loans. Whilst in theory a single non-repayment is default, in practice, authors have devised their own definitions of default: some use 120-day thresholds (Gray, 1985), some use 180 days, whilst others use 240 days (Pedalino *et al.*, 1992). Similarly, the debt burden has been defined differently by different authors. Some consider the debt burden to be greater than 8% of income as the cut-off point, after which students are likely to default; in other instances, however, a debt burden up to 8% is accepted by various authors (Price, 2004; King & Bannon, 2002; Baum & O'Malley, 2003; Scherschel, 1998) and a range of 8–12% by other authors (Bean-Blossom & Rodriguez, 1989; Cross & Olinsky, 1984; Lee, 1982).

### **2.4 Factors Influence Repayments and Default**

Many factors have been identified in previous studies as influencing repayments and defaults in the context of educational loans. In this section, we report most factors related to default and repayments with the purpose of demonstrating which area has been studied widely and which area has fewer studies. Furthermore, gaps are identified so that this study can explore the problem in a different way.

### ***2.4.1 Amount of Loan Borrowed***

The amount of loan borrowed by students during their studies can affect loan repayments. This is justifiable as, the higher the borrowing, the higher the chances of default (Choy & Li, 2006; Dynarski, 1994; Lochner & Monge-Naranjo, 2004). Markedly, studies have also shown that students often take loans for further degrees when they complete their first qualifications in the belief that higher degrees will help them to procure better jobs, subsequently leading to a higher repayment of older loans. However, students who borrow larger amounts in their first loans have been reported to experience difficulties in repaying subsequent loans as well (Livingstone, 2003; Woo, 2002; Schwartz & Finnie, 2002; Volkwein *et al.*, 1998).

### ***2.4.2 Repayment Type***

Repayment types can also contribute to educational loan default (Shen & Ziderman, 2009); it can accelerate or delay the repayment. Normally, two types of repayment are implemented in most countries: income-contingent loans and mortgage-type loans (Chapman, 2005; Barr, 2003; Ziderman, 2004). The repayment type of income-contingent loans is proportionate to income, whereas mortgage-type loan repayments are based on a monthly fixed rate. The latter contributes commonly to low repayment collection compared with income-contingent loans (Chapman & Ryan, 2005); this is because the system itself allows the opportunity to default. In the case of the mortgage-type loans, the borrower of the loan has a repayment contract following graduation, which sets the fixed monthly repayment rate and repayment term (Cartwright, 2008; Ismail & Serguieva, 2009). Moreover, income-contingent loan schemes depend on graduate earnings, whereby graduates with lower lifetime earnings pay less (or do not pay at all), whilst those with higher earnings pay higher or in full (Palacios, 2004; Ismail & Serguieva, 2009). As a result, the default rate is low in the case of this scheme.

In order to implement the income-contingent loan system, it is a requirement that the countries have strong tax system links with the government and organisation providing loans. Developed countries, such as the USA, the UK, Australia, and Canada, all use income-contingent loans as a type of repayment collection; however, owing to the weak tax system and coordination problem with the government and loan provider, the system is not very successful in developing countries. Notably, research has shown



that the default rate is higher for those countries that implement the mortgage-type loan (Barr, 2003; Chapman, 2006b).

### **2.4.3 Unemployment and Income Uncertainty**

Unemployment amongst graduates has direct implications in terms of loan repayment. Unemployment increases the likelihood of default (Monteverde, 2000; Dynarski, 1994). Researches have shown that uncertainty and unemployment directly affect loan repayment (Choy & Li, 2006; Lochner & Monge-Naranjo, 2004; Woo, 2002; Volkwein *et al.*, 1998; Boyd, 1997; Dynarski, 1994). Moreover, a research shows that, as the income level of postgraduate studies increases, the likelihood of default decreases (Baum & O'Malley, 2003). Moreover, it is noted that most students default because their personal income is insufficient to keep up with their repayments (Flint, 1994; Woo 2002). Income uncertainty arises owing to fluctuation in the job market (Oosterbeek & Van Den Broek, 2009).

### **2.4.4 Background Characteristics**

Previous research indicates that students' background plays a relatively minor role in debt repayment (Livingstone & Lunt, 1992). However, more recently, several researchers have found that background makes a significant contribution to debt repayment (Hira *et al.*, 2000; Abu Bakar *et al.*, 2006). Background characteristics include gender, ethnicity, age, marital status and number of dependents (Volkwein & Szelest, 1995; Gjonca & Calderwood, 2004).

#### **2.4.4.1 Gender**

Empirical studies have established that gender affects loan repayments (Volkwein & Szelest, 1995; Knapp & Seaks, 1992; Myers & Sierra, 1980; Wilms *et al.*, 1987). In particular, compared with males, females have been found to experience greater difficulty in repaying loans (Schwartz & Finnie, 2002; Davies & Lea, 1995). Markedly, females are more likely to default owing to childcare needs, financial needs, and more time taken off work to raise a family (Moran, 1987; Myers & Siera, 1980). However, Podgursky *et al.* (2002) and Volkwein *et al.* (1998) report in their studies that males are more likely to default than females, whereas another study has established no significant difference in default rates between males and females (Knapp & Seaks, 1992; Ismail & Serguieva, 2009).

#### **2.4.4.2 Ethnic Groups**

Ethnic groups refer to the group of different races. Ethnicity has been found to be associated significantly with educational loan defaults (Harrast, 2004; Flint, 1997, Volkwein & Szelest, 1995; Dynarski, 1994; Knapp & Seaks, 1992; Wilms *et al.*, 1987). One study conducted at a traditional four-year public institution found that ethnicity explained approximately 20% of the variance in loan default (Herr & Burt, 2005).

Importantly, ethnic barriers have been found to be a reason for high default (Churaman, 1992): for example, non-White students are more likely to default than their counterpart White peers (Harrast, 2004; Christman, 2000; Woo, 2002; Volkwein & Cabrera, 1998; Volkwein & Szelest, 1995); similarly, Black students have been identified as carrying a higher debt load than their White and Asian peers (St. John, 1998; Ismail & Serguieva, 2009). A study of African, American and Hispanic students shows that defaulters were more likely to be unemployed (Volkwein & Cabrera, 1998); however, even if African Americans are employed, they are still at a greater risk of default, even when income level was controlled in the study (Herr & Burt, 2005; Steiner & Teszler, 2003; Podgursky *et al.*, 2002; Knapp & Seaks, 1992; Greene, 1989).

#### **2.4.4.3 Age**

The age parameter has been found to influence loan defaults (Herr & Burt, 2005; Steiner & Teszler, 2005; Harrast, 2004; Podgursky *et al.*, 2002; Woo, 2002; Christman, 2000; Flint, 1997; Davies & Lea, 1995; Knapp & Seaks, 1992). Importantly, a negative relationship between age and educational loan repayment suggests that older students are likely to have greater financial obligations, such as families to support, whilst younger students have relatively less financial commitments (Herr & Burt, 2005). Moreover, older students are considered to be more likely to default because they owe more than younger students (Harrast, 2004). Steiner & Teszler (2003), however, established that younger students are three times more likely to default than older students.

#### **2.4.4.4 Marital Status**

Marital status has been found to affect loan repayment (Volkwein *et al.*, 1998; Dynarski, 1994; Myers & Siera, 1980). Being single, divorced or widowed was found to

increase the default rate by more than 7% (Volkwein & Szelest, 1995) and up to approximately 40% (Volkwein *et al.*, 1998). In addition, being married lowers dramatically the default rate for non-Whites (Volkwein *et al.*, 1998; Ismail & Serguieva, 2009). However, several empirical studies have found that marital status does not affect loan repayment (Spencer, 1992; Gray, 1985; Stockham & Hesseldenz, 1979).

#### **2.4.4.5            *Number of Dependents***

The number of dependant has been identified to affect loan repayments (Dynarski, 1994): the higher the number of dependents, the higher the likelihood of default (Woo, 2002). A study by Volkwein & Szelest (1995) found that the probability of default increased by 4.5% per dependent child; this is because more children required the sharing of limited resources, thereby decreasing the ability to repay loans (Herr & Burt, 2005).

### **2.4.5   *Institutional Characteristics***

Institutional characteristics refer to universities/colleges where students undertake their studies. In general, studies have shown little evidence that institutional characteristics influence loan repayment (Fredericks & Szelest, 1995). Such elements include the duration of study in college and the type of institution.

#### **2.4.5.1            *Duration of Study in College***

The duration of the study in college has been found to be associated closely with high indebtedness. Students with high indebtedness refer to those students who have taken loans to enrol in college for their diploma, degree and masters, whereas students with low indebtedness refer to those who have taken loans for a diploma or degree only. Those with high indebtedness were found to be less likely to default compared with those students with low indebtedness, owing to the fact that high indebtedness is associated with higher earnings, with such individuals most likely to make repayment (Woo, 2002; Fossey & Bateman, 1998).

#### **2.4.5.2            *Type of College/University***

The type of colleges/university in which students undertake their study has been found to influence default (Podgursky *et al.*, 2002). Students attending less than two years of

proprietary colleges have been found to have a higher default rate than those of four years at prestigious institutions (Woo, 2002). Usually, students who attend proprietary colleges for less than four years tend generally to borrow more because they come from lower-income families, and also originate from ethnic minority groups; such characteristics can add to the probability of default (Gladieux & Perna, 2005; Goodwin, 1991). Further studies show that enrolment in a prestigious college can lower the probability of default (Volkwein & Szelest, 1995; Pinto & Mansfield, 2006). It seems that the wealthier the institution attended (including government-owned institutions), the less the likelihood of default (Woo, 2002).

#### **2.4.6 Academic Experiences**

Academic experiences include the programme of study, educational individual attainment, and grade point average (GPA). Academic experiences have been found to affect loan repayment (Steiner & Teszler, 2003; Herr & Burt, 2005).

##### **2.4.6.1 Programme of Study**

The programme of study refers to the choice of major undertaken by the students in the college/university. Previous studies suggest that the programme of study affects personal income and the subsequent ability to repay the loans (Herr & Burt, 2005; Steiner & Teszler, 2005; Volkwein & Szelest, 1995; Millet, 2003; Price, 2004; Volkwein *et al.*, 1998; Flint, 1997). Moreover, specific majors have been found to be associated with default rates (Steiner & Teszler, 2003; Volkwein & Szelest, 1995). For example, courses such as engineering and those of agricultural discipline have a lower probability of default by over 4% (Volkwein & Szelest, 1995), whilst studying education, computer engineering, sociology, art, history, risk management and insurance have been found to be associated with higher default rates (Harrast, 2004).

##### **2.4.6.2 Educational Attainment**

Educational attainment has been found to be an indicator of loan default (Herr & Burt, 2005; Flint, 1997; Volkwein & Szelest, 1995). Some have found this to be otherwise, such as, for example, Greene (1989). Moreover, high school dropouts and those who do not complete their degrees have been found to be more likely to default (Podgursky *et al.*, 2002; Dynarski, 1994; Wilms *et al.*, 1987). For example, approximately 70% of

Black, Hispanic and Asian, and 43% of Whites blamed student loan debt as being the reason for dropping out (Williams-Harold, 1998). Steiner & Teszler (2005) have also determined that students who graduated had a 2% chance of default compared with 14% for those who did not graduate.

Furthermore, course credits attempted, transferred, completed or failed have been found to be the strongest predictor of loan default (McMillion, 2004). For example, students who complete their courses on time show lower probability to default (Christman, 2000; Harrast, 2004; Steiner & Teszler, 2005). Furthermore, those students who transferred their credits to another institution were also more likely to default (Herr & Burt, 2005).

#### **2.4.6.3            *Grade Point Average (GPA)***

Grade point average (GPA) is a point measurement gauge used to present students' academic examination results obtained for the end of each semester. GPA may serve as a proxy for ability and motivation, and traits associated with success in later life, as well as in college (Volkwein & Szelest, 1995). GPA has also been found to be related strongly with defaults (Steiner & Teszler, 2003; Fredericks & Szelest, 1995). Studies show that, as GPA increases, the probability of default conversely decreases (Christman, 2000; Podgursky *et al.*, 2002; Steiner & Teszler, 2003; Woo, 2002). For example, a study of Texas A&M borrowers shows that students with a GPA of 2.0 or less were almost 18% more likely to default than students with GPA of 2.5. Furthermore, students with a GPA above 3.0 show a default rate of less than 1% (Steiner & Teszler, 2003). In addition, Abu Bakar *et al.* (2006) state a GPA of 3.0 and above illustrates higher repayment amongst degree students.

#### **2.4.7    *Parents' Income and Education***

Parents' income and education have been found in the literature to contribute to educational loan default and repayment.

##### **2.4.7.1            *Parents' income***

Empirical studies have established that the level of parents' income is related positively to educational loan repayment (Dynarski, 1994; Knapp & Seaks, 1992; Wilms *et al.*, 1987; Gray, 1985). Furthermore, students who have parents with higher income have

also been found to default relatively less than those students who have parents with low income (Baum & O'Malley, 2003; Woo, 2002; Volkwein *et al.*, 1998). It was also found that students with higher income parents also perform better in studies; this is because higher-income parents are able to support and meet some of their children's expenditure relating to their studies. However, some studies also state that parents' income has no impact on educational loans repayments; hence, the results of such topics are mixed in the literature (Flint, 1997; Volkwein & Szelest, 1995; Greene, 1989).

#### **2.4.7.2 Parents' Education**

Parental education refers to parents' academic qualification, which relates to the mother's as well as the father's level of education (Steiner & Teszler, 2003). Those students whose parents have higher levels of formal education are considered to be less likely to default when compared to parents with lower levels of formal education (Choy & Li, 2006; Volkwein *et al.*, 1998); this may be attributable to the fact that parents with academic qualifications carry better knowledge about loan requirements and repayments. For example, one study states that educated parents have a better understanding of loans, which has subsequent influence on their children's repayment plans (Eccles, 1993).

#### **2.4.8 Knowledge about loan Agreement**

A loan agreement is a contract between the lender and the borrower which regulates the terms of the loan (Vijayakumar & Subburaj, 2010). Only two studies relating to loan agreement in the context of educational loan have been found in the literature (Volkwein *et al.*, 1998; Abu Bakar *et al.*, 2006). The first study was conducted by Volkwein *et al.* (1998) in a Western context, which found that students have knowledge concerning loan repayment obligation. In this study, 93% of respondents were aware that the loan had to be repaid; however, 25% of them were not clear about the repayment process.

Secondly, Abu Bakar *et al.* (2006) carried out their study in a non-Western context, and found that university students had knowledge about loan agreement and loan repayment process (Ismail *et al.*, 2010). The study found that knowledge amongst students differed depending on how long they had been receiving the loan. Two-thirds of the students did not know that the loan would be retracted when they were on

probation; despite this clause being stated in the agreement they signed, the majority were not aware of it. Accordingly, it can be assumed that students did not read the loan agreement carefully. Specifically, the study found that students in their first year had relatively less knowledge compared with those in senior years. Second, Chinese students had better knowledge compared with other ethnic groups. Third, students with a higher cumulative grade point average (CGPA) tended to have more knowledge about the loan and repayment compared with those with lower cumulative grade point average (CGPA).

#### ***2.4.9 Awareness of Education Debt***

Awareness of education debt refers to information that students have regarding education debt matters. Studies have found that students obtain this information from parents, peers, friends, professional bodies, and media (Flint, 1997; Dynarski, 1994). Firstly, in his study, Flint (1997) states that the sources of information come from friends, peers and professionals. Moreover, the credibility of informants and the extent of information from friends, professional and peers were all found to influence subsequent attitudes and behaviours—particularly in decision-making contexts (Davidson *et al.*, 1985). These informants influence in the context of educational borrowing and default prevention by providing information regarding the availability of loans and repayment requirements. Peers in particular have been found to shape borrowers' beliefs, feelings and behavioural tendencies towards loans. For example, a study conducted by Thein & Herr (2001) shows that senior students in university are more aware about the information of loans than junior students. Secondly, Dynarski (1994) states that, generally, media also focuses attention on defaulters.

#### ***2.4.10 Perceptions towards Loan Repayment***

Perceptions towards loan repayment and the impact of the loan to the student upon graduation are also crucial. Concern has been voiced by undergraduate students that education debt impedes them from buying cars, buying a home, having children or moving out of their parents' home following graduation (Baum & Saunders, 1998). However, a study by Millett (2003) indicates that the financial aid college students received does not become so much of a burden that it constrains their options when they graduate. Moreover, a study of Pell Grant borrowers found that loan repayment does not have a significant impact on the probability of owning a home (Baum & O'Malley,

2003). On the other hand, however, a loan owed by students carried forward upon graduation became an important issue in their career choices (Fox, 1992), predominantly owing to the fact that students have different concerns about repaying the debt they owe (Hira *et al.*, 2000).

Perceptions regarding whether loan repayment will affect a student's personal life after graduation can be important in terms of predicting repayments and defaults. A study by Abu Bakar *et al.* (2006) questioned students about their perceptions regarding whether or not the National Higher Education Fund Corporation (NHEFC)—from where they procured the loan—would affect their life following graduation. Almost 70% of the students claimed that loan repayment would delay them from buying cars, with 43.6% claiming it would delay them from getting married, and 36.1% claiming it would delay them from having children (Abu Bakar *et al.*, 2006). Since getting married in Malaysia is still embedded within cultural practices, it can be very costly—especially for the bridegroom-to-be (Abu Bakar *et al.*, 2006). Notably, half of all male respondents, compared with only 39% of all female respondents, indicated that loan repayment would delay them getting married (Abu Bakar *et al.*, 2006). Having a loan to pay back may have an impact on the respondents' ability to save for their marriage, which also influences when they will start having children (Abu Bakar *et al.*, 2006).

Another study has also found that students considered the size of the loan as having an impact on their decision of when they should get married, have children and purchase a new car (Hira *et al.*, 2000). In the context of Australia, Marks (2009) found that loan repayment can have a negative impact on the decision to have children, but had no negative impacts on when students leave the parental home, marry, and accordingly obtain home ownership. Studies have also found that students who borrow for their studies can experience impacts on their careers and other decisions for many years in their lives (Lamkin, 2004; Fossey, 1998).

Students who overestimate their future income are also more likely to be longer in debt. A study by Seaward & Kemp (2000) states that those who go into debt might not understand the full implications of their financial behaviour: for example, in a study of 381 college students concerning the use of credit card loans, only a few were able to report the current interest rate of their credit cards (Warwick & Mansfield, 2000).



Moreover, outstanding loans have also been found to cause stress amongst students in the later years of their lives (Walker *et al.*, 1992; Livingstone & Lunt, 1992). Stressful lives owing to high debt have also been found to impact students' perceptions towards their quality of life, causing repayments to be postponed (Tokunaga, 1993).

#### ***2.4.11 Attitude towards Education Debt***

Attitude in this sense refers to the borrower's approach towards loans which could affect his or her tendency to default (Gross *et al.*, 2009; Volkwein & Szelest, 1995). Writings on attitude and behaviour initially derived from psychology (Pedalino *et al.*, 1992; Bean-Blossom & Rodriguez, 1989). Moreover, previous studies within Western societies regarding the relationship between attitude and behaviour were also often noted as weak (Volkwein & Szelest, 1995; Livingstone & Lunt, 1992; Baum & Schwartz, 1988). Markedly, relatively few studies have explored the relationship between students' attitudes towards debt and the probability of default (Abu Bakar *et al.*, 2006; Baum & O'Malley, 2003; Volkwein & Szelest, 1995; Livingstone & Lunt, 1992). As a result, attitude relating to loan defaults remains a major area for further investigation (Abu Bakar *et al.*, 2006; Christman, 2000). Notably, Orr (1987) and Monteverde (2000) state in their studies that 'willingness to repay' is more important than the 'ability to repay'.

Attitude can have both positive and negative effects on loan repayments and defaulting. Moreover, positive attitude has been found to be an important predictor of debt repayments. Livingstone & Lunt (1992), in their study, show that those who repay are more concerned with personal achievement and self-direction. Moreover, positive attitude towards loan occurs when students consider that loans give them benefits in their lives. Several studies have found that loans are very important to students because of the benefits that students achieve through borrowing (Baum & O'Malley, 2003; Christman, 2000). However, there are studies which have also determined that borrowing has negative effects, with borrowers feeling burdened and less satisfied concerning the benefits of borrowing. For example, African American students and those coming from low-income families report feeling burdened by their loans (Boyd, 1997; Volkwein & Szelest, 1995). Furthermore, a study by Abu Bakar *et al.* (2006) shows that respondents in general have negative attitudes towards loans and loan repayment, and that such a negative attitude would impact the repayment of the loan

upon graduation. In their study, it was established that 51% respondents agreed with the statement that it was not easy to repay the loan (Abu Bakar *et al.*, 2006); one quarter of the students believed that there were no legal penalties for non-repayment (Abu Bakar *et al.*, 2006); 9.8% believed that the NHEFC could not trace them to collect the loan; and 48.8% felt that it was difficult for them to make repayments (Abu Bakar *et al.*, 2006). In addition, a negative attitude towards instalment borrowing has also been identified within African American, female, married and unemployed populations (Yieh, 1996).

Changes in debt situation may also have an effect on borrower's attitude to debt. The change of attitude can be associated with, for example, the length of time in the university or programme of study taken in the university, which did not fully guarantee employment following graduation. For example, Davies & Lea (1995) state that university students are more tolerant of debt, which increased accordingly with more and more time spent within university.

Student counselling has also been found to have a positive influence on borrowers' attitude towards loan repayment (Podgursky *et al.*, 2002; Seifert & Worden, 2004; Steiner & Teszler, 2005). Students who participate in counselling programmes have been found to be less likely to default. Similarly, those who did not partake in counselling were found to be strongly related to default (Steiner & Teszler, 2003; Flint, 1997). Borrowers at Texas A&M University who received exit counselling through in-person contact with a counsellor had a 1.3% default rate, whilst borrowers who did not receive in-person counselling had an 11.1% default rate (Steiner & Teszler, 2005). Woo (2002), on the other hand, found attitude to correlate with borrowers' delinquency, where delinquency refers to a debt or other financial obligation on which payment is overdue (Ismail *et al.*, 2010). Each period of delinquency has been found to increase the borrower's chances of default by 4.8% (Woo, 2002; Ismail *et al.*, 2010).

Attitude has also been found to be related with students' background and institution (college/university) characteristics (Ferguson, 2003). For example, two-thirds of students in one national survey found that race and ethnicity influence students' attitude towards debt (Baum & O'Malley, 2003). Furthermore, students possessed

negative attitude toward debt and default owing to dissatisfaction with the institution, which subsequently caused them to default on their loans (Christman, 2000).

Default and debt repayments are treated as influenced potentially by a complex range of factors. Many factors described above have been found to influence attitude: for example, the students' background characteristic has been found to influence attitude, and it is widely studied in the context of educational loans; similarly, institutional characteristics, i.e. academic experiences found to influence attitude, have also been studied extensively in the educational loans literature. However, few researches examine the effects of factors—such as those related to parents' income and education, knowledge about loan agreement, awareness of education debt, perceptions towards loan repayment—on attitude; all are viewed as being important factors to be investigated. In this study, however, we tend to investigate gaps derived from those factors mentioned above that may have been overlooked in previous studies, which are possible to be the antecedents of students' attitude towards loan repayment. For this purpose, a sequential summary of research works on factors contributing to educational loans defaults and repayments has been developed, as shown in Table 2.2.

Table 2.2: A Sequential Summary of Research Work on Factors Contributed to Educational Loans Defaults and Repayments.

Author(s) / Year	Place of Study Conducted	Methods/Unit of analysis /Theory/Analysis	Key Findings
(1)	(2)	(3)	(4)
Wilms <i>et al.</i> , 1987	USA	Questionnaire survey and secondary data from California Student Aid Commission for institutions/students and institutions/ Hierarchical stepwise and discriminant analysis.	Default rates stem mainly from students' background characteristics, rather than institutions characteristics.
Greene, 1989	USA	Secondary data survey on National Direct Student Loan borrowers at the University of North Carolina Greensboro / Students/Tobit technique.	First, graduation/study completion, high income and high GPA have a positive relationship with repayment. Second, the Tobit model helps to identify student characteristics before the student loans are due for repayment and are associated with high probabilities of default.
Cabrera <i>et al.</i> , 1990	USA	Secondary data survey from the National Postsecondary Student Aid Study/Students/ Logistic regressions analysis.	Negative effects owing to the psychological stress of future loan repayment. Result found borrowers (community college students) evaluated the benefits of educational investment negatively than students who are funded through grants and students who did not borrow.
Knapp & Seaks, 1992	USA	Secondary data survey on federally guaranteed Stafford loans/college students /Probit technique.	High parents' income, the presence of two parents at home, student's having graduated and student's race (whites defaulting less than blacks) lower probability of default.
Churaman, 1992	USA	Secondary data survey on National Postsecondary Student Aid Study/Students/ Descriptive analysis.	Parents' contribution to their children's college education includes financial aid and saving for their children; choose type of college.
Dynarski, 1994	USA	Secondary data survey from the National Postsecondary Student Aid Study /Students who left postsecondary education between 1976 and 1985/Descriptive and regression analysis.	Earnings after leaving school are a powerful antecedent of default. Low-income households and minority groups, high school dropouts, and borrowers who attend proprietary schools and two-year colleges were also found to be more likely to default. Moreover, borrowers who did not complete high school and their post-secondary programme were more likely to default.

<b>Author(s) / Year</b>	<b>Place of Study Conducted</b>	<b>Methods/Unit of analysis /Theory/Analysis</b>	<b>Key Findings</b>
Volkwein & Szelest, 1995	USA	Secondary data survey from (NPSAS, IPEDS, College Board data) /Students /Theory of Human Capital and Theory of Public Subsidy/Logistic regressions analysis.	Programme of study majoring in a scientific or technological discipline, earning good grades, persisting to degree completion, getting and staying married, and not having dependent children substantially increase the likelihood of repayment and lower the likelihood of default.
Davies & Lea, 1995	UK	Questionnaire survey/Pseudo-longitudinal design/ Students/ Stepwise multiple regression analyses.	Factors correlated with attitudes towards debt include age; personal expenditure; religion.
Yieh, 1996	USA	Questionnaire Survey on consumer finances /Tobit techniques	Income, educational attainment and occupational status have impact on amount of credit card debt. Being African American, female, married and unemployed have negative attitude toward instalment borrowing.
Boyd, 1997	USA	Secondary data survey from National Postsecondary Student Aid Study /Students /Descriptive analysis.	African-American student loan borrowers have made an economically rational decision when they choose to default on their educational loans because they foresee themselves as being excluded from obtaining home mortgage loans, whether or not they repay their student loans.
Flint, 1997	USA	Secondary data survey from National Postsecondary Student Aid Study/ Student /Logistic regressions analysis.	Educational loan default can be drawn mainly based on psychological, sociological and economics perspectives.
Volkwein <i>et al.</i> , 1998	USA	Secondary data survey from National Postsecondary Student Aid Study/Human capital theory /Students /Logistic regressions analysis.	Student loan repayment and default behaviour can be substantially predicted by age, gender, race, parents' education and income, achievement in high school, degree completed, choice of major, GPA, family support, educational attainment, highest degree earned, income, occupation, loan indebtedness, marital status, number of dependents.
Baum & Sounders, 1998	USA	Secondary data survey from National Student Loan Survey borrowers /Students /Logistic regressions analysis.	For those students who finished their degree programme, debt delayed them from purchasing a home, purchasing a car, and delayed them having children.

<b>Author(s) / Year</b>	<b>Place of Study Conducted</b>	<b>Methods/Unit of analysis /Theory/Analysis</b>	<b>Key Findings</b>
Christman, 2000	USA	Quantitative and qualitative methods /Survey and interviews /US Department of Education, National Student Loan Data System/Students, staff, faculty /Descriptive analysis and content analysis.	First, Institutional characteristics, race, parents' income, and cumulative GPA contribute to default. Second, defaults on loan to characteristics the students individually possessed, such as attitude, ignorance, dissatisfaction, misperception concerning the potential consequences of failing to repay loans, and possibly insufficient funds.
Monteverde, 2000	USA	Secondary data survey from guaranteed loan programme datasets /Students /Statistical analysis of survival analysis and credit scoring.	Predictor of default includes background, school-of-attendance, geographic location of attended school, school reputation, unemployment.
Cofer & Somers, 2000	USA	Secondary data survey from National Postsecondary Student Aid Study/Former student (Black and Asian) /Descriptive analysis.	Loan repayment delayed purchases a house, buy a car and have children.
Hira <i>et al.</i> , 2000	USA	Questionnaire Survey/Students /Descriptive analysis.	First, lack of knowledge about some educational loan borrowing aspect. Second, unaware of their total loan indebtedness and repayment obligations. Third, perceptions of students that the size of the loan influences when they should married, have children and purchase a car.
Dynarski, 2002	USA	Quasi-experimental study from Georgia HOPE Scholarship datasets/Students/quasi-experimental methodology.	Loans were found to have different effects on borrowers from different income groups. Higher income will lower default rate.
Schwartz & Finnie, 2002	Canada	Secondary data survey from National Graduates Survey borrowers/Students/ Tobit and Probit techniques.	Most of loan borrowers who have problem to repay their loans categories into the 'can't pay' category, rather than the 'won't pay' category. Repayment obligations affect buying house, buying car and moving from parents' house.
King & Bannon, 2002	USA	Secondary data survey from National Postsecondary Student Aid Study /Students /Descriptive analysis.	Borrowers who have educational debt exceed 8% of their monthly incomes will default in repayment.

<b>Author(s) / Year</b>	<b>Place of Study Conducted</b>	<b>Methods/Unit of analysis /Theory/Analysis</b>	<b>Key Findings</b>
Woo, 2002	USA	Secondary Data Survey from Database of California student /Logistic regressions analysis.	Background demographic and financial characteristics (being female, older students), leaving school without a degree (fail to complete the academic programme), GPA, having low wages after leaving school, experiencing unemployment, and college type were major antecedents of default. Attitude is found to correlate with borrowers' delinquency.
Podgursky <i>et al.</i> , 2002	USA	Secondary Data Survey from Enhanced Missouri Student Achievement Study & Missouri Student Assistance Resource Services/Logit model.	First, males were more likely to default than females for African American student. Second, borrowers who attended selective 4 year universities were less likely to default than borrowers who attended other types of public 2-year and 4-year propriety colleges.
Millett, 2003	USA	Secondary Data Survey from Longitudinal database of 1992–1993/Students/Logistic regressions analysis.	Undergraduate debt was found to be a significant predictor of students' application to post-graduate programme; thus, defer repayment.
Baum & O'Malley, 2003	USA	Questionnaire survey responses /Students /Descriptive analysis.	Borrowers from low-income families have repayment difficulties, even after controlling current incomes. Overall students have negative attitudes towards student loans. Loan repayment delayed purchases a house, purchase a car, have children, career choice, and getting married.
Lochner & Monge-Naranjo, 2004	USA	Secondary data survey from Baccalaureate and Beyond datasets/Model of optimal human capital investment /Descriptive analysis and Logit model.	Default rates differ between the undergraduate majors, but the differences withdraw when debt and earnings were controlled.
Harrast, 2004	USA	Secondary data survey from Department of Labour and Workforce Development and Student records from university files/ Students/ Descriptive analysis & ANOVA.	Less number of semesters to graduation, academic preparation and GPA contributed to less default on education debt.
Seifert & Worden, 2004	USA	Secondary data survey from Advocate Unit, New York State Department of Higher Education /Students/Descriptive analysis, ANOVA & Logistic regressions analysis.	Early intervention influences default behaviour amongst borrowers.

<b>Author(s) / Year</b>	<b>Place of Study Conducted</b>	<b>Methods/Unit of analysis /Theory/Analysis</b>	<b>Key Findings</b>
Price, 2004	USA	Secondary data survey from National Centre for Education Statistics' Baccalaureate & Beyond Longitudinal Survey/Graduate students /Multinomial logistic regressions model.	First, parents' income (lower-income backgrounds), race and ethnicity (Blacks and Hispanics) increased educational debt burden. Second, the instability of income after graduation can result of default. Third, debt burden of the borrowers greater than 8% are more likely to default on their loans.
McMillion, 2004	USA	Secondary data (Journals and paper publications) /Review of literature.	Factors affect student loan default includes college success, college experiences, unemployment, loan repayment factors, knowledge of repayment obligation, repayment after default, background of the borrower, borrowers attitude, level of indebtedness, perception of debt, type of institution attended, loan servicing factor.
Baum & Schwartz, 2005	USA	Secondary data survey from Nellie Mae National Student Loan Survey/lifecycle model/ Students/Descriptive analysis.	Students should not devote more than 8% of their gross income for repayment of educational loans.
Steiner and Teszler, 2005	USA	Secondary data survey from TG-guaranteed Federal Family Education Loan Programme/ students attended Texas A&M University /Logistic regressions analysis.	GPA, in-person exit counselling, degree completion, college reputation, age, credit hours, ethnicity, parental education, credit hours' transfers, gender contribute to default and repayment.
Herr & Burt, 2005	USA	Secondary data survey from UT Austin and Texas Guaranteed Student Loan Corporation and National Student Loan Database System /Students/Descriptive & regression analysis.	Student programme completion, persistence, and success, race/ ethnicity, gender are strong predictors of loan repayment.
Cragg, 2006	USA	Secondary data survey/ Longitudinal Study /Integrated Postsecondary Education Data System (IPEDS)/ Students/ Logistic regressions analysis.	Student background characteristics', institutional characteristics' have impact on graduation; thus, making repayment.
Papagni, 2006	Italy	Secondary data/modelling of household liquidity constraints/ Analysis of dynamics.	Parents care about children's education and this gives them a motivation for providing a guarantee in a loan contract. Children can borrow because their parents guarantee their income to repay loan.



<b>Author(s) / Year</b>	<b>Place of Study Conducted</b>	<b>Methods/Unit of analysis /Theory/Analysis</b>	<b>Key Findings</b>
Barone, 2006	USA	Secondary data survey/TG-guaranteed Federal Family Education Loan Programme/ students attended Prairie View A&M University /Logistic regressions analysis.	College success, academic preparation, high family income and high GPA prevent educational loan defaults.
Dowd & Coury, 2006	USA	Secondary data survey /Beginning Postsecondary Students (BPS 90/94) data/ Logistic regressions analysis.	First, students may be at risk of loan default because borrowing does not reduce student costs sufficiently to enable students' persistence in college completed degree on time. Second, students who take loans find repayment to be a financial burden.
Abu Bakar <i>et al.</i> , 2006	Malaysia	Questionnaire survey at one university/first, second and final year undergraduate students/ Descriptive & regressions analysis.	First, students have knowledge about loan agreement. Second, overall students have negative attitudes towards loans and loan repayment. Third, loan repayment will have effects on students' personal life after graduation.
Porter <i>et al.</i> , 2006	USA	Qualitative/Open ended survey (respond in writing)/ unsubsidised Stafford Loan funds borrowers/Content analysis.	Factors that students perceived are important in helping them make good financial decisions about paying loans includes money management, mandatory career counselling, information about funding options, identification of websites that provide useful information and interaction between current students and alumni who are already making loan repayments.
Pinto & Mansfield, 2006	USA	Mail questionnaire survey (Zoomerang) / four public and four private institutions/ Undergraduate students/ Descriptive & regressions analysis.	First, students would pay the credit card bill before making their educational loan repayment. Second, credit card debt related to higher dropout rates among students, which increases the likelihood of educational loan default.
Choy & Li, 2006	USA	Secondary data survey from 1992–93 National Postsecondary Student Aid Study and National Student Loan Data System /Students and Graduates/Descriptive analysis.	Difficulty repaying loans is related to both low income and large loan amounts borrowed.

<b>Author(s) / Year</b>	<b>Place of Study Conducted</b>	<b>Methods/Unit of analysis /Theory/Analysis</b>	<b>Key Findings</b>
Borden <i>et al.</i> , 2007	USA	Questionnaire survey (pre-test and post-test survey during one seminar)/College students /Descriptive & regressions analysis & ANOVA.	First, seminar increased students' knowledge towards financial matters, increased positive attitudes toward credit. Second, gender and employment status can predict students' financial knowledge, attitudes and behaviours.
Marriott, 2007	UK	Questionnaire survey/First -year business school UK status undergraduates' students/ Descriptive analysis.	Academic institutions can provide support to enhance the financial awareness of students towards loans so that they can manage better their loans whilst at university.
Lu & Lu, 2008	China	Dynamic evolution game replication method/ Evolutionary Game Analysis.	Inefficient credit system leads student breaking a contract, thus lead to high rate of educational loans default.
Marks, 2009	Australia	Questionnaire survey and secondary data survey from Household, Income and Labour Dynamics in Australia/students /Logistic regressions analysis.	No negative impacts on transitions to adulthood such as moving from parents' home, getting married and buying house.
Ionescu, 2009	USA	Quantitative/Secondary data /Model of lifecycle earnings /Simulation using MatLab software.	Flexible in repayments increases enrolment significantly, while flexible in requirements have little effect on default rates.
Oosterbeek and van den Broek, 2009	Netherlands	Mail questionnaire survey/Members of a panel of higher education /Regressions analysis.	Students with good earnings prospects less problem in repayment.
Gross <i>et al.</i> , 2009	USA	Secondary data (Journals) /Thematic analysis.	Educational loan default rates influence by type of loans, socioeconomics contexts, college experiences Institutional characteristics, college borrowers' background and borrowers' attitude and awareness.
Shen, Shen & Ziderman, 2009	China	Secondary data survey from GSSL borrowers graduated in 2004 at five universities/ Ordinal regressions analysis.	Type of repayment contributed to defaults. The repayment ratio is kept within 10% of income, thus reduce the burden of repayment.
Wright & Walters, 2010	USA	Secondary data survey from 2005 National Graduates Survey/ Compared the default rates of community college graduates (applied and technical programmes) and university graduates students (liberal arts).	Graduates of community colleges are more likely to default within two years of graduation than graduates of bachelor level university programmes. Default rates vary by field of study. Graduates of liberal arts programmes are more likely to default than graduates of more applied and technical programmes.

Notes: (i) Place (blank) refers to literature review paper  
Source: Developed by researcher for current study

## 2.5 Attitude Definitions

The term ‘attitude’ refers ‘to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question’ (Ajzen, 1991, p. 188). Moreover, attitude refers to value, ideals, standards, opinions, treatment of understanding, judgment, practice or acts, and ritualised acts (Hart, 1927; Bain, 1928). In most cases the meaning of attitude is implicit rather than explicit: implicit means ‘implied’ rather than expressly stated. It was further stated that attitude may result in any number of different kinds of action (May & Hartshorne, 1927), and may also be categorised as verbal responses, opinions and reasons; however, there is no specific scientific explanation of explicit behaviour (Bain, 1928). Notably, the definitions and main criteria of attitude based on different research domains are shown in Table 2.3.

Table 2.3: Definitions of Attitude based on Research Domains

Research Domains	Definitions	Related References
Education	Attitude refers to the desirable outcome of education.	Symonds, 1925
Sociology	Attitude means good or desirable behaviour. Attitude does not have value as a scientific term. It is non-normative, objective, descriptive term.	Bain, 1928
Psychology	Attitude is the subjective reaction to a value. Combination of an attitude and a value (It is never be attitude or a value alone).	Eagly & Chaiken, 1993

Source: Developed by researcher for current study

Attitude can be classified as being either normal or abnormal (Bain, 1928). Normal attitude is a way of acting which is similar to a value, whilst an abnormal attitude is a way of acting which is contrary to a value. As an example, abnormal attitude considers the same action of ten people as owing potentially to ten different attitudes. In most cases, the opinion or value could be substituted for attitude without changing the meaning.

A person’s attitude towards an object is determined primarily by beliefs considered most important to him (Fishbein & Ajzen, 1975; Miniard & Barone, 1997). However, it is impossible to obtain a precise measure which determines an individual’s

attitude; this is owing to the fact that beliefs may vary from person to person. An approximation can be obtained by considering a few beliefs. Ajzen (1991) assumes that attitudes are linked to, and based upon, beliefs and the evaluative responses associated with such beliefs. Moreover, Ajzen & Fishbein (1980) further conclude that evaluative meaning arises spontaneously and certainly, owing to the fact that beliefs are formed concerning a particular object. Each belief associates the object with a certain attribute which is embedded within context, culture and memory.

Furthermore, attitude has been measured with the use of tools of scientific observation and measurement, such as logic and mathematics (May *et al.*, 1927). Empirical evidence has thus far confirmed the complex nature of attitude, owing to the fact that it has multiple characteristics—each of which can be interpreted altogether or separately in order to describe a human being. These characteristics refer commonly to some hypothetical instinctive, mental, emotional, latent, inhibited and active in the response (May *et al.*, 1927). Psychologists describe seven ways in which the term attitude is used: namely great organic drives (motives), muscular set, generalised conduct, neural set or readiness to adjust, emotional concomitant (associated) of action, feeling concomitant (associated) of action and accepting or rejecting verbal responses (Symonds, 1925).

## **2.6 Theories of Attitude Research**

Theory can be defined as a coherent set of general propositions used to explain the apparent relationships amongst certain observed phenomena. Theories allow generalisations beyond individual facts or situations (Zikmund, 2003, p. 41). Furthermore, a theory is a fact-based framework for describing a phenomenon, presenting a concept or idea which is testable based upon a hypothesis and further supported by evidence. There are several theories relating to attitude research; those usually applied in researches are the Self-perception Theory (Bem, 1972), Cognitive Dissonance Theory (Festinger, 1962), Attribution Theory (Graham, 1997), Theory of Reasoned Action (Ajzen & Fishbein, 1975) and Theory of Planned Behaviour (Fishbein & Ajzen, 1980).

The Self-perception Theory posits that people decide on their own attitudes and feelings from watching themselves behave in various situations. This theory explains that people develop their attitudes by observing their own behaviours (Bem, 1972). Moreover, the Cognitive Dissonance Theory proposes that people have a motivational drive to reduce dissonance (difference) by changing their attitudes, beliefs, and behaviours, or by otherwise justifying or rationalising their own attitudes, beliefs, and behaviours (Festinger, 1962), whilst the Attribution Theory is concerned with where individuals place responsibility for incident (Graham, 1997). Importantly, people attribute the behaviour of others or themselves (self-attribution) with something else.

The Theory of Reasoned Action and the Theory of Planned Behaviour are widely used in attitude-explaining studies in many different areas/fields relating to attitude and behavioural research. They serve as the basis for explaining how attitude research is formed and accordingly developed.

### 2.6.1 Theory of Reasoned Action (TRA)

The Theory of Reasoned Action was introduced by Fishbein & Ajzen in 1975, whereby it was explained individuals' social behaviour is motivated by his/her attitude towards the behaviour and the subjective norms (see Figure 2.2). This theory has received considerable attention in the literature (Sarver, 1983). Moreover, the Theory of Reasoned Action is concerned with the variables of consciously intended behaviours, and measures behavioural intention as the prediction of actual behaviour (Manstead *et al.*, 1983). As the principal predictor of behaviour, behavioural intention is considered to be the motivation necessary to engage in a particular behaviour: the more one intends to engage in a behaviour, the more likely its performance.

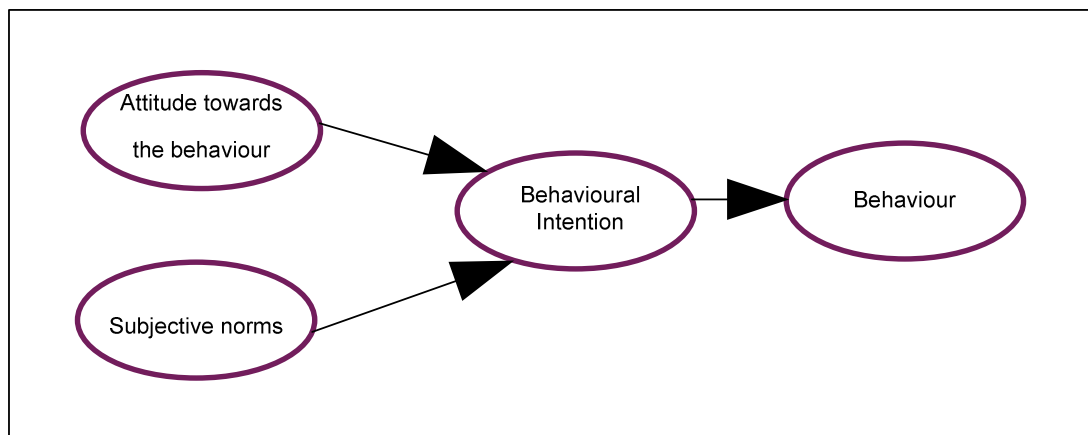


Figure 2.2: Diagrammatic View of Theory of Reasoned Action

The main purpose of TRA is to understand the motivational influences on behaviour, which can be explained as follows: if people have a positive attitude and they think others want them to perform the behaviour (subjective norms), this will ultimately increase their intention; thus, they are more likely to perform the behaviour. The first antecedent of intention—namely attitude—is conceptualised as overall positive or negative evaluations of behaviour. Attitude is the degree to which the performance of the behaviour is valued positively or negatively (Ajzen, 2006). The second antecedent of intention—namely subjective norms—is defined as the perception of general social pressures from others to perform or not to perform a given behaviour (Ajzen, 1991, p. 188). A high correlation of attitudes and subjective norms to behavioural intention—and subsequently to behaviour—has been confirmed in many studies (Hornik, 2007; Chang, 1998; Langdridge *et al.*, 2007). Intention is an indication of a person’s readiness to perform a given behaviour whilst the behaviour is the manifest, observable response in a given situation with respect to a given target (Ajzen 2006).

Moreover, several quantitative and narrative reviews have thus far provided support for use of the TRA in the prediction of a number of social behaviours (Sheppard, *et al.*, 1988). However, as Ajzen himself concedes, ‘The Theory of Reasoned Action was developed explicitly to deal with purely volitional behaviours’ (Ajzen, 1980, p. 127), and only predicts usefully a narrow range of behaviours. Volitional behaviour means the choice of the behaviour carried out via conscious, personal choice—and is therefore not based on external principles. Ajzen (1980, p. 132); hence, an extension to the Theory of Reasoned Action is proposed: ‘a conceptual framework that addresses the problem of incomplete volitional control’. This extended Theory of Reasoned Action has come to be known as the Theory of Planned Behaviour.

### **2.6.2 Theory of Planned Behaviour (TPB)**

The Theory of Planned Behaviour describes that an individual’s performance of certain behaviour is determined by her/his intention toward that behaviour. This theory associates attitudes and behaviour, and is known to be one of the most predictive persuasion theories (Ajzen & Fishbein, 1980). Notably, the theory has been applied to various studies of the relations amongst beliefs, attitudes, and behavioural intentions, as

well as behaviours in various fields. It was introduced owing to the fact that there were arguments stating that intention will lead subsequently to an actual behaviour. In order to gather a deeper understanding in this regard, intention is determined by attitudes, subjective norms, and perceptions concerning one’s own ability to successfully engage with the behaviour (Ajzen, 1991).

In other words, attitude towards the behaviour, subjective norm, and perceived behavioural control, all lead subsequently to the formation of a behavioural intention. Attitude is the degree to which performance of the behaviour is positively or negatively valued (Ajzen 2006), whilst Subjective Norms are the perceived pressures ‘to perform a behaviour that comes from observing what important others say or do’ (Fishbein & Ajzen, 1975, p. 304). Perceived behavioural control is defined as people’s perceptions of their ability to perform a given behaviour (Ajzen, 2006). The perceived behavioural control component—as introduced in this theory—works in parallel with attitudes and subjective norms as an antecedent of intention (see Figure 2.3).

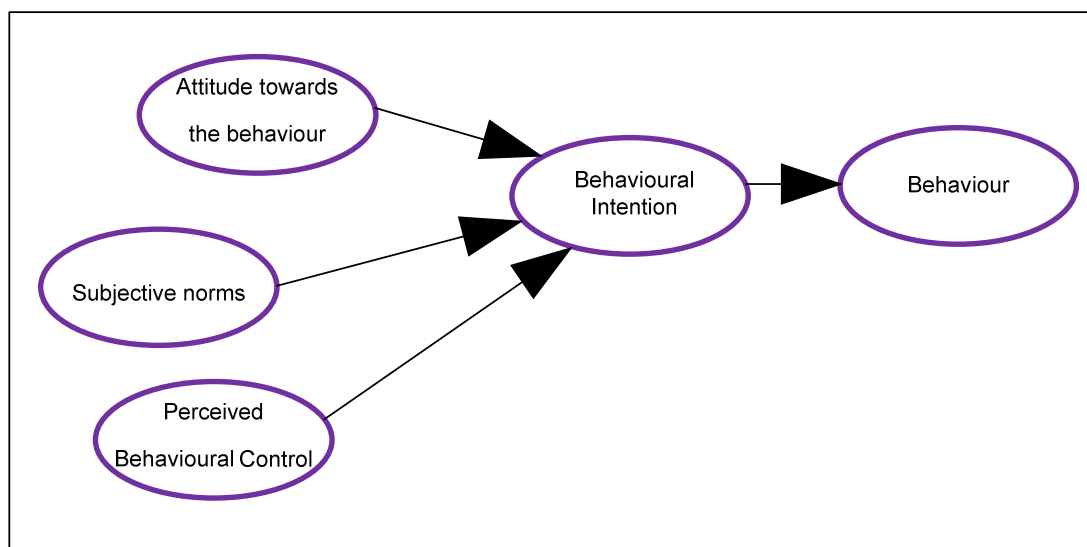


Figure 2.3: Diagrammatic View of Theory of Planned Behaviour

Numerous researches have illustrated the overall usefulness of the TPB in predicting a wide range of intentions and behaviours (Ajzen, 1991; Conner & Armitage, 1998; Conner & Sparks, 1996; Godin & Kok, 1996; Sparks, 1994; Pavlou & Fygenon, 2006; Ravis *et al.*, 2010; Lapple & Kelley, 2010; Hardeman *et al.*, 2010). For example, the Theory of Planned Behaviour has been used in studies with the purpose of predicting the performance of intention and behaviour, such as predicting user intention

to avoid caffeine (Madden *et al.*, 1992), intention to use a new software (Mathieson, 1991), intention to perform breast self-examination (Young *et al.*, 1991), intention to choose a career (Vincent *et al.*, 1998), intention to choose university studies (Bean & Eaton, 2000), intention to stop smoking (Norman *et al.*, 1999); intention to engage in recycling (Taylor & Todd, 1995), and taxpayer compliance (Bobek & Hatfield, 2003).

The Theory of Planned Behaviour has become the most influential and popular of conceptual frameworks for the study of human action (Ajzen, 2001a; 1991). This theory was selected for this study in an attempt to capture incomplete volitional aspects of behaviour—known as perceived behavioural control—which is not typically associated in the Theory of Reasoned Action (Fishbein & Ajzen, 1975). Moreover, the Theory of Reasoned Action is not well-equipped to predict situations in which individuals have low levels of volitional control; therefore, this study employed the Theory of Planned Behaviours so as to explain the research model. Furthermore, although the Theory of Planned Behaviour has been used in many studies to investigate the influence of attitudes towards a range of social and personal behaviours, TPB has not yet been applied in an attempt to study attitude in the context of educational loan. The details on how TPB explaining the relationships in the model are discussed in detail in Chapter Three.

## **2.7 Research Gaps**

This intensive review of the literature shows a number of directions for further study in the field of educational loans.

### ***2.7.1 Attitude towards Educational Loan Repayment***

Previous studies have thus far established that attitude can predict debt repayment (Livingstone & Lunt, 1992; Davies & Lea, 1995; Flint, 1997). Furthermore, a study carried out by Abu Bakar *et al.* (2006) in one public university in Malaysia amongst first-, second- and third-year undergraduate students has determined that, overall, students have negative attitudes toward loan repayment (Ismail *et al.*, 2010). Although the study was conducted in Malaysia, it was not discussed rigorously and thoroughly, nor was it analysed deeply in consideration of students' attitude on the intention to repay loan in the context of educational loan (Ismail *et al.*, 2010). In short, there is a



lack of understanding concerning educational loan repayment or default caused by students' attitude and factors affecting students' attitude.

### **2.7.2 Model**

Previous researches highlight knowledge concerning loan agreements in the context of educational loans (Volkwein *et al.*, 1998; Abu Bakar *et al.*, 2006). However, no research thus far investigates specifically how students perceive loan agreements, such as through helping students to better understand the impacts of loan repayment in their lives. Previous studies also discuss parental contributions, such as parents' income and parents' education, and the effects on their children's (students') education and loan repayments (Steiner & Teszler, 2003; Dynarski, 1994; Volkwein & Szelest, 1995; Greene, 1989). However, there is no study which investigates specifically how parents influence students' attitude towards loan repayment.

In addition, previous studies have established that students' awareness towards education debt has been being influenced by their peers, friends, professionals (Flint, 1997; Thein & Herr, 2001) and media in general (Dynarski, 1994). As of date, there has been no thorough investigation on the ways in which media—such as such as newspapers, television, radio and the internet—influence awareness towards loan repayment issues. Other important factors include students' perceptions of impacts of loans following graduation, all of which have been found in the previous studies to delay an educational loan repayment; however, thus far, no study has examined the link between perceptions concerning the impact of loan following graduation with students' attitude towards loan repayment. Furthermore, there is so far no clear conceptual model which integrates all of the aforementioned factors.

### **2.7.3 Theory**

The prediction of education debt repayment has been examined by the Human Capital Theory, the Lifecycle Theory, the Ability to Pay Theory, and the Theory of Public Subsidy (Flint, 1997; Volkwein & Szelest, 1995). However, most previous studies—specifically those on attitude—failed to consider any theory in their research (see Table 2.2). After carrying out an intensive review on literature relating to attitude towards education debt, the researcher has accordingly established a lack of knowledge

concerning the underlying theories in terms of explaining the attitude and relating factors, in the context of educational loan repayment.

#### **2.7.4 Mediator**

Past studies have so far not explored various important mechanisms—such as mediating effects—which may contribute to affecting students' attitude model. Omitted mediating variables may ultimately change the strength or overall direction of the relationships determined. With this in mind, the investigation of mediating effects will help to achieve a deeper understanding as to why the hypothesised relationships between one construct and another are not as expected. Similarly, studying the mediating effects enhances understanding in terms of the constructs investigated owing to the variance of constructs potentially increasing or decreasing, and may therefore be different compared with testing alongside the direct relationship.

#### **2.7.5 Scale**

Previous studies have thus far not yet tested measurement scales developed in a Western context alongside other non-Western countries (see Table 2.2); therefore, the measurement scale lacks external validity to non-Western context. Importantly, although the study exists in a non-Western context—particularly in Malaysia, only measurement scales/items for two constructs—namely perceptions in relation to the impacts of loans following graduation and students' attitude towards loan repayment—have been tested, analysed and verified (Abu Bakar *et al.*, 2006); however, the scales still need to be refined, although there are no measurement scales/items representing four constructs—namely parental influence, awareness of loan repayment issues created by the media, perceptions towards loan agreement and intention to repay loan. Essentially, the measurement scales are important to be refined as students may have different reasons for not repaying their loans, and some factors may appear important to only a specific type of student. This issue relates to different reasons and different types of student considered important to the study. Notably, extensive studies require a clear knowledge and understanding concerning the constructs in the students' attitude model, as it is believed that this will facilitate the development of valid and reliable measurement scales; thus, it can be used to test to broader populations and context. Moreover, the findings are also more meaningful if the measures (items) are one-dimensional, as suggested by Anderson & Gerbing (1988).

### ***2.7.6 Methodological Approach***

The methodological approach has been employed in previous work on education debt, either employed qualitative approach (Serrem, 1998) or mostly quantitative approach, i.e. Dowd & Coury (2006); Abu Bakar *et al.* (2006); Baum & O'Malley (2003) and Cofer & Somers (2000). However, only one study on loan defaulters—that carried out by Christman (2000)—has been found as having applied both quantitative and qualitative (interviews) approaches. No previous study has combined focus groups, interviews and questionnaire survey to obtain the data, as well as thorough analysis.

### ***2.7.7 Study Setting***

Notably, the majority of studies have been conducted in Western countries—particularly in the USA, i.e., Monteverde (2000); Flint (1997); Christman (2000); Baum & O'Malley (2003); Eckel *et al.* (2007). Notably, there has been a very limited study in a non-Western context concerning this topic. Accordingly, in order to ensure the generalisability and applicability of the theory, model, constructs and measurement scales in different contexts, an empirical research should be expanded to other countries.

## **2.8 Research Opportunities**

### ***Students' attitude towards educational loan repayment***

Firstly, this study is an attempt to investigate the attitude as a focal construct, to have impact on the intention to repay loan. Furthermore, this study also examines whether or not perceptions that loan repayment will affect the quality of life after graduation, perceptions towards loan agreement, parental influence and awareness of loan repayment issues created by the media are antecedents of students' attitude.

### ***Comprehensive Model***

Secondly, this study intends to examine the roles of students' attitudes toward loan repayment and the intention to repay loan, students' perceptions that loan repayment will affect the quality of life after graduation, students' perceptions towards loan agreement, parental influence, and the awareness of loan repayment issues created by the mass media, as well as how these factors integrate each other into one model.

### ***The Theory of Planned Behaviour***

Thirdly, this study utilises the Theory of Planned Behaviour, during the course of which the students' attitude model is generated. By introducing the theory in an attempt to explain the constructs relationships in the model—as well as exploring different approaches than usual—we will also be able to acquire a better understanding on the proposed model, therefore contributing to the diversity of the theory utilised to measure students' attitude and its antecedents, as well as the intention to repay the loan.

### ***Mediating Effects***

Fourthly, this study intends to investigate the mediating effects between one construct and another in the proposed research model, namely students' attitude model, and to thereby enhance understanding on the constructs investigated, because the variance of constructs may increase or decrease, and may therefore be different between the constructs in the model.

### ***Scale Assessment***

Fifthly, this study intends to investigate in detail the measurement scales for each construct proposed in the students' attitude model. The thorough and rigorous process involved in the scale development includes the various assessments. Moreover, the relationships between items and constructs will be more effectively verified, including the purification and validation of the scales, in order to match different techniques with the sample so that the findings of this study can be generalised to broader populations and countries.

### ***Multiple Methodological Approach***

Sixthly, this study enhances the methodological approach by employing multiple methods, namely focus groups, semi-structured interviews, questionnaire survey, and structured interviews, all of which complement each other in an attempt to improve the quality of findings. Moreover, for the first time, this study employs robust techniques—namely Exploratory Factor Analysis (EFA) and Structural Equation Modelling (SEM)—in an attempt to test the measurement properties and accordingly test and validate the proposed model. In addition, also for the first time, Nvivo 8.0 has been utilised to extract items in the qualitative findings.

### ***Study Setting in Non-Western Country***

Finally, this is the first detailed study conducted in a non-Western context in order to establish a deeper understanding of the constructs developed in Western studies applied in a non-Western country. This study opens up the possibility to facilitate the identification of new constructs and items, subsequently integrating as a model based on data provided by Malaysian students in the public universities.

## **2.9 Summary**

This chapter began with an overview of global educational loans. This was followed by essential definitions of repayment and defaults. Subsequently, the factors contributing to educational loan defaults and repayment include economic, sociological and psychological contexts—all of which have been presented. In an economic context, the amount of loan borrowed, the repayment type, as well as unemployment and income uncertainties have all been discussed. In relation to the sociological and psychological context, various areas have been considered, including students' background characteristics, institutional characteristics, academic experiences, parents' income and education, knowledge about loan agreement, awareness of education debt, perceptions towards loan repayment, and attitude towards education debt have been discussed. In the following section, definitions of attitude. Next, a summary of theories on attitude research were then presented, including the Theory of Planned Behaviour, which is the theory adopted as the framework for this study. Finally, gaps in the research are highlighted, followed by opportunities/contributions made by this study. The next chapter is related to the theoretical model and hypotheses.

## **Chapter Three: Research Model and Hypotheses**

### **3.1 Introduction**

This chapter highlights the research model and hypotheses. The chapter begins with the introduction in Section 3.1, followed by Section 3.2, which presents the definition of each construct to be used throughout this study. The Theory of Planned Behaviour (TPB) is described in Section 3.3. In Section 3.4, the focal constructs of the study, namely students' attitude towards loan repayment, are discussed, followed by the consequences of students' attitude, namely intention to repay loan. The antecedents of students' attitude comprises the perceptions that loan repayment will affect quality of life following graduation, perceptions towards loan agreement, parental influence and awareness of loan repayment issues created by media are presented in Section 3.6. This is followed by the proposed model and the hypotheses are discussed in Section 3.7. The final section summarises the chapter.

### **3.2 Constructs Definitions**

This section discusses the construct definition and the term used throughout this study.

#### ***Students' Attitude towards Loan Repayment***

Attitude is defined as the way in which a person views something or tends to behave towards it, often in an evaluative way (World English Dictionary Online, 2009). In the literature, students' attitudes towards loan repayment refers to students' positive or negative attitude, which could subsequently affect their tendency to repay or default on loans (Gross *et al.*, 2009). The construct used throughout this study is students' attitude.

#### ***Intention to Repay the Loan***

Behavioural intention is an indication of a person's readiness to perform a given behaviour (Ajzen, 2006). Intention can be used to predict the actual behaviour (Ajzen, 1991, p. 181). For example, students will have a greater intention to make a loan repayment if they have a positive evaluation of loan repayment. In this study, intention to repay the loan measures the extent to which students have the intention to repay their educational loan. The construct used throughout this study is intention.

### ***Parental Influence***

In the literature, influences by parents are identified as being either direct or indirect (Davies-Kean, 2005). Notably, direct influence relates to parents' involvement in children's decisions, whilst indirect influence means children's behaviour is influenced by their observation towards their parents' behaviour. Influence in this context means the power to have an effect on people. 'Direct' is defined as 'going in a straight line towards somewhere or someone', whilst indirect is defined as 'happening in addition to an intended result, often in a way that is complicated or not obvious' (The Cambridge English Dictionary Online, 2009). In this study, parental influence refers to a parent's role, as a guardian, to influence their children on loan repayments. The construct used throughout this study is parental influence.

### ***Perceptions that Loan Repayment Will Affect Quality of Life after Graduation***

The construct of perceptions that loan repayment will affect quality of life after graduation refers to students' perceptions on loan repayment that can influence their future decisions. Notably, decisions can relate to job options, such as when to buy a car, when to get married, when to have children, when to move from their parents' home, and when to buy a house (Baum & O'Malley, 2003, p. 17). In this study, the construct used for perceptions that loan repayment will affect quality of life after the graduation is perceived quality.

### ***Awareness of Loan Repayment Issues Created by the Media***

Awareness is defined as 'the knowledge that something exists, or the understanding of a situation or subject at the present time based on information or experience' (The Cambridge English Dictionary Online, 2009). In the literature, awareness of loan repayment issues created by media refers to information disseminated and received by students through a number of various different media channels (Dynarski, 1994, p. 56). The focus of this study, therefore, is placed on information received through electronic and printed media, such as television, radio, newspaper and websites. This construct is referred to as media awareness.

### ***Perceptions towards Loan Agreement***

Loan agreement refers to contracts between the organisation as a lender and the student as a borrower. The loan agreement contains the requirements relating to loans, as well as loan repayment. In this study, the perceptions towards loan agreement refer to how students perceived loan agreement will impact their attitude and themselves in the future. The name of this construct in this study is perceived agreement.

The following section describes the Theory of Planned Behaviour, which describes the relationships in the model developed for this study.

### **3.3 Theory of Planned Behaviour (TPB) Explaining Model Relationships**

The Theory of Planned Behaviour focuses on factors which determine individuals' actual behavioural choices. This theory provides a comprehensive framework on three different factors: attitude towards the behaviour, subjective norms, and perceived behavioural control (see Figure 3.1). Moreover, this theory provides a useful conceptual framework for explaining the relationship between the constructs of behavioural patterns (Fishbein & Ajzen, 1975).

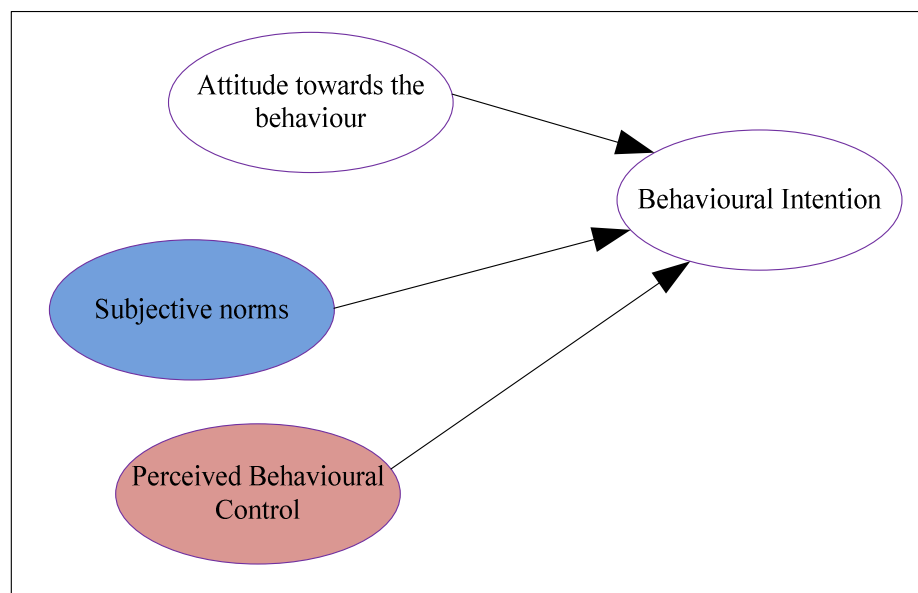


Figure 3.1: Diagrammatic View of the Theory of Planned Behaviour  
Source: Adapted from Ajzen, 1991.



The Theory of Planned Behaviour (TPB) is based on the principle of understanding the person's choice of behaviour and further examining the person's overall intention relating to such behaviour (Ajzen, 1991; Ajzen & Madden, 1986). There are three main variables in the Theory of Planned Behaviour: attitude, subjective norms and perceived behavioural control. Attitude refers to the strength of beliefs that the person holds in consideration of a particular behaviour, whilst subjective norms refer to the perceived social pressures associated with important persons in the individual's life which influence him/her to perform the behaviour. In other words, attitude refers to the degree to which a person has a favourable or unfavourable evaluation or appraisal of the behaviour in question (Ajzen & Madden, 1986, p. 454). On the other hand, subjective norm is the perceived pressure to perform a behaviour stemming from the observation of what others say or do (Ajzen, 1991, p. 188).

Perceived behavioural control refers to individuals' belief that they have control over certain factors which subsequently allow them to perform the behaviour (Ajzen, 2002, p. 666). Perceived behavioural control also is defined as people's perceptions of their ability to perform a given behaviour (Ajzen, 2006). Perceived behavioural control plays a fundamental role—along with attitude and subjective norms—as co-antecedents of intention. Notably, empirical evidence suggests that perceived behavioural control adds meaningful improvements in terms of predicting intentions (Ajzen, 1991), i.e. the more resources and opportunities someone believes they possess and the fewer obstacles or obstruction they anticipate, the greater their perceived control is likely to be. Furthermore, perceived behavioural control concerns the presence of factors potentially facilitating or obstructing the performance of behaviour. The perceptions of the behavioural control component can influence intentions, thereby affecting actual behaviour or affecting directly the actual behaviour; however, studies relating to this theory are usually more interested in the perceptions of behavioural control and how it may influence actual behaviour through intention (Ajzen & Madden, 1986, p. 459).

According to the theory, should there be the presence of a number of factors—i.e. a strong attitude, significant approval from others, notable capabilities and strong intentions—the more likely the behaviour is to be performed. For example, if students hold positive attitudes concerning loan repayments and have strong family support, and also if students have the capability—such as the knowledge and resources required to

make the repayment—it is then considered likely that they will form the positive intention towards repayments, thus making repayments. As a general rule, the more favourable the attitude towards performing a behaviour, the greater the perceived social approval; and the easier the performance of the behaviour is perceived to be, the stronger the behavioural intention, as a result they will perform the behaviour. This is further explained in the Table 3.1.

Table 3.1: Theory of Planned Behaviour components

	<b>TPB components</b>	<b>Parameter</b>	<b>Description</b>
1.	Attitude	<ul style="list-style-type: none"> <li>• Positive (or negative) attitude</li> </ul>	An attitude towards behaviour is recognized as a person's positive (or negative) evaluation of a relevant behaviour (Ajzen, 1991). It is composed of a person's most important beliefs regarding the perceived outcomes of his behaviour.
2.	Subjective norms	<ul style="list-style-type: none"> <li>• Parents</li> <li>• Family</li> <li>• Peers</li> <li>• Mass Media</li> <li>• Professional bodies</li> </ul>	A subjective norm refers to a person's perceptions and influences of whether his behaviour is approved or disapproved by others (Ajzen, 2006).
3.	Perceived behavioural control	<ul style="list-style-type: none"> <li>• Person's perceived barriers</li> </ul>	The perceived behavioural control describes the perceived difficulty level of performing the behaviour (Ajzen, 1991) —reflecting both past experience as well as anticipated barriers.
4.	Behavioural Intention	<ul style="list-style-type: none"> <li>• Person's intention to perform behaviour</li> </ul>	Intention is an indication of a person's readiness to perform a given behaviour (Ajzen 2006). Intention refers to intention to perform the behaviour influenced by his own attitude, subjective norms, and his perceived behavioural control.

Source: Developed by researcher for current study

Previous studies suggest that the attitude and subjective norm components are not as independent as the theory predicts. For instance, the subjective norm was found to influence attitude in the study of the tendency to use pirated software (Chang, 1998), consumers' purchasing intention on the internet (Lim & Dubinsky, 2005), and the intention to use digital piracy (Al-Rafee & Cronan, 2006). Quite simply, the overall conception in those studies suggests that social pressures influence fundamentally

individual attitude. In the case of perceived behavioural control, it only affected behavioural intentions. Notably, to the best of the researcher's knowledge, no study has so far established perceived behavioural control as having an effect on attitude (Ismail *et al.*, 2010).

In the context of educational loans, prior research has proposed several factors as for why students do not repay their loans. These factors include, for example, borrowers' background, academic experiences, institutional characteristics, as well as parents' income and education. Amongst those factors, little research has so far been carried out on students' attitude as a main reason for default. Currently, no study has been conducted with the help of a composite framework with the focal construct of attitude so as to determine the reasons behind the defaults. A study by Abu Bakar *et al.* (2006) sought to address the effect of attitude, and perceptions towards educational loan and loan repayment amongst students who borrowed government loans in Malaysia. However, they only studied the constructs individually that affect loan and loan repayment. In this study, we explore and undertake a thorough analysis of the antecedents of attitude and the impact of attitude on the intention to repay loan by developing a model to investigate whether or not such factors are inter-related. For the purpose of this study, TPB has been adopted as a guide to explain the constructs and the relationships between such in the context of educational loans.

The Theory of Planned Behaviour has been selected as it has predictive power of behaviour (Madden *et al.*, 1992; Chang, 1998). In this study, we rely on Ajzen's (1991) Theory of Planned Behaviour, which offers a comprehensive theory; however, we make modification on the antecedents, consequence of students' attitude, and a structure for extending prior studies. Ajzen 'allows for correlation between the constructs but does not explicitly discuss the details' (Bobek *et al.*, 2005, p. 9; 2007, p. 97). This study does not, however, test the Theory of Planned Behaviour, as such; rather, this study is an application of the Theory of Planned Behaviour in an attempt to investigate the students' attitude, its antecedents, and the impacts of students' attitude on the intention to repay the loan, as well as how they integrate as a model. This is because the Theory of Planned Behaviour offers the possibility of uncovering potential influential factors that have not been explored previously (Bobek *et al.*, 2007; p. 97).

The advantage of the Theory of Planned Behaviour also allows behavioural intentions and actual behaviours to be measured separately (Ajzen, 1991). Importantly, the measurement of behavioural intentions and behaviour simultaneously is not a true test of predicting future behaviour, but rather helps in terms of predicting current behaviours. Owing to the existence of the time gap between intentions and behaviour, the relationship between these two factors could be disturbed by certain underlining factors. Accordingly, we should address the issue one at a time, i.e. the actual behaviour or the intentions. In this study, we investigate students' attitude and its antecedents, which influence the intention to repay the loan. This study fulfils the gaps whereby the results should help to predict in one aspect on factors that contribute to educational loans repayment.

Attitude in the context of this study refers to students' positive and negative attitude towards loan repayment. In the educational loan context, several empirical studies provide support subjective norms, such as parents, peers, friends, media and professional bodies (Dynarski, 1994; Flint, 1997). Similarly, subjective norms in this study only refer to parental influence and media awareness, whilst perceived behavioural control in this study refers to perceived quality and perceived agreement.

### **3.4 Focal Construct: Students' Attitude towards Loan Repayment**

Students may have various different reasons for not honouring their loan repayment programme. Attitude has been found to be one of the key reasons associated with non-repayment. With this in mind, the literature review carried out in the second chapter indicates that little research has centred on attitude in the context of educational loans. This is the reason for which attitude has been selected as the focal construct in this study. Indeed, attitude is a complicated concept as the use of attitude depends on the contexts, nature of the study and settings. Notably, therefore, in this study, the students' attitude model is examined based primarily on the modified Theory of Planned Behaviour. We will accordingly consider the process by which the students' attitude model is generated using the Theory of Planned Behaviour.

Attitude has long been acknowledged to play major role in social psychology (Fishbein & Ajzen, 1974, p. 59). Moreover, attitude has been found to be the most

significant factor influencing behavioural intention (Al-Rafee & Cronan, 2006). In a review paper and analysis of 30 studies by Trafimow & Finlay (1996, p. 825), it was found that attitude was the best predictor of behavioural intention in all but one study.

Given the discussions in the literature review chapter in terms of the factors affecting loan default and the alarming rate of default, this study has carried out an in-depth research examination towards borrowers' attitude towards loan repayment. Factors influencing attitude are identified from various areas (Al-Rafee & Cronan, 2006). Essentially, this study is significant because it focuses on loan repayment, as well as investigating the antecedents of attitude towards loan repayment (Al-Rafee & Cronan, 2006); Ismail *et al.*, 2010). On the other hand, thus far, attitude has been considered mainly as an independent variable, in the present study, and is examined as a dependent variable (Al-Rafee & Cronan, 2006; Ismail *et al.*, 2010).

### **3.5 Consequences of Students' Attitude towards Loan Repayment: Intention to Repay Loan**

Attitude is identified as being associated with behavioural intention, whereby intention leads to actual behaviour (Ajzen, 1991). The Theory of Planned Behaviour is adopted in order to investigate the underlying processes, thereby leading to the decision to pay the loan. The Theory of Planned Behaviour states that the immediate antecedent of the behaviour decision is intention. Intention, in turn, is predicted by the extent to which a student evaluates loan repayment, either positively or negatively, and also through social pressures, such as family, parents and media, for example. Importantly, students will be more inclined to make repayments if they have a positive rather than negative evaluation of loan repayment. Furthermore, they will be more inclined to make repayments if they have experienced positive social pressure from others to do so. Past studies have also established that behavioural intention is a powerful antecedent and a predictor of performing actual behaviour (Davis, 1989; Chen *et al.*, 2007).

There are a number of different factors predicting repayment behaviours, mostly based on the characteristics of individual borrowers (Volkwein & Szelest, 1995; Christman, 2000). A study carried out by Livingstone & Lunt (1992) states that the predictor of debt and debt repayment is attitude. However, in a Western context, the

relationship between attitude and behaviour was found to be weak (Volkwein & Szelest, 1995; Baum & Schwartz, 1988; Livingstone & Lunt, 1992).

Furthermore, an individual's behaviour is determined by his or her own behavioural intentions in terms of performing the given behaviour. Behaviour is a function of intentions, and intention is an indication of a person's readiness to perform a given behaviour. Notably, intention is assumed to capture motivational factors that influence behaviour (Ajzen, 1991). Moreover, attitude has been shown to affect intention significantly (Al-Rafee & Cronan, 2006; Ismail *et al.*, 2010). Accordingly, it is recognised that, if attitude can be changed, intention may be influenced subsequently. Literature concerning attitude change exists (Al-Rafee & Cronan, 2006) and, if applied to educational loan repayment, can prove to be an excellent selection for adoption in an attempt to improve loan repayment. It is noteworthy to highlight that one of the major components of the Theory of Planned Behaviour is attitude, which is generally agreed upon as being the best predictor of intention (Allport, 1935; Al-Rafee & Cronan, 2006). According to Theory of Planned Behaviour, the stronger the person's attitude, the stronger the intention and, with this in mind, a hypothesis can be formulated in the following manner:

**H<sub>1</sub>:** The relationship between students' attitude towards loan repayment and intention to repay loan is positive and statistically significant.

### **3.6 Antecedents of Students Attitude towards Loan Repayment**

The proposed antecedents of students' attitude correspond with the Theory of Planned Behaviour. Subjective norm is the perceived pressure to perform a behaviour deriving from observing what others say or do (Fishbein & Ajzen, 1975). Moreover, subjective norm is an immediate variable of intention towards behaviour performance; it is the function of normative beliefs, representing the person's significant approval of behaviour (Shim *et al.*, 2001). In addition, there is also evidence to suggest that subjective norms also influence attitude (Chang, 1998; Shimp & Kavas, 1984; Al-Rafee & Cronan, 2006), owing to the notion that one's attitude towards a specific behaviour is likely to be influenced significantly by others (Bommer *et al.*, 1987).

Subjective norms can be related to socialisation agents—namely parents, peers, and mass media. These socialisation agents are identified as having an influence on the psychological, emotional and moral development of young people. Moreover, the socialisation agent influences students' interactions with parents and peers, as well as their exposure to advertising in mass media (Frankenberger & Sukhdial, 1994). Importantly, socialisation is an inherently cultural process whereby children—through insight, training and imitation—acquire the habits and values matched with adaptation to their culture (Baumrind, 1980, p. 640). Parental socialisation is an adult-initiated process which fundamentally assists children in developing habits and values which are matched with their existing cultural environment (Baumrind, 1980).

Amongst many factors potentially influencing young people to make repayments on their loan, a seemingly likely one is that of the mass media: young audiences encounter substantial content related to loans across virtually all types of media. News relating to loan defaulters continues to appear in media that attract a large number of young readers, including their parents (Dynarski, 1994). The content in mass media influences the attitudes and behaviours of young people, which has been proven in past research concerning smoking (Gunther *et al.*, 2006)—although this relies on the assumption that it works in the context of educational loan repayment. The role of parents and media in terms of placing pressure on students to change their attitudes will be highlighted in this study.

The successful performance of behaviour depends on a favourable intention and a sufficient level of perceived behavioural control (Ajzen, 2002). The perceived importance of the issue will have a direct effect on an individual's judgment (Al-Rafee & Cronan, 2006): for instance, if persons believe that they do not have adequate resources or opportunities to take on a particular behaviour, they are then unlikely to shape a strong intention to perform such a behaviour (Ajzen, 2002). In the current study, we therefore focus on students' perceptions that loan repayment will affect their quality of life following graduation, and students' perceptions towards loan agreement. If students consider these two factors seriously, the more likely this is to influence their commitment, attitude and their intention to honour repayment.

### ***3.6.1 Parental Influence***

Children have been significantly found to be influenced by parents' race and parents' savings patterns (Dennis, 1993; Churaman, 1992). Parents also influence their children in terms of financial decisions and higher education enrolment (Livingstone, 2003; Gillies *et al.*, 2001; Jones & Martin, 1999; Tomlinson, 1997). Parental knowledge in many issues also influences children in terms of the decision-making process (St. John, 2000; Olson, 1982). The influential relationship process exists when students work together with their parents in order to invest time and money for education (Cofer & Somers, 1999). Moreover, family resources are known to influence students' participation in higher education, which has tightened the financial link between parents and students (Christie *et al.*, 2001; Gillies *et al.*, 2001; Jones & Martin, 1999). A study carried out by Ionescu (2009) has established that parents' wealth only has minimal effects on enrolment in higher education.

Educational loans have become demanding and have subsequently caused hardships—not only for students but also for parents (Shea, 2000). Students have a sense of security if their parents support them financially during their studies. Moreover, parental contribution is closely associated with social class (Callendar & Kemp, 2000): owing to increasing education-related costs, students from high-income families are more likely to pursue higher study institutions, whilst students from non-high-income families are more likely to attend proprietary schools (The Institute for Higher Education, 2002). Moreover, it is further acknowledged that parents' income and the presence of two parents within the home are additional factors recognised as having a statistically significant association with a lower probability of default by students (Knapp & Seaks, 1992).

In the financing of college education for their children, it is clear that parents play the ultimate role of aid administrators. Moreover, family usually begin to plan for their children's finances between six months to a year prior to applying for loans (Dennis, 1993; Ismail *et al.*, 2010); therefore, the family's financial position must be considered in order to manage the increasing costs associated with education (Churaman, 1992; Ismail *et al.*, 2010). The role of parents is crucial and important so as to ensure that family income remains above family thresholds (Marks & McMillan, 2007; Volkwein *et al.*, 1998).



The parents' role contributes in the way that students can borrow collateral provided based on parental income (Fernandez *et al.*, 2001; Papagni, 2006; Ahier, 2000). Importantly, students have been 'forced' to take on paid employment (Callendar & Kemp, 2000; Smith & Taylor, 1999; McCarthy & Humphrey, 1995). Accordingly, parents who are concerned with their children's education subsequently provide collateral for their children in terms of education (Papagni, 2006). In addition, various student achievements depend on family resources (Galor & Zang, 1997; Haveman & Wolfe, 1995; Parish & Willis, 1993). Furthermore, parental involvement is considered to be important as there are various schemes requiring testing on the basis of parents' income as the entry point to enrol in higher education (Jackson, 2002; Ziderman, 2004; Ismail *et al.*, 2010). Moreover, the parents' financial situation is important as it is measured in such a way so as to guarantee their children's student loan (Chung, 2003). In Thailand, for example, family income ceilings are accordingly set for loan eligibility.

Parents with both financial and cultural resources often unconsciously give their children the best possible start to their adult lives (Reay, 1998). Parents influence their children directly through discussions and training (Ward *et al.*, 1977). Furthermore, young people who talk to their parents on a regular basis concerning negative habits are less likely to behave negatively when compared with young people whose parents do not talk to them on a regular basis (The Council on Alcohol and Drugs Houston, 2001). Moreover, it is considered that young people who engage in problematic behaviours often believe that their parents approve of such behaviours more so than young people who do not engage in such behaviours (Jessor & Jessor, 1977).

Importantly, attitude is learnt from family during childhood and is permanent. Essentially, it attributes primary influence to parents owing to the fact that their contact with their children begins earlier and is better sustained. Owing to weakening ties, parents and family currently assisting their children will experience financial difficulties, whereby older students are more likely to default than younger students (Woo, 2002). Furthermore, constant communication between parents and children play a key role in influencing the positive attitudes of children (Grolnick & Slowiaczek, 1994).

In a study of 242 college students, Joo *et al.* (2003) state that students whose parents often use credit cards are more likely to have positive attitudes toward credit card use, whereas students whose parents experience problems with using credit cards are more likely to have negative attitudes toward the use of credit cards (Borden, 2008). As such, family background may play an important role in young adults' attitudes and behaviours (Borden, 2008).

Furthermore, parents are also valuable sources of information and expertise (Reay, 1998; Giddens, 1973). Evidence from other research disciplines suggests that parents can have a positive impact on the development of their children's personalities, including attitude (Vandell, 2002). Such propositions can be formulated in the following manner:

**H<sub>2</sub>**: Parents have positive effects on the students' attitude towards loan repayment.

**H<sub>2b</sub>**: Parental influence is positively associated with the intention to repay the loan.

**H<sub>2c</sub>**: The relationship between parental influence and intention to repay the loan is mediated by students' attitude towards loan repayment.

### ***3.6.2 Perceptions that Loan Repayment Will Affect Quality of Life after Graduation***

The factors relating to perceptions, such as in the fact that loan repayment will affect quality of life after graduation—such as owning a home, getting married, career options, having a child, or purchasing a new car—are perceived by college students to be important in helping them to make good financial decisions whilst, at the same time, honouring their education loan (Abu Bakar *et al.*, 2006; Christman, 2000; Monteverde, 2000; Volkwein *et al.*, 1998; Volkwein & Szelest 1995).

Moreover, those students who are concerned about repaying their loans perceive the size of the loan as being influential in terms of when they should get married, have children, and purchase a new car (Hira *et al.*, 2000). Moreover, student debt affects the

capacity of graduates to own a home, have a family, and access private finance, such as mortgages, personal loans and credit cards (Maslen, 2003). However, in Australia, research shows that loan repayments have a negative impact on the decision to have children, but that there are no negative impacts so far determined in relation to moving from the parents' house, getting married and owning a home (Marks, 2009). Previous studies also state that college students who borrow for their studies affect their careers and lifelong decisions for years to come (Lamkin, 2004; Fossey, 1998).

Furthermore, the payment of the loan is associated with the failure to cope with a stressful life (Walker *et al.*, 1992; Livingstone & Lunt, 1992). If students are stressed as a result of outstanding debt, this can affect their perceptions towards life, which may result in the postponement of repayments (Tokunaga, 1993). In addition, it is noted that loan burdens can limit students' options when they graduate (Millett, 2003); however, a study of Pell Grant borrowers established that loan repayments do not have a significant impact on the probability of owning a home (Baum & O'Malley, 2003). Nevertheless, on the other hand, the loans owed by students carried forward upon graduation are considered to be a fundamental factor when considering career choices (Fox, 1992).

Notably, a negative attitude occurs when repayment obligations delay buying a house, buying a car, moving from parents' house, marriage postponement, and having children (Baum & Schwartz, 1988; Ismail *et al.*, 2010). In addition, loans cause students to delay having families, purchasing a house, and making other significant life decisions (Baum & O'Malley, 2003; Ismail *et al.*, 2010), such as purchasing a car (Ellen *et al.*, 1998), having children, moving out of their parents' home following graduation (Baum & Saunders, 1998; 2003; Abu Bakar *et al.*, 2006), as well as career choices (Millett, 2003). The consequence of debt accumulation upon graduation is an important factor affecting positive or negative attitudes (Abu Bakar *et al.*, 2006). This is a useful tool for predicting repayment (Abu Bakar *et al.*, 2006).

Student loans have also been the main source of finance amongst college students (Hira *et al.*, 2000; Abu Bakar *et al.*, 2006). Notably, students take risks by investing in higher education by taking a loan as lifestyle and career support are affected subsequently once students accumulate debt (Porter, 1999). Clearly, once students borrow, they have the obligation to honour repayments following graduation. Being

young graduates with high temptations and desires, and also owing to the fact that they are only just starting out in their new career, it is considered that there is a strong tendency to purchase so as to accommodate their lifestyle, which could delay loan repayment as a result. This behaviour takes place negatively owing to carrying debt loads (Field, 2006). Taking this notion into account, defaulting is primarily related to students' willingness and the ability to repay (Monteverde, 2000; Ismail *et al.*, 2010). Moreover, students actually have the obvious ability to repay, but nevertheless may choose not to do so (Flint, 1997).

Students remain persistent in their belief that higher education is a way of establishing satisfaction in life (Moore, 1995; Ismail *et al.*, 2010). However, the long-term impacts associated with debt need to be considered by students prior to any decision being made in relation to debt accumulation (McWade, 1996; Ismail *et al.*, 2010). Furthermore, students should also consider the planned personal lifestyle after graduation (Christman, 2000; Baum & O'Malley, 2003), and any unexpected situations that could influence future income or the ability to repay the borrowed amount (McWade, 1996; Ismail *et al.*, 2010). These hypotheses can be formulated in the following way:

**H<sub>3</sub>**: Perceptions that loan repayment will affect quality of life after graduation influences the students' attitude towards loan repayment.

**H<sub>3b</sub>**: Perceptions that loan repayment will affect quality of life after graduation influences the intention to repay the loan.

**H<sub>3c</sub>**: The relationship between perceptions that loan repayment will affect quality of life after graduation and intention to repay the loan is mediated by students' attitude towards loan repayment.

### ***3.6.3 Perceptions towards Loan Agreement***

A study in the US has revealed that borrowers lack knowledge concerning various aspects of student loans (Hira *et al.*, 2000; Ismail *et al.*, 2010). Furthermore, senior students are found to have better knowledge compared with first-year students (Abu

Bakar *et al.*, 2006). In addition, borrowers who are not prone to procrastination are considered less likely to default, perhaps owing to the fact that borrowers who are organised enough to follow through with schedules, etc. are also more able to handle repayment obligations (Woo, 2002; Ismail *et al.*, 2010). Furthermore, it is also noted that students may be either confused about their repayment obligations or may otherwise simply refuse to repay (Woo, 2002; Schwartz, 1999). Accordingly, it is noted that many students are relatively young, and are therefore without any long experience in terms of credit relationships. Importantly, knowledge concerning students' financial assistance seems to be quite limited (Woo, 2002; Schwartz, 1999). With this in mind, a survey of 3,500 high school graduates in California (Woo, 2002) and first-year post-secondary students was carried out in 1991, which reports that around half of the respondents were dissatisfied with their knowledge of student financial assistance (Schwartz, 1999).

Furthermore, a study carried out by Abu Bakar *et al.* (2006) shows that students who obtained good results in their studies—such as cumulative grade point average (CGPA) above 3.0—read loan agreements thoroughly; thus, this group has better knowledge concerning loan agreements than those who obtained poor results or a CGPA lower than 3.0. Moreover, those students who have obtained good results may also have the opportunity to get a better job with a higher income. Markedly, high-income contributes to a better quality of life, which can subsequently affect career and life decisions for years to come (Lamkin, 2004; Fossey, 1998).

Notably, even if a student has sufficient knowledge of loan agreement, they may not necessarily have positive perceptions towards the agreement. Importantly, many students are unaware of the details of their borrowing (Schwartz, 1999). Furthermore, some borrowers are confused about student borrowing, which may be related to the circumstances in which the lending agreement and the reasons for such occurs (Schwartz, 1999). The process of applying for and receiving student financial assistance is linked closely with the process of attending school (Schwartz, 1999). Unlike consumer loans, student loans are not tied directly to the purchase of tangible consumer goods, and so no repayment is demanded until the end of full-time studies (Schwartz, 1999). Indeed, there is little contact with the lender for potentially long periods whilst the student is engaged in full-time studies (Schwartz, 1999). As a result, some students

may not even know—or even remember—that part of their financial aid package was, in fact, a loan that must be repaid (Schwartz, 1999). Hypotheses relating to these issues can be formulated in the following way.

**H<sub>4</sub>**: Perceptions towards loan agreement is positively associated with students' attitude towards loan repayment.

**H<sub>4b</sub>**: Perceptions towards loan agreement positively influences the perceptions that loan repayment will affect quality of life after graduation.

**H<sub>4c</sub>**: The relationship between perceptions towards loan agreement and students' attitude towards loan repayment is mediated by perceptions that loan repayment will affect quality of life after graduation.

#### ***3.6.4 Awareness of Loan Repayment Issues Created by the Media***

The sense of awareness towards loan repayment refers to the students' consciousness in securing the required information on loan repayment responsibility. Students realise that loan repayment is required (Volkwein *et al.*, 1998). Nevertheless, both students and families believe that education is not an optional purchase or debt, but rather a necessary objective (Ismail *et al.*, 2010). A study carried out by Baum & Schwartz (1998) states that approximately 30% of respondents perceive difficulties resulting from their loan repayment; on the other hand, however, approximately half of the respondents do not perceive difficulties (Schwartz, 1999). Similarly, students are found to have different concerns regarding repaying the debt they owe (Hira *et al.*, 2000).

Awareness amongst students relating to the importance of financial skills and the complexity of the financial world is imperative; this is to ensure money borrowed is being managed efficiently for the improvement of their quality of life during college years and also following graduation (Abu Bakar *et al.*, 2006; Masud *et al.*, 2004). Therefore, providing information to students concerning money management is not only recommended but critical. For example, federal financial aid regulations require post-secondary institutions to provide information to their students concerning the types of loans available, and to further provide debt management exit counselling to their student loan borrowers (US Department of Education, 2003).

Despite the role of the mass media in terms of influencing behavioural intention amongst young students, the Theory of Planned Behaviour could further explain awareness of loan repayment issues created by the media. Essentially, however, through the subjective norms component, the Theory of Planned Behaviour has the ability to explain directly the phenomena concerning the awareness of loan repayment issues created by media construct, such as by implicitly suggesting that information disseminated from mass media can influence attitude. Importantly, gathering information from media can function as a credible signal of the ability to improve awareness towards loan and repayment, and accordingly influences students' attitude to make repayments. The information not only influences students but also parents. Parents receive information from many sources, with such sources providing awareness to be engaged amongst young people (Grolnick & Slowiaczek, 1994). Importantly, most developing countries have little access to quick broadband internet access; however, millions of students and parents are IT-literate and greatly depend on the internet for information and education.

The overall effectiveness of the information is believed to increase engagements with young people, thereby providing improved opportunities for behaviour change. Ignorance and misinformation cannot be a factor in loan defaults, simply because students realise that loan repayment is required (Volkwein *et al.*, 1998). Usually, students gather information from parents who can influence their children directly through discussions (Ward *et al.*, 1977). Moreover, based on the information they have, parents can influence positive habits on their children. These hypotheses can be formulated in the following way:

**H<sub>5</sub>**: Awareness of loan repayment created by media has positive effects on students' attitude towards loan repayment.

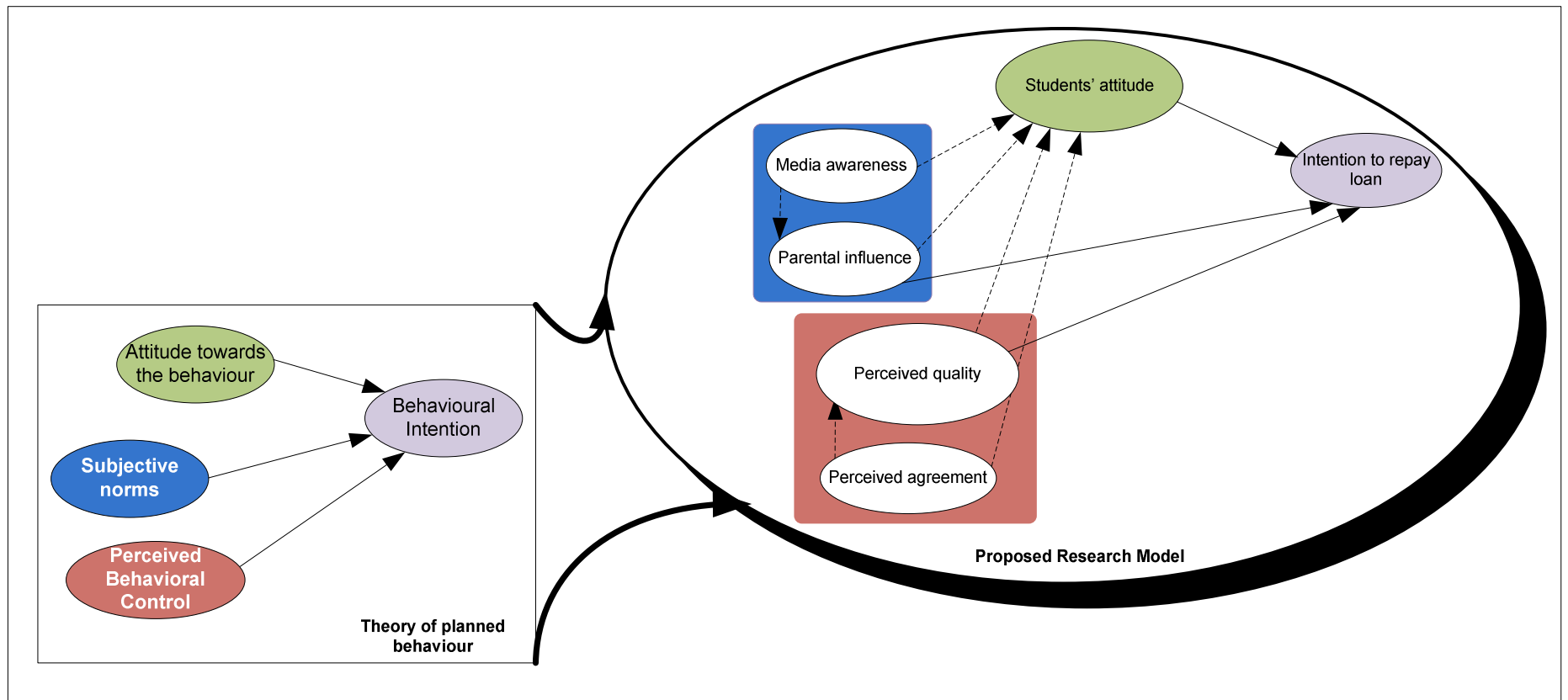
**H<sub>5b</sub>**: Awareness of loan repayment issues created by media has positive impact on parent's influence on children.

**H<sub>5c</sub>**: The relationship between awareness of loan repayment issues created by media and students' attitude towards loan repayment is mediated by parental influence.

### **3.7 Testable Research Model and Hypotheses**

In summary, the current study adopts the Theory of Planned Behaviour in an attempt to develop a testable research model. This model does not measure directly the Theory of Planned Behaviour components, but rather considers the process by which the model is generated using the Theory of Planned Behaviour. We adopted the Theory of Planned Behaviour to examine the underlying factors of students' attitude antecedents and the impacts of students' attitude on the intention to repay loan. This is shown diagrammatically in Figure 3.2. Furthermore, Table 3.2 shows thirteen (13) developed hypotheses, followed by the proposed research model in Figure 3.3.





Notes: ———> existing relationships based on TPB; .....> proposed relationships based on developed hypotheses  
 Source: Developed by researcher for current study

Figure 3.2: Proposed Model Derived from Literature Review and the Theory of Planned Behaviour

Table 3.2: Hypotheses developed to be tested in this study

Notation	Hypotheses
H <sub>1</sub>	The relationship between students' attitude towards loan repayment ( <i>students' attitude</i> ) and intention to repay the loan ( <i>intention</i> ) is positive and statistically significant.
H <sub>2</sub>	Parents have positive effects on the students' attitude towards loan repayment ( <i>students' attitude</i> ).
H <sub>2b</sub>	Parental influence is positively associated with the intention to repay the loan ( <i>intention</i> ).
H <sub>2c</sub>	The relationship between parental influence and intention to repay the loan ( <i>intention</i> ) is mediated by students' attitude towards loan repayment ( <i>students' attitude</i> ).
H <sub>3</sub>	Perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ) influences the students' attitude towards loan repayment ( <i>students' attitude</i> ).
H <sub>3b</sub>	Perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ) influences the intention to repay the loan ( <i>intention</i> ).
H <sub>3c</sub>	The relationship between perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ) and intention to repay the loan ( <i>intention</i> ) is mediated by students' attitude towards loan repayment ( <i>students' attitude</i> ).
H <sub>4</sub>	Perceptions towards loan agreement ( <i>perceived agreement</i> ) is positively associated with students' attitude towards loan repayment ( <i>students' attitude</i> ).
H <sub>4b</sub>	Perceptions towards loan agreement ( <i>perceived agreement</i> ) is positively influence perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ).
H <sub>4c</sub>	The relationship between perceptions towards loan agreement ( <i>perceived agreement</i> ) and students' attitude towards loan repayment ( <i>students' attitude</i> ) is mediated by perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ).
H <sub>5</sub>	Awareness of loan repayment created by media has positive effects on students' attitude towards loan repayment ( <i>students' attitude</i> ).
H <sub>5b</sub>	Awareness of loan repayment issues created by media ( <i>media awareness</i> ) has positive impact on parents' influence on children
H <sub>5c</sub>	The relationship between awareness of loan repayment created by media ( <i>media awareness</i> ) and students' attitude towards loan repayment ( <i>students' attitude</i> ) is mediated by parental influence

Source: Developed by researcher for current study

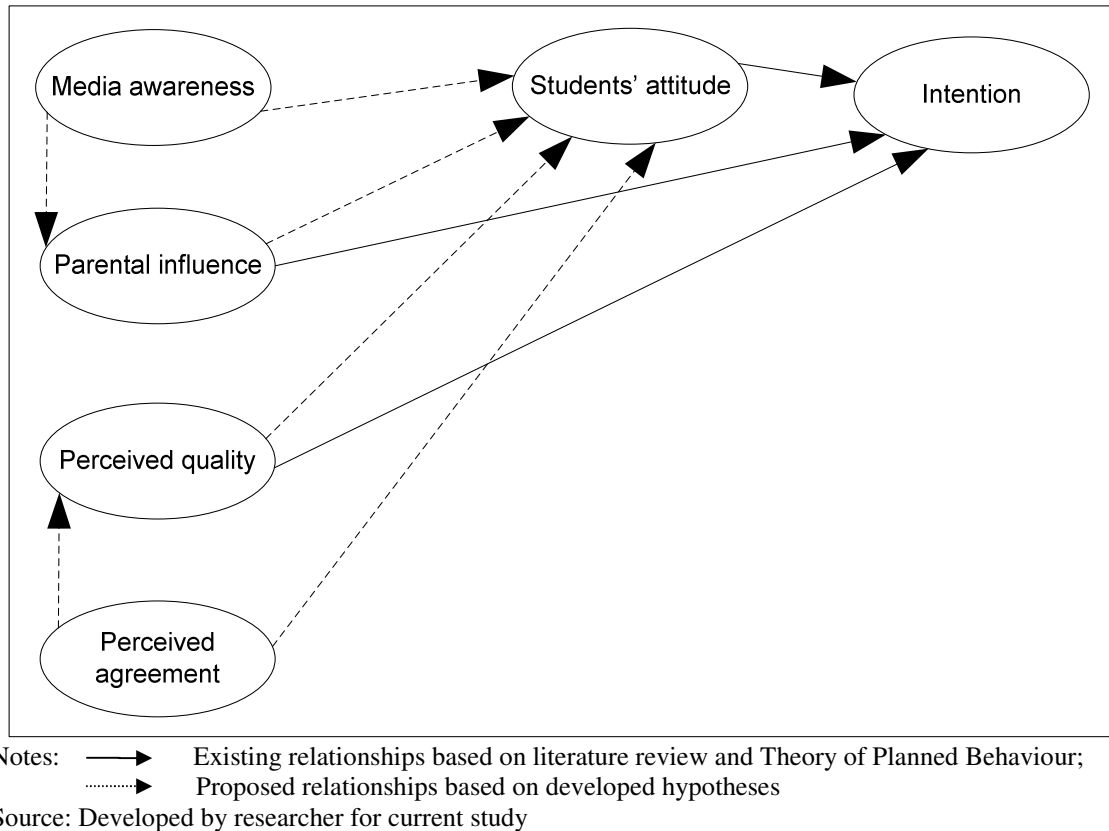


Figure 3.3: Proposed Research Model

### 3.8 Summary

This chapter presents a proposed research model and the hypotheses tested in the study. Six constructs forming the basis of the model are discussed: students' attitude towards loan repayment, intention to repay the loan, parental influence, perceptions that loan repayment will affect quality of life after graduation, perceptions towards loan agreement, and awareness of loan repayment issues created by the media. One of the attitude theories—the Theory of Planned Behaviour—adopted to describe the relationships in the proposed model is then explained. This was followed by a discussion on the focal construct that is students' attitude towards loan repayment, the consequence of students' attitude, which is the intention to repay the loan, as well as antecedents of students' attitude. The antecedents are parental influence, perceptions that loan repayment will affect quality of life after graduation, perceptions towards loan agreement, and awareness of loan repayment issues created by the media. The proposed model derived from the literature review and Theory of Planned Behaviour is presented schematically followed by the list of thirteen (13) hypotheses tested in the thesis.

# Chapter Four: Setting of the Study

## 4.1 Introduction

This chapter starts by providing a brief description of Malaysia as the backdrop of the study. Section 4.2 delivers initially a profile of Malaysia, followed by education in Malaysia, which focuses on both primary and secondary schools in Section 4.3. The following section (4.4) discusses higher education in Malaysia, including students' enrolment and costs associated with higher education in Malaysia. The mechanics of student loan schemes in Malaysia is then discussed in Section 4.5. The subsequent and final section presents the challenges faced by higher education in Malaysia.

## 4.2 The Profile of Malaysia

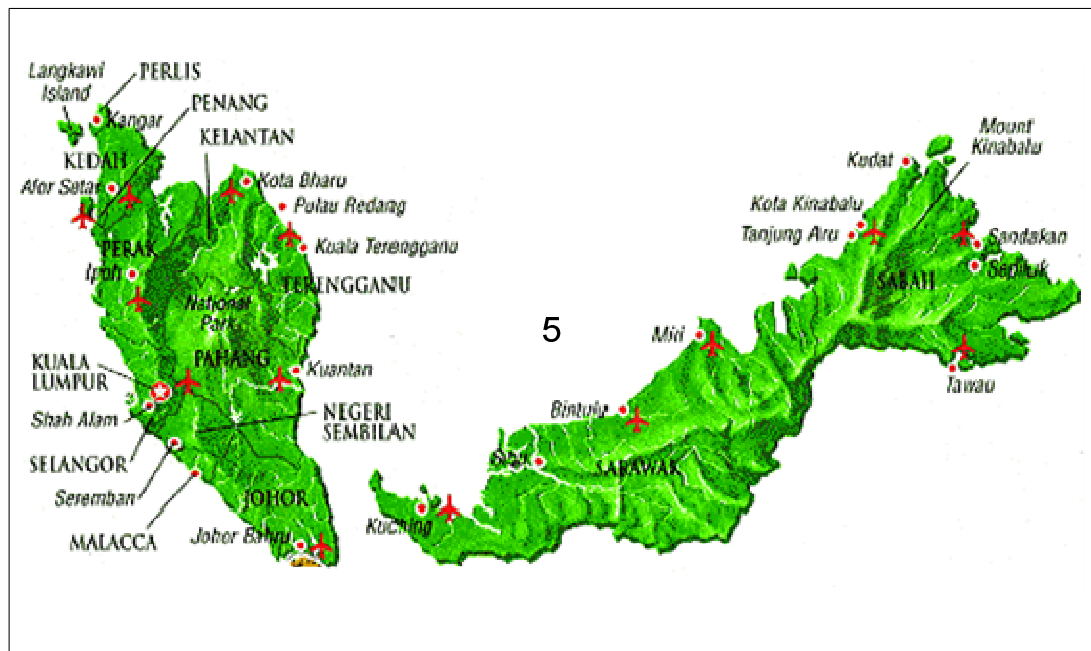
Malaysia achieved its independence from Britain on August 31, 1957. Formerly, the country was under British colonial rule for 83 years (1874–1957). The country is located in South-Eastern Asia, and is separated into two regions, as shown in Figure 4.1, comprising the Peninsular Malaysia and East Malaysia. The Peninsular Malaysia is bordered by Thailand in the north whilst East Malaysia is bordered by Indonesia and Brunei.



Notes: ---- Malaysia  
Source: [www.map-of-asia.us](http://www.map-of-asia.us)

Figure 4.1: Map of South East Asia

Malaysia is a federation comprising thirteen (13) states<sup>1</sup>. These states are located in Peninsular and East Malaysia, as shown in Figure 4.2. The governance system is modelled on the Westminster parliamentary system. Executive power is in the hands of the Prime Minister and the Cabinet. Legislative power is divided between federal and state legislatures. Furthermore, the federal head of the country is the ‘Yang d-Pertuan Agong’, commonly referred to as the King of Malaysia.



Source: <http://my.opera.com>

Figure 4.2: Map of Malaysia

Malaysia is a land of heterogeneous peoples owing to its multi-racial, cultural, lingual and religious characteristics. The country is categorised as a developing country with a population of 25.7 million (The World FactBook, 2010). Notably, Malaysia’s population comprises Malays, Chinese, Indians, the natives of Sabah and Sarawak, indigenous groups, ethnics’ communities—such as Khmers, Thais, Pinoy—and others from several countries. Malays and indigenous groups, commonly known as Bumiputera, make up 61% of the total population. Around a quarter of the population—24%—is Chinese. Moreover, Malaysians of Indian ethnicity make up 7% of the

<sup>1</sup> Johor, Kedah, Kelantan, Melaka, Negeri Sembilan, Pahang, Perak, Perlis, Pulau Pinang, Sabah, Sarawak, Selangor, and Terengganu and the federal territory (Wilayah Persekutuan) with three components, city of Kuala Lumpur, Labuan, and Putrajaya.

population, whilst the remainder derive from other groups totalling 8% (The World FactBook, 2010).

The origin of multi-ethnic groups in Malaysia began when immigrants from China and India were brought into the country in order to meet the growing demand for labour—particularly in the mines and rubber estates—thereby giving rise to a heterogeneous society. Asian immigrants—especially Indians and Chinese—are encouraged to migrate and work in mining, plantations and infrastructure developments; this has created subsequently a multi-ethnic population in Malaya (now Malaysia) from the nineteenth century. The British, who ruled the country, separated the Malay, Chinese and Indian ethnics into different economic sectors: Malays were made to focus on rural agriculture, the Chinese focused on mining industries, and the Indians concentrated on the rubber plantation sector. Ethnicities have also adopted their own religions and cultures: Malays have deep Islamic beliefs; Chinese are largely Buddhists, although some practice Christianity; and Indians are mainly Hindus, although some also practice Christianity. Other groups adopt combined practices, such as Islamic, Buddhist, Hindus, Christianity and atheist.

Presently, Malaysia is a fast-growing country and practices a relatively open state-oriented market economy. In 2007, for example, the economy of Malaysia was the third largest economy in South-East Asia, and the 29<sup>th</sup> largest economy in the world. In 2009, the nominal GDP was US \$207.4 billion, whilst the nominal per capita GDP was US \$8,100. Furthermore, Malaysia is affluent in terms of natural resources, such as oil, forestry and minerals. Moreover, the main exports are natural rubber and palm oil. Furthermore, the country also exports logs, timber, cocoa, pepper, pineapple and tobacco.

### **4.3 Education in Malaysia**

Education in Malaysia is administered via two separate ministries: education up to school levels is monitored through the Ministry of Education (MoE), whilst higher education is monitored by the Ministry of Higher Education (MoHE). The Malaysian system of education comprises six years of primary education, five or six years of

secondary education, one or two years of pre-university education, and a normal three- or four-year university education (Ismail *et al.*, 2010).

Malaysian children commence schooling (kindergarten) between the ages of three and six (Ismail *et al.*, 2010). Furthermore, at the age of seven, children begin primary school for a period of six years (Ismail *et al.*, 2010). Before progressing to secondary level, children in Year Six are evaluated for the Primary School Achievement Test (UPSR) (Malaysia, 2009; Ismail *et al.*, 2010). Notably, secondary education in Malaysia is conducted at secondary schools for five years; subsequently, at the end of Form Three—which is the third year—students are evaluated in the Lower Secondary Assessment (PMR) (Malaysia, 2009; Ismail *et al.*, 2010). In the final year of secondary education (Form Five), students are then evaluated for the Certificate of Education examination (SPM), which is equivalent to the former British Ordinary or ‘O’ Levels or current GCSEs (Malaysia, 2009; Ismail *et al.*, 2010).

Malaysian national secondary schools are divided into several types: national secondary school (public school), religious secondary school, and national type secondary school, which are referred to as boarding school; these include technical schools and MARA Junior Science College (Malaysia, 2009; Ismail *et al.*, 2010). There are also Chinese and Indian Independent High Schools in Malaysia, where students are taught in Chinese and Tamil languages (Malaysia, 2009; Ismail *et al.*, 2010). However, dissimilar to government-run schools, every independent school is free to make its own decisions, and studying in independent schools is expected to take six years to complete, where it is divided into Junior Level for three years and Senior Level for three years (Department of Education, 2009; Ismail *et al.*, 2010).

Malaysia also has many international schools which offer students the opportunity to study the curriculum of other countries (Malaysia, 2009; Ismail *et al.*, 2010). These schools mainly provide education to the expatriate population in Malaysia, and comprise various different curricular, such as the Australian curriculum offered by Australian International School, Malaysia, and the British Curriculum offered by The Alice Smith School, ELC International School, The Garden International School and Lodge International School (Malaysia, 2009; Ismail *et al.*, 2010). Others include the International Baccalaureate and the American Curriculum offered by The International

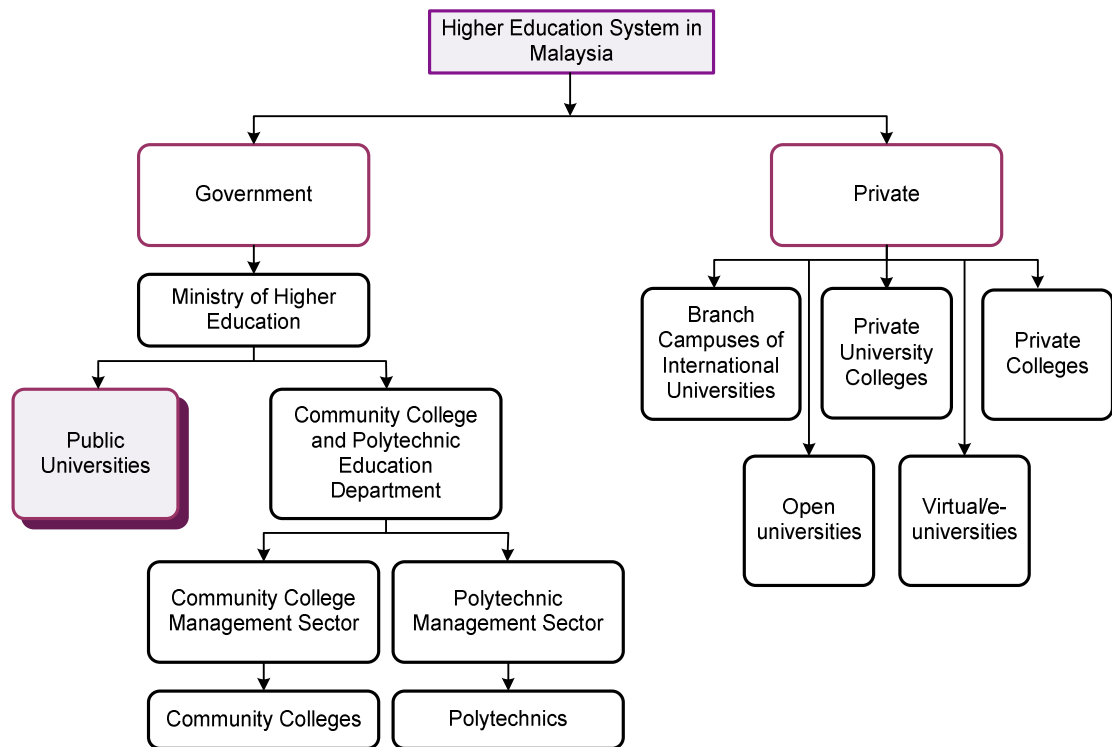
School of Kuala Lumpur (Malaysia, 2009; Ismail *et al.*, 2010); the Japanese Curriculum offered by The Japanese School of Kuala Lumpur; the Taiwanese Curriculum offered by The Chinese Taipei School, Kuala Lumpur, and The Chinese Taipei School, Pulau Pinang; the International Baccalaureate and British Curriculum offered by The International School of Penang, and the French Curriculum offered by Lycee Francais de Kuala Lumpur (Department of Education, 2009; Malaysia, 2009; Ismail *et al.*, 2010).

Students aiming to enter universities have to complete an additional eighteen months of secondary schooling during Form Six, and will be evaluated for the Malaysian Higher School Certificate, which is equivalent to the British Advanced or 'A' levels (Ismail *et al.*, 2010). Alternatively, students may complete a twelve-month programme in Matriculation College prior to university enrolment (Ismail *et al.*, 2010).

#### **4.4 Higher Education in Malaysia**

Higher education in Malaysia comprises two main categories: government and private. Public higher education institutions are funded by the government, and are similarly governed as self-managed institutions, whilst private higher education institutions include private colleges, private university colleges, open universities, virtual/e-universities and branch campuses of international universities, all of which are also governed as self-managed institutions (see Figure 4.3). Under the government is the Ministry of Higher Education (MoHE), which was established in 2004 with the purpose of providing strategic direction to the development universities, community colleges and polytechnics. Markedly, both public and private higher education institutions offer certificates, diplomas, first degrees and postgraduate degrees, whilst polytechnics and community colleges only offer certificates and diploma.





Source: Developed by researcher for current study

Figure 4.3: Higher Education System in Malaysia

Essentially, there is a total of 20 public universities, 37 community colleges and 21 polytechnics, 32 private university colleges, and 485 private colleges in the higher education system in Malaysia (Ministry of Higher Education, 2010). In addition, it is noteworthy to highlight that students also have the option to enrol in open universities, virtual universities (online) and branch campuses of international universities, i.e. from the USA, the UK and Australia. In the case of the branch campuses of international universities, students study half of their course in Malaysia and the second half abroad. Furthermore, Malaysian students are also given the opportunity to study abroad in other countries, such as Australia, Canada, Japan, New Zealand, Singapore, the UK and the USA, as well as Middle Eastern countries, including Egypt and Jordan (Ministry of Higher Education, 2010).

The importance of higher education has been translated into significant investment by the government of Malaysia (Ismail *et al.*, 2010), which has accounted for 20% of total government expenditure (Department of Statistics, 2007; Ismail *et al.*, 2010). Importantly, almost 47% of the total development allocation for education is set

aside for higher education—or RM 8.9 billion (£1.78 billion) out of RM 18.7 billion (£3.74 billion) (World Bank, 2007; Ismail *et al.*, 2010).

#### **4.4.1 Student Enrolment**

The commitment to higher education and the large-scale investment in this sector by the government have together paid off substantially (Ismail *et al.*, 2010). For example, student enrolment based on the level of education in public universities during the year 2005 was 352,457, with such enrolment expected to increase to reach 1.27 million in the year 2020 (see Table 4.1). In addition, students' enrolment in public universities in Malaysia indicates that the number of female students is higher than male students. For example, in 2006, from the total enrolment of 331,025 in public universities, 62% were females. The difference is also evident at both diploma and undergraduate level, with the female participation ratio respectively 60% and 65%. This is owing to the requirement of enrolling in public universities is based on merit and not on gender. However, at PhD level, 63% of all students were male (see Table 4.2).

Table 4.1: Students' Enrolments in Public and Private Universities by Level of Education in Malaysia

Level of Education	Total Students									Simple Growth Rate / year 2005 – 2020 (15 years)		
	2005			2010 (Estimates)			2020 (Estimates)					
	Public	Private	Total	Public	Private	Total	Public	Private	Total	Public	Private	Total
PhD	6,742	140	6,882	21,410	270	21,680	54,800	700	55,500	47.52%	15.62%	42.93%
Percentage (%)	1.91	0.05	1.15	3.01	0.08	2.08	4.40	0.13	3.07			
Master	34,436	4,202	38,638	111,550	5,770	117,320	289,300	15,000	304,300	49.34%	17.13%	45.83%
Percentage (%)	9.77	1.70	6.45	15.67	1.75	11.27	22.83	2.79	16.87			
Degree/Undergraduate	212,326	110,591	322,917	293,650	134,550	428,200	434,700	199,200	633,900	6.98%	5.34%	6.42%
Percentage (%)	60.24	44.88	53.92	41.24	40.86	41.12	34.31	37.14	35.14			
Diploma	98,953	131,428	230,381	285,690	188,680	474,370	488,000	322,300	810,300	26.21%	9.68%	16.78%
Percentage (%)	28.07	53.35	38.47	40.12	57.30	45.55	38.52	60.09	44.92			
<b>Total</b>	<b>352,457</b>	<b>246,361</b>	<b>598,818</b>	<b>712,030</b>	<b>329,270</b>	<b>1,041,300</b>	<b>1,266,800</b>	<b>536,301</b>	<b>1,804,000</b>	<b>17.29%</b>	<b>7.84%</b>	<b>13.41%</b>

Notes: (Estimates) = Department Statistic Forecast

Source: National Higher Education Plan, 2007-2010.

Table 4.2: Enrolment in Public Universities in 2006

No.	Universities	PhD		Master		Degree/Undergraduate		Diploma		Total
		Male	Female	Male	Female	Male	Female	Male	Female	
1.	Universiti Malaya	689	475	2,536	3,144	6,210	11,964	-	-	25,018
2.	Universiti Sains Malaysia	1,045	489	2,287	2,382	8,747	14,376	-	-	29,326
3.	Universiti Kebangsaan Malaysia	1,642	1,179	2,786	3,936	5,886	12,330	50	205	28,014
4.	Universiti Putra Malaysia	641	547	1,042	1,382	6,262	13,083	579	827	24,363
5.	Universiti Teknologi Malaysia	410	182	1,422	1,132	8,269	8,149	2,669	1,864	24,097
6.	Universiti Utara Malaysia	142	64	765	703	5,277	15,126	-	-	22,077
7.	Universiti Islam Antarabangsa Malaysia	383	305	708	957	5,293	10,169	169	162	18,146
8.	Universiti Malaysia Sarawak	47	20	351	356	2,050	3,922	-	-	6,746
9.	Universiti Malaysia Sabah	54	31	318	411	4,885	8,418	-	-	14,117
10.	Universiti Pendidikan Sultan Idris	33	18	328	292	3,998	9,753	-	-	14,422
11.	Universiti Teknologi MARA	97	86	935	1,280	12,690	25,371	20,917	33,525	94,901
12.	Universiti Sultan Zainal Abidin	-	-	-	-	-	-	1,019	2,619	3,638
13.	Universiti Sains Islam Malaysia	22	1	30	8	99	263	-	-	423
14.	Universiti Malaysia Terengganu	43	10	98	105	638	1,775	134	191	2,994
15.	Universiti Tun Hussein Onn Malaysia	28	6	133	343	1,381	3,416	558	388	6,253
16.	Universiti Teknikal Malaysia Melaka	23	1	52	35	2,327	1,998	531	234	5,201
17.	Universiti Malaysia Pahang	8	1	21	7	2,840	825	467	226	4,395
18.	Universiti Malaysia Perlis	22	8	35	27	1,648	1,624	196	98	3,658
19.	Universiti Malaysia Kelantan	-	-	-	-	-	-	-	-	-
20.	Universiti Pertahanan Nasional Malaysia	-	-	-	-	-	-	-	-	-
	<b>TOTAL</b>	<b>5,839</b>	<b>3,423</b>	<b>13,847</b>	<b>16,500</b>	<b>78,470</b>	<b>142,562</b>	<b>27,289</b>	<b>40,339</b>	
	Percentage (%)	63.04	36.96	45.63	54.37	35.50	64.50	40.35	59.65	
	<b>TOTAL</b>	<b>9,262</b>		<b>30,347</b>		<b>221,032</b>		<b>67,628</b>		<b>328,269</b>

Notes: (i) Blank = no enrolment; Not included Universiti Malaysia Kelantan (No. 19 in table) and Universiti Pertahanan Nasional Malaysia (No. 20 in table) because no enrolment; M = male; F = female; (ii) UMK and UPNM enrolment start in semester 2007/2008

Source: National Higher Education Plan, 2007-2010

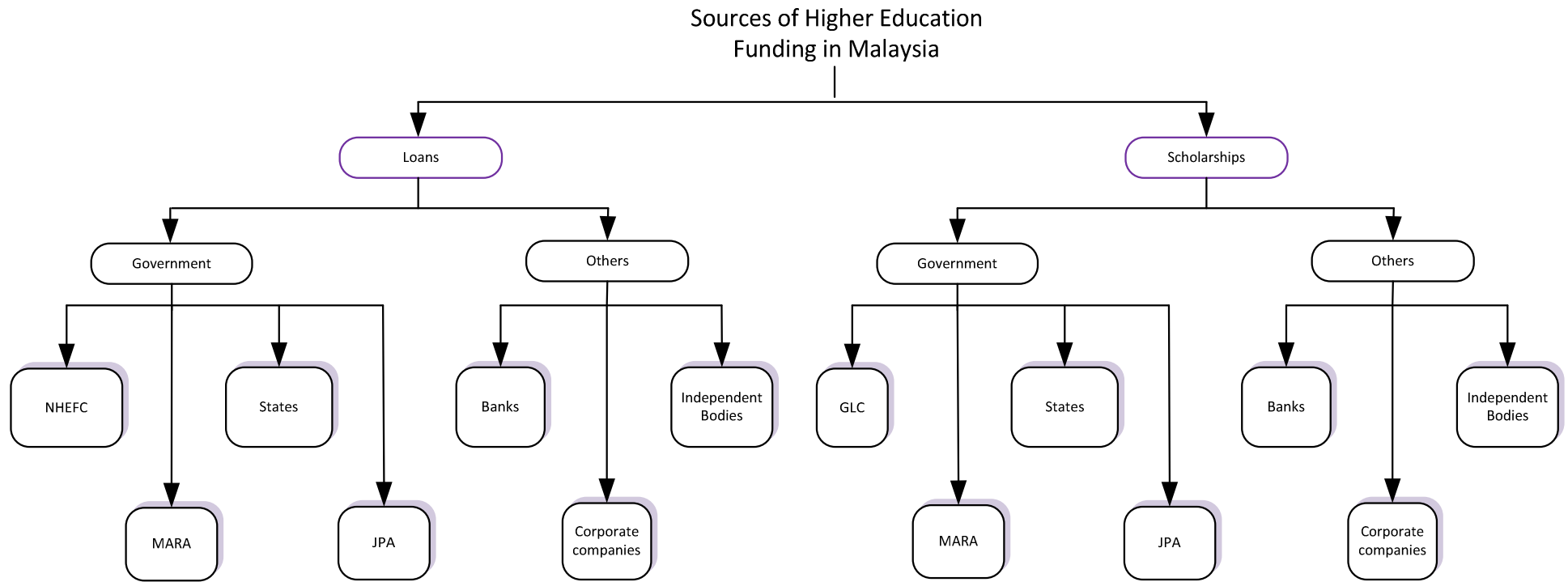
## **4.4.2 Cost of Higher Education in Malaysia**

The Malaysian government is identified as a generous contributor to higher education funding. For instance, public higher education institutions in Malaysia receive 90% of their funding from government sources, with the remainder derived from student fees (National Higher Education Action Plan 2007–2010, p. 18).

### ***4.4.2.1 Student Loans Scheme in Malaysia***

The government of Malaysia—under the Ministry of Higher Education (MoHE), as well as various other funding bodies—provides various types of loans and scholarships to students (Ismail *et al.*, 2010) (see Figure 4.4). Students can receive either a scholarship or a loan, but not both at one time. In addition, loans and scholarships differ from one to the next in terms of their implications for recipients. Scholarship recipients need not repay the money awarded to them, but are instead bonded to work in jobs approved by the funding bodies for a number of years following graduation. In the case of loan recipients, there is no commitment between the recipients and funding bodies, although the amount of money borrowed must be repaid.

Importantly, there are several bodies providing loans and scholarships for student purposes, such as Majlis Amanah Rakyat (MARA), Public Service Department (JPA), corporate companies, and government-linked companies, such as Petronas, Telekom Malaysia, Tenaga Nasional and Khazanah Nasional, States foundation, banking institutions, National Higher Education Fund Corporation (NHEFC), and independent bodies, including Yayasan Tunku Abdul Rahman (see Figure 4.4).



Notes: NHEFC – National Higher Education Fund Corporation; MARA – People Trust’s Council; JPA – Public Service Department’ GLC – Government Link Companies

Source: Developed by researcher for current study

Figure 4.4: A Schematic Presentation of Sources of Higher Education Funding in Malaysia

The administration and loan requirements differ between the institutions and agencies themselves (Ismail *et al.*, 2010): for example, The *Jabatan Perkhidmatan Awam*—otherwise known as Public Service Department—provides a source of direct financial support to students pursuing studies in higher institutions—both locally and abroad. Loans are given to all courses of studies and to all students, especially to those from poor families. In the case of scholarships, the objective is to give more to critical courses considered necessary for social economic development, such as medicine, dentistry and pharmacy (Public Service Department Annual Report, 2009). Notably, students need to repay such loans at regular intervals, although the loan is interest-free. Importantly, the loan may be converted partially into a scholarship depending on the final academic results. For instance, those who complete on time and achieve honours only need to pay back 25% of the total amount borrowed; on the other hand, those who get a general degree or fail will have to pay back the loan in its full amount. The grace period for paying back the loan is 6 months following graduation or after getting a job—whichever is earlier. All loan applicants should have two guarantors, namely the parents and one additional guarantor.

Furthermore, the MARA Education Loans, implemented since 1985, are given only to bumiputera students who pursue studies at prominent Institutions of Higher Learning, locally and abroad. The MARA Education sponsorship is only for the bumiputeras in conjunction with the Parliament Act of People’s Trust Council, 1966. Moreover, those who obtain at least Second Class Upper (Honours) with a Cumulative Grade Point Average (CGPA) of 3.0 and above do not have to repay loans borrowed; however, those who get Second Class Lower (Honours) and Third Class (Honours) CGPA of less than 3.0 have to repay 75% of the amounts borrowed. Those who fail or otherwise cannot complete on time need to repay the full amount, irrespective of the grades obtained (People’s Trust Council Annual Report, 2009).

The biggest organisation providing loans for students for enrolment in higher education is the National Higher Education Fund Corporation (NHEFC) (NHEFC, 2009; Ismail *et al.*, 2010). The NHEFC, which was formed in 1997, is a semi-autonomous body under the authority of the Ministry of Higher Education (NHEFC, 2009; Ismail *et al.*,

2010). The functions of this body include offering student loans in the form of financial assistance to students, and providing administrative, supervisory and a collection of loan settlement services (NHEFC, 2009; Ismail *et al.*, 2010). The objective of this body is to provide loans for those students considered eligible to pursue studies at higher education institutions, in-line with government aspirations, whereby no students should be denied enrolment to higher education merely on the basis of financial reasons (NHEFC, 2009; Ismail *et al.*, 2010).

The student loan scheme under NHEFC operates as follows. A loan is awarded to students throughout the year of study, although the exact terms depend on the offer letter from the respective university. Loan disbursements to students are also different with respect to the type of institution in which the student has enrolled, i.e. university, polytechnic and others institutions (NHEFC, 2009; Ismail *et al.*, 2010), as well as the level of study, such as diploma, undergraduate (degree), masters, professional course, and other certificates (NHEFC, 2009; Ismail *et al.*, 2010). For example, for undergraduates, the duration is three or four years depending on the programme of study. Total loans given are also categorised based on the field of study, namely arts and science. The amount of the loan for science undergraduate students is RM6,500 (£1,150) per year, and for arts degree students RM6,000 (£1,100) per year. In addition, loan disbursements also depend on the parents' monthly income (NHEFC, 2009; Ismail *et al.*, 2010). For instance, if parents' income is more than RM4,000 (£850) per month, their children (borrowers) are eligible for fees only, and in the case of parents' income being less than RM4,000 (£850) per month, their children (borrowers) are eligible for fees and subsistence (NHEFC, 2009). The loans given to students are terminated when students fail to continue their studies (NHEFC, 2009). The same method will apply if a student also fails to continue in the public universities specified during the application for the loan (NHEFC, 2009; Ismail *et al.*, 2010).

Students are required to repay following graduation (NHEFC, 2009; Ismail *et al.*, 2010). They may start the repayment six months following graduation or when the student secures a job—whichever is earlier (NHEFC, 2009; Ismail *et al.*, 2010). The amount the student has to repay includes the administrative costs, which amount to approximately 1%,



although such administrative costs are calculated 6 months following the completion of study (NHEFC, 2009). However, there are two major cases whereby a student can defer the repayment; namely if the graduate is still unemployed and if the student continues to study at a higher level (NHEFC, 2009). However, administrative costs are charged during this period of deferment (NHEFC, 2009). Notably, however, administrative costs are waived if borrowers make full repayment of the loan within 6 months following graduation (NHEFC, 2009). In addition, repayment exemption is only considered for those borrowers who obtain CGPA first-class honours, equating to 3.75–4.0 (NHEFC, 2009). Therefore, in order to avoid any legal actions being initiated by the NHEFC, students who cannot repay the amount borrowed must appeal to the NHEFC to defer payment or to otherwise re-schedule the repayment (NHEFC, 2009). Importantly, the period of loan repayment is based on the amount of loan borrowed, as highlighted in Table 4.3.

Table 4.3: Amount of Loan Borrowed and Period of Loan Repayment

Amount of loan borrowed	Period of loan repayment
RM10,000 (£2,000) and below	60 months
RM10,001 (£2,000) to RM22,000 (£4,400)	120 months
RM22,001 (£4,400) to RM50,000 (£10,000)	180 months
RM50,001 (£10,000) and above	240 months

Source: National Higher Education Fund Corporation (NHEFC), 2009

## 4.5 Challenge of Higher Education in Malaysia

The challenges faced by higher education in Malaysia are huge. As we have shown in the earlier sections, the student enrolment in higher education is rising. With this increasing enrolment, the loan advancements to students are also rising proportionately. If the default rate continues as it is today, the future funding for higher education may have to be curtailed significantly. If this happens, students—particularly those from poor socio-economic backgrounds—would suffer more than students coming from prosperous backgrounds. As a result, a viable and sustainable plan of financing higher education has to be found.

Presently, only 50% of the loans advanced are being recovered, as reported in the latest statistics (see Chapter One). Importantly, the Ministry of Finance (MoF) has drastically discontinued its budget transfers to the NHEFC—as of 2005—thereby forcing the NHEFC to borrow money at high interest rates from the Employees Provident Fund (World Bank, 2007). This situation has caused the NHEFC to be classified as insecure, which will remain the case unless actions are taken to improve repayments or reduce defaulting. The important steps include sustaining capital by reacquiring loans from previous borrowers so that the NHEFC will have adequate resources to support future students. With the increasing number of students enrolled in higher education institutions, as shown earlier in the previous section, the problem with the default rate has to be prevailed. If the default rate continues, this funding for higher education is likely to be reduced further. Owing to the 50% default rate amongst NHEFC borrowers, this study therefore seeks to investigate and determine whether the cause of default is mainly attributable to borrowers' attitude and its antecedents. The findings of the study will help the policy makers to offer a viable and sustainable higher education funding plan.

#### **4.6 Summary**

This chapter has provided a backdrop for the study. The chapter focuses on the profile of Malaysia in which this research is conducted, followed by education, as well as higher education, in Malaysia. The methods of funding the higher education are then discussed. A profile loan schemes is described with the final section highlighting the challenges presently faced by the government. The next chapter described the research methodology by which study has been undertaken.

# Chapter Five: Research Design and Methodology

## 5.1 Introduction

This chapter describes the rationale for the research methodology, and comprises nine major sections: the first section provides the introduction of the chapter; the second section details the justification of the mixed-methodology choice, including philosophical assumptions, adopted research methods and the rationale for a mixed approach; the third section describes the choice of context for the study and the unit for the analysis, whilst the scale development and validation are presented in the fourth section, including the review of literature for existing measurement scales, and qualitative processes and findings, which have contributed to the item-generation process for this study; the fifth section provides a discussion of the pilot survey process and its findings, followed subsequently by the sixth section, which provides data-collection details and data screening procedures; subsequently, the steps in the data analysis process and the statistical techniques selected are presented in the seventh section, followed by process of cross-checking quantitative findings in the eighth section. The final section concludes the chapter with a summary of the approach applied in this study.

## 5.2 Research Philosophy

The research philosophy reflects how a researcher considers or thinks about the effects of the approach adopted in the development of knowledge; informally, it is the way in which we go about conducting research in order to ensure convincing outcomes of the study (Saunders *et al.*, 2009). Importantly, two main philosophical positions induce the designs of most management research efforts in the literature; namely positivism and phenomenology. The key idea of positivism is that the social world exists externally—the properties of which should be measured through objective methods (Easterby-Smith *et al.*, 2008). On the other hand, the phenomenology idea behind the framework is that reality is not objective and exterior, but rather is constructed socially and given meaning by people; thus, it focuses on the way in which people create logic within their world—particularly through sharing their experiences with others through the medium of language (Saunders *et al.*, 2009). The

idea of phenomenology is that reality is determined by people. Accordingly, focus should be directed towards what people are thinking and feeling—both individually and collectively. Thus, it is stated that ‘one should try to understand and explain why individuals have diverse experiences’ (Easterby-Smith *et al.*, 2008, p. 58).

This study aims to investigate the antecedents of students’ attitude and the impact of students’ attitude on the intention to repay the educational loan. With this in mind, it is important to select an approach based on the nature of the research topic. In order to achieve this aim, the first objective is the Theory of Planned Behaviour (TPB), which is selected in order to conceptualise the students’ attitude model in order to explain the constructs relationships. This study also has two additional research objectives: to develop a model to explain the antecedents and consequences associated with students’ attitude towards loan repayment, whilst the following objective is to assess the mediation role in the proposed model.

This study, to a significant extent, is based on positivism or on the existence of social facts. The positivist approach explains and predicts causal relationships between its elements, which occurs in the social world, by searching for the regularities (Bryman, 2004). A positivist has a preference for empirical data, which can be observed and measured so that various components can be compared for their relative frequency. Upon such a quantitative basis, it is possible to generate regularities which can then be generalised to broader populations. The philosophical assumptions of positivism are presented in Table 5.1.

Table 5.1: Philosophical Assumptions of Positivism applied in this Study

<b>Notation</b>	<b>Implications</b>	<b>Descriptions</b>
The Observer	Independence	The observer must be independent from what is being observed.
Human Interests	Value-freedom	The choice of what to study, and how to study it, can be determined by objective criteria rather than by human beliefs and interests.
Research Progress	Causality	The aim should be to identify causal explanations and fundamental laws that explain regularities in human social behaviour.

<b>Notation</b>	<b>Implications</b>	<b>Descriptions</b>
Research Progresses through...	Hypothesis and deduction	Science proceeds through a process of hypothesising fundamental laws and then deducing what kinds of observations will demonstrate the truth or falsity of these hypotheses.
Concepts	Operative	Concepts need to be operationalised in a way that enables facts to be measured quantitatively.
Unit of Analysis	Reductionism	Problems as a whole are better understood if they are reduced to the simplest possible elements.
Generalisation through...	Generalisation	In order to generalise about regularities in human and social behaviour, it is necessary to select samples of sufficient size from which inferences may be drawn from the wider population.
Sampling requirements	Cross-sectional analysis	Such regularities can most readily be identified by comparing variations between samples.

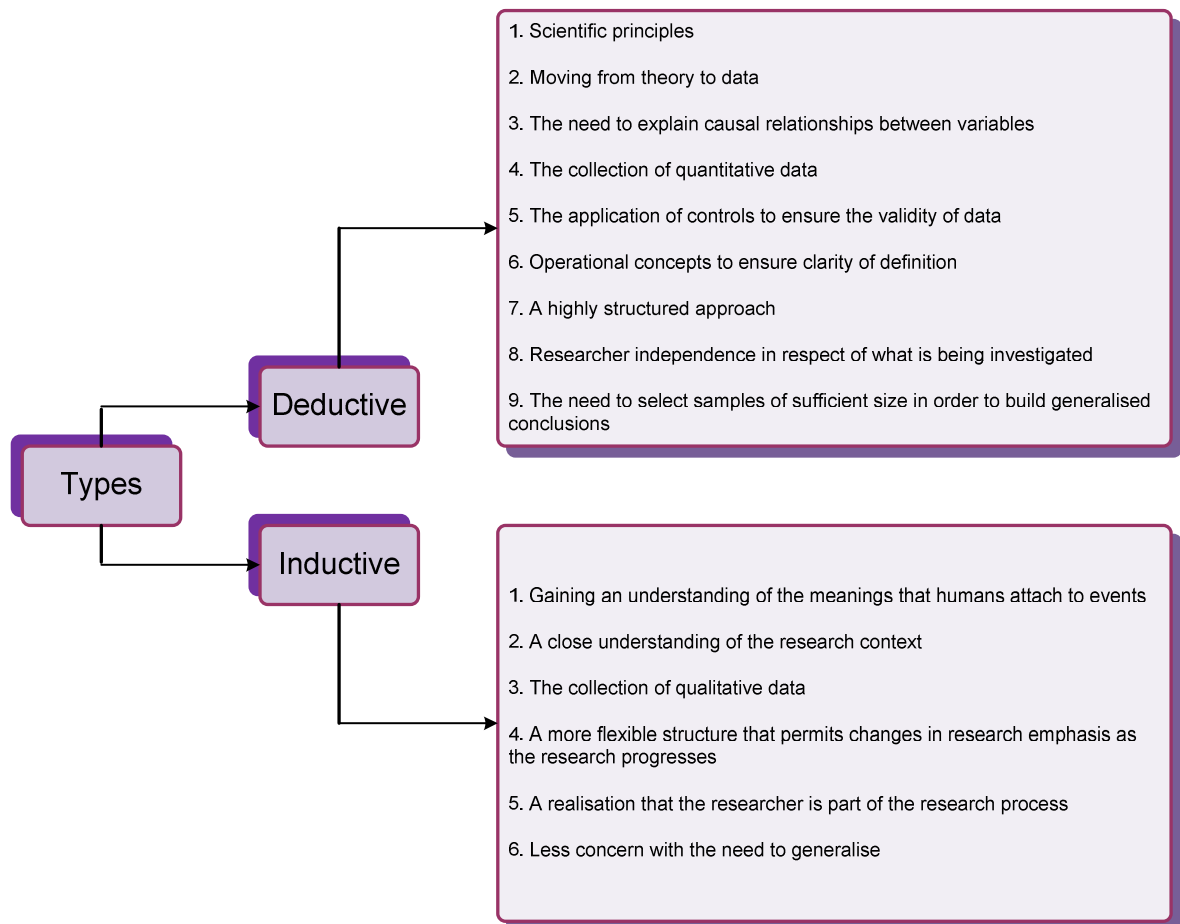
Source: Adapted from Easterby-Smith *et al.*, 2008.

Through the research methodology adopted, we focus mainly on testing a model in a different context than within that which has been developed. The secondary criteria for selecting the methodology involves allowance for developing further the theoretical model so as to achieve better alignment with the new context; thus, we test for the overall applicability of a Western-developed theoretical model in the context of the educational system of a non-Western country, thereby investigating or deducing, in detail, the extent to which the model applies. We also allow for the identification or induction of further features and extensions of the theoretical model within the new context; therefore, the study is also based upon phenomenology, although to a lesser degree.

Moreover, phenomenology appears in this study—as first identified in the literature—through contextual and setting factors as we relate to the phenomenon of interest. Subsequently, we generate inductively a tentative but explanatory theory concerning the phenomenon. Finally, we validate inductively the theoretical model within the new context through the detailing of experiences.

There are two broad methods of reasoning approaches: deductive and inductive. Deductive reasoning is in direction from the more general to the more specific, whereas inductive reasoning, on the other hand, works in contrast, moving from specific

observations to broader generalisations and theories (Bryman & Bell, 2007). Moreover, theories based on deductive and inductive reasoning help the researcher to understand, explain or predict phenomena (Sekaran & Bougie, 2010). The deductive approach represents the most common view of the nature of the relationship between theory and research (Bryman & Bell, 2007). The deductive method is also suitable if one begins with a theoretical framework, formulating hypotheses and deducing conclusions logically from the results of the study (Sekaran & Bougie, 2010). On the other hand, throughout the inductive process, researchers observe certain phenomena and arrive at various different conclusions; theory is the result of research, and the processes involve drawing general conclusions from specific observations (Bryman & Bell, 2007). Theories based on deductive and inductive reasoning also assist the researcher in understanding, explaining or predicting phenomena, as shown in Figure 5.1.



Source: Adapted from Saunders *et al.*, 2009

Figure 5.1: Deductive and Inductive Approach

Based on this, and also in consideration of the nature of the current study, we seek to adopt a mainly deductive approach complemented by an inductive perspective. In an attempt to relate with the philosophical stance, the deductive approach owes more to positivism whilst the inductive approach owes more to phenomenology (Bryman & Bell, 2007). Furthermore, the use of combined reasoning helps the researcher to formulate the conceptual model and to accordingly refine it, thereby helping to test the hypotheses as well as to cross-check the quantitative findings. The key hallmarks of scientific research have been applied in the current study, as based on the model of Sekaran & Bougie (2010, p. 19) and Tashakkori & Teddlie (2003), as shown in Table 5.2.

Table 5.2: Hallmarks of Scientific Research applied in Current Study

Types	Notation	Purpose
Deductive Reasoning	Purposiveness	This study begins with an exact aim (investigating the antecedents of students' attitude towards loan repayment) because this will lead to positive behaviour (intention to repay loan).
	Rigour	A clear theoretical foundation (Theory of Planned Behaviour) and a good methodological design require rigour (focus groups, semi-structured interviews, survey and structured interviews).
	Testability	The hypotheses were developed to test the model (e.g. administered survey to students in public universities in Malaysia, and sample were selected based on stratified random sampling).
	Precision and confidence	Precision refers to how closely the findings, based on a sample, reflect the characteristics of the current study phenomenon. Confidence refers to the probability that the current study conclusions are correct.
	Objectivity	The findings should be objective; that is, they should not be based on researcher' subjective opinions or feelings
	Generalisability	This refers to the applicability of current study findings can be generalised to different contexts.
	Parsimony	Simplicity is preferred when explaining a phenomenon (In the current study, four antecedents, one focal construct and one consequence were chosen rather than selecting an unmanageably large number of variables).

Types	Notation	Purpose
Inductive Reasoning	Subjectivity	Provides understanding and description of respondents' personal experiences of phenomena and useful for describing complex phenomena (e.g. focus groups and interviews). Can describe, in rich detail, phenomena as they are situated and embedded in contexts. Can determine how respondents' interpret 'constructs and items' (e.g. focus groups discussions and semi-structured interviews).
	Meaning	The data are based on the respondents' own categories of meaning. Data in the words and categories that respondents lend themselves to exploring how and why phenomena occur (e.g. focus groups, semi-structured interviews and structured interviews).

Source: Developed by the researcher for this study

### 5.2.1 *Adopted Research Method*

This study employs multiple methods for the purpose of data collection. The benefit of using multiple methods is that it enables triangulation to take place. Triangulation involves 'reviewing and analysing evidence from multiple sources such that a study's findings are based on the convergence of that information' (Johnstone, 2004, p. 264). Triangulation is the use of different data collection methods with the view to clarifying that the data are communicating what we think they are (Johnstone, 2004); this notably strengthens the integrity of conclusions drawn from the data (Johnstone, 2004). In the arena of social science, triangulation often refers to the claim that comparing findings from two or more different research methods (Moran-Ellis *et al.*, 2006) enables the researcher to conclude whether or not an aspect of a phenomenon has been measured accurately (Moran-Ellis *et al.*, 2006). In this vein, Patton (2002) suggests four different categories of triangulation:

1. Evaluate data produced by different research methods (e.g., quantitative and qualitative);
2. Measure data from different processes using qualitative and quantitative sources (e.g., interviews, questionnaires, observations);
3. Use different analysis techniques;
4. Investigate data from diverse theoretical viewpoints.



For instance, in this study, focus group discussions have been implemented, followed by semi-structured interviews in order to validate existing constructs and items from literature and to thereby generate new items, which subsequently provide the researcher with the issues requiring further exploration through the conduction of a quantitative approach (a questionnaire survey). The main objective of the quantitative part of our study is to test, on a larger scale, the findings generated as a result of the literature review and the small-scale qualitative phase with the use of the structured questionnaires presented to a large sample of respondents (Ismail *et al.*, 2010). Structured interviews were conducted to cross-check the quantitative findings as a means of triangulating the data (Ismail *et al.*, 2010). Notably, both the qualitative and quantitative data also involve coding; the responses are computerised in a format appropriate for using Nvivo 8.0, SPSS 15.0 and AMOS 18.0 in the analysis (Ismail *et al.*, 2010). The multiple research methods involve collecting, analysing and interpreting quantitative and qualitative data in a single study (Ismail *et al.*, 2010) or in a series of studies, which investigate actively the same underlying phenomenon (Leech & Onwuegbuzie, 2007). Importantly, both methodologies ‘describe their data, construct explanatory arguments from their data, and speculate about why the outcomes they observed happened as they did’ (Sechrest & Sidani, 1995, p. 78).

### **5.2.2 *Rationale for the Mixed Approach***

Both methodologies possess various advantages and disadvantages, much like any other approach. Qualitative methods are argued to be unscientific and theoretically open to subjective bias by the individual researcher, and closed to inspection or replication. In contrast, quantitative methods seek regularities in human lives by separating the social world into empirical components known as ‘variables’, which can be represented numerically (Payne & Payne, 2004). Moreover, quantitative studies concentrate on testing theoretical hypotheses, thereby generalising the results to a broader population, whereas qualitative studies focus on the details of social interaction and the specificity of reality that social actors generate (Corbetta, 2003). Quantitative research methods are most commonly associated with deductive explanatory approaches which begin with a known theory—usually by attempting to provide evidence for or against a pre-specified hypothesis

(Bryman & Bell, 2007). Quantitative research is accordingly linked to the notion of science as objective truth or fact (Bryman & Bell, 2007), and begins with pre-specified objectives which are devised with focus directed towards testing preconceived outcomes (Bryman & Bell, 2007). When applying quantitative methods, numerical estimation and statistical inference from a generalisable sample are used in relation to a larger 'true' population of interest (Bryman & Bell, 2007). Accordingly, quantitative research is most commonly viewed as being a method demonstrating causal relationships under standardised (controlled) conditions (Bryman & Bell, 2007).

The preferred quantitative research method includes operationalising concepts in order to facilitate measurement, as well as working with larger samples (Sekaran & Bougie (2010; Mangan *et al.*, 2004). On the other hand, qualitative findings are non-numerical; therefore, conclusions cannot be drawn based on statistical inferences (Sekaran & Bougie, 2010). Notably, qualitative methods seek to understand the rationale individuals bring to their own actions rather than explaining statistical patterns (Sekaran & Bougie, 2010; Payne & Payne, 2004).

This study also utilises both quantitative and qualitative data: whilst quantitative data are objective and focused on the phenomenon of interest, qualitative data emphasise descriptions as opposed to quantifying, and relate to an inductive approach (Ismail *et al.*, 2010). There are three main benefits to employing multiple methods in the current study as different methods may be used for different research purposes (Ismail *et al.*, 2010). First, focus groups and semi-structured interviews are conducted prior to the pilot study in order to validate constructs and items extracted from the literature, and also to generate new items (Ismail *et al.*, 2010), thereby producing a set of items that best represent the constructs; this provides the researcher with a greater confidence that the current study focuses only on the most important issues at hand (Ismail *et al.*, 2010). Secondly, the quantitative survey pays off in terms of improved instrumentation and also in terms of sharpening the researcher's understands of the findings (Ismail *et al.*, 2010). With this in mind, the breadth of data produced by the quantitative approaches are supplemented by the depth and richness of the findings achieved through the qualitative methods (Ismail *et al.*, 2010). Finally, structured interviews are conducted to cross-check the quantitative findings

to conclude whether or not an aspect of a phenomenon has been measured accurately (Ismail *et al.*, 2010).

### **5.3 Context of Study and Unit of Analysis**

This section presents the context in which this study is based, and the unit of analysis to be utilised. Importantly—and as highlighted previously—Malaysia is selected as representative of non-Western countries owing to a number of different reasons. For example, its national culture of collectivism is substantially different from that of a typically Western country, which is characterised by individualism (Hofstede, 1980). Furthermore, the philosophy underlying its major religion—Islam—also helps in terms of differentiating Malaysian students from those in Western countries, all of whom are mainly from a Judeo-Christian background. Moreover, this study also facilitates the assessment of external validity and the generalisation of theory in a non-Western context. Characteristically, in Malaysia, students rely on the government to provide financial assistance for enrolment in higher education; however, educational loan defaults have become the subject of significant debate amongst the Malaysian public, and have therefore added additional burdens to the government (see Chapter One for a statistic on the number of loan defaulters). Accordingly, in order to develop a strategy for minimising loan defaults, it is important to analyse whether or not research findings on educational loan default in Western countries are applicable to, and collaborate with, a non-Western country's context.

One of the first steps taken when conducting social research is to determine the unit of analysis. The unit of analysis is the social object or entity—the properties or characteristics of which are the focus of study (Baker, 1994; Corbetta, 2003). The unit of analysis includes individual, group, programme, company, institution, community, state, nation, or even artefact. There can also be either a single unit of analysis (as is very common in case studies and survey research) or otherwise multiple units of analysis (as is normally found in research involving hierarchical data analysis) (Bryk & Raudenbush, 1992). The choice of an appropriate unit of analysis is decided in consideration of the research objective and question, and is therefore linked to the way in which data should be

collected. In order to allow for complete data analysis at different levels, a general rule of thumb is that data should always be collected at the lowest level unit of analysis possible—irrespective of that which is being studied (Bernard, 2000). This is owing to the fact that the data—at least at an individual level—can be aggregated or transformed into data at a higher level (group, company, and network), whereas the reverse process (disaggregating data) may not be possible. Therefore, the appropriate unit of analysis in both the qualitative and quantitative parts of this study is a student.

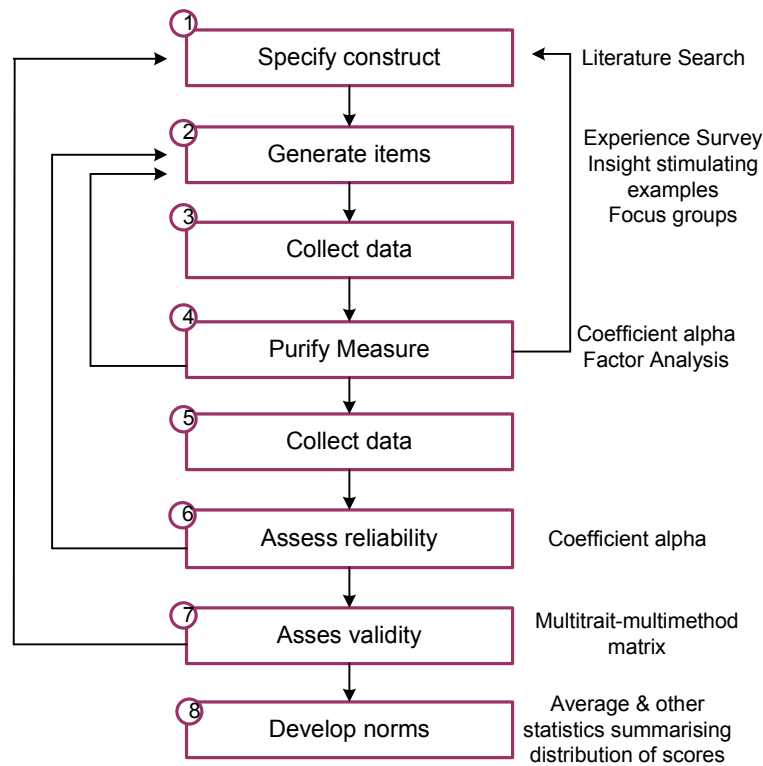
Many researches explore the interaction of debt and attitudes using a student population (Davies & Lea, 1995; St. John *et al.*, 2005; Porter *et al.*, 2006; Price, 2004). Essentially, students are an interesting group to study in the context of education debt for a number of different reasons. First, they are the group of respondents borrowing loans for their education, and can therefore provide vital information concerning various different aspects of concepts in the study (Chapman, 2006; Scott, 2001). Secondly, student respondents are particularly desirable in this instance, owing to the fact that students are literate generally and can verbalise definitions effectively, as well as the scopes of difficult and technical terms (Singell, 2002; St. John, 2003); therefore, students contribute to the generation of measurement constructs and items within the study as the information obtained was quite in-depth and rich. Finally, students, as respondents, are accessed easily and followed-up with in the case of further questions following the end of focus groups and interviews.

For the purpose of this study, final-year undergraduate students from public universities in Malaysia were selected for various reasons. First, the students are the borrowers of this type of loan, and therefore represent the largest population borrowing government loans. Second, students from public universities represent the highest borrowers from the National Higher Education Fund Corporation (NHEFC)—the largest organisation providing loans in Malaysia. Notably, however, under the scope of NHEFC, although total polytechnics institutions are higher when compared with total public universities in terms of total loans provided, the total amount of loan for students in public universities is nevertheless higher (NHEFC, 2010). Finally, students who experience loan-borrowing are also involved directly with the process of repayment; therefore, reliable and

adequate data can be obtained for the purification of measurement scales and hypotheses-testing. Essentially, this allows the researcher to measure clearly the constructs and to estimate effectively students' relationships with those constructs.

#### **5.4 Scale Development and Validation**

A measurement scale refers to the collection of items combined into a composite score. Measurement scales—which are developed systematically—help to ensure that the research findings are subject to generalisation (DeVellis, 2003); this is why a systematic process of developing the measurement scales is followed throughout this study. Moreover, we follow the procedure of systematic scale development in order to measure latent variables, as outlined by Churchill (1979). Importantly, our purpose is to develop a set of valid and reliable scales. The scale development procedure comprises the identification of existing measurement scales through the literature review, and subsequently adds measurement items generated through a qualitative study (i.e. focus-group discussions and semi-structured interviews). Importantly, the pool of items generated is then subjected to a pilot test as an item-trimming procedure (DeVellis, 2003) prior to being developed further into a large-scale survey. The procedure for developing better measures in this study is presented in Figure 5.2.



Source: Adapted from Churchill, 1979

Figure 5.2: Procedure for Developing Better Measures

#### 5.4.1 Existing Measurement Scales

This section discusses the constructs derived from the literature. The main objective of conducting a literature search is to identify the constructs of measurement scales (Churchill, 1979). The researcher conducted a thorough literature review when conceptualising the constructs. The constructs in this study have been identified and integrated as concisely as possible. The review of the literature resulted in the identification of six (6) main constructs: students' attitude, perceived quality, perceived agreement, media awareness, parental influence, and intention to repay loan. The literature review has also identified that the students' attitude construct comprises six (6) items, whilst the perceived quality construct relates to a further six (6) items (see Table 5.3). However, for the other four (4) constructs, there are no specific items available in the literature concerning educational loans in particular. Examples of constructs, including their corresponding items, are exhibited in Table 5.3.

Table 5.3: Measurement Items Derived from Literature

Constructs	Items	Sources
Student's attitude	<ul style="list-style-type: none"> <li>• Not easy to repay the loan</li> <li>• The repayment can help other students</li> <li>• Repayment is my obligation</li> <li>• NHEFC can trace me to collect the loan</li> <li>• There are legal penalties for non-repayment</li> <li>• I have to put an effort to make repayment</li> </ul>	Abu Bakar <i>et al.</i> , 2006; Baum & O'Malley, 2003; Davies & Lea, 1995.
Perceived quality	<ul style="list-style-type: none"> <li>• Loan repayment will affect my decision on the selection of the place to stay.</li> <li>• Loan repayment will affect my decision on job options.</li> <li>• Loan repayment will affect my decision on and when to get married.</li> <li>• Loan repayment will affect my decision on when to buy my first car</li> <li>• Loan repayment will affect my decision on when to have my first child</li> <li>• Loan repayment will affect my decision on buying a house</li> </ul>	Abu Bakar <i>et al.</i> , 2006; Lamkin, 2004; Baum & O'Malley, 2003; Fossey, 1998; Fox, 1992.

Source: Identified by the researcher through a literature review, for the purposes of the current study

#### 5.4.2 Generation of New Items

This section presents the item-generation methods adopted throughout the study, i.e. focus groups and semi-structured interviews. Focus groups are adopted in order to validate existing constructs and items, as well as to generate new constructs and items, until the point that data reaches saturation. A series of semi-structured interviews are also conducted in an attempt to obtain relevant information relating to the constructs and associated items. The strengths of quantitative research include the opportunity to obtain data necessary for statistical tests and the confirmation of findings, which can be generalised to broader populations. However, quantitative research implementing the survey method must overcome various challenges associated with instrument development. For example, survey studies are considered to have failed in terms of capturing the phenomenon if key constructs are not included in the survey instrument (Wackerbarth *et al.*, 2002). Therefore, the qualitative research is considered to be more appropriate when there is the need to unfold that which surrounds a phenomenon (Carson *et al.*, 2001).

#### **5.4.2.1 Rationale**

Previous studies suggest the use of literature reviews (de Vaus, 1986; Sheatsley, 1983; Wackerbarth, 2002) and expert opinions (Fink, 1995; Wackerbarth, 2002) in order to guide item-generation. In such cases, previous studies also suggest the use of preliminary data-collection methods for the development of relevant and appropriate items. Such preliminary methods include observations (de Vaus, 1986; Wackerbarth, 2002), interviews with members of the target population (de Vaus, 1986; Sheatsley, 1983; Wackerbarth, 2002), and focus groups with members of the target population (Rea & Parker, 1997; Wackerbarth, 2002). In this study, time and effort have been directed towards preliminary qualitative work—comprising extensive discussions in focus groups as well as semi-structured interviews—in an attempt to develop a comprehensive set of survey items for the quantitative study (Ismail *et al.*, 2010; Wackerbarth, 2002). This exploratory study offers the opportunity to evaluate the contribution of the focus groups process in combination with semi-structured interviews to item-generation (Wackerbarth, 2002). The purpose of the use of semi-structured interviews in this study is to obtain information relating to personal stories, which is considered sensitive for particular respondents (Wackerbarth, 2002). Importantly, the procedure, as detailed in Padgett (1998), is outlined below.

#### **5.4.2.2 Sampling**

Respondents in the qualitative study are final-year undergraduate students at Universiti Putra Malaysia (UPM) (Ismail *et al.*, 2010). UPM has been selected as the university it has students from all over Malaysia, and offers a variety of courses to students (Ismail *et al.*, 2010). In the cases of both focus groups and semi-structured interviews, respondents are NHEFC loan borrowers (Ismail *et al.*, 2010). Regarding sampling, non-probabilistic sampling techniques are employed for the qualitative part of this study (Ismail *et al.*, 2010). Moreover, selection between non-probabilistic and probabilistic sampling is based on various factors—mainly the nature of research and the variability in the population (Malhotra, 2003; Ismail *et al.*, 2010). In this study, findings are treated as preliminary, and the sampling procedures involve convenience sampling used for the focus group discussions (Ismail *et al.*, 2010). However, purposive sampling is also utilised in the second part of the qualitative study, which involves semi-structured interviews (Ismail *et al.*, 2010).



Convenience sampling is a non-probabilistic technique which refers to the collection of information from members of the population who are conveniently available for such provision (Ismail *et al.*, 2010). It is most often utilised during the exploratory phase of a research in order to generate an in-depth analysis (Sekaran & Bougie, 2010; Bryman, 2004). Notably, this is considered to be the best way of gathering basic information—both quickly and efficiently (Sekaran & Bougie, 2010; Malhotra, 2003; Ismail *et al.*, 2010). Importantly, sampling units tend to be accessible, cooperative and easy to measure (Malhotra, 2003; Ismail *et al.*, 2010). Convenience sampling is used in the first qualitative part where four (4) focus groups are selected, each of which comprises four (4) male and four (4) female students (Ismail *et al.*, 2010).

Purposive sampling is used in the second qualitative part where the interviewees are selected on the criterion of fields of study, i.e. arts and science (Ismail *et al.*, 2010). This sampling technique is used for the semi-structured interviews in order to generate more relevant information (Ismail *et al.*, 2010). Purposive sampling is a ‘type of sampling in which particular settings, persons, or events are deliberately selected for the important information they can provide’, which is unavailable through other choices (Maxwell, 1997, p. 87). With this in mind, Teddlie & Tashakkori (1998) were followed in terms of halting both focus groups and in-depth interviews sampling when the new groups and/or interviewees provided little or no new ideas and themes to those already obtained during the previous focus groups/interviews, i.e. when saturation had been achieved (Ismail *et al.*, 2010). Details of the sampling techniques adopted are summarised in Table 5.4.

Table 5.4: Sampling Techniques Used in this Study

Items	Qualitative	Qualitative
Data collection method	Focus groups	Semi structured interviews
Sample size	Four focus groups – Eight respondents per group	Six individual interviews
Sampling technique and its description	<i>Convenience Sampling:</i> Drawing samples that are both easily accessible and willing to participate in a study.	<i>Purposive Sampling:</i> Drawing samples based on specific purposes associated with answering the research questions.
Sampling time frame	Consecutively over one week.	Consecutively over two week.

Source: Developed by the researcher for the purpose of this study

### 5.4.2.3 *Ethical Considerations*

An ethical procedure is followed in the qualitative study. Students' consent is first obtained for the use of any specific statement in the study. At the beginning of each focus group's discussion or semi-structured interview, the moderator and interviewer first read the consent (see Appendix 1 and Appendix 3), which the respondents are then asked to review and accordingly accept or decline. Importantly, the consent form describes the voluntary nature of the study and its strict confidentiality (Wackerbarth, 2002). Moreover, various steps are taken to protect the respondents' rights: first, the research objectives and methods are described verbally and in writing so that all potential respondents understand clearly the data; second, the respondents are asked to sign the form, thereby providing written permission; third, the transcripts, audiotapes and pre-interview questionnaires are stored confidentially and securely following Wackerbarth, (2002); fourth, all materials used for the purpose of the study are not marked (e.g. name) in order to conceal the identity of respondents; and finally, the respondents are asked to provide permission prior to the publication of quotations.

### 5.4.2.4 *Procedure*

Although the two qualitative methods are time-consuming (i.e. for the purposes of conduction, transcription, coding and analysis) (Ismail *et al.*, 2010), combining the two qualitative methods provides advantages in terms of gathering improved instrumentation

for quantitative data collection approaches, and also in terms of sharpening the researcher's understanding of findings (Frechtling *et al.*, 1997). This dual approach—i.e. the conduction of both focus groups and semi-structured interviews (Ismail *et al.*, 2010)—allows for richer findings than just one comparative analysis (Stokes & Bergin, 2006). The moderator facilitating all focus groups is not the one who carries out the interviews in order to reduce the possibility of the interview results being bias (Stokes & Bergin, 2006; Ismail *et al.*, 2010). With this in mind, the following section will discuss the focus group discussions and semi-structured interviews' procedure.

### ***Focus Groups Discussions***

The researcher approached the president and secretary of residential colleges club at UPM (Ismail *et al.*, 2010). An invitation for the focus groups was sent to potential respondents in order to arrange the meetings (Ismail *et al.*, 2010). The voluntary nature of the study was laid out, and respondents were then given the opportunity to cease arrangements whenever deemed necessary (Wackerbarth, 2002). Furthermore, respondents who showed an interest in participating in the focus groups were reminded via telephone prior to the meeting commencing (Ismail *et al.*, 2010). Moreover, respondents were provided with input and interaction relating to the topic, which enabled the researcher to capture subjective comments and their subsequent evaluation (Ismail *et al.*, 2010). Focus group discussions on the specific topic at a particular location and at a specified time provided the opportunity for a flexible, free-flowing format for the respondents (Ismail *et al.*, 2010). The spontaneous responses were expected to reflect the genuine opinions, ideas, and feelings of the respondents concerning the topic under discussion (Ismail *et al.*, 2010).

A discussion guide is first developed by the researcher and revised subsequently by the supervisor and other lecturers involved in the field, including two major sections of questions (Ismail *et al.*, 2010) (see Appendix 2). The first section comprises constructs definition and warm-up questions in an attempt to capture the main ideas relating to the research topic, whilst the second section comprises questions or issues developed in order to capture the students' attitude model constructs specifically (Ismail *et al.*, 2010). All questions are developed in an attempt to explore, elicit and probe the relevant information

from the students' points of view in an interactive setting of discussion (Ismail *et al.*, 2010). The moderator follows the discussion guideline in order to ensure that the discussions have covered thoroughly all necessary topics based on the research objectives (Ismail *et al.*, 2010). Moreover, the moderator uses probes in order to stimulate and generate additional and relevant information (Ismail *et al.*, 2010).

Focus groups discussions were conducted consecutively during the same week (Ismail *et al.*, 2010). Each session took approximately 2 to 2.5 hours (Ismail *et al.*, 2010), which is considered to be an acceptable time period for conducting focus groups (Bryman, 2004). Each group included eight respondents (Ismail *et al.*, 2010) owing to the fact that groups of over 10 respondents tend to be somewhat unwieldy and unmanageable, as interactions amongst respondents can be less effective and discussions can be difficult to control (Edmunds, 1999). With the aforementioned in mind, the groups were split so as to ensure gender balance (Ismail *et al.*, 2010) whilst observing the established principle of respondents' homogeneity (Morgan, 1998).

In addition, the selection and role played by the moderator was also considered important: the moderator was selected based on her experiences of conducting and moderating focus groups (Ismail *et al.*, 2010). The moderator greeted the respondents, introduced the topic, provided a brief explanation of the study, and subsequently observed, explored, probed and taped the discussions (Ismail *et al.*, 2010). The moderator was not an integral part of the discussions, but merely guided the group persuasively with the use of probes to obtain all the relevant information, and helped respondents to get through any difficulties that might arise (Ismail *et al.*, 2010). The moderator also assured all members participating in the discussion, and ensured that no member dominated the group and discussions (Ismail *et al.*, 2010). The profiles of focus groups respondents are shown in Table 5.5.

Table 5.5: Details of Respondents in Focus Groups Discussions

Focus Group	No. of respondents	Year of study*	Age Range	Gender	Duration (minutes)
1	8	Final year	22-25	4 male and 4 female	150
2	8	Final year	22-25	4 male and 4 female	135
3	8	Final year	22-25	4 male and 4 female	145
4	8	Final year	22-25	4 male and 4 female	120

Notes: \*Undergraduate students

Source: Developed by the researcher for the purposes of the current study

### ***Semi-Structured Interviews***

A comprehensive interview guide was developed by the researcher (Ismail *et al.*, 2010). A draft version was revised by the supervisor and other lecturers in the field; this included a list of questions or issues that explored actively and suggested probes for following-up on the key topics of the study (Ismail *et al.*, 2010). The questions were then developed so as to cover the main research topic, and were specified, probed and directed in order to explore interviewees' opinions in-depth and to generate the relevant information (Ismail *et al.*, 2010). The interviewer allowed short pauses in order to provide the interviewee with the opportunity to reflect and strengthen their answers (Ismail *et al.*, 2010).

The interview was a semi-structured one, asking questions in a specific sequence whilst still allowing for spontaneity when covering the topics in the interview guide (Ismail *et al.*, 2010) (see Appendix 4). The guide helped the interviewer to speed-up the interview process (Ismail *et al.*, 2010), and subsequently made the overall interviewing activity more systematic and comprehensive, as recommended by Bryman (2004).

The interview meetings were pre-arranged by the researcher and the interviewees through personal contact whereby interviewees were provided with overviews concerning the purpose of the interview. However, the researcher did not reveal a great deal of information to respondents in order to avoid respondents preparing certain answers in advance that would hinder spontaneity (Ismail *et al.*, 2010). Furthermore, interviewees were reminded of the meeting by telephone.

The interviews were carried out consecutively over a two-week period, in a flexible and relaxed atmosphere, owing to the informal setting (Ismail *et al.*, 2010). An introduction concerning the research topic was given to the interviewees prior to proceeding into the interview (Ismail *et al.*, 2010). Each interview lasted for approximately 35–50 minutes (Ismail *et al.*, 2010), which is considered acceptable for a one-to-one interview (Burton, 2000). The profile of interviewees and details relating to the semi-structured interviews are shown in Table 5.6.

Table 5.6: Details of Respondents in Semi-Structured Interviews

Interviewees	Gender	Year of study*	Fields of study	Duration (minutes)
1	Female	Final year	Arts	45
2	Female	Final year	Arts	50
3	Male	Final year	Science	40
4	Female	Final year	Science	45
5	Male	Final year	Science	50
6	Male	Final year	Arts	35

Notes: \*Undergraduate students

Source: Developed by the researcher for the purposes of the current study

#### 5.4.2.5 *Interpretation and Analysis Procedure*

The focus groups discussions and semi-structured interviews were audio-taped and accordingly transcribed (Wackerbarth, 2002). Each tape was reviewed in order to verify accuracy in transcription, to detect any additional information, and to monitor the saturation level of the data (Wackerbarth, 2002). The purpose was to validate the proposed research model and to identify the additional relevant items that might not be identified in the literature (Ismail *et al.*, 2010). The transcripts from both—i.e. focus group discussions and semi-structured interviews—were analysed using the qualitative analysis software Nvivo 8.0. The use of computer-assisted qualitative data analysis software Nvivo makes data analysis easier, more reliable, more accurate and more transparent (Gibbs, 2002). With this in mind, Nvivo 8.0 was used to review the text and data-coding by assigning text to free nodes and tree nodes, and thereby proceed through the qualitative data analysis (Ismail *et al.*, 2010). All the texts were stored electronically for further clarification (Ismail *et al.*, 2010). The labelled codes referred to concepts from findings in the literature, as suggested

by Boyatzis (1998), in an attempt to achieve consistency of terminology and uniformity with previous studies.

The data-coding process proceeded through a number of steps, following Huberman & Miles (1994). The start list of codes could be 'based on a conceptual framework, list of research questions, hypotheses, problem areas, and/or key variables that the researcher brings to the study' (Miles & Huberman, 1994, p. 58). Importantly, the research model first developed from the literature review turned out to be guidance for the coding of themes during the beginning of data analysis. Each of the constructs in the students' attitude model were coded, and a list of codes was subsequently created based on the range of constructs generated from the literature review, whilst allowing the further open-coding of new constructs or items.

The respondents agreed with the list of existing constructs and items highlighted during the focus group discussions and semi-structured interviews. Notably, none of the extracted constructs from an earlier step were suggested for deletion; rather, many additional items were suggested to be introduced into the relevant scales. It was noted that the major issues were voiced by interviewees. The initial item-generation process produced forty-eight (48) items (see Appendix 5). Furthermore, items from the literature were first screened out, and items which were identical or equivalent were excluded, as recommended by Sekaran & Bougie (2010). Notably, the researcher was concerned with parsimony and avoiding redundancy in the measures that might lead to a more complicated model (Ismail *et al.*, 2010).

During the qualitative study, there were thirty-six (36) items identified to measure six (6) constructs: two (2) new measurement items were generated for the students' attitude construct; one (1) new item for the perceived quality construct; seven (7) new items concerning the perceived agreement construct; four (4) new items concerning the media awareness construct; ten (10) new items regarding the parental influence construct; and eleven (11) new items in relation to the intention to repay loan. Items from the literature, as well as items produced from the qualitative study, were used in order to develop the questionnaire for the survey (Ismail *et al.*, 2010), as shown in Table 5.7.

Table 5.7: Constructs and Corresponding Items generated from Literature Review and Qualitative Studies

Constructs	Items	Sources
Students' attitude	<ul style="list-style-type: none"> <li>• Repayment collection should be in-charge by a commercial bank following bank rules and regulation</li> <li>• Not easy to repay the loan</li> <li>• Repayment can help other students</li> <li>• Repayment is my obligation</li> <li>• NHEFC can trace me to collect the loan</li> <li>• There are legal penalties for non-repayment</li> <li>• I have to put an effort to make repayment</li> <li>• Government should aim helping me to get a job with the good salaries, so I can pay back loan</li> </ul>	<p>Abu Bakar <i>et al.</i>, 2006; Baum &amp; O'Malley, 2003; Davies &amp; Lea, 1995, and items from researcher' qualitative work prior to survey.</p>
Perceived quality	<ul style="list-style-type: none"> <li>• Loan repayment will affect my decision on the selection of the place to stay.</li> <li>• Loan repayment will affect my decision on job options.</li> <li>• Loan repayment will affect my decision on when to get married.</li> <li>• Loan repayment will affect my decision on when to buy my first car</li> <li>• Loan repayment will affect my decision on when to have my first child</li> <li>• Loan repayment will affect my decision on buying a house</li> <li>• Loan repayment will affect my decision on how much money I will contribute to my parents</li> </ul>	<p>Abu Bakar <i>et al.</i>,2006; Lamkin, 2004; Baum &amp; O'Malley, 2003; Fossey, 1998; Fox, 1992, and item from researcher' qualitative work prior to survey.</p>
Parental influence	<ul style="list-style-type: none"> <li>• My parents advised me after I graduate to find any job to pay the loan first</li> <li>• My parents advised me after I graduate to make regular payments to reduce the debt</li> <li>• My parents advised me to save from the NHEFC loan whilst as a student, so that I can make payments immediately after I graduate</li> <li>• My parents' experiences with loan influence me to make repayment after I graduate</li> <li>• My parents remind me of the importance of making loan repayment after I graduate</li> <li>• My parents remind me to pay back loan after I graduate to avoid problems in the future</li> <li>• My parents, as guarantors of this loan, remind me to pay back loan after graduating to avoid burden on them in the future</li> <li>• My parents pay tax to government so I do not have to repay my educational loan</li> <li>• My parents borrow loan from commercial bank to pay back my loan</li> <li>• My parents' huge debt affected me</li> </ul>	<p>All items from researcher' qualitative work prior to survey.</p>



Media awareness	<ul style="list-style-type: none"> <li>• I have read of latest information about NHEFC loan repayment in the newspapers</li> <li>• I have watched the television about latest information of loan repayment</li> <li>• I have read the latest information about loan published on the website</li> <li>• I hear the latest information about loan which is broadcast on the radio</li> </ul>	All items from researcher' qualitative work prior to survey.
Perceived agreement	<ul style="list-style-type: none"> <li>• I think the loan agreement was written too long</li> <li>• The loan agreement was difficult to understand</li> <li>• The time given to complete the loan agreement form was not enough</li> <li>• The loan agreement need to use the language that is more easily understood</li> <li>• The loan agreement content is not clear</li> <li>• I only depend on the information given from briefing organised by the university to fill up the loan agreement form</li> <li>• Term used in loan agreement is only suitable for Law students</li> </ul>	All items from researcher' qualitative work prior to survey.
Intention to repay loan	<ul style="list-style-type: none"> <li>• I will make repayment because it is my priority</li> <li>• I will find any job after I graduate to pay back student loan</li> <li>• If I am unemployed after I graduate, my parents will make repayment, and I will continue paying the remainder after I get a job</li> <li>• I will save part of the loan during study, so that I can make repayments immediately after I graduate</li> <li>• I will make regular payments through salary deduction</li> <li>• I will make repayment because my culture norms says debt must be repaid</li> <li>• I will make repayment because my belief in religion says debt must be repaid</li> <li>• I will make regular payments to reduce debt</li> <li>• I will make regular payments to avoid problems in the future</li> <li>• I will make regular payments after graduate to avoid burdening my parents in the future</li> <li>• I never think about loan repayment, for me it is not important</li> </ul>	All items from researcher' qualitative work prior to survey.

Source: Developed by the researcher for the purposes of the current study

### ***5.4.3 Questionnaire Translation***

A Students' Attitude Questionnaire (SAQ) was developed containing forty-eight (48) items. Items were scored on a 5-point Likert scale, with high scores indicating strong endorsement of the items on each scale (1 = strongly disagree; 5 = strongly agree), following the scale used in Baum & O'Malley (2003). A proper introduction clearly disclosing the identity of the researcher and conveying the purpose of the survey was included explicitly in the covering letter of the questionnaire (Ismail *et al.*, 2010). A validation of scale is required during the initial stages of development of a new questionnaire. Furthermore, the translation and adaptation of a scale into different languages make possible the use of questionnaires in the different setting of studies (Brislin, 1970); therefore, the questionnaire in this study was first translated and subsequently retranslated before finally proceeding in order to confirm validity, reliability and various other properties on the scale for Malaysian students.

The translation of the SAQ was carried out at an early stage of the study; this was performed owing to the fact that items derived from the literature were defined in English, whilst items generated from the qualitative study were described in Malay language (Ismail *et al.*, 2010). Due to the dual versions, reliability and validity procedures were carried out for the present study. Notably, during back-to-back translation, the following steps were taken (Ismail *et al.*, 2010). Items in the Malay version were translated by a bilingual Malaysian academic translator into English (Ismail *et al.*, 2010). The original items from the literature and items from the qualitative study which have been translated into English version then were translated into Malay by another academic translator (Ismail *et al.*, 2010). The SAQ was then reconciled and provided in the form of two final versions: one Malay version and one English version (Ismail *et al.*, 2010). Both versions were cross-checked independently by a further bilingual academic translator to ensure that both Malay and English survey instrument hold and reflect the same intended meaning (Ismail *et al.*, 2010).

In order to assess the linguistic accuracy of the translated instrument (Brislin, 1970), a study adopting bilingual people was carried out with seven (7) PhD students from Malaysia currently enrolled at Brunel University. The translation instrument was found to

be acceptable, and no further amendment or revision was required. Thus, a satisfactory semantic equivalence of the translated instrument was ensured, following the procedure outlined by Brislin (1970).

#### **5.4.4 Content/Face Validation**

The scale items developed were subject to content adequacy assessment. The instrument included items for the measuring of all constructs in the conceptual model. Content validity refers to ‘the extent to which a specific set of items reflects a content domain’ (DeVellis, 2003, p. 49). Moreover, the term ‘content validity’ is also believed to refer to the extent to which the elements of measurement scales are relevant and representative of the targeted construct for a particular assessment purpose (Ismail *et al.*, 2010). Face validity refers to an assessment whereby items of a scale adequately measure the construct of interest (DeVellis, 2003); the process involves incorporating the opinion of experts experienced in dealing directly with the loan process with the opinion of academics (DeVellis, 2003). The academics were selected as they often acted as judges of a measurement scale in previous studies, as recommended by Arnold & Reynolds (2003). The other validators were selected owing to the fact that they were highly familiar with the topic in an attempt to evaluate the measurement items, and to subsequently indicate whether or not the measures emerge to be logically valid, as suggested in Mowbray (2003).

Expert opinion was incorporated by ensuring the items were relevant and represented the constructs. Experts are able to provide valuable input by selecting a subset of items of particular relevance to the constructs; this restricts the number of potentially correlated constructs considered for inclusion in a model, and thereby ensures that only relevant items are selected for the constructs. Two (2) experts from the organisation providing loans in Malaysia, i.e. the National Higher Education Fund Corporation (NHEFC), were involved in the study: a manager and a loan officer. Furthermore, two (2) parents of NHEFC borrowers—one (1) secondary school teacher and one (1) bank officer—were involved, as well as six (6) lecturers—two (2) from Brunel university and four (4) from Malaysian universities. Two (2) lecturers from Malaysia were former NHEFC borrowers and one (1) lecturer used to be a former staff in the Loan and Scholarships

division at the Ministry of Higher Education of Malaysia. The final group involved in the content/face validation comprised four (4) master students (former loan borrowers). Details of items from the qualitative study—deleted and revised in the process of content/face validation—are presented in Table 5.8.

Importantly, experts and validators were asked to state whether or not they agreed with the lists, and to provide specific reasons, if any, for their opinions. The exercise began when both the NHEFC manager and the loan officer were given the first draft of the questionnaire containing a conceptual definition of each construct and item. Subsequently, they were asked to assess whether or not each item represented the constructs, and whether or not the clarity of wording and the item content were appropriate for inclusion in the questionnaire. Of the seven (7) items in the perceived agreement construct, one (1) item—‘term used in loan agreement is only suitable for Law students’—was recommended for deletion and one (1) item—‘I only depend on the information given from briefing organised by the university to fill up the loan agreement form’—was recommended for revision (see Table 5.8). Moreover, of the six (6) items in the students’ attitude construct, one (1) item—‘not easy to repay the loan’—was recommended for deletion. Furthermore, despite the fact that the item was extracted from a previous study, the experts considered the item within the context of the study to be inappropriate. In addition, one (1) newly generated item—‘repayment collection should be in-charge by a commercial bank following bank rules and regulations’—in the students’ attitude construct was deleted, as it was considered as failing to represent the construct according to the experts. Moreover, one (1) item—‘my parents pay tax to the government so I do not have to pay back the loan’—in the parental influence construct was also recommended for deletion.

Next, the parents of NHEFC borrowers were selected as they are experienced as guarantors for their children’s loans. They are also educated and able to validate the questionnaire draft (conceptual definitions, constructs, items) effectively. Following the procedure, as described in the previous paragraph, they were also asked to assess constructs, items, content, as well as wording clarity. Two (2) items were proposed for deletion from parental influence construct, namely ‘my parents borrow loan from commercial bank to repay my educational loan’ and ‘my parents’ huge debt affected me’.

Students with Masters who used to be NHEFC borrowers also underwent the same process of evaluating the constructs, items, content, as well as wording clarity. They were satisfied with the constructs and items; however, one (1) item from students' attitude construct and one (1) item from intention to repay loan construct were disputed. The item 'repayment collection should be in-charge by a commercial bank following bank rules and regulations' and 'I never think about loan repayment, for me it is not important' were proposed for deletion.

Finally, six (6) academics participated as validators: two (2) lecturers from Brunel University, one (1) lecturer from Universiti Utara Malaysia, one (1) lecturer from Universiti Tun Hussein Onn Malaysia, one (1) lecturer from Universiti Malaysia Kelantan and one (1) lecturer from Universiti Kuala Lumpur. The same procedure applied for these individuals in terms of assessing the items relevant to constructs, content, as well as wording clarity. An item generated from the qualitative study—'Government should aim helping me to get a job with the good salaries, so I can pay back loan'—was also recommended for exclusion owing to the validators' uncertainty concerning whether or not the item was conceptually logical enough to unite under one construct.

They commented on one (1) item—'the loan agreement needs to use language that is more easily understood'—that there was a lack of clarity, and suggested accordingly that the sentence should be improved in term of English. Consequently, the phrase was revised to read 'the loan agreement needs to use a more easily understood language'. Similarly, the phrase 'I hear the latest information about loan which is broadcast on the radio' was evaluated as being unclear. The item was rephrased to 'I have listened to the latest information about loan broadcast on the radio'. Furthermore, the phrase 'I have read of latest information about NHEFC loan repayment in the newspapers' was changed to 'I am aware of latest information about NHEFC loan repayment in the newspapers', in-line with recommendations from academics. The corresponding items deleted and revised during content validation are presented in Table 5.8.

Finally, as suggested by academics, the phrase 'Loan agreement was easy to understand' was reworded to instead read 'Loan agreement was difficult to understand'. A

negatively worded item is phrased in the reverse semantic direction from the majority of the items on a measure (Barnette, 2000). Moreover, a negatively worded (reverse) statement is included in the scale in order to encourage respondents to concentrate more on the survey items (Barnette, 2000).

Table 5.8: Items Deleted and Revised During Content/Face Validation

Validators / Total	Constructs	Items Deleted	Items Revised
NHEFC Manager and Loan Officer (2)	Perceived agreement	<ul style="list-style-type: none"> <li>• Term used in loan agreement is only suitable for Law students.</li> </ul>	<ul style="list-style-type: none"> <li>• I only depend on the information given from briefing organised by the university to fill up the loan agreement form. <i>Revised to</i></li> <li>• I largely depended on the instructions given to me during briefing to fill up the loan agreement form.</li> </ul>
	Students' attitude	<ul style="list-style-type: none"> <li>• Not easy to repay the loan.</li> <li>• Repayment collection should be in-charge by a commercial bank following bank rules and regulations.</li> </ul>	None
	Parental influence	<ul style="list-style-type: none"> <li>• My parents pay tax to government so I do not have to pay back loan.</li> </ul>	None
Parents (2)	Parental influence	<ul style="list-style-type: none"> <li>• My parents borrow loan from commercial bank to repay my educational loan.</li> </ul>	None
		<ul style="list-style-type: none"> <li>• My parents' huge debts affected me</li> </ul>	
Past Borrowers (4)	Students' attitude	<ul style="list-style-type: none"> <li>• Repayment collection should be in-charge by a commercial bank following bank rules and regulations.</li> </ul>	None
	Intention	<ul style="list-style-type: none"> <li>• I never think about loan repayment, for me it is not important.</li> </ul>	None

Validators / Total	Constructs	Items Deleted	Items Revised
Academics (6)	Students' attitude	<ul style="list-style-type: none"> <li>Government should aim helping me to get a job with the good salaries, so I can pay back loan.</li> </ul>	None
	Perceived agreement	None	<ul style="list-style-type: none"> <li>The loan agreement needs to use language that is more easily understood. <i>Revise to</i></li> <li>The loan agreement needs to use a more easily understood language.</li> </ul>
	Media awareness	None	<ul style="list-style-type: none"> <li>I hear the latest information about loan which is broadcast on the radio. <i>Revise to</i></li> <li>I have listened to the latest information about loan broadcast on the radio.</li> </ul>
			<ul style="list-style-type: none"> <li>I have read of latest information about NHEFC loan repayment in the newspapers. <i>Revise to</i></li> <li>I am aware of latest information about NHEFC loan repayment in the newspapers.</li> </ul>

Source: Developed by the researcher for the purpose of this study

The full list of potential items was reviewed subsequently, with those items that best represent the constructs in the students' attitude model accordingly selected. Further on-going discussions were also conducted with the supervisors so as to reach consensus concerning the final list of items. Upon receiving comments, the questionnaire was then adjusted for the last time before being distributed for pilot survey. In total, thirty-nine (39) items were finalised (see Table 5.9), with the following constructs distribution: students'

attitudes—five (5) items; parental influence—seven (7) items; perceived agreement—six (6) items; media awareness—four (4) items; perceived quality—seven (7) items; and intention to repay loan—ten (10) items. The final version of the instrument then tested in the pilot survey. The purpose of the pilot survey was to refine the measurement items and enhance construct reliability and validity.

Table 5.9: Constructs and Corresponding Items based on the Literature Review, Qualitative Studies and Content/Face Validation by Academics, Loan Officers, Parents and Past Borrowers

Constructs	Items
Students' Attitude	<ul style="list-style-type: none"> <li>• Repayment will help other students.</li> <li>• Repayment is my obligation.</li> <li>• I have to make an effort to make repayments.</li> <li>• NHEFC can trace me to collect the loan.</li> <li>• There are legal penalties for non-repayment.</li> </ul>
Perceived quality	<ul style="list-style-type: none"> <li>• After graduation, loan repayment will affect my decision on the selection of the place to stay.</li> <li>• After graduation, loan repayment will affect my decision on job options.</li> <li>• After graduation, loan repayment will affect my decision on when to get married.</li> <li>• After graduation, loan repayment will affect my decision on when to buy my first car.</li> <li>• After graduation, loan repayment will affect my decision on when to have my first Child.</li> <li>• After graduation, loan repayment will affect my decision on buying a house.</li> <li>• After graduation, loan repayment will affect my decision on how much money I will contribute to my parents.</li> </ul>
Perceived agreement	<ul style="list-style-type: none"> <li>• I think the loan agreement was written too long.</li> <li>• The loan agreement was difficult to understand.</li> <li>• The time given to complete the loan agreement form was not enough.</li> <li>• The loan agreement need to use the language more easily understood.</li> <li>• The loan agreement content is not clear.</li> <li>• I largely depended on the instructions given to me during briefing to fill up the loan agreement form.</li> </ul>
Media awareness	<ul style="list-style-type: none"> <li>• I am aware of latest information about loan repayment in the newspapers.</li> <li>• I have watched the television about latest information about loan repayment.</li> <li>• I have read the latest information about loan published on their website.</li> <li>• I have listened to the latest information about loan broadcast on the radio.</li> </ul>



Constructs	Items
Parental influence	<ul style="list-style-type: none"> <li>• My parents advised me after I graduate to find any job to pay the loan first.</li> <li>• My parents advised me after I graduate to make regular payments to reduce the debt.</li> <li>• My parents advised me to save from the NHEFC loan whilst as a student, so that I can make payments immediately after I graduate.</li> <li>• My parents' experiences with any loan influence me to make repayment after I graduate.</li> <li>• My parents remind me of the importance of making loan repayment after I graduate.</li> <li>• My parents remind me to pay back the loan after I graduate to avoid problems in the future.</li> <li>• My parents, as guarantors of this loan, remind me to pay back the loan after graduating to avoid burdening them in the future.</li> </ul>
Intention to repay loan	<ul style="list-style-type: none"> <li>• I will make repayment because it is my priority.</li> <li>• I will find any job after I graduated to pay back my educational loan.</li> <li>• If I am unemployed after I graduate, my parents will make repayment, and I will continue paying the remainder after I get a job.</li> <li>• I will save part of the loan during study, so that I can make payments immediately after I graduate.</li> <li>• I will make regular payments through salary deduction.</li> <li>• I will make repayment because my culture norms says debt must be repaid.</li> <li>• I will make repayment because my belief in religion says debt must be repaid.</li> <li>• I will make regular payments to reduce the debt.</li> <li>• I will make regular payments to avoid problems in the future.</li> <li>• I will make regular payments after graduate to avoid burdening my parents in the future.</li> </ul>

Source: Developed by the researcher for the purpose of this study

## 5.5 Pilot Survey

The focus in this section is directed to the steps taken during the pilot survey, including ethical considerations, details involved in testing the instrument, and the item purification procedure.

### ***5.5.1 Ethical Considerations and Procedure***

The pilot survey was performed so as to ensure that the instrument, as a whole, functions well (Ismail *et al.*, 2010), and also that the survey questions operate well in ensuring there were no overlapping categories (Ismail *et al.*, 2010). Furthermore, piloting proved to be useful for enhancing the understanding and overall quality of the questionnaire (Ismail *et al.*, 2010), and to highlight and thereby avoid double-barrelled, leading and loaded questions (Ismail *et al.*, 2010), as recommended in Sekaran (2003). Moreover, although it is preferable to have a short questionnaire, the questionnaire for this study was developed to be of a medium length in order to capture the necessary data (Ismail *et al.*, 2010). The questionnaire posed only closed questions in an attempt to help respondents make quick decisions, thereby allowing them to choose amongst several alternatives (Ismail *et al.*, 2010).

Prior to the conduction of the formal pilot survey, the questionnaire was piloted informally to 11 colleagues—all PhD students at Brunel University—in order to provide an indication concerning the length of time taken to complete (Ismail *et al.*, 2010), as suggested by Brace (2004). It was established that the questionnaire took approximately 10 minutes to complete on average. Next, the questionnaire was piloted formally so as to allow for final adjustments to final-year undergraduate students at Universiti Utara Malaysia (UUM) and Universiti Tun Hussein Onn (UTHM) in Malaysia, following the recommendation of Henderson *et al.* (2004). For the pilot survey, five different courses have been identified in the two respective universities, and we also obtained lecturers' consent for all classes to carry out our study. Subsequently, the questionnaire was e-mailed to the researcher's representatives, including payment for the cost of printing the questionnaire, photocopying, postage-paid costs, as well as their expenses for distributing the questionnaire to students.

Students were approached by the researcher's representatives during the lecture and invited to complete the questionnaire on a voluntary basis (Ismail *et al.*, 2010). The questionnaire was then handed out and responses obtained during a series of lectures in September, 2009 (Ismail *et al.*, 2010). Notably, whilst the students were completing the

questionnaire, there were no lecturers present in the lecture room, although the researcher's representatives were present so as to answer any questions the students might have had about the questionnaire (Ismail *et al.*, 2010). For those who consented to participate, their rights were explained and they were given the opportunity to ask questions surrounding the study (Ismail *et al.*, 2010). Moreover, they were informed regarding the purpose of the study, the length of time it would take, and were also told that participation was voluntary and that they could withdraw from the study at any time (Ismail *et al.*, 2010). They were assured that their responses would remain confidential (Ismail *et al.*, 2010). Before the completed questionnaires were returned, the researcher's representative randomly asked respondents to point out any item that was either ambiguous or difficult to answer, as recommended in Kohli *et al.* (1993).

### ***5.5.2 Pilot Sample***

Regarding the pilot survey, respondents were recruited from Universiti Utara Malaysia (UUM) and Universiti Tun Hussein Onn Malaysia (UTHM)—all of whom were final-year undergraduate students and NHEFC borrowers—on the basis of their availability (Ismail *et al.*, 2010). A total of 255 questionnaires (153 questionnaires to UUM and 102 questionnaires to UTHM) were distributed to final-year undergraduate students studying a variety of honour degree courses (Ismail *et al.*, 2010). The respondents were degree students in five areas of study (Engineering, Law, Business, Psychology and Communication) (Ismail *et al.*, 2010). Of the 255 questionnaires distributed, 237 were returned and 199 questionnaires (78%) were completed fully by the respondents (Ismail *et al.*, 2010). There were 38 students with incomplete questionnaires, which were therefore not included in the study (Ismail *et al.*, 2010). The data from 199 respondents were then used to refine the measures by analysing reliability and dimensionality (Ismail *et al.*, 2010).

### ***5.5.3 Pilot Survey Analysis and Findings***

This section describes the pilot survey analysis and findings, including the profile of respondents, respondents' comments on the survey questionnaire, item purification procedure, exploratory factor analysis and results, as well as the reliability analysis and corresponding results.

### 5.5.3.1 Respondents' Profile

The demographic profile of students in the pilot sample ( $n = 199$ ) are presented in Table 5.10.

Table 5.10: Demographic Profile of Pilot Respondents

Demographic Profile	Frequency (N=199)	Valid %
<b>Gender</b>		
• Male	83	41.7
• Female	116	58.3
<b>Ethnic</b>		
• Bumiputera	187	94.0
• Chinese	11	5.5
• Indian	1	0.5
• Other	199	0.0
<b>Age</b>		
• 18 to 20	11	5.5
• 21 to 23	140	70.4
• 23 and above	48	24.1
<b>Field of study</b>		
• Arts	114	57.3
• Science	85	42.7
<b>Secondary school background</b>		
• Boarding school	35	17.6
• Private school	2	1.0
• Public school	148	74.4
• Islamic school	14	7.0
<b>Religion</b>		
• Islam	186	93.5
• Buddhist	10	5.0
• Hindu	0	0.0
• Christian	1	0.5
• No religion	2	1.0
<b>Parents' income</b>		
• RM 1000 and below (less than £200)	87	43.7
• RM 1001 to RM 2000 (£200–£400)	56	28.1
• RM 2001 to RM 3000 (£400–£600)	29	14.6
• RM 3001 to RM 4000 (£600–£800)	10	5.0
• RM 4000 and above (£800 and above)	17	8.5
<b>Father's profession</b>		
• Government servant professional	24	12.1
• Government servant non-professional	28	14.1
• Private company employee executive level	12	6.0
• Private company employee non-executive level	15	7.5
• Pensioner executive level	15	7.5
• Pensioner non-executive level	15	7.5
	72	36.2

• Self-employed	18	9.0
• Unemployed		
<b>Mother's profession</b>		
• Government servant professional	14	7.0
• Government servant non-professional	12	6.0
• Private company employee executive level	4	2.0
• Private company employee non-executive level	8	4.0
• Pensioner executive level	1	0.5
• Pensioner non-executive level	2	1.0
• Self-employed	20	10.1
• Unemployed	138	69.3

Source: Developed by the researcher for the current study

In terms of gender, 41.7% of the respondents were male and 58.3% were female. Across all respondents, 94% were Bumiputera, 5.5% were Chinese, 0.5% were Indian, and there were no respondents from others groups. In terms of the field of study (FoS) category, 114 respondents were from arts (57.3%) and 42.7% were from science. The majority of the respondents were between the ages of 21 and 23 (70.4%), followed by 23 and above (24.1%). The small group of respondents was between the ages of 18 and 20 (5.5%). The respondents also came from different backgrounds of secondary education, with 17.6% having had experienced studying at a boarding school. Notably, according to the admissions criteria to study at a boarding school, students must have acquired good results in the primary school exam (standard six) or the secondary school exam (form three). Statistics show that only 1.6% had studied at a private school, 74.4% were from a public school, and only 7% studied at an Islamic school. Importantly, Islamic school mainly focuses on the religious subject as its foundation.

The majority of respondents were Muslim (93.5%), followed by Buddhist (5%), then Christian (0.5%), with 1% claiming no religion. The respondents came from families with varying parental income levels, with approximately 43.7% having earned less than RM 1,000 per month (less than £200), whilst almost 28.9% earned between 1,001 and 2,000 RM per month (£200–£400). Notably, only 14.6% earned between RM2,001 and 3,000 per month (£400–£600), followed by 5% earning between RM3,001 and 4,000 per month (£600–£800). Finally, 8.5% (32 respondents) earned over RM4,000 per month (£800 and above).

In order to understand more about parents' respondents' professions, questions were asked in this regard. 12.1% of fathers were professional workers with the government. Grade 41 and above are categorised as professional (Public Service Department, 2009). For Grade 41 and below, 14.1% worked as non-professional workers with the public sector. 7% of mothers worked as professional workers, whilst 6% as non-professional with the government; 12 (6%) of the fathers worked as executives in the private sector, with the non-executives standing at 7.5%. However, in the case of the mothers' profession, only approximately 2% worked at an executive level in a private company, and only 4 (2%) worked at a non-executive level. In relation to the fathers' profession, approximately 7.5% retired their service at an executive or non-executive level. For the mothers' profession, approximately 4% were retired as an executive and 0.5% as non-executive. Self-employed fathers were recorded at 36.2% compared with only 10.1% of mothers. Furthermore, only 5.6% of fathers were not working compared with 69.3% of mothers.

#### **5.5.3.2 *Pilot Respondents Comments on the Survey Questionnaire***

During the pilot survey, respondents provided few suggestions in an attempt to strengthen and make the survey clearer. Respondents suggested retaining the two languages (Malay and English) in this survey, stating that such an approach would make it clearer for respondents coming from different ethnic backgrounds. In the perceived quality construct ('perception that loan repayment will affect quality of life after graduation') section in the questionnaire, the phrase 'after graduation, loan repayment will affect my decision on' was included only once during the beginning of the section, with the phrase assumed as referring to all items listed in that section. However, respondents suggested inclusion of the phrase as 'after graduation, loan repayment will affect my decision on' to all items in that section, which was considered to provide clearer understanding. Overall, respondents agreed on the format of the questionnaire items, and also on the use of both languages in the survey instrument.

#### **5.5.3.3 *Pilot Survey Analysis: Item Purification Procedure***

Data obtained from literature and qualitative studies was subjected to a further purification process, which involved evaluating scale reliability with coefficient alpha ( $\alpha$ ) and item-to-total correlation, as well as exploratory factor analysis (EFA). The data obtained comprised

thirty-nine (39) items measuring the six (6) constructs of the model (see Table 5.11). Eleven (11) items were transposed directly from the literature (Abu Bakar *et al.*, 2006; Baum & O'Malley, 2003), involving items representing the constructs of students' attitude and perceived quality. The remaining items (73%;  $N=28$ ) were newly generated based on the four (4) focus group discussions and six (6) semi-structured interviews conducted.

Items were divided into groups in order to ensure that the number of observations per item was at least 10:1 (Cavusgil & Zou, 1994). The sample size for the pilot survey was 199 respondents, and the number of questions or items totalled 39. Therefore, as the ratio of 10:1 was not met, the EFA was conducted based on grouping, with different groups of items then measured. Items were separated into five groups based on each of the six (6) constructs, with the exception of the perceived agreement construct and the perceived quality construct, both of which were combined into one group since each one measured the perceived constructs. The grouping was also based on the construct definitions derived from the literature review, whereby constructs related theoretically were combined together. The EFA was conducted so as to test each of the five groups, related correspondingly to the constructs of media awareness, parental influence, students' attitude, intention to repay loan, as well as the grouped together perceived agreement and perceived quality constructs.

Table 5.11: Item Description

Codes	Items
AT01	• Repayment will help other students
AT02	• Repayment is my obligation
AT03	• I have to make an effort to make repayments
AT04	• NHEFC can trace me to collect the loan
AT05	• There are legal penalties for non-repayment
LP01	• I think the loan agreement was written too long
LP02	• The loan agreement was difficult to understand
LP03	• The time given to complete the loan agreement form was not enough
LP04	• The loan agreement need to use the language more easily understood
LP05	• The loan agreement content is not clear
LP06	• I largely depended on the instructions given to me during briefing to fill up the loan agreement form

Codes	Items
AW01	• I am aware of latest information about loan repayment in the newspapers
AW02	• I have watched the television about latest information about loan repayment
AW03	• I have read the latest information about loan published on their website
AW04	• I have listened to the latest information about loan broadcast on the radio
PQ01	• After graduation, loan repayment will affect my decision on the selection of the place to stay
PQ02	• After graduation, loan repayment will affect my decision on job options.
PQ03	• After graduation, loan repayment will affect my decision on when to get married
PQ04	• After graduation, loan repayment will affect my decision on when to buy my first car
PQ05	• After graduation, loan repayment will affect my decision on when to have my first Child
PQ06	• After graduation, loan repayment will affect my decision on buying a house
PQ07	• After graduation, loan repayment will affect my decision on how much money I will contribute to my parents
PI01	• My parents advised me after I graduate to find any job to pay the loan first
PI02	• My parents advised me after I graduate to make regular payments to reduce the debt
PI03	• My parents advised me to save from the NHEFC loan whilst as a student, so that I can make payments immediately after I graduate
PI04	• My parents' experiences with any loan influence me to make repayment after I graduate
PI05	• My parents remind me of the importance of making loan repayment after I graduate
PI06	• My parents remind me to pay back the loan after I graduate to avoid problems in the future
PI07	• My parents, as guarantors of this loan, remind me to pay back the loan after graduating to avoid burdening them in the future
IR01	• I will make repayment because it is my priority
IR02	• I will find any job after I graduated to pay back student loan
IR03	• If I am unemployed after I graduate, my parents will make repayment, and I will continue paying the remainder after I get a job
IR04	• I will save part of the loan during study, so that I can make repayments immediately after I graduate
IR05	• I will make regular payments through salary deduction
IR06	• I will make repayment because my culture norms says debt must be repaid
IR07	• I will make repayment because my belief in religion says debt must be repaid
IR08	• I will make regular payments to reduce the debt
IR09	• I will make regular payments to avoid problems in the future
IR010	• I will make regular payments after graduate to avoid burdening my parents in the future

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention

Source: Developed by researcher for current study.



### 5.5.3.3.1 Exploratory Factor Analysis (EFA):

#### 1. Procedure and Analysis

EFA was conducted in order to examine the factorial structure of scales, and was initiated by clarifying the general properties of data (descriptive statistics) (Ismail *et al.*, 2010). EFA, as highlighted previously, is a method of defining the underlying structure amongst the variables, i.e. ‘take what the data gives you’, and subsequently involves grouping variables together on a number of factors (Hair *et al.*, 2010, p. 94; Ismail *et al.*, 2010). Importantly, this is used widely in social science research in order to identify the latent factors and to summarise and reduce a large set of observed variables to a smaller number of factors that account for co-variation (Tabachnick & Fidell, 2007; Ismail *et al.*, 2010). Moreover, three basic assumptions underlying EFA have also been examined, including the absolute sample size, the coefficients in the correlation matrix, and the sampling adequacy (Ismail *et al.*, 2010). It is important to compute the variability in scores (variance) for any given measures (or variables) (Ismail *et al.*, 2010). Notably, a variable which ‘has no variance would have a communality of 1; a variable that shares nothing with other variables would have a communality of 0’ (Field, 2010, p. 630; Ismail *et al.*, 2010). Thus, the communalities of greater than (>) 0.5 are required (Hair *et al.*, 2010). Essentially, communality can be calculated from factor-loading in a model containing multiple constructs (Ismail *et al.*, 2010).

In addition, there are numerous ways by which the adequacy of extraction and the number of factors can be assessed; most common, however, are Eigen-values greater than (>) 1 and/or the Scree plot. For the pilot survey, we only reported the Eigen-values results since the factor analysis are run in groups (Ismail *et al.*, 2010). In order to reduce the number of items and extract factors, in this instance, the principal component analysis technique was performed (Ismail *et al.*, 2010). The principal component extract method—available in SPSS—was used to extract the minimum set of variables accounting for the maximum variance in the data, as recommended in Hair *et al.* (2010, p. 107). Moreover, rotation of the factor axes (dimensions) in the principal-components analysis obtains simple and interpretable factors, according to Yaremko *et al.* (1986). In order to achieve the best possible interpretation of the factors within this study, the Varimax rotation method was

utilised (Ismail *et al.*, 2010). It was considered that rotation was important when striving to improve the interpretability and scientific utility of the solution and, with this in mind, it was used to maximise high correlations between factors and variables, and also to minimise low ones (Ismail *et al.*, 2010). This study applied a varimax of orthogonal techniques commonly applied in rotation for maximising variance (Ismail *et al.*, 2010). Importantly, the varimax rotation was selected as ‘its criterion centres on simplifying the columns of factor matrix’ (Hair *et al.*, 2010, p. 115). The reason for selecting a particular type of rotation and an adequate rotation method is to achieve a simple structure (Brown, 2009). Bryant & Yarnold (1995, pp. 132–133) define simple structure as ‘a condition in which variables load at near 1 (in absolute value) or at near 0 on an eigenvector (factor)’. Variables that load near 1 are clearly important in the interpretation of the factor, and variables that load near 0 are clearly unimportant (Ismail *et al.*, 2010). Moreover, simple structure simplifies the task of interpreting the factors (Ismail *et al.*, 2010). Furthermore, the goal of varimax rotation is ‘to maximise the variance of factor loading by making high loadings higher and low ones lower for each factor’ (Tabachnick & Fidell, 2007, p. 620). The factor loadings equal or above ( $\geq$ ) 0.50 are considered practically significant (Hair *et al.*, 2010).

In an attempt to assess the factorability of items, the anti-image matrices and two other indicators—such as the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett’s Test of sphericity—were examined. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA) measures whether or not the distribution of values is adequate for conducting factor analysis. Kaiser (1974) recommends a value between 0.8 and 0.9; however, for the early stage of data exploration, items with KMO measures of sampling adequacy greater than ( $>$ ) 0.60 suggest satisfactory factorability (Tabachnick & Fidell, 2007). In addition, the Bartlett’s Test of sphericity (p-values) examines whether the variables in the population are uncorrelated. Therefore, a Bartlett’s Test of less than ( $<$ ) 0.05 suggests satisfactory factorability for all items (Hair *et al.*, 2010).

Factorial solutions, such as item loadings, and percentage of variance extracted were next evaluated using SPSS 15.0. Any item with a cross-loading of more than one factor was dropped following the procedure outlined by Hair *et al.* (2010). Furthermore,

items which were repetitively regarded as unclear were also trimmed to reduce the chance of obtaining random guesses by future respondents. These two steps were repeated until all measurement scales had at least acceptable reliability ( $\alpha > 0.70$ ) and which, at the same time, exhibited clear factor structures. Items which did not meet the aforementioned criteria were removed one at a time. Factor analyses were repeated until a solution was attained whereby all items included in the analysis met all criteria (Ismail *et al.*, 2010), as recommended by Bearden *et al.* (2001).

## **2. Exploratory Factor Analysis Results**

The exploratory factor analysis produced the following results: for media awareness group items, the EFA result revealed that they loaded clearly on one factor. Similarly, for the attitude construct, the EFA result revealed that they loaded clearly on one factor. In terms of the intention to repay the loan construct, the EFA result showed that they loaded on two factors: in Factor 1 (IR01, IR05, IR06, IR07, IR08, IR09, IR10) and Factor 2 (IR02, IR03 and IR04). (For a description of items abbreviation, see the notes of Table 5.11.) However, IR02 ('I will find any job after I graduate to pay back my educational loan') was deleted owing to fact that communality was found to be less than ( $<$ ) 0.5, turning out to be 0.408; this left IR04 ('I will save part of the loan during study, so that I can make payments immediately after I graduate') as a single item, which was also subjected to deletion. Finally, IR03 and IR05 also showed communalities  $< 0.5$ , which was 0.0476 and 0.490 respectively and subject to deletion.

For the perceived agreement construct, the EFA result showed that they loaded on two factors: Factor 1 (items LP01, LP02, LP03 and LP04) and Factor 2 (items LP05 and LP06) (for a description of items abbreviation, see the notes of Table 5.11); however, LP06 'largely depended on the instructions given to me during briefing to fill up the loan agreement form', and was correspondingly deleted as it loaded in two factors (0.430/0.568), therefore leaving LP05—'the loan agreement content is not clear'—as single item and thus also subject to deletion. Nevertheless, for the perceived quality construct, the EFA result revealed clearly that they loaded only on one factor.

For the parental influence construct, the EFA result showed that they loaded on two factors—PI03 and PI04—in Factor 2, and PI01, PI02, PI05, PI06 and PI07 in Factor 1. (For a description of items abbreviation, see the notes of Table 5.11.) The items for PI03 (‘my parents advised me to save from the NHEFC loan whilst as a student, so that I can make payments immediately after I graduate’) and PI04 (‘my parents’ experiences with any loan influenced me to make repayment after I graduate’) were then deleted so as to retain the one-dimensionality of the construct. Furthermore, PI07 (‘my parents, as guarantors of this loan, remind me to pay back the loan after graduating to avoid burdening them in the future’) was removed as it loaded in two factors (0.644/0.408). Therefore, the parental influence construct were represent by items PI01, PI02, PI05 and PI06. The details of the first round of EFA are presented in Table 5.12. In this stage, nine (9) items have been deleted.

Table 5.12: First Round Items Loadings during Exploratory Factor Analysis

Constructs	Items	Component	
		1	2
Perceived agreement	LP01	.743	
	LP02	.872	
	LP03	.725	
	LP04	.809	
	LP05		.825
	LP06	.430	.568
Perceived quality	PQ01	.704	
	PQ02	.760	
	PQ03	.839	
	PQ04	.851	
	PQ05	.809	
	PQ06	.844	
	PQ07	.715	
Media awareness	AW01	.769	
	AW02	.838	
	AW03	.736	
	AW04	.744	
Parental influence	PI01	.669	
	PI02	.818	
	PI03		.829
	PI04		.765
	PI05	.825	
	PI06	.852	
	PI07	.644	.408
Students’ attitude	AT01	.837	
	AT02	.885	
	AT03	.911	
	AT04	.793	
	AT05	.802	

Intention	IR01	.691	
	IR02		.540
	IR03		.670
	IR04		.744
	IR05	.691	
	IR06	.832	
	IR07	.823	
	IR08	.753	
	IR09	.776	
	IR10	.763	

LP01-06—Perceived agreement items; PQ01-07—Perceived quality items; AW01-04—Media awareness items; PI01- 02, 05 & 06—Parental influence items; AT01-05—Students’ attitude items; IR01- 06, 07, 08, 09 & 10—Intention items.

Source: Developed by the researcher for the current study

Factor analysis was then repeated until a solution was attained whereby all items included in the analysis met all criteria. The second round of results met the requirements as presented in Table 5.13.

Table 5.13: Exploratory Factor Analysis Results for Pilot Survey

Constructs	Items	Loadings	Communalities	Eigen-values	MSA
Perceived agreement	LP01	0.791	0.647	4.874	0.856
	LP02	0.885	0.790		
	LP03	0.730	0.559		
	LP04	0.807	0.653		
Perceived quality	PQ01	0.709	0.508	2.307	
	PQ02	0.783	0.613		
	PQ03	0.836	0.740		
	PQ04	0.854	0.739		
	PQ05	0.798	0.649		
	PQ06	0.851	0.733		
	PQ07	0.713	0.551		
Media awareness	AW01	0.769	0.591	2.389	0.759
	AW02	0.838	0.702		
	AW03	0.736	0.542		
	AW04	0.744	0.554		
Parental influence	PI01	0.709	0.503	2.696	0.770
	PI02	0.876	0.767		
	PI05	0.845	0.714		
	PI06	0.844	0.712		
Students’ attitude	AT01	0.911	0.700	3.585	0.850
	AT02	0.885	0.783		
	AT03	0.837	0.830		
	AT04	0.802	0.628		
	AT05	0.793	0.643		

	IR01	0.713	0.508		
	IR06	0.869	0.756		
Intention	IR07	0.857	0.735		
	IR08	0.792	0.627	3.737	0.830
	IR09	0.753	0.567		
	IR010	0.738	0.544		

Notes: MSA—Measure of sampling adequacy  
 LP01-04—Perceived agreement items; PQ01-07—Perceived quality items; AW01-04—Media awareness items; PI01- 02, 05 & 06—Parental influence items; AT01-05—Students’ attitude items; IR01- 06, 07, 08, 09 & 10—Intention items.

Source: Developed by the researcher for the current study

### 5.5.3.3.2 Reliability Analysis

Scale reliability strictly refers to the proportion of variance attributable to the true score of latent variables (DeVellis, 2003). In order to evaluate the scale reliability and internal inconsistency of all items, the coefficient alpha and item-to-total correlation were assessed for each provisional dimension. A Cronbach’s coefficient alpha ( $\alpha$ ) was applied in order to determine the reliability of scales in the pilot survey (Carmines & Zeller, 1979; Tabachnick & Fidell, 2007). An alpha ( $\alpha$ )  $\geq$  0.7 is generally accepted as demonstrating a high level of homogeneity within the scale, and to thereby determine whether or not the item reflects a single dimension (Churchill, 1979; Nunnally, 1967). The statistical criteria for item retention in this stage were greater than ( $>$ ) 0.35 for item-to-total correlation, as recommended by Bearden *et al.* (2001), and items with low item-to-total correlations ( $<$ 0.35) were removed (Nunnally, 1978). The results are shown in Table 5.14.

Table 5.14: Reliability Test Results

Constructs	Items Codes	Cronbach’s alpha	Cronbach’s alpha if the items deleted	Item-to-total correlation
Perceived agreement	LP01	0.826	0.785	0.643
	LP02		0.729	0.767
	LP03		0.814	0.577
	LP04		0.793	0.626
Media awareness	AW01	0.775	0.724	0.570
	AW02		0.672	0.664
	AW03		0.742	0.535
	AW04		0.738	0.544
Perceived quality	PQ01	0.905	0.901	0.620
	PQ02		0.895	0.683
	PQ03		0.883	0.789
	PQ04		0.884	0.789
	PQ05		0.890	0.725
	PQ06		0.884	0.788
	PQ07		0.900	0.644

Parental Influence	PI01		0.850	0.532
	PI02	0.836	0.746	0.754
	PI05		0.775	0.686
	PI06		0.775	0.689
Students' Attitude	AT01		0.881	0.732
	AT02		0.865	0.803
	AT03	0.899	0.857	0.844
	AT04		0.890	0.685
	AT05		0.888	0.696
Intention	IR01		0.871	0.597
	IR06		0.838	0.788
	IR07		0.841	0.770
	IR08	0.877	0.857	0.684
	IR09		0.863	0.643
	IR010		0.866	0.626

Notes: LP01-04—Perceived agreement items; PQ01-07—Perceived quality items; AW01-04—Media awareness items; PI01- 02, 05 & 06—Parental influence items; AT01-05—Students' attitude items; IR01- 06, 07, 08, 09 & 10—Intention to repay loan items.

Source: Developed by the researcher for the current study

The EFA and the scale reliability results show that the six (6) constructs and the remaining thirty (30) items represented the students' attitude model. The questionnaires containing purified items were therefore edited and prepared for the main student survey. Notably, the final items to be tested in the main survey are presented in Table 5.15.

Table 5.15: Constructs and Items to be Tested for the Main Survey

Construct	Codes	Items
Students' attitude	AT01	• The repayment will help other students.
	AT02	• Repayment is my obligation.
	AT03	• I have to put an effort to make repayments.
	AT04	• NHEFC can trace me to collect the loan.
	AT05	• There are legal penalties for non-repayment.
Perceived quality	PQ01	• Loan repayment will affect my decision on the selection of the place to stay.
	PQ02	• Loan repayment will affect my decision on job options.
	PQ03	• Loan repayment will affect my decision on when to get married.
	PQ04	• Loan repayment will affect my decision on when to buy my first car.
	PQ05	• Loan repayment will affect my decision on when to have my first child.
	PQ06	• Loan repayment will affect my decision on buying a house.
	PQ07	• Loan repayment will affect my decision on how much money I will contribute to my parents.

Construct	Codes	Items
Perceived agreement	LP01	• I think the loan agreement was too long.
	LP02	• The loan agreement was difficult to understand.
	LP03	• The time given to complete the loan agreement form was not enough.
	LP04	• The loan agreement needs to use a more easily understood language.
Media awareness	AW01	• I am aware of latest information about loan repayment in the newspapers.
	AW02	• I have watched the television about latest information of loan repayment.
	AW03	• I have read the latest information about loan published on their website.
	AW04	• I have listened to the latest information about loan broadcast on the radio.
Parental influence	PI01	• My parents advised me after I graduate to find any job to pay the loan first.
	PI02	• My parents advised me after I graduate to make regular payments to reduce the debt.
	PI05	• My parents remind me of the importance of making loan repayment after I graduate.
	PI06	• My parents remind me to pay back the loan after I graduate to avoid problems in the future
Intention	IR01	• I will make repayment because it is my priority.
	IR06	• I will make repayment because my culture norms says debt must be repaid.
	IR07	• I will make repayment because my belief in religion says debt must be repaid.
	IR08	• I will make regular payments to reduce the debt.
	IR09	• I will make regular payments to avoid problems in the future.
	IR10	• I will make regular payments after graduate to avoid burdening my parents in the future.

Notes: LP01-04—Perceived agreement items; PQ01-07—Perceived quality items; AW01-04—Media awareness items; PI01- 02, 05 & 06—Parental influence items; AT01-05—Students’ attitude items; IR01- 06, 07, 08, 09 & 10—Intention to repay loan items.

Source: Developed by the researcher for the current study

## 5.6 Summary of Scale Development and Validation

The systematic process of developing the measurement scales items in this study followed the procedure of systematic scale development outlined by Churchill (1979) to



measure latent variables. Measurement scales items, which are systematically developed, help to ensure that the research findings are subject to generalisation (DeVellis, 2003). Importantly, the purpose of this study was to develop a set of valid and reliable scales items and the processes involved were as follows.

First, the researcher conducted a thorough literature review when conceptualising the constructs. The constructs in this study have been identified and integrated as concisely as possible. The review of the literature resulted in the identification of six (6) main constructs: students' attitude, perceived quality, perceived agreement, media awareness, parental influence, and intention to repay loan. The literature review has also identified that the students' attitude construct comprises six (6) items, whilst the perceived quality construct relates to a further six (6) items. The remaining items were identified during the qualitative study, through focus groups and semi-structured interviews. A total of thirty-six (36) items were identified to measure six (6) constructs. Two (2) new measurement items were generated for the students' attitude construct; one (1) new item for the perceived quality construct; seven (7) new items concerning the perceived agreement construct; four (4) new items concerning the media awareness construct; ten (10) new items regarding the parental influence construct; and eleven (11) new items in relation to the intention to repay loan. Items from the literature, as well as items produced from the qualitative study, were used in order to develop the Students' Attitude Questionnaire (SAQ) for the survey, which contained 48 items.

Second, the back-to-back translation of the SAQ that was carried out at an early stage of the study follows the procedure outlined by Brislin (1970). The translation and adaptation of a scale into different languages makes possible the use of questionnaires in the different setting of studies (Brislin, 1970). The questionnaire in this study was first translated and subsequently retranslated before finally proceeding to confirm the validity, reliability and other properties on the scale for Malaysian students. In order to assess the linguistic accuracy of the translated instrument, a study adopting bilingual people was carried out with seven (7) PhD students from Malaysia currently enrolled at Brunel University. The translation instrument was found to be acceptable, and no further amendment or revision was required.

Third, the content/face validation were conducted in this study with two (2) experts from the organisation providing loans in Malaysia, i.e. the National Higher Education Fund Corporation (NHEFC), who were a manager and a loan officer. Furthermore, two (2) parents of NHEFC borrowers—one (1) secondary school teacher and one (1) bank officer—were involved, as well as six (6) lecturers—two (2) from Brunel university and four (4) from Malaysian universities, and finally four (4) former loan borrowers. The experts and validators evaluated whether the elements of measurement scales were relevant and represented the targeted construct, as well as assessed whether items of a scale adequately measured the construct of interest (DeVellis, 2003), following the procedure suggested in Mowbray (2003). Items from the qualitative study were revised and deleted in the process of content/face validation. In total, thirty-nine (39) items were finalised, with the following constructs distribution: students' attitudes—five (5) items; parental influence—seven (7) items; perceived agreement—six (6) items; media awareness—four (4) items; perceived quality—seven (7) items; and intention to repay loan—ten (10) items.

Fourth, the final version of the instrument was then tested in the pilot survey. The purification process involved in this stage were evaluating scale reliability with the coefficient alpha ( $\alpha$ ) and item-to-total correlation, as well as exploratory factor analysis (EFA). A two-round exploratory Factor analysis was conducted in the pilot survey until a solution was attained, whereby all items included in the analysis met all criteria. In this stage, nine (9) items were deleted. The EFA and the scale reliability results show that the six (6) constructs and the remaining thirty (30) items represented the students' attitude model.

## **5.7 Main Survey**

A survey is an efficient data-collection mechanism, and is considered to be the most popular and common quantitative data-collection technique in business and management research (Donald & Pamela, 2000; Ismail *et al.*, 2010). It is considered that this approach allows the collection of a large amount of data from a sizeable population in a highly

economic way (Donald & Pamela, 2000; Ismail *et al.*, 2010), with the data generated from questionnaires standardised (Sekaran & Bougie, 2010). Administering questionnaires to a large number of individuals at the same time is less expensive and consumes less time (Sekaran & Bougie, 2010; Bryman, 2004; Ismail *et al.*, 2010). Furthermore, it is an enquiry into an identified problem based on testing theory, measurement with numbers, and analysis through the utilisation of statistical techniques (Ismail *et al.*, 2010). The goal of quantitative methods is to determine whether or not the predictive generalisations of a theory hold true (Creswell, 1994; Ismail *et al.*, 2010).

### **5.7.1 Data Collection Process**

This section presents the rationale for the sampling technique and data collection procedure applied in this study.

#### **5.7.1.1 Sampling**

The sampling technique used in this study was stratified random sampling, combining stratified sampling with random sampling (Malhotra, 2003; Teddlie & Yu, 2007; Ismail *et al.*, 2010). The justification for the selection is as follows: firstly, probability sampling techniques are used primarily in the case of quantitatively oriented studies (Ismail *et al.*, 2010), involving ‘selecting a relatively large number of units from a population (Ismail *et al.*, 2010), or from specific subgroups of a population, in a random manner where the probability of inclusion for every member of the population is determinable’ (Tashakkori & Teddlie; 2003, p. 713); secondly, probability samples aim to achieve representativeness, whereby the sample represents the entire population, and which is based on underlying theoretical distributions of observations, or sampling distributions (Bryman, 2004; Teddlie & Yu, 2007; Ismail *et al.*, 2010); and thirdly, the findings derived from a sample can be generalised to the population (Malhotra, 2003; Bryman, 2004; Ismail *et al.*, 2010).

Essentially, stratified sampling occurs when the researcher divides the population into subgroups (Ismail *et al.*, 2010). In such an instance, each unit belongs to a single subgroup of a population, and units are accordingly selected from the sub-group to be representative of the population (Bryman, 2004; Teddlie & Yu, 2007; Ismail *et al.*, 2010). On the other hand, however, random sampling, in comparison, occurs when each sampling

unit in a clearly defined population has an equal chance of being included in the sample (Bryman, 2004; Teddlie & Yu, 2007; Ismail *et al.*, 2010). The probability of a unit being selected is not affected by the selection of other units from the accessible population; in other words, the selections are carried out independently (Ismail *et al.*, 2010). Stratified sampling includes all important subpopulations, and therefore increases precision (Malhotra, 2003; Bryman, 2004; Ismail *et al.*, 2010). The various subgroups in the sample are also representative to the proportion of the entire population (Ismail *et al.*, 2010). The research technique, sample size, the sampling technique and description—as well as the sampling timeframe—are presented in Table 5.16.

Table 5.16: Sampling Technique Used in this Study

<b>Research Technique</b>	<b>Total questionnaire distributed</b>	<b>Sampling Technique and Its Description</b>	<b>Sampling Time Frame</b>
<i>Quantitative</i> Structured questionnaire survey	640 questionnaire survey	<i>Stratified random sampling:</i> Dividing the population into groups and then selecting units randomly from each group where the probability of inclusion for every member of the population is determinable (equal probability to be included)	Three months

Source: Developed by researcher for the current study

The disproportionate stratified random sampling procedure is employed for this study in which the number of groups from each population is changed whilst maintaining the sample size. Such redistribution of numbers in groups is considered to be more appropriate and representative for the study than proportionate sampling design, owing to the fact that some groups are too small relative to other groups.

### 5.7.1.2 *Sample Size*

In order to employ structural equation modelling (SEM) in this study, a considerable sample size was deemed necessary in order to obtain reliable estimates (Joreskog & Sorbom, 1996). Notably, there are five considerations affecting sample size in SEM (Hair *et al.*, 2010, p. 661), as shown in Table 5.17.

Table 5.17: Sample Size Considerations

Considerations	Descriptions
<i>Multivariate normality of the data</i>	A generally accepted ratio to minimise problems with deviations from normality is 15 respondents for each parameter estimated (15:1).
<i>Estimation technique</i>	Most common SEM estimation procedure is maximum likelihood estimation (MLE). Sample size >400, the method become more sensitive.
<i>Model complexity</i>	Model can be complex that requires larger sample sizes; More constructs that require more parameters to be estimated; Multi-group analyses requiring an adequate sample for each group ( <i>Hair et al., 2010, p. 661</i> ).
<i>Amount of missing data</i>	The researcher should plan for an increase in sample size to offset any problems of missing data. If more than 10% of missing data is expected, the sample size should be increased.
<i>Average error variance among the reflective indicator</i>	Larger sample sizes are required when the constructs communalities are smaller than 0.5. Communalities represent the average amount of variation among the indicator variables explained by the measurement model ( <i>Hair et al., 2010, p. 662</i> ).

Source: Developed by researcher for the current study

Taking into account the five (5) considerations aforementioned, the sample size targeted in this study is between 350 and 450 respondents.

### 5.7.1.3 *Selecting the Sample*

There are twenty (20) public universities in Malaysia. From these twenty (20), eighteen (18) universities are in Peninsular Malaysia whilst the other two (2) are in East Malaysia (see Table 5.18). Owing to the fact that most universities are located in Peninsular Malaysia, the noted eighteen (18) universities are divided into four (4) regions, i.e. North, Central, South and East Peninsular Malaysia—based on their location. Three (3) universities from the North, Central and South regions in Peninsular Malaysia were selected for inclusion in the samples; however, no representative university from the East region in peninsular Malaysia as universities located there had been established for less than ten years, and were offering limited courses to students. The other university selected for inclusion in the sample is from East Malaysia, i.e. Universiti Malaysia Sabah (UMS) (see Figure 5.3).

Table 5.18: Public Universities in Malaysia

	<b>Acronym</b>	<b>Universities/ Universities selected</b>	<b>State/Federal territory</b>	<b>Region</b>	<b>Justification for not selecting</b>
1	UNIMAP	Universiti Malaysia Perlis	Perlis	North peninsular Malaysia	New (limited courses offers)
2	UUM	Universiti Utara Malaysia	Kedah	North peninsular Malaysia	
3	USM	Universiti Sains Malaysia	Pulau Pinang	North peninsular Malaysia	
4	UPSI	Universiti Pendidikan Sultan Idris	Perak	North peninsular Malaysia	Focus only for education
5	UKM	Universiti Kebangsaan Malaysia	Selangor	Central peninsular Malaysia	
6	UPM	Universiti Putra Malaysia	Selangor	Central peninsular Malaysia	
7	UIAM	Universiti Islam Antarabangsa Malaysia	Selangor	Central peninsular Malaysia	International university
8	UiTM	Universiti Teknologi MARA	Selangor	Central peninsular Malaysia	Offer only for Bumiputera
9	UPNM	Universiti Pertahanan Nasional Malaysia	Selangor	Central peninsular Malaysia	Army university
10	UM	Universiti Malaya	Kuala Lumpur*	Central peninsular Malaysia	
11	USIM	Universiti Sains Islam Malaysia	Negeri Sembilan	South peninsular Malaysia	Islamic university
12	UTeM	Universiti Teknikal Malaysia Melaka	Melaka	South peninsular Malaysia	New (limited courses offers)
13	UTM	Universiti Teknologi Malaysia	Johor	South peninsular Malaysia	
14	UTHM	Universiti Tun Hussein Onn Malaysia	Johor	South peninsular Malaysia	
15	UMP	Universiti Malaysia Pahang	Pahang	East peninsular Malaysia	New (limited courses offers)
16	UMK	Universiti Malaysia Kelantan	Kelantan	East peninsular Malaysia	New (limited courses offers)
17	UMT	Universiti Malaysia Terengganu	Terengganu	East peninsular Malaysia	New (limited courses offers)
18	UNISZA	Universiti Sultan Zainal Abidin	Terengganu	East peninsular Malaysia	New (limited courses offers)
19	UNIMAS	Universiti Malaysia Sarawak	Sarawak	East Malaysia	
20	UMS	Universiti Malaysia Sabah	Sabah	East Malaysia	

Sources: Ministry of Higher Education (MoHE), 2010

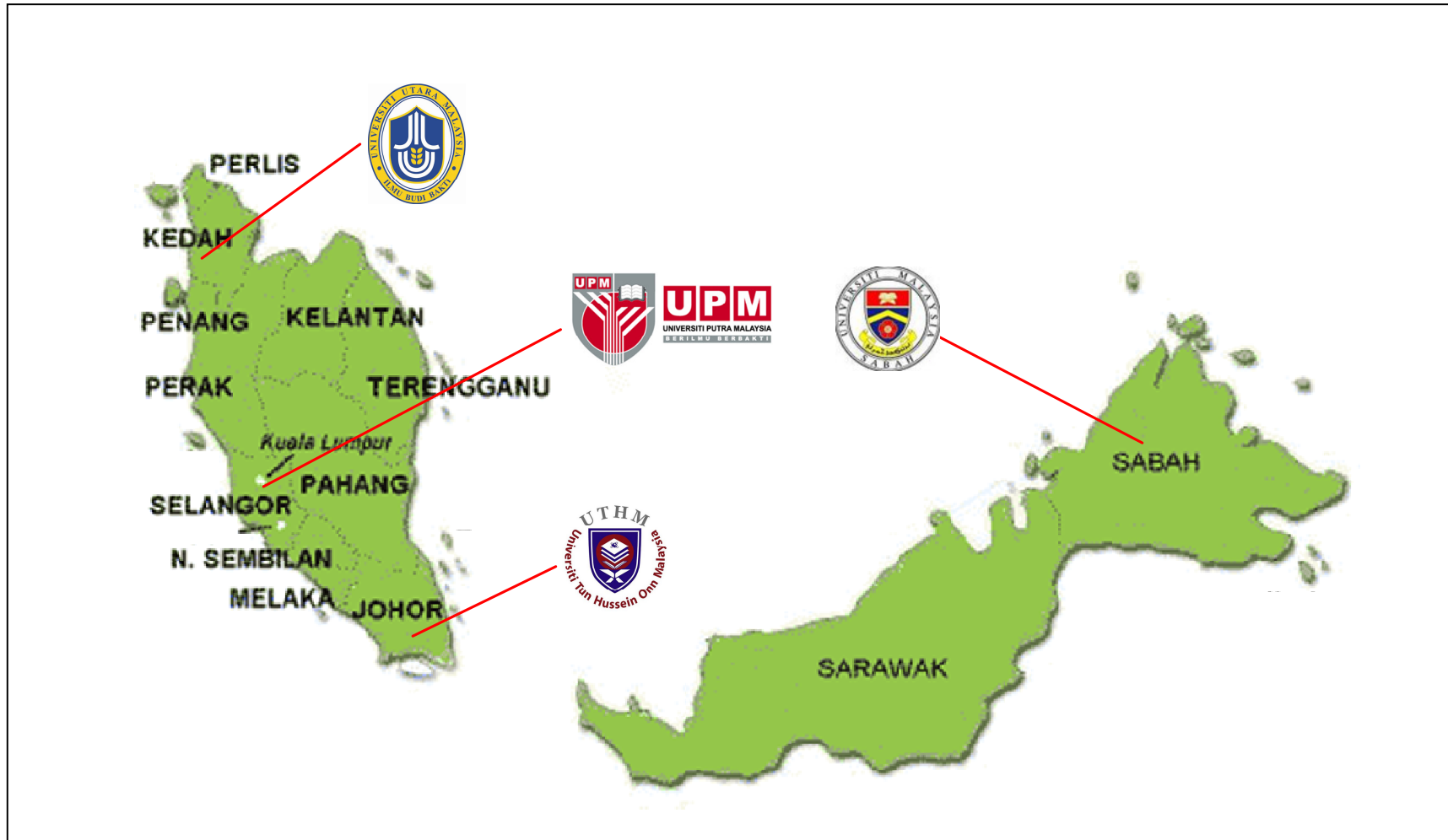


Figure 5.3: Selected Universities Included in the Sample

Table 5.19: Respondents Selected for the Survey

Location	Acronym	Selected Universities
Central Peninsular Malaysia	UPM	Universiti Putra Malaysia
North Peninsular Malaysia	UUM	Universiti Utara Malaysia
South Peninsular Malaysia	UTHM	Universiti Tun Hussein Onn Malaysia
East Malaysia	UMS	Universiti Malaysia Sabah

Source: Developed by researcher for current study

The stratified random sampling was employed in this study where the population was divided into main groups: field of study, gender and ethnicity. First, the samples were drawn based on the 'field of study' category. Loans given to students were divided as 45% for science and 55% for arts. The NHEFC manager that we approached provided information relating to the percentage of the total loans given to borrowers based on the field of study; thus, we were able to identify those borrowers who were final-year students and who were taking different courses in different universities in order to ensure that students from arts and science courses were distributed proportionately. Therefore, courses which were categorised as either science or arts were selected randomly from the four (4) selected universities (see Table 5.19). There are three (3) arts and two (2) science courses selected from Universiti Utara Malaysia (UUM); three (3) science and two (2) arts courses from Universiti Putra Malaysia (UPM); three (3) science and two (2) arts from Universiti Tun Hussein Onn Malaysia (UTHM); and four (4) arts and one (1) science from Universiti Malaysia Sabah (UMS).

Secondly, the samples were stratified based on gender. According to the statistics provided by the Ministry of Higher Education (2009), male students in public universities total approximately 40%, whilst females total approximately 60% of the overall population. Therefore, the samples drawn were based on the gender percentage.

Thirdly, the samples were stratified based on ethnic groups. The NHEFC, however, did not provide actual data for total loan borrowers based on ethnic groups; rather, information provided by NHEFC only stated whether respondents are Bumiputera or non-Bumiputera; thus, justification concerning specific ethnicity could not be provided, and so



the ethnic groups were divided based on the Malaysian populations of Bumiputera (61%), Chinese (24%), Indian (7%), and other populations (8%) (The World FactBook, 2010).

#### **5.7.1.4 Data Collection Procedure**

This procedure commenced by contacting the NHEFC officers to ask for their support and information-gathering on the total public universities and total loan intake by students from NHEFC. We were also able to obtain data from the NHEFC official website. Subsequently, we identified respondents from the four (4) universities selected, and the research team were appointed as researcher representatives in each of the participating universities. The research team task was to distribute the paper questionnaires at universities in the specific classes identified. Before the survey was conducted, consent for distribution of questionnaire in their classes was obtained from lecturers teaching the identified classes. Furthermore, explanations were given to lecturers concerning the purpose of conducting the survey. There were various lecturers who refused the research team permission to distribute the questionnaire in their classes; however, most of them agreed to help.

In February, 2010, the questionnaire was emailed to the researcher's representatives, including payment for the costs of printing the questionnaire, photocopying, postage-paid costs, as well as their expenses incurred as a result of distributing the questionnaire to students. The questionnaire was then structured across six (6) pages, all of which were stapled together with a covering letter, in accordance with the recommendations provided by Dillman (2000). The roles of the research team also included introducing the research topic and assuring of the confidentiality of information that respondents would provide (Ismail *et al.*, 2010); this allowed less bias and the opportunity to motivate respondents concerning any particular question. In addition, the collection of all completed responses within a short period of time was ensured (Ismail *et al.*, 2010). The survey took approximately eight weeks—commencing mid-April, 2010—with the research team from each university subsequently mailing than the questionnaires back to the researcher. In May, 2010—approximately one month later—the researcher received back a total of 640 questionnaires.

### 5.7.1.5 *Process of Selecting Samples*

The data from the questionnaires returned were keyed-in to the SPSS readable files based on universities (id) created (see Table 5.20). The coding of data involved translating entries of the questionnaire to letters or numbers (Ismail *et al.*, 2010). For example, the first column in the SPSS is for ID (universities), the Field of Study in the second column, followed by Gender and Ethnicity. The remaining columns were based on other demographics variables, as well as all items in the questionnaire. Notably, all data entry for computer analysis was verified by statistic lecturer.

During the first level of stratified sampling based on the field of study (see Table 5.21), 11 of a total 640 questionnaires identified did not have the 'Field of Study' question filled in, and were therefore excluded, subsequently meaning the total number of questionnaires was 629. Of the 629 questionnaires, the researcher stratified based on 45% science and 55% arts. The samples required were 283 for science and 346 for arts; however, the sample available was only 331 for arts. In conclusion, the samples for science totalled 283 whereas arts amounted to 331 (see Table 5.21).

Next, the data were stratified based on gender; respondents who failed to answer the gender question were therefore excluded (see Table 5.21). For science students, the sample required 113 males based on 40% populations in the university, and 169 females; however, the sample available for male students contained only 70, whereas females totalled 169 based on 60% populations. The same steps were adopted for the arts students. Moreover, the sample for male students totalled only 101, which is less than the required sample of 132.

Similarly, ethnic groups followed the percentage of population in Malaysia: 61% for Bumiputera, 24% Chinese, 7% Indian and 8% for other populations (see Table 5.21). Similar exercises were conducted for the Field of Study and Gender columns for each group. For example, in terms of science males, 42 Bumiputera, 17 Chinese, 5 Indian and 5 others were required for sampling; however, samples available for Bumiputera were 46, which was more than required; therefore, only 42 were selected for this study. The sample

of 42 was the basis of 60% of Bumiputera respondents required for this study. For other ethnic groups—namely Chinese and Indian—the sample required less than the sample available and, as a result, the sample used in this study was based on the sample available (see Table 5.21). Notably, the total samples following stratification were 327 for Bumiputera, 83 for Chinese, 26 for Indian, and 17 for others. Moreover, the stratified sampling process involved three levels, with the total sample generated totalling 453 respondents. The details of the steps of random stratified sampling are shown in Table 5.21, and the samples included to be tested in this study are presented in Figure 5.4.

Essentially, the samples included in this study were based on the 640 questionnaires collected. The stratification was adapted in an attempt to preserve the maximum sample size possible, as the size was considered a priority for performing the analysis. Thus, if an available stratum size was more than the stratum's required size, only the required size was then included in the sample. Moreover, if an available stratum size was less than the stratum's required size, the available size was included in the sample to be tested in this study.

Table 5.20: Selected Universities included in the Sample, and number of Questionnaires distributed at and returned from these Universities

Sample* by Region	Universities	FOS* (Random)		Courses (Random)	Submitted	ID/Return
North Peninsular Malaysia	Universiti Utara Malaysia (UUM)	Arts	1.	Media Technology	40	1/160
		Science	2.	Decision Science	40	
		Arts	3.	Social Work Management	40	
		Arts	4.	Counselling	40	
		Science	5.	Business Mathematics	40	
					Total = 160	
Central Peninsular Malaysia	Universiti Putra Malaysia (UPM)	Science	1.	Agriculture	40	4/160
		Science	2.	Forestry	40	
		Science	3.	Food Science	40	
		Arts	4.	Modern Language	40	
		Arts	5.	Human development	40	
					Total = 160	
South Peninsular Malaysia	Universiti Tun Hussein Onn Malaysia (UTHM)	Science	1.	Civil Engineering	40	3/160
		Science	2.	Electronic Engineering	40	
		Arts	3.	Technology Management	40	
		Arts	4.	Technical Education	40	
		Science	5.	Information Technology	40	
					Total = 160	
East Malaysia	Universiti Malaysia Sabah (UMS)	Arts	1.	Business	40	2/160
		Arts	2.	Economics	40	
		Arts	3.	Visual Arts	40	
		Arts	4.	Psychology	40	
		Science	5.	Food Technology and Bioprocess	40	
					Total = 160	
						<b>Total = 640</b>

Notes: \*Fields of study (FOS); \*ONLY Final-year undergraduate students

Sources: Developed by researcher for current study

Table 5.21: Sampling Respondents based on Field of Study, Gender and Ethnic Groups

Items	Level I		Level II				Level III															
	Field of study		Gender				Ethnic groups															
			Science		Arts		Science				Female				Male				Arts			
			Science	Arts	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female		
	Science	Arts	Male	Female	Male	Female	M	C	I	O	M	C	I	O	M	C	I	O	M	C	I	O
Total sample	640		283		331		70			169				101				198				
Blank	11		1		1		1			1				0				2				
Sample valid	629		282		330		69			168				101				196				
Sample required	283	346	113	169	132	198	42	17	5	5	103	40	12	13	62	24	7	8	120	47	14	16
Sample available	283	331	70	212	101	229	46	10	10	3	129	16	11	12	72	23	6	0	156	34	4	2
Sample used	283	331	70	169	101	198	42	10	5	3	103	16	11	12	62	23	6	0	120	34	4	2

Notes:

Field of study = Science (45%), Arts (55%).

Gender = Male (40%), Female (60%).

Ethnic groups = M (Bumiputera = 61%), C (Chinese = 24%), I (Indian = 7%), O (others = 8%).

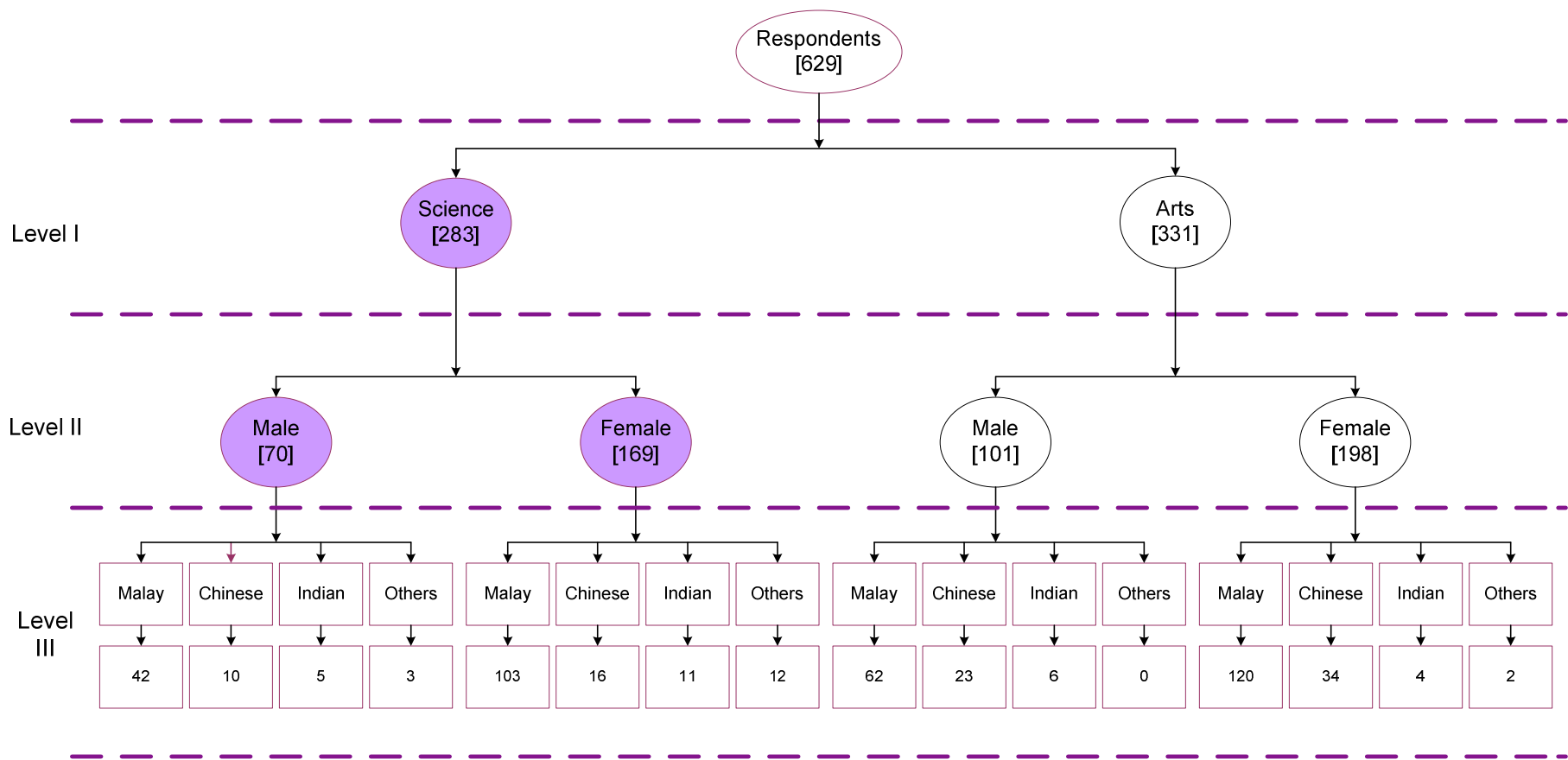
Blank = Respondents not answer that question, thus excluded from this study.

Sample valid = Completed questionnaires (for field of study, gender and ethnicity categories) fill in by respondents.

Sample required = Total sample should be included in this study.

Sample available = Available sample based on 640 questionnaires collected.

Sources: Developed by researcher for current study



Sources: Developed by researcher for current study

Figure 5.4: Stratified Random Sampling

### 5.7.2 Data Screening

Data screening involves the double-checking of data entries on the computer files in order to overcome human errors—particularly when there are large numbers of respondents (Hair *et al.*, 2010). The researcher is then required to verify each section so as to identify the questionnaires and to accordingly exclude those with extensively missing data; this was carried out. At this point, the researcher excluded one questionnaire as the respondent only answered demographic questions and left the remaining sections blank (id=8, UUM, science, male, Bumiputera). In addition, 21 questionnaires were established as lacking in demographic-related answers—such as age, secondary school background, religious background, parents' income, as well as father's and mother's profession—and so this was also removed. To date, the total respondents selected to be tested for this study were 431.

Next, the missing data analysis was employed 'to identify the patterns and relationships underlying the missing data in order to maintain as close as possible the original distribution of values when any remedy is applied' (Hair *et al.*, 2010, p. 42). Subsequently, the following assumptions were also examined: descriptive statistics, outlier examination, linearity test and normality of data (Hair *et al.*, 2010). Notably, homoscedasticity tests were then carried out using the statistical package for social sciences (SPSS) 15.0 version for Windows (Hair *et al.*, 2010).

Firstly, the descriptive statistics provide an overview concerning the aggregated data to be employed in the analysis (Tabachnick & Fidell, 2007). Moreover, the examination of potential outliers is important as their 'existence may distort an estimation of regression coefficients and representation of the relationships in samples' (Hair *et al.*, 2010, p. 66). The outliers here were examined in SPSS 15.0 (Tabachnick & Fidell, 2007).

Secondly, there is consideration of the normality of residuals whereby, for any value of independent variable, the residuals surrounding the regression line are assumed to be normally distributed (Hair *et al.*, 2010). The violation of the normality assumption will

affect the statistical significance tests—especially in the case of small samples (Hair *et al.*, 2010). Furthermore, the violation of normality of the residuals is often a ‘signal of other problems in the regression model such as misspecification’, i.e. the use of an incorrect regression model (Cohen *et al.*, 2000, p. 120). The Kurtosis & Skewness test (Hair *et al.*, 2010; Field, 2010), the Kolmogorov-Smirnov & Shapiro-Wilks test (Hair *et al.*, 2010; Field, 2010) were applied to assess the normality of residuals.

Third, linearity is an implicit assumption of all multivariate techniques based on ‘co-relational measures of association, including multiple regression, logistic regression, factor analysis, and structural equation modelling’ (Hair *et al.*, 2010, p. 76). In the case of data analysis, the relationships of variables are important for examination when seeking to determine any departures potentially affecting the correlation. In statistics, linearity can be measured by a scatter plot or Pearson’s correlations (Field, 2010). In, this study, Pearson’s correlations was applied using SPSS 15.0 in an attempt to assess the correlation between variables.

Fourth, the multi-collinearity refers to the relationship between two or more independent variables in a regression model (Field, 2010). It is desirable to have a number of independent variables highly correlated with the dependent variable (Field, 2010). Moreover, when there is a substantial degree of multi-collinearity, the process for separating the effects of independent variables becomes more difficult or it makes the consideration of the contribution of each independent variable difficult (Field, 2010). In order to diagnose this potential problem, the researcher employed SPSS 15.0 for Windows so as to compare the condition index and Variance Inflation Factor (VIF) of the model with the suggested threshold values (Hair *et al.*, 2010).

Fifth, the homoscedasticity test refers to the condition whereby ‘conditional variance of the residuals around the regression line is constant for any value of an independent variable’ (Lewis-Beck, 1993, p. 18). Conditional variances represent the variability of the residuals surrounding the predicted value for a specified value of the variable (Hair *et al.*, 2010). Notably, homoscedasticity is an essential assumption, as its violation will ultimately lead to incorrect estimations of standard errors, as well as



significant tests (Hair *et al.*, 2010). In this study, the researcher adopted Levene's test of homogeneity of variance in SPSS 15.0 in order to confirm the results of the variability of dependent variables through independent variables (Field, 2010).

In addition, in this study, common method bias was also examined as it has a potential problem in cases of behavioural research (Podsakoff *et al.*, 2003; Aquevegue & Ravasi, 2006). Method biases are a problem because they are one of the main sources of measurement error (Aquevegue & Ravasi, 2006). According to Podsakoff *et al.* (2003), method biases are likely to be particularly powerful in studies in which the data for both the predictor and the criterion variable are obtained from the same person in the same measurement context using the same item context and similar item characteristics (Aquevegue & Ravasi, 2006). As Brown & Perry (1994, p.1347) noted, researchers must be 'cautious when using these large-scale surveys because the characteristics of survey respondents, data-gathering methods, and survey questions may introduce measurement error'.

## **5.8 Analysis Performed on the Main Survey Data**

The EFA and reliability test were applied to the data of the main survey in order to assess the dimensionality and reliability of the instrument as a whole (Ismail *et al.*, 2010). In order to assess the validity of scale, a Confirmatory Factor Analysis (CFA) was performed on the main survey data via structural equation modelling (SEM) (Anderson & Gerbing, 1988; Hair *et al.*, 2010); subsequently, the structural model was tested (Anderson & Gerbing, 1988; Hair *et al.*, 2010). The construct validity of the questionnaire was assessed via convergent, discriminant and nomological validity (Hair *et al.*, 2010).

Structural equation modelling examines 'a series of interrelated dependent relationships amongst the measured variables and latent constructs, as well as between several latent's constructs' (Hair *et al.*, 2010, p. 634). The structural model is considered to be most useful when representing the interrelationships of variables between constructs (Hair *et al.*, 2010). The approach applied here followed the procedure outlined by Hair *et al.* (2010) and Anderson & Gerbing (1988) with the aim of developing an acceptable

measurement model before building on such in order to predict causal relationships amongst the research variables. The hypotheses were then tested for the structural model utilising the analysis of moment structure (AMOS) 18.0 version software (Ismail *et al.*, 2010).

### ***5.8.1 Exploratory Factor Analysis and Reliability Assessment***

The EFA explores the data and provides the researcher with information concerning how many factors are needed in order to best represent the data. The distinctive feature of the EFA is that the factors are derived from statistical results—not from theory. EFA will therefore determine the underlying pattern of the data, subsequently establishing the factor structure. Accordingly, with sufficient data gathered from the main survey, the researcher sought to confirm the items and constructs which had been tested previously in groups during EFA in the pilot survey. Importantly, it is noted that EFA can be conducted on ‘one or more separate samples before reaching the point of trying to confirm a model’ (Hair *et al.*, 2010, p. 707).

For the main survey, the investigation was concerned with all constructs and items put in together. The factor analysis extraction methods—principal components with orthogonal (Varimax) rotation—were conducted for the thirty (30) items measuring the variables for the main survey. For each scale, factors demonstrating an Eigen-value greater (>) than 1 were extracted (Pallant, 2001; Field, 2010) using Kaiser’s criterion to retain the factors; it was considered that this rule was appropriate for the sample size exceeding 250. Furthermore, a Scree plot was obtained in order to clarify whether or not any other factors might be present (Field, 2010). Furthermore, the items that showed similar loadings on loads of more than one factor or cross-loadings were excluded (Hair *et al.*, 2010). Each factor was then assessed in relation to reliability—namely Cronbach’s Alpha ( $\alpha$ ) (Field, 2010).

### ***5.8.2 Structural Equation Modelling and Assessment of Fitness***

Structural Equation Modelling (SEM) is a technique permitting a set of relationships between independent variables and dependent variables (Hair *et al.*, 2010). SEM provides

the appropriate and most efficient estimation technique for a series of separate multiple regression equations estimated simultaneously (Hair *et al.*, 2010). Importantly, it is developed through two different components, such as the measurement model and the structural model, aiming to establish an overall model fit in order to confirm the consistency of a theoretical model and the estimated model (Hair *et al.*, 2010; Tabachnick & Fidell, 2007). In statistics, many methods are available for evaluating the overall model fit on the basis of both incremental and absolute appropriateness of fit measures (Hair *et al.*, 2010). However, considerations regarding ‘the sample size, the estimation technique, the complexity of the model, the violation of underlying assumptions of multivariate normality and variable independence, can be superior to others’ (Diamantopoulos & Siguaw, 2000, p. 83).

This study applied model testing with the use of two separate stages, as recommended by Anderson & Gerbing (1988). The first stage comprises the development of the measurement model, with the aim of confirming the relationships between a construct and its indicators. Markedly, this model is assisted by CFA (Anderson & Gerbing, 1988), with CFA also used as a stricter assessment of construct validity of ensuring that the theoretical meaning of a construct is empirically captured by its indicators (Bagozzi *et al.*, 1991). In order to assess measurement scales through the use of construct validity, the following criteria should be assessed, such as the one-dimensionality of constructs (Anderson & Gerbing, 1988), convergent validity, discriminant validity and nomological validity (Anderson & Gerbing, 1988).

The second stage is structural model testing, which highlights the casual relationships between latent constructs (Anderson & Gerbing, 1988).

### **5.8.2.1            *Confirmatory Factor Analysis and Scale Validity***

#### ***Confirmatory Factor Analysis (CFA)***

CFA is a technique employed to confirm a priori hypothesis concerning the relationship between a set of measurement items and their respective constructs (Netemeyer *et al.*,

2003). CFA is applied to test ‘the extent to which a researcher’s a-priori, theoretical pattern of factor loadings on pre-specified constructs represents the actual data’ (Hair *et al.*, 2010, p. 693; Hattie, 1985). Moreover, CFA is also applied so as to provide a confirmatory test of the measurement theory (Bagozzi *et al.*, 1991). The researcher must specify both the number of factors existing for a set of variables, and which factor each variable will load on before results can be computed (Hair *et al.*, 2010). In this study, AMOS 18.0 is used in order to assess the quality of the proposed measurement model and the hypothesised structural model (Hair *et al.*, 2010).

It is important to investigate the issue of causality, as it is noted that this will affect the measurement theory (Hair *et al.*, 2010; Jarvis *et al.*, 2003). This is owing to the fact that the contrasting direction of causality subsequently leads to various different measurement approaches—namely reflective versus formative measurement models. A reflective measurement theory is based on the idea that latent constructs cause the measured items, and that the arrows are drawn from latent constructs to measured items (Hair *et al.*, 2010), whilst a formative measurement theory is modelled based on the assumption that the measured variables cause the construct (Hair *et al.*, 2010; Jarvis *et al.*, 2003). Essentially, there are few considerations to be taken into account when distinguishing between reflective constructs and formative constructs, as shown in Table 5.22.

Table 5.22: Comparison of Formative and Reflective Construct

Aspects of Comparison	Formative Construct	Reflective Construct
<i>Definition</i>	A construct which consists of a composite of multiple measures	A construct which has observed measures that are affected by an underlying latent – unobservable construct
<i>Direction of causality from construct</i>	Dropping an item should cause changes in the construct	Dropping an item should not cause changes in the construct
<i>Characteristics of Measurements (Items)</i>	Uncorrelated (multidimensional)	Correlated (one-dimensional)
<i>Internal Consistency test (Cronbach's Alpha)</i>	Not required	Required – to prove convergent validity
<i>Relations between Construct and Measurements (Items)</i>	Change in the formative measures cause changes in the underlying construct. Item changes – construct change	Change in the construct affects the underlying measures  Constructs changes – items change
<i>Measurement of Error</i>	At construct level	At individual measurement level
<i>Effect when Item(s) Removed</i>	May affect the Content Validity	Will not affect the Content Validity

Source: Developed by researcher based on Jarvis *et al.*, 2003 and Hair *et al.*, 2010.

These considerations indicate that the measurement model of the current study is reflective.

### **Scale Validity**

The scale validity can be assessed through the one-dimensionality of constructs, convergent validity, discriminant validity and nomological validity (Hair *et al.*, 2010). Unidimensional measures—otherwise referred to as one-dimensional measures—‘mean that a set of measured variables (indicators) can be explained by only one underlying construct’ (Hair *et al.*, 2010, p. 696). The unidimensionality of a construct should be achieved prior to any attempt being made at further theory tests, owing to the fact that it

demonstrates that the multiple indicators of a construct are consistent internally and distinct from other measures externally (Anderson & Gerbing, 1988). Each measured variable is hypothesised to relate to ‘only a single construct and all cross-loadings are hypothesized to be zero’ (Hair *et al.*, 2010, p. 696). In the case of CFA, the overall fit of the model is utilised as the necessary and sufficient condition for examining whether or not a set of measurement items is unidimensional (Steenkamp & Van Trijp, 1991).

Convergent validity is the extent to which the latent variable correlates to indicators pre-specified to measure the same construct (Anderson & Gerbing, 1988; Bagozzi *et al.*, 1991; Peter & Churchill, 1986; Steenkamp & Van Trijp, 1991). Convergent validity assesses the extent to which independent measures of the same construct converge are highly, or otherwise, correlated (Hair *et al.*, 2010). Moreover, convergent validity is assessed by the factor loadings greater than ( $>$ ) 0.50 (Anderson & Gerbing, 1988). In addition, convergent validity is also assessed through composite reliability and Average Variance Extracted (AVE) (Fornell & Larcker, 1981). Essentially, average variance extracted is a ‘summary of convergence among a set of items representing a latent construct. It is the average percentage of variation explained among the items’ (Hair *et al.*, 2010, p. 773). The value of variance extracted should be greater than ( $>$ ) 0.50 in order to indicate that the observable variables truly reflect the construct in question, and to thereby ensure the validity of the scale under investigation (Hair *et al.*, 2010). This is owing to the fact that, if it is less than ( $<$ ) 0.50, the ‘variance due to measurement error is larger than the variance captured by the construct, and the validity of the construct is questionable’ (Fornell & Larcker 1981, p. 46). Therefore, composite reliability or construct reliability measures the reliability and internal consistency of the variables, thereby representing a latent construct in the model (Hair *et al.*, 2010). It ‘must be established before construct validity can be assessed’ (Hair *et al.*, 2010, p. 771). Composite reliability scores should be greater than ( $>$ ) 0.70, which would therefore indicate that the measures represent the same latent construct consistently (Hair *et al.*, 2010).

Discriminant validity is defined as the extent to which the indicators of one construct are distinct from the items of other latent variables (Bagozzi *et al.*, 1991). In order to assess discriminant validity, this study performs a test as follows (Hair *et al.*, 2010). The

AVE of each construct is computed, with a comparison then drawn between this and the square correlation between them (Field, 2010); if the AVE estimates are greater than (>) the squared correlation estimates for any of the constructs, the discriminant validity is then achieved (Fornell & Larcker, 1981). Notably, an alternative test for discriminant validity is a chi-square difference test. As stated by Anderson & Gerbing (1988, p. 416), discriminant validity can be assessed for two estimated constructs by ‘constraining the estimated correlation parameter between them (two estimated constructs) to 1 and then performing a chi-square difference test on the values obtained for the constrained and unconstrained model’.

Nomological validity refers to the examination of the hypothesised relationships between the constructs as well as the empirical links between indicators (items) and their underlying constructs (Hair *et al.*, 2010). In order to confirm the nomological validity, the Goodness of Fits were examined: for example, Comparative Fit Index (CFI), Goodness of Fit Index (GFI) and Root Mean Square Error Approximation (RMSEA) (Steenkamp & Van Trijp, 1991).

#### **5.8.2.2                      *Structural Model and Assessing Fitness***

The structural model is applied in order to illustrate the casual relationships between the variables (Hair *et al.*, 2010). The overall fit of the structural model confirms the consistency of a theoretical model and the estimated model which is based on the observed values (Hair *et al.*, 2010). In relation to statistics, there are so many methods available to test the overall model fit; however, no sole method is thus far able to provide absolute assurance of model fit (Hair *et al.*, 2010). The most common fit indices include the Chi-square, the Goodness of Fit Index (GFI), the Tucker-Lewis Index (TLI), the Adjusted Goodness of Fit Index (AGFI), and the Root Mean Square Error Approximation (RMSEA) (Kline, 1998; Hair *et al.*, 2010).

#### ***Absolute Fit Indices***

The chi-square statistics is the most common test of fitness in structural equation modelling (Hair *et al.*, 2010). Diamantopoulos & Siguaw (2000, p. 83) state that, ‘it is a test of perfection, in which the null hypothesis is that the model fits the population data perfectly’.

In this test, the null hypothesis is rejected when it is statistically significant, thereby indicating a poor model fit and the subsequent possible rejection of the model (Byrne, 1998). However, insignificant value of chi-square corresponds to good fit (Joreskog & Sorbom, 1996). Chi-square value is computed as  $(N - 1) F_{min}$  where  $N$  is the sample size,  $F_{min}$  is the value of the fitness function' and the relevant degree of freedom calculates as  $\frac{1}{2} k(k + 1) - t$ , where  $k$  is the number of observed variables and  $t$  is the number of parameters to be estimated' (Diamantopoulos & Sigauw, 2000, p. 83). In the case of AMOS software, the results of the chi-square test show in the form of minimum discrepancy (CMIN) (Hair *et al.*, 2010). Moreover, the degree of freedom represents 'the amount of information available to estimate model parameters' (Hair *et al.*, 2010, p. 665).

The Goodness of Fit index is a measure of the relative amount of variance and covariance (Hair *et al.*, 2010). The GFI compares the squared residuals predicted with the observed value (Hair *et al.*, 2010). Notably, the possible range of GFI value is '0–1, with higher values indicating better fit' (Hair *et al.*, 2010, p. 667). Values ranging from 0.80 to 0.89 are indicative of a good fit (Doll *et al.*, 1994), whilst values ranging between 0.90 and 1.0 are considered to be a very good fit (Diamantopoulos & Sigauw, 2000). In addition, it is noteworthy to highlight that Tanaka & Huba (1985) recommend that a model with a GFI of less than 0.8 should be rejected.

The Root Mean Square Error of Approximation (RMSEA) represents a closeness of fit. It measures the extent to which the model approximates the data (Joreskog & Sorbom, 1996; Browne & Cudeck, 1993). Values less than (<) 0.05 are considered to be of a very good fit, and values less than (<) 0.08 represent a good fit, whilst values ranging from 0.08 through to 0.10 indicate a mediocre fit and values of greater than (>) 0.10 indicate a poor fit (Hair *et al.*, 2010).

### ***Incremental Fit Indices***

Incremental fit indices calculate how fit the specified model is compared with a baseline model (Hair *et al.*, 2010). Commonly, the baseline model is the null model (Hair *et al.*, 2010). Some of the most common incremental fit measures are the normed fit index (NFI), the comparative fit index (CFI), and the Tucker-Lewis index (TLI) (Hair *et al.*, 2010).



Importantly, however, CFI is amongst the most widely used indices (Marsh *et al.*, 1996). CFI is an improved version of the Normed Fit Index (NFI) (Hair *et al.*, 2010). Although this is not an absolute threshold value, 0.90 and above is mostly recommended as an indication of good fit (Hair *et al.*, 2010, p. 669).

Another incremental fit index is the TLI (Byrne, 1989), which is similar conceptually to CFI in that it involves a mathematical comparison of a specified theoretical measurement model and a baseline null model (Hair *et al.*, 2010, p. 668). Importantly, it is calculated as  $[(\text{chi-square null} / \text{df null}) - (\text{chi-square proposed} / \text{df proposed})] / (\text{chi-square null} / \text{df null})$ , where *df* is degree of freedom' (Hair *et al.*, 2010). A fit statistic of 0.9 or higher is considered to be good, whilst fit levels of around 0.8 are considered acceptable (Gerbing & Anderson, 1992).

### ***Parsimony Fit Indices***

The parsimony fit is defined as those measurements relating to the Goodness of Fit of the model to the number of estimated coefficients required in order to achieve this level of fit (Hair *et al.*, 2010). The basic objective is to diagnose whether the model fit has been achieved by over-fitting the data with too many coefficients (Hair *et al.*, 2010, p. 669). This fit measure includes Parsimony Normed Fit Index (PNFI) and the Adjusted Goodness of Fit index (AGFI) (Hair *et al.*, 2010). PNFI value can be used in the same way as the NFI (Hair *et al.*, 2010). The AGFI is an extended version of GFI, which is adjusted by the ratio between the degree of freedom for the proposed model and the degree of freedom available (Hair *et al.*, 2010, p. 669). Values ranging from 0.80 through to 0.89 are indicative of a reasonable fit (Doll *et al.*, 1994), whilst values between 0.90 and 1.00 are considered to be a very good fit (Joreskog & Sorbom, 1993).

In this study, all of the above Goodness of Fit indices were applied in order to capture their different emphasis when evaluating the fitness of our model.

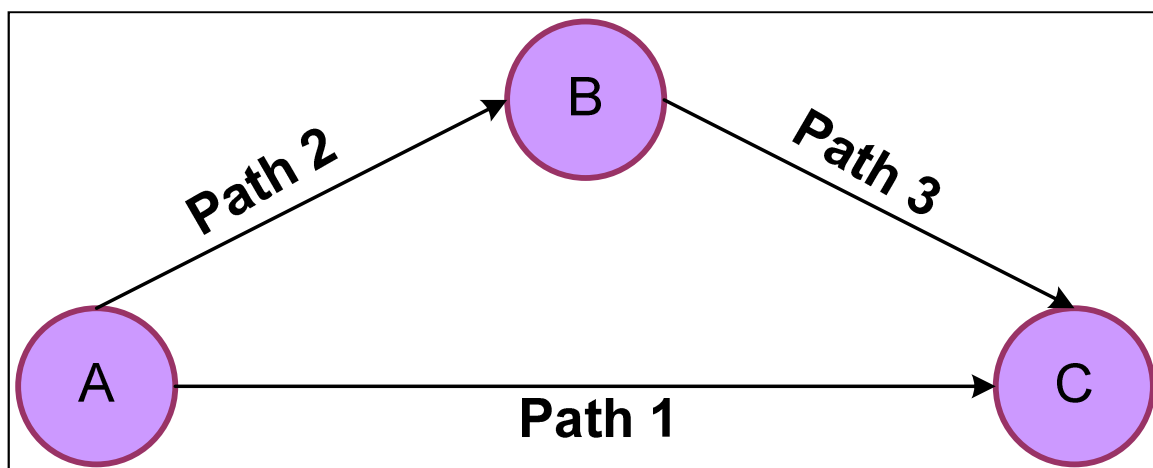
### **5.8.2.2.1 Hypotheses Testing**

The hypotheses were tested using the SEM (Hair *et al.*, 2010). SEM is considered to be the most robust method in social science when seeking to predict the output of variables (Hair *et al.*, 2010). It is an appropriate method for investigating the relationship between a dependent variable and two or more independent variables owing to its well-developed underlying statistical theory (Hair *et al.*, 2010; Anderson & Gerbing, 1988). Based on the structural model, the research hypotheses were tested from the standardised estimate and t-value (critical ratio) (Hair *et al.*, 2010). The standardised estimates for the hypotheses have to be statistically significant and in the hypothesised direction (Tabachnick & Fidell, 2007). The Fit indices are used to assess whether or not the hypothesised structural model fits the data (Hair *et al.*, 2010).

### **5.8.2.2.2 Testing the Mediator**

In this study, the four hypotheses involved mediation. Mediation can be examined in several ways; one alternative is to add previous paths, one-by-one, to the exploratory model, and to thereby evaluate the model fit (Hair *et al.*, 2010). Mediation requires 'significant correlations among all three constructs' (Hair *et al.*, 2010, p. 766). In this study, testing for mediation is performed through the following process (also shown in Figure 5.5):

1. Estimate the direct effect Path 1 between A and C constructs;
2. Estimate the second model by adding construct B, including Path 2 and Path 3;
3. Add construct B.
4. If Path 1 is significant and unchanged after adding construct B, mediation is then not supported;
5. If Path 1 is reduced but remains significant, then partial mediation is supported; and
6. If Path 1 reduced to not significant, full mediation is then supported.



Source: Adapted from Hair *et al.*, 2010, p. 766

Figure 5.5: Mediation Effects

## 5.9 Cross-checking Quantitative Results

In order to cross-check the quantitative results, structured interviews are conducted at the end. The researcher approached the Universiti Malaysia Sabah (UMS) alumni association members, who used to be NHEFC borrowers, based on the list provided by the secretary of the association. Those who agreed to participate were provided with the date and time arranged for the interviews. These interviews were conducted over the phone using the loudspeaker function. An interview guide was developed by the researcher, including a list of questions based on the quantitative findings. Respondents' consent is first obtained for the use of any specific statement in the study. At the beginning of each interview, the researcher read the consent, with the respondents then asked about whether they wanted to participate or decline. Importantly, the respondents were asked for permission prior to the publication of quotations. In total, there were six (6) interviews lasting approximately 25–35 minutes each. The telephone interviews were recorded and transcribed by the researcher. All Malay transcripts were translated into English and verified by bilingual speakers so as to ensure that the translation was accurate. Table 5.23 shows profiles of the interviewees.

Table 5.23: Details of Interview Respondents

Interviewee	Occupation	Income Range (RM)	Income Range (£)	Age Range	Gender	Duration (minutes)
1	Lecturer	25,000 – 40,000	5,000 – 8,000	25 - 35	Female	30
2	Engineer	25,000 – 40,000	5,000 – 8,000	25 - 35	Male	30
3	Government Officer	25,000 – 40,000	5,000 – 8,000	25 - 35	Female	35
4	Bank Manager	30,000 – 50,000	6,000 – 10,000	25 - 35	Female	35
5	Engineer	25,000 – 40,000	5,000 – 8,000	25 - 35	Male	30
6	Teacher	15,000 – 30,000	3,000 – 6,000	25 - 35	Female	30

Source: Developed by the researcher for the current study

## 5.10 Summary

This chapter provides the rationale behind the selection of the mixed paradigm for this research. This study also employed a variety of methods for data collection. The qualitative study included focus group discussions and semi-structured interviews, all of which were conducted during the initial stages of data collection in order to develop scale as well as conduct validation. The qualitative data were coded and entered onto the Nvivo 8.0 software for the purposes of validation and computation. Prior to the pilot survey being initiated, back translation and content/face validation were implemented. A pilot survey was conducted in order to purify the survey instrument prior to the actual main survey being carried out. Details, such as measurement scales, sampling and respondents and data analysis procedures, were also discussed in this chapter.

Upon the analysis stage of the study, the data were cleaned, coded and entered onto the statistical package for social sciences (SPSS) version 15.0 for Windows. The analytical techniques used for the pilot survey were the exploratory factor analysis and the reliability analysis. The analytical techniques used for the main survey were missing data analysis, exploratory factor analysis and the reliability analysis, confirmatory factor analysis, and

structural model evaluation. The results of the main survey analysis are reported and explained in the next chapter. Finally, structured interviews were conducted at the end of the study in order to cross-check the quantitative results.

Data for the main survey were collected from final-year undergraduate students from selected public universities in Malaysia through a survey questionnaire. Details, such as measurement scales, sampling and participation and data analysis procedures, were also discussed in this chapter. Moreover, the survey instrument was structured into seven sections, namely ‘perception towards loan agreement’, ‘awareness of loan repayment issues created by media’, ‘perception that loan repayment will affect quality of life after graduation’, ‘parental influence’, ‘students’ attitude’ and ‘intention to repay loan’, along with demographic questions—including gender, ethnic groups, field of study, secondary school background, age, marital status, religion, parents’ income, father’s profession, and mother’s profession.

As highlighted above, the data were cleaned, coded and entered onto the statistical package for social sciences (SPSS) version 15.0. Analytical techniques—including descriptive statistics, exploratory factor analysis and reliability analysis—were discussed briefly. Following these analyses, factors were validated using confirmatory factor analysis on the basis of SEM. This was also used as a stricter assessment of construct validity to ensure that the theoretical meaning of the construct was captured empirically via its items. Subsequently, an assessment of model fit through AMOS 18.0 and tested hypotheses were discussed. Notably, Goodness of Fit indices were used to assess the model fit of measurement models, such as Chi-square ( $\chi^2$ ), Root Mean Square Error of Approximation (RMSEA), Goodness of Fit Index (GFI), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI). Finally, structured interviews were conducted with six (6) graduates through the conduction of telephone interviews in order to cross-check the quantitative findings.

## Chapter Six: Quantitative Analysis

### 6.1 Introduction

This chapter details the analysis and the results involved in the multi-stage procedure. First, data were examined and screened in order to prepare for subsequent quantitative analyses. Next, descriptive statistics were presented, and Exploratory Factor Analysis (EFA) and a reliability test were performed in relation to overall measurement scales; this ensures the underlying dimensions of the measurement scales, and further achieves an acceptable level of reliability for further analysis. The resulting solutions were then re-assessed with the use of the Confirmatory Factor Analysis (CFA). Subsequently, Structural Equation Modelling (SEM) was used to test the hypotheses regarding the relationships between the constructs in the conceptual model, and to further assess the overall Goodness of Fit between the proposed model and the collected data set. Finally, the results of the mediation testing were presented, and the conclusions were drawn in the last section.

### 6.2 Data Screening

The data were examined and screened following the procedure suggested by Hair *et al.* (2010) and Tabachnick & Fidell (2007). The dataset was searched for missing values (Hair *et al.*, 2010), and the questionnaires with substantive missing data or poor quality responses were removed prior to analysis (Hair *et al.*, 2010).

#### 6.2.1 Missing Data

Dealing with missing data is an important stage in the data exploration process, as they may affect the results to a significant extent (Hair *et al.*, 2010). Missing data occurs when ‘valid values on one or more variables are not available for analysis’ (Hair *et al.*, 2010, p. 42). Moreover, they may affect an analysis from two perspectives: ‘practical and substantive’ (Hair *et al.*, 2010, p. 42). From a practical perspective, missing data effectively reduces a sample’s size and, as a consequence, multivariate analysis cannot be performed efficiently. In terms of the substantive perspective, any statistical results could be biased (Hair *et al.*, 2010; Field, 2010).

There were two types of missing data (Hair *et al.*, 2010; Tabachnick & Fidell, 2007). First, data which are classified as ignorable missing data, which were expected and part of the research design (Hair *et al.*, 2010), and where specific remedies for such were not needed—the allowances are inherent to the technique employed (Hair *et al.*, 2010). Importantly, this is not applicable to the current study owing to the fact that all respondents given a questionnaire did return it to the researcher. The second type of missing data cannot be classified as ignorable, and occurs for many reasons and in many different situations (Hair *et al.*, 2010).

These missing data fall into two classes: known processes versus unknown processes (Hair *et al.*, 2010). Known missing data were identified by the researcher in relation to the procedural factors, such as errors in the data entry creating invalid codes, failure to complete the entire questionnaire, or even the morbidity of the respondents (Hair *et al.*, 2010; Tabachnick & Fidell, 2007). In such situations, the researcher has little control over the missing data processes, although some remedies may be applicable if the missing data are found to be random (Hair *et al.*, 2010). Second, unknown missing data processes were identified and accommodated less easily (Hair *et al.*, 2010; Tabachnick & Fidell, 2007). Most often, such instances were related directly to the respondent (Hair *et al.*, 2010). One example is the refusal of a respondent to respond to certain questions, which was common in questions of a sensitive nature, such as income or controversial issues (Hair *et al.*, 2010; Tabachnick & Fidell, 2007).

In the current study, the researcher has minimised the problem associated with missing data through research design, although the problem has not been eliminated and nevertheless required further action. When missing data occurs in a random pattern, numerous solutions are available in order to mitigate their effect (Hair *et al.*, 2010). Following Tabachnick & Fidell (2007), the amount of missing data was assessed firstly, and the pattern of missing data examined subsequently in order to determine whether or not missing data occurs randomly or relates to a specific items; this was carried out in order to avoid biased estimates.

The primary issue was examining the extent of missing data, and determining whether or not it would affect the results—even if operating in a non-random manner (Hair *et al.*, 2010). The most direct means of assessing the extent of missing data was through tabulating the percentage of variable with missing data for each case, and the number of cases with missing data for each variable (Hair *et al.*, 2010). In order to determine the missing data, this study applied SPSS 15.0 of missing value analysis, and accordingly found the level of missing data for all the variables to be too low, as the missing data ranges from 0.0% to 3.9% (see Table 6.2). The rule of thumb for missing data under 10% for an individual case or observation is that such gaps can be generally ignored (Hair *et al.*, 2010). Notably, Tabachnick & Fidell (2007, p. 63) point out that, if only few data point are missing in a random pattern from a large data set—such as 5%, for example—the problem is then not considered to be serious. In order for the researcher to confirm whether the missing data process occurs in a completely random manner, a small MCAR test was performed. The test results show that data are missing completely at random; thus, no cases were deleted from our data set. The missing data were impulse with estimate mean values.

Table 6.1: Item Description

Items	Descriptions
LP01	I think the loan agreement was written too long
LP02	The loan agreement was difficult to understand
LP03	The time given to complete the loan agreement form was not enough
LP04	The loan agreement need to use the language more easily understood
AW01	I am aware latest information about NHEFC loan repayment in the newspapers
AW02	I have watched the television programme about latest information about NHEFC loan repayment
AW03	I have read the latest information about NHEFC loan published on their website
AW04	I hear that latest information about NHEFC loan which is broadcast on the radio
PQ01	After graduation, loan repayment will affect my decision on the selection of the place to stay
PQ02	After graduation, loan repayment will affect my decision on job options
PQ03	After graduation, loan repayment will affect my decision on when to get married
PQ04	After graduation, loan repayment will affect my decision on when to buy my first car
PQ05	After graduation, loan repayment will affect my decision on when to have my first Child
PQ06	After graduation, loan repayment will affect my decision on buying a house
PQ07	After graduation, loan repayment will affect my decision on how much money I will contribute to my parents



PI01	My parents advise me after I graduate to find any job to pay the loan first
PI02	My parents advise me after I graduate to make regular payments to reduce the debt
PI05	My parents remind me to pay back the loan after I graduate to avoid problems in the future
PI06	My parents, as guarantors of this loan, remind me to pay back the loan after graduate to avoid burden on them in the future
AT01	The repayment will help other students
AT02	Repayment is my obligation
AT03	I have to make an effort to make repayments
AT04	NHEFC can trace me to collect the loan
AT05	There are legal penalties for non-repayment
IR01	I will make repayment because it is my priority
IR06	I will make repayment because my culture norms says debt must be repaid
IR07	I will make repayment because my belief in religion says debt must be repaid
IR08	I will make regular payments to reduce the debt
IR09	I will make regular payments to avoid problems in the future
IR10	I will make regular payments after graduate to avoid burden on my parents in the future

Notes: LP – perceived agreement; AW – media awareness; PQ – perceived quality; PI – parental influence; AT – students’ attitude; IR – intention

Source: Developed by researcher for current study.

Table 6.2: Univariate Statistics

Items	N		SD	Missing	
	Count	Per cent		Count	Per cent
LP01	431	3.92	0.925	0	0.0
LP02	429	3.30	0.977	2	0.5
LP03	428	3.42	1.004	3	0.7
LP04	414	3.75	0.925	17	3.9
AW01	431	3.31	1.005	0	0.0
AW02	431	3.14	1.046	0	0.0
AW03	431	3.28	0.999	0	0.0
AW04	429	2.94	1.022	2	0.5
PQ01	431	3.42	1.128	0	0.0
PQ02	431	3.46	1.067	0	0.0
PQ03	430	3.37	1.096	1	0.2
PQ04	430	3.57	1.019	1	0.2
PQ05	430	3.21	1.082	1	0.2
PQ06	431	3.66	1.021	0	0.0
PQ07	431	3.33	1.187	0	0.0
PI01	427	3.63	0.981	4	0.9
PI02	429	3.93	0.817	2	0.5
PI05	429	3.78	0.893	2	0.5
PI06	428	3.92	0.852	3	0.7

AT01	429	4.03	0.805	2	0.5
AT02	428	4.20	0.713	3	0.7
AT03	421	4.21	0.688	10	2.3
AT04	429	3.94	0.805	2	0.5
AT05	427	4.09	0.724	4	0.9
IR01	430	4.06	0.764	1	0.2
IR06	426	4.03	0.725	5	1.2
IR07	430	4.09	0.659	1	0.2
IR08	430	4.11	0.753	1	0.2
IR09	428	4.00	0.886	3	0.7
IR10	428	4.18	0.839	3	0.7

Note: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students’ attitude; IR—intention; SD = Standard deviation, N = Sample size

Source: Developed by researcher for current study.

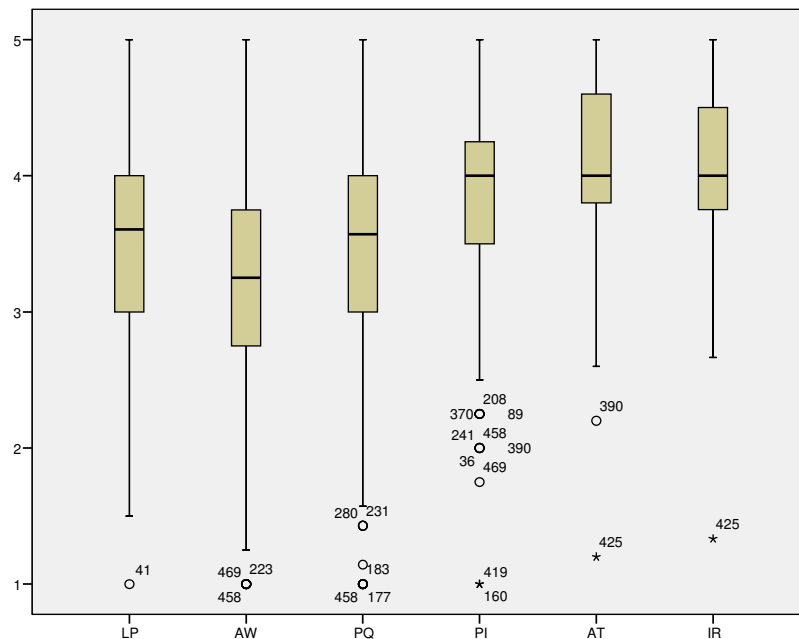
### 6.2.2 Outliers

Outliers refer to observations of characteristics identifiable as distinctly different or distinct from other observations (Hair *et al.*, 2010). Outliers are judged to be unusually high or low values of a variable or a ‘unique combinations of values across several variables that make the observation stand out from the others’ (Hair *et al.*, 2010, p. 64). In other words, an outlier occurs with an extreme value on one variable or a combination of scores on two or more variables affecting the statistics (Tabachnick & Fidell, 2007). There are three methods of detecting outliers: univariate detection, bivariate detection and multivariate detection (Field, 2010).

Univariate detection examines the distribution of observations for each variable, whereas the rule of thumb in the case of a small ‘sample size (80 or fewer observation) is that a case is an outlier if its standard score is 2.5 or greater, whilst for larger samples, the threshold standard scores is 4’ (Hair *et al.*, 2010, p. 67). Bivariate outliers can be identified by considering a pair of variables jointly in a scatter plot, whereby if some cases fall markedly outside the range of the other observations, they will then be considered as isolated points (Hair *et al.*, 2010). Multivariate outliers, in terms of analogy, are a combination of scores on more than two variables (Hair *et al.*, 2010). Multivariate is identified as being a better solution than bivariate owing to a large number of graphs and limited numbers of variable observations (Hair *et al.*, 2010). Thus, for multidimensional position of variables, the multivariate detection method of dealing with outliers is more useful (Hair *et al.*, 2010).

According to Hair *et al.* (2010) and Field (2010), multivariate outliers can be identified by the Mahalanobis  $D^2$  measure, which assesses each observation across a set of variables. Mahalanobis  $D^2$  is distributed as a chi-square statistic, with degrees of freedom (df) equal to the number of construct in the analysis (Hair *et al.*, 2010). If  $D^2/df$  exceeds 2.5 in a small sample and 3 or 4 in a large sample, it can then be designated as a possible outlier (Hair *et al.*, 2010). Mahalanobis  $D^2$ , as a multi-dimensional version of a z-score, and measures the distance of a case from the centroid (multi-dimensional mean) of a distribution (Hair *et al.*, 2010). It is important to highlight that outliers can bias the mean and inflate the standard deviations (Field, 2010).

The current study applied a graphical method for detecting the univariate outliers and the Mahalanobis’s test for finding multivariate outliers. Using the box plot method, three univariate outliers were found—each of which was marked with asterisks in Graph 6.1. The Mahalanobis’s distance test also identified three multivariate outliers, as shown in Table 6.3; thus, both tests identified the same three cases as problematic. During this stage, adjustments were made by removing three cases, and thus the size of the sample ( $N$ ) was reduced to 428.



Graph 6.1: Box Plot

Table 6.3: Outliers

Constructs	Case (id)	D <sup>2</sup> /df
AT	425	4.91
AW	No cases	
IR	425	4.71
PI	419, 160	3.97, 3.97
PQ	No cases	

Notes: D<sup>2</sup>/df = Mahalanobis D<sup>2</sup> value / degree of freedom

LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence;  
AT—students' attitude; IR—intention

Source: Developed by researcher for current study

### 6.2.3 Normality

Normality is a fundamental assumption in multivariate analysis—particularly in the case of structural equation modelling (Hair *et al.*, 2010). Prior to further analysis, it should be ensured that data are distributed normally and related to each other (Tabachnick & Fidell, 2007). If the variation from the normal distribution is sufficiently large, statistical tests resulting from such are deemed invalid (Hair *et al.*, 2010). In order to test whether or not the data are distributed normally, tests are performed relating to the measures of kurtosis and skewness (Hair *et al.*, 2010). Markedly, kurtosis refers to the peakedness or flatness of the distribution compared to normal, whereas skewness describes distributions which are unbalanced and shifted to one side, i.e. right-negative skewness or left-positive skewness, and 0 in the case of balanced normal distribution (Curran *et al.*, 1996). For both skewness and kurtosis, the critical values should be within the 'range of  $\pm 2.58$ ' in order to accept that data distribution is not far from normal (Hair *et al.*, 2010, p. 73).

In this study, as shown in Table 6.4, the analysis indicates that no number of variables fell outside of the acceptable range for values of skewness and kurtosis—all variables were found normally distributed; however, values for skewness were found to be negative, whilst values for kurtosis were mixed negative and positive (see Table 6.1 for item description). The negative values of skewness indicate that the tail on the left side is longer than the right side, and the bulk of the values lie to the right of the mean. Mean refers to the centre of a distribution of scores whilst standard deviation refers to an estimate of the average variability of a set of data measured in the same unit of measurement (Field, 2010, p. 794).

Table 6.4: Descriptive statistics

Items	N	Mean	SD	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	S. Error	Statistic	S. Error
LP01	428	3.92	.915	-.838	.118	.872	.235
LP02	428	3.30	.974	-.017	.118	-.511	.235
LP03	428	3.42	1.000	-.079	.118	-.764	.235
LP04	428	3.75	.906	-.539	.118	.287	.235
AW01	428	3.32	1.002	-.389	.118	-.337	.235
AW02	428	3.14	1.041	-.188	.118	-.667	.235
AW03	428	3.28	.993	-.446	.118	-.487	.235
AW04	428	2.94	1.019	-.095	.118	-.763	.235
PQ01	428	3.43	1.125	-.512	.118	-.459	.235
PQ02	428	3.47	1.061	-.535	.118	-.390	.235
PQ03	428	3.37	1.093	-.380	.118	-.531	.235
PQ04	428	3.58	1.020	-.646	.118	-.042	.235
PQ05	428	3.22	1.074	-.124	.118	-.630	.235
PQ06	428	3.66	1.022	-.673	.118	.004	.235
PQ07	428	3.34	1.183	-.360	.118	-.766	.235
PI01	428	3.64	.963	-.550	.118	-.032	.235
PI02	428	3.95	.792	-.614	.118	.508	.235
PI05	428	3.80	.869	-.627	.118	.469	.235
PI06	428	3.93	.828	-.690	.118	.677	.235
AT01	428	4.04	.790	-.779	.118	1.004	.235
AT02	428	4.22	.691	-.661	.118	.785	.235
AT03	428	4.22	.661	-.526	.118	.322	.235
AT04	428	3.96	.787	-.501	.118	.276	.235
AT05	428	4.10	.712	-.503	.118	.401	.235
IR01	428	4.06	.749	-.676	.118	.713	.235
IR06	428	4.04	.705	-.460	.118	.494	.235
IR07	428	4.10	.648	-.207	.118	-.246	.235
IR08	428	4.12	.745	-.607	.118	.386	.235
IR10	428	4.01	.860	-.892	.118	1.062	.235
Valid N (list wise)	428						

Notes: SD—Standard Deviation; S.Error—Standard Error

LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence;

AT—students' attitude; IR—intention; SD = Standard deviation, N = Sample size

Source: Developed by researcher for current study

In addition, the Kolmogorov-Smirnov & Shapiro-Wilks test was also applied in order to determine data normality (Field, 2010; Shapiro & Wilks, 1965). This test statistic calculates the level of significance for the differences from a normal distribution (Field, 2010). The current study has employed a large sample, and the test accordingly states that all variables in the dataset were significant, as shown in Table 6.5 (see Table 6.1 for item

description). Because this test is very sensitive to a large sample size, hence, significant Kolmogorov-Smirnov & Shapiro-Wilks test does not reveal departure from normality of data (Field, 2010, p. 93).

Table 6.5: Kolmogorov-Smirnov & Shapiro-Wilks

Items	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilks		
	Statistic	Df	Sig.	Statistic	Df	Sig.
PQ01	.239	428	.000	.892	428	.000
PQ02	.265	428	.000	.883	428	.000
PQ03	.219	428	.000	.903	428	.000
PQ04	.271	428	.000	.875	428	.000
PQ05	.176	428	.000	.914	428	.000
PQ06	.268	428	.000	.873	428	.000
PQ07	.217	428	.000	.902	428	.000
AT01	.284	428	.000	.822	428	.000
AT02	.263	428	.000	.792	428	.000
AT03	.270	428	.000	.790	428	.000
AT04	.266	428	.000	.842	428	.000
AT05	.271	428	.000	.813	428	.000
AW01	.229	428	.000	.896	428	.000
AW02	.204	428	.000	.906	428	.000
AW03	.258	428	.000	.879	428	.000
AW04	.185	428	.000	.901	428	.000
LP01	.257	428	.000	.843	428	.000
LP02	.207	428	.000	.904	428	.000
LP03	.194	428	.000	.900	428	.000
LP04	.215	428	.000	.878	428	.000
PI01	.254	428	.000	.882	428	.000
PI02	.284	428	.000	.837	428	.000
PI05	.272	428	.000	.859	428	.000
PI06	.274	428	.000	.842	428	.000
IR01	.289	428	.000	.814	428	.000
IR06	.288	428	.000	.814	428	.000
IR07	.299	428	.000	.793	428	.000
IR08	.261	428	.000	.817	428	.000
IR10	.270	428	.000	.829	428	.000

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention; <sup>a</sup> Lilliefors Significance Correction; df = degree of freedom, Sig. = Significance

Source: Developed by researcher for current study

### 6.2.4 Linearity

Linearity indicates a correlation between variables, represented by a straight line (Field, 2010). Linearity can be measured by the Pearson’s correlation test or a scatter plot (Field, 2010; Hair *et al.*, 2010). This study applied the Pearson’s correlation test. The results found that the independent variables were correlated significantly with the dependent variable, as shown in Table 6.6. Furthermore, the results also show that constructs of intention (IR) and attitude (AT) illustrate a high, positive correlation (0.7). In order to prove that IR and AT measure different things, the discriminant validity in the confirmatory factor analysis is checked, as the discriminant validity examines the extent to which one construct is distinct from other constructs.

Table 6.6: Pearson’s Correlations

	LP	AW	PQ	PI	AT	IR
LP	1					
AW	.069	1				
PQ	.200**	.138**	1			
PI	.096*	.271**	.289**	1		
AT	.085	.210**	.040	.476**	1	
IR	.040	.212**	-.003	.534**	.700**	1

Notes: \*p < .05; \*\*p < .01; LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students’ attitude; IR—intention

Source: Developed by researcher for current study

### 6.2.5 Multicollinearity

Multicollinearity exists when there is a strong correlation between two or more predictors in the model (Hair *et al.*, 2010). This study determined the multicollinearity using the Variance Inflation Factor (VIF) method (Hair *et al.*, 2010). This indicates whether or not one predictor has a strong linear relationship with other predictors (Hair *et al.*, 2010). Following Myers (1990), only if the largest VIF is greater than 10 does this indicate a serious problem. The results in the current study show a largest value of VIF=3.354 (see Table 6.7); therefore, the researcher is confident that there is no concern in terms of multicollinearity.

Table 6.7: Multicollinearity

Model	Collinearity Statistics		
	Constant	Tolerance	VIF
LP01			
LP02		.687	1.455
LP03		.774	1.292
LP04		.760	1.316
AW01		.559	1.790
AW02		.495	2.021
AW03		.637	1.570
AW04		.648	1.543
PQ01		.558	1.793
PQ02		.440	2.272
PQ03		.330	3.030
PQ04		.324	3.087
PQ05		.435	2.297
PQ06		.298	3.354
PQ07		.564	1.774
PI01		.637	1.569
PI02		.545	1.834
PI05		.363	2.752
PI06		.327	3.057
AT01		.560	1.787
AT02		.370	2.699
AT03		.384	2.601
AT04		.485	2.061
AT05		.442	2.264
IR01		.518	1.931
IR06		.413	2.419
IR07		.335	2.988
IR08		.396	2.525
IR10		.544	1.839

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention; VIF = Variance Inflation Factor.

Source: Developed by researcher for current study

### 6.2.6 Homoscedasticity

Homoscedasticity refers to the assumption that 'dependent variables exhibit equal levels of variance across the range of independent variables' (Hair *et al.*, 2010, p. 74). The dispersion (variance) of the dependent variable values must be relatively equal at each value of the independent (predictor) variable; thus, this refers to the assumption of normality owing to the fact that, when the assumption of multivariate normality is met, the relationships between variables are homoscedastic (Field, 2010; Tabachnick & Fidell,



2007). In other words, Homoscedasticity estimates the variance of dependent variables with independent variables (Hair *et al.*, 2010). Homoscedasticity can be measured by graphical that is scatterplots, and statistical methods that is Levene's test (Hair *et al.*, 2010). For scatterplots, the small dispersion are shown at one side of the graph indicate homogeneity of variance (Hair *et al.*, 2010). For statistical method, the p-value of Levene's test should be insignificant (Tabachnick & Fidell, 2007).

In this study, the Levene's test was applied to confirm the results of variability of dependent variables with independent variables. The results show that overall items were homogeneous (see Table 6.8) with the exception of 2 items where the test statistic was significant—PQ04 and PI06—which therefore indicated a lack of homogeneity for these two items. Nevertheless, it can be noted that Levene's test is sensitive to sample size (Hair *et al.*, 2010); hence, this may be significant as the sample size in the current study is large (N=428), which does not mean that there is substantial departure from normality of data (Field, 2006, p. 98). Furthermore, only two (2) of the items did not comply with homogeneity, and so it was decided that all items be retained for further analysis—mainly owing to the fact that this study identifies both items as being very important in detailing the reasons for perceived quality and parental influence constructs.

Table 6.8: Homoscedasticity

Items	Levene Statistic	df1	df2	Sig.
LP01	.000	1	426	.994
LP02	.704	1	426	.402
LP03	1.034	1	426	.310
LP04	1.958	1	426	.162
AW01	.088	1	426	.766
AW02	.243	1	426	.622
AW03	.022	1	426	.882
AW04	.417	1	426	.519
PQ01	1.694	1	426	.194
PQ02	2.935	1	426	.087
PQ03	.050	1	426	.823
PQ04	4.397	1	426	.037
PQ05	.732	1	426	.393
PQ06	1.937	1	426	.165
PQ07	.021	1	426	.884
PI01	.130	1	426	.719
PI02	3.210	1	426	.074
PI05	1.616	1	426	.204
PI06	11.478	1	426	.001
AT01	.666	1	426	.415
AT02	2.892	1	426	.090
AT03	1.309	1	426	.253
AT04	2.809	1	426	.094
AT05	2.025	1	426	.155
IR01	.942	1	426	.332
IR06	6.818	1	426	.009
IR07	.276	1	426	.600
IR08	.790	1	426	.375
IR10	.717	1	426	.398

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention; df = degree of freedom, Sig. = Significance.

Source: Developed by researcher for current study

### 6.2.7 Common Method Bias

The common method bias 'implies that the covariance among measured items is driven by the fact that some or all of the responses are collected with the same type of scale' (Hair *et al.*, 2006, p.833). In an attempt to determine the presence of common method variance bias amongst the study variables, a Harman's (1967) one-factor test was performed following the approach outlined by (Podsakoff *et al.*, 1984). A Harman's (1967) one-factor test is the most widely used techniques to address the issue of common method variance (Podsakoff *et al.*, 1984). Most researchers apply this technique by loading all of the variables in their

study into an exploratory factor analysis (Aulakh & Gencturk, 2000; Schriesheim, 1979); next, the unrotated factor solution is examined so as to determine the number of factors necessary to account for the variance in the variables (Podsakoff *et al.*, 1984).

The basic assumption of this technique is that, if a substantial amount of common method variance is present, either a single factor will emerge from the factor analysis, or one general factor will account for the majority of the covariance amongst the measures (Aquevegue & Ravasi, 2006). Therefore, in this study, all the items of the study were entered into a principle component analysis with unrotated, varimax rotation, and principal axis factoring. According to these techniques, a single factor emerges from the factor analysis, or one general factor accounts should be less than 50% of the covariation (Hair *et al.*, 2010). The results indicate that a single factor emerges and one general factor accounts from the factor analysis less than 50% of the covariation; therefore, it does not appear to be a common method bias concern in the present study.

### 6.3 Sample Characteristics

In the current study, the demographic questions asked in the questionnaire included basic personal information, such as gender, ethnic groups, age, field of study, secondary school background, religious beliefs, parents' income, father's profession and mother's profession. Table 6.9 lists the categories of demographic variables whilst the pie charts present the percentage of each variable. The number of total respondents in this study was  $N = 428$ .

Table 6.9: Demographic Variables for Main Survey Respondents

Demographic Variables	Frequency ( $N = 428$ )	Valid (%)
<b>Gender</b>		
• Male	142	33.2
• Female	286	66.8
<b>Field of study</b>		
• Arts	238	55.6
• science	190	44.4
<b>Ethnic</b>		
• Bumiputera	312	72.9
• Chinese	77	18.0
• Indian	24	5.6
• Other	15	3.5

<b>Age</b>		
• 18 to 20	49	11.4
• 21 to 23	318	74.3
• 23 and above	61	14.3
<b>Secondary school background</b>		
• Boarding school	76	17.8
• Private school	7	1.6
• Public school	321	75.0
• Islamic school	24	5.6
<b>Religion</b>		
• Islam	300	70.1
• Buddhist	50	11.7
• Hindu	21	4.9
• Christian	52	12.1
• No religion	5	1.2
<b>Parents income</b>		
• RM 1000 and below (less than £200)	157	36.7
• RM 1001 to RM 2000 (£200–£400)	124	29.0
• RM 2001 to RM 3000 (£400–£600)	75	17.5
• RM 3001 to RM 4000 (£600–£800)	40	9.3
• RM 4000 and above (£800 and above)	32	7.5
<b>Father's profession</b>		
• Government servant professional	57	13.3
• Government servant non-professional	55	12.9
• Private company employee executive level	38	8.9
• Private company employee non-executive level	38	8.9
• Pensioner executive level	39	9.1
• Pensioner non-executive level	10	2.3
• Self-employed	167	39.0
• Unemployed	24	5.6
<b>Mother's profession</b>		
• Government servant professional	35	8.2
• Government servant non-professional	25	5.8
• Private company employee executive level	13	3.0
• Private company employee non-executive level	8	1.9
• Pensioner executive level	4	0.9
• Pensioner non-executive level	2	0.5
• Self-employed	51	11.9
• Unemployed	290	67.8

Notes: N = Sample size

Source: Developed by researcher for current study

The respondents were 33.2% male and 66.8% female (see Table 6.9). In the context of Malaysia, this can be explained by the fact that the number of female students enrolled for higher education is 20% higher than male students. In public universities, females total

60% and males total 40% (Ministry of Higher Education, 2008). In terms of the field of study (FoS) category, 55.6% are from arts and 44.4% are from science. These categories are classified by the National Higher Education Fund Corporation (NHEFC) in disbursing loans to students. Across all respondents, 72.9% were Bumiputera, 18.0% were Chinese, 5.6% were Indian, and only 3.5% were of other group.

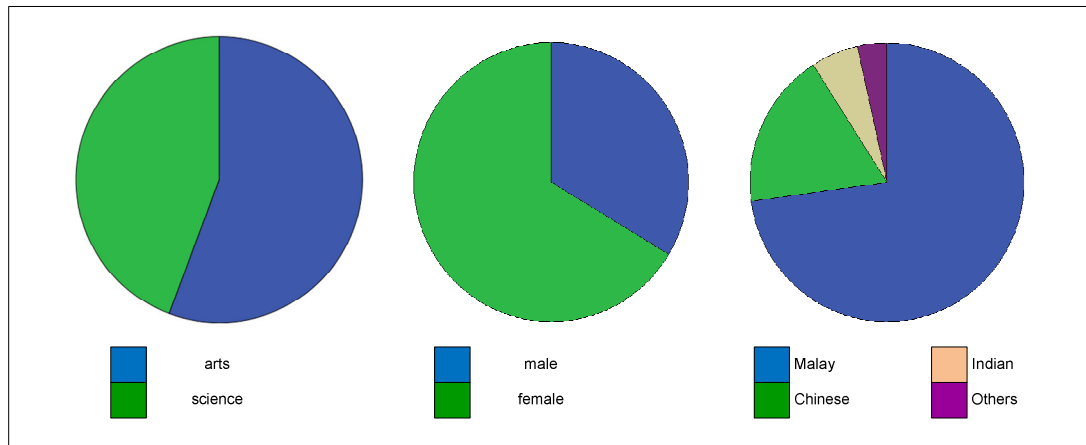


Figure 6.1: Field of Study, Gender and Ethnic Groups

The majority of respondents were between the ages of 21 and 23, broken down as follows: 18–20 (11.4%), 21–23 (74.3%), 23 and above (14.3%). The respondents also came from different backgrounds of secondary education. For example, 17.8% of the respondents had studied at boarding school; importantly, the criterion to be accepted to study at boarding school is a high result achieved in primary school achievement test or lower secondary assessment (form three). Moreover, approximately 1.6% of respondents had studied at a private school, and 75% studied at a public school, whilst 5.6% had studied at an Islamic school focused on religious subjects as a foundation. The majority of the respondents were Islamic (70.1%), whilst the remaining sample was divided as follows: Christian (12.1%), Buddhist (11.7%), Hindu (4.9%), with 1.2% stating no religion.

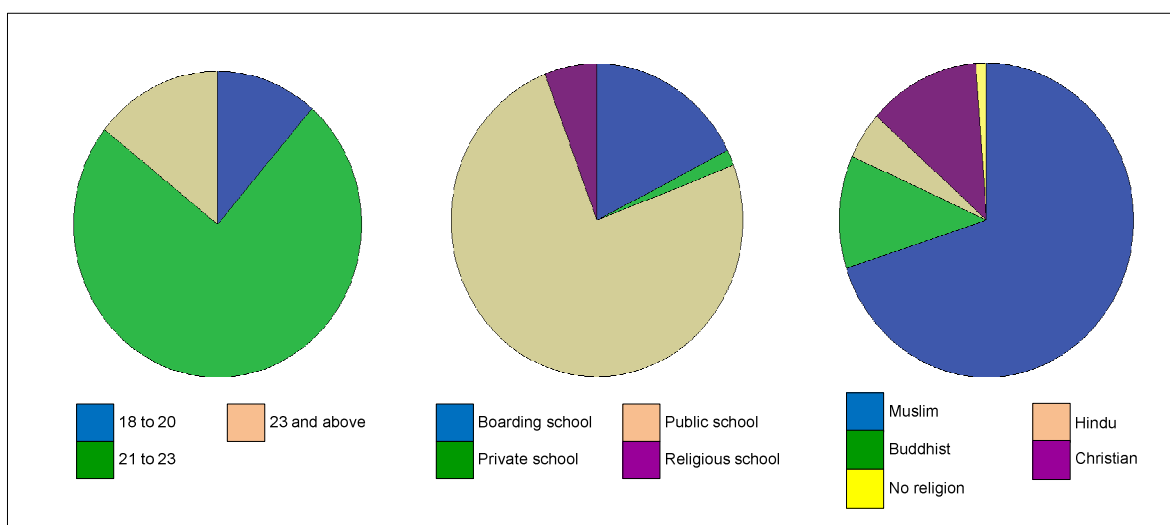


Figure 6.2: Age, Secondary Education and Religion

The respondents' parents had different income levels: approximately 36.7% earned less than RM1,000 per month (less than £200), whilst almost 29% earned between RM1,001 and 2,000 per month (£200–£400); only 17.5% earned between RM2,001 and 3,000 per month (£400–£600), followed by 9.3% earning between RM3,001 and 4,000 per month (£600–£800) and finally, 7.5% or 32 parents earned over RM4,000 per month (over £800).

In order to understand more about the parents' backgrounds, some questions were asked concerning parents' professions. As shown in Figure 6.3, approximately 13.3% of fathers worked for the government as professional workers—note that Grade 41 and above are categorised as professional (Public Service Department, 2009). Considering those below Grade 41, 12.9% of fathers worked with the public sector as non-professional workers. On the other hand, considering the mother's profession, approximately 8.2% worked with the government as professional workers and 5.8% worked as non-professional. In total, fathers working in private companies as an executive totalled 38 (8.9%), and a similar percentage as non-executive 8.9%, whilst approximately 3% of mothers worked at an executive level in a private company, and 1.9% worked at a non-executive level. Moreover, approximately 9.1% of fathers received a pension at an executive level and 2.3% at a non-executive. However, around 0.9% of mothers received a pension at an executive level and 0.5% at a non-executive. Moreover, self-employed fathers totalled approximately

39% compared with mothers, which totalled 11.9% for the same element. Finally, 5.6% of fathers were not working compared with non-working mothers at 67.8%.

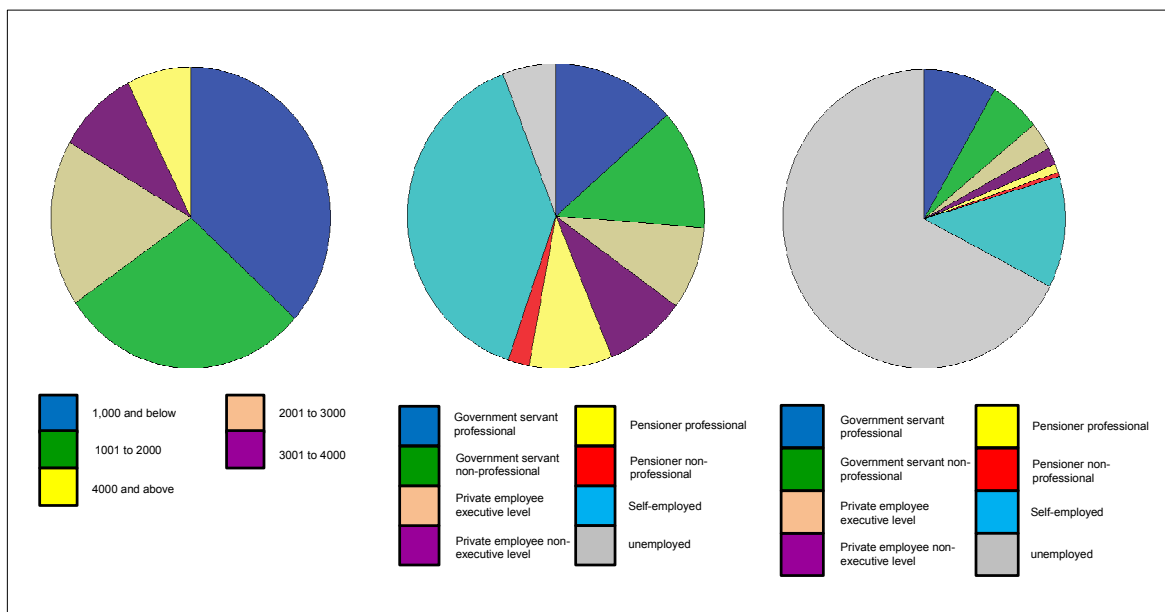


Figure 6.3: Parents' Income, Father's and Mother's Profession

## 6.4 Exploratory Factor Analysis (EFA) and Reliability Result

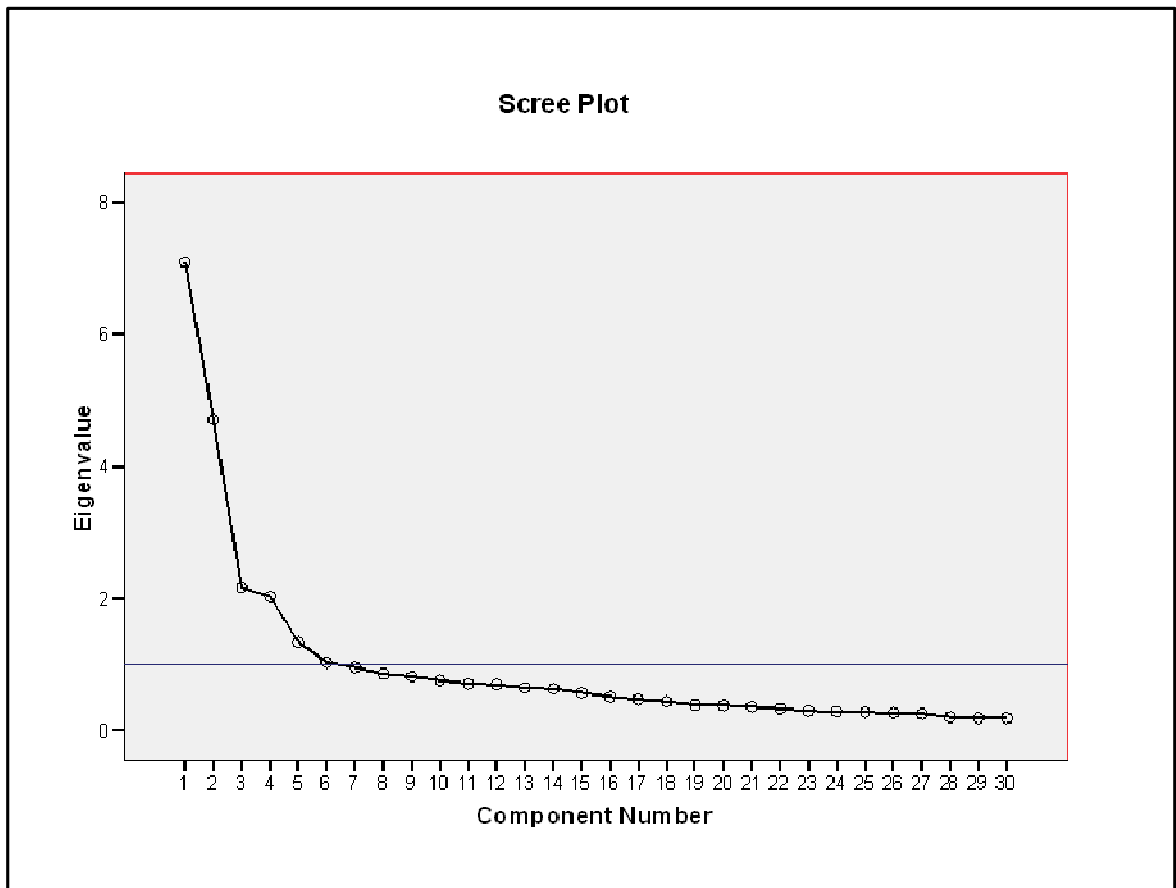
EFA in the survey was conducted in order to verify the dimensionality of items for all constructs, with one test and without grouping the variables. The researcher first considered the Kaiser-Meyer-Olkin (KMO) and Bartlett Test of Sphericity analysis (Norusis, 1992). In the current study, the result of KMO was 0.855, therefore indicating a good acceptance. Notably, Kaiser (1974) recommends that the KMO value should be between 0.8 and 0.9; however, 0.6 is still considered to be an acceptable value (Tabachnick & Fidell, 2007). The Bartlett Test of Sphericity (p-values) reached a statistical significance ( $p < .05$ ) in our study, thereby supporting the correlation matrix amongst variables (Hair *et al.*, 2010; Hutcheson & Sofroniou, 1999).

Moreover, in the EFA test, items exhibiting low factor loadings, high cross-loadings, or low communalities should be deleted. In the current study, the factor loadings were all greater than 0.50, therefore highlighting high-correlation coefficients between the items and

constructs. As for the dimensionality of the items, the result showed cross-loadings for two items: IR01 ('I will make repayment because it is my priority') and IR10 ('I will make regular payments after graduation to avoid burden on my parents in the future'); accordingly, both items were deleted as they could not represent a specific construct between the constructs of attitude and intention, and therefore could not contribute towards differentiating between the constructs. In addition, item IR09 ('I will make regular payments to avoid problems in the future') was also deleted, owing to the fact that the item was identified as having low communalities, which are 0.429. Therefore, the total number of items was reduced to 27.

The Eigenvalues were used in order to establish the number of constructs to extract, where only the factors having Eigenvalues greater than ( $>$ ) 1 were viewed as significant (Nunnally & Bernstein, 1994; Tabachnick & Fidell, 2007). The current study results found all six (6) constructs to have Eigenvalues greater than ( $>$ ) 1. Furthermore, other than extracting with Eigenvalues, the decision on factors can be made by plotting a Scree plot (Hair *et al.*, 2010). The Scree plot test is derived by plotting the roots against the number of constructs in their order of extraction, and the shape of the resulting curve is then used to evaluate the cut-off point (Hair *et al.*, 2010). Most commonly, the Scree plot negatively decreases, and the Eigenvalues are highest for the first construct and moderate, but subsequently decrease for the next few constructs before reaching small values for the last several constructs (Tabachnick & Fidell, 2007). The results of the Scree plot test found six (6) constructs (see Figure 6.5), thereby confirming the Eigen-values' results.





Graph 6.2: Scree Plot

The remaining items then were resubmitted to another round of EFA—including all the above tests—the results of which subsequently highlighted that all criteria were met, as presented in Table 6.10. Therefore, no further action was necessary concerning the quality of items and constructs. Furthermore, in the case of reliability testing, a Cronbach’s Coefficient Alpha ( $\alpha$ ) was applied in order to check the reliability of scales. The results found each construct indicated a high reliability, as presented in Table 6.10.

Table 6.10: Exploratory Factor Analysis Results for Main Survey

Constructs	Items	Cronbach's alpha	Eigen-values	Loadings	Communalities	MSA
Perceived agreement	LP01	0.815	6.053	0.748	0.585	0.855
	LP02			0.789	0.657	
	LP03			0.671	0.501	
	LP04			0.654	0.506	
Media awareness	AW01	0.775	4.583	0.757	0.615	
	AW02			0.833	0.724	
	AW03			0.724	0.580	
	AW04			0.706	0.518	
Perceived quality	PQ01	0.905	2.165	0.655	0.503	
	PQ02			0.753	0.605	
	PQ03			0.842	0.732	
	PQ04			0.847	0.741	
	PQ05			0.797	0.655	
	PQ06			0.847	0.750	
	PQ07			0.698	0.509	
Parental influence	PI01	0.823	2.023	0.611	0.509	
	PI02			0.793	0.692	
	PI05			0.749	0.698	
	PI06			0.739	0.734	
Students' attitude	AT01	0.899	1.322	0.722	0.568	
	AT02			0.766	0.702	
	AT03			0.742	0.685	
	AT04			0.719	0.595	
	AT05			0.755	0.647	
Intention	IR06	0.841	1.025	0.782	0.749	
	IR07			0.769	0.784	
	IR08			0.788	0.770	

Notes: MSA (Measure of Sampling Adequacy); LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention

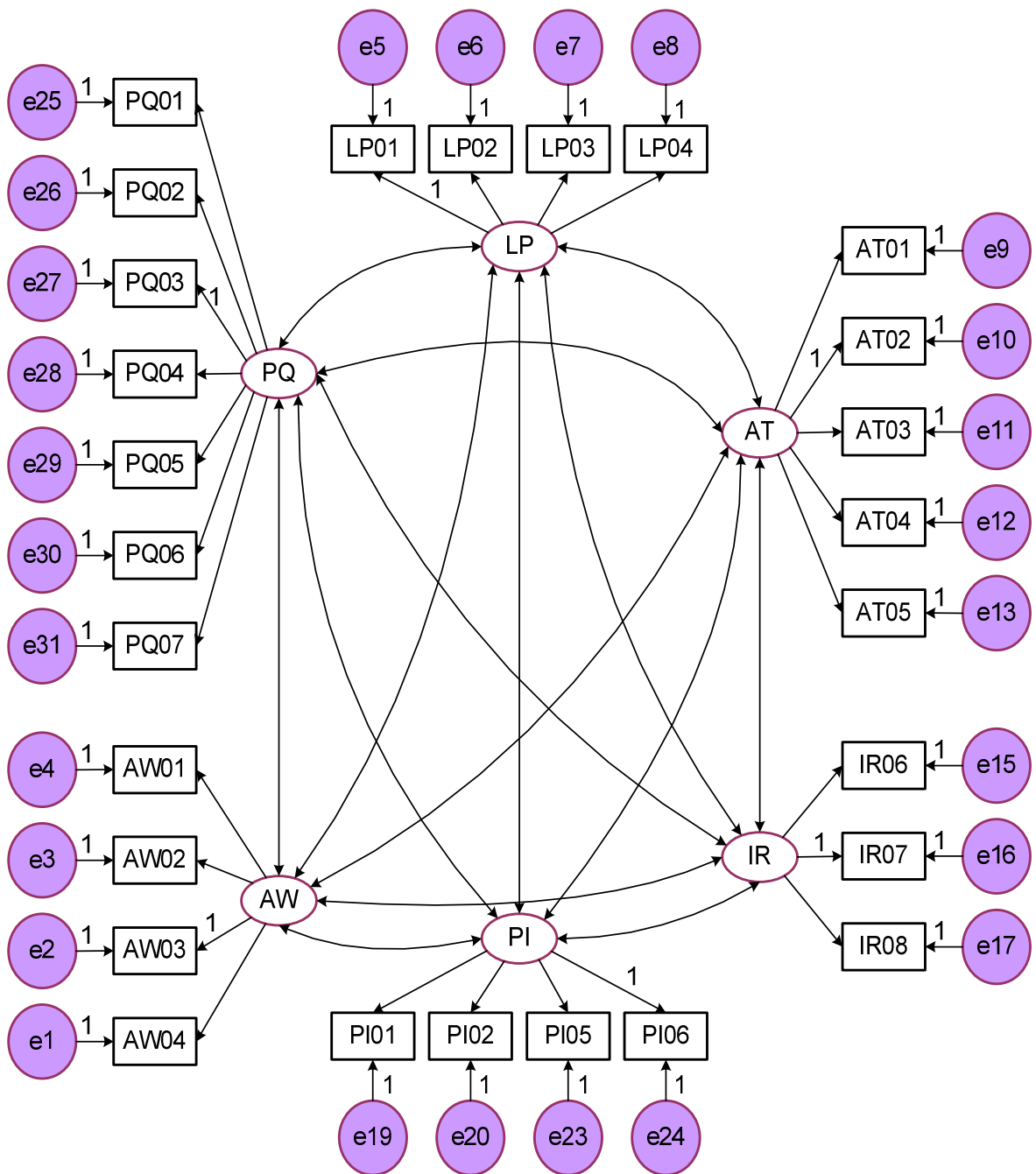
Source: Developed by researcher for current study

## 6.5 Confirmatory Factor Analysis Results

The combination of six (6) constructs and twenty-seven (27) items with a sample size of 428 satisfied the rule of thumb to apply SEM. Therefore, the current study applied CFA approach in order to assess the measurement model. CFA is a part of SEM, and CFA is used as a stricter assessment of construct validity to ensure that the theoretical meaning of a construct is captured empirically by its items (Bagozzi *et al.*, 1991). Notably, CFA differs to EFA in that the researcher must be able to recognise which items belong to which constructs prior to CFA being conducted. When applying this approach, the researcher assessed how well all the items of the same construct related to each other (Anderson & Gerbing, 1988; Hair *et al.*, 2010).

In CFA, distinguishing between dependent and independent variables is not necessary during the measurement stage (Hair *et al.*, 2010). Our measurement model was first drawn on the AMOS 18.0 graphics (Analysis of Moment Structure 18.0 software), and CFA was then run with all variables linked (see Figure 6.4), where measured variables were shown in rectangular shapes and latent variables are shown in oval shapes. Two-headed connections indicated covariance between constructs, and one-headed connectors indicated a causal path from a construct to items (Hair *et al.*, 2010).

In this study, CFA using AMOS 18.0 was performed so as to specify the causal relationships between the observed items and the underlying theoretical constructs. The MLE method was adopted as it is the technique most widely employed in SEM programmes (Hair *et al.*, 2010): it is efficient and unbiased, and produces reliable results under any circumstances compared with other techniques (Olsson *et al.*, 2004).



Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students’ attitude; IR—intention

Figure 6.4: CFA Measurement—Theoretical Model

Essentially, it is considered that CFA must provide an acceptable fit and evidence of construct validity (Hair *et al.*, 2010). One of the many tests when using CFA is to assure the constructs in the proposed model offer unidimensionality and have nomological

validity; in this regard, the Goodness of Fit indices of measurement models are used (Steenkamp & Trijp, 1991). Moreover, unidimensional measures mean that a set of items can only explain one underlying construct (Hattie, 1985). In CFA, for example, the overall fit of the model is used in order to examine whether or not a set of measurement items is unidimensional (Steenkamp & Van Trijp, 1991).

The initial results of the CFA for our measurement model show the chi-square ( $\chi^2$ ) = 710.021, degree of freedom (df) = 309, chi-square rated (Chi-square/df) = 2.298, which corresponds to a satisfactory model fit (Hair *et al.*, 2010; Fornell & Larcker, 1981; Bagozzi *et al.*, 1991). In addition, the results of normed Comparative Fit Index (CFI) = 0.923, Tucker-Lewis index (TLI) = 0.913, Goodness of Fit index (GFI) = 0.891, adjusted Goodness of Fit (AGFI) = 0.866, Normed Fit Index (NFI) = 0.872, PNFI = 0.768, PGFI = 0.728 and Root Mean Square Error of Approximation (RMSEA) = 0.055 all suggested a satisfactory fit to the model. Therefore, based on the overall model fit, the model was found to be unidimensional. Moreover, the results of the overall model fit also suggested that the measurement model was nomologically valid (Steenkamp & Trijp, 1991).

However, in order to achieve a better model fit, the researcher then applied a refinement process, scanning whether or not the standardised regression weights were greater than (>) 0.5. The initial run of CFA indicated that item PI01 had loading less than (<) 0.5 (0.435); thus, this item was deleted prior to running the CFA for another round (see Table 6.1 for item description). The revised CFA model, following the deletion of PI01, showed that the model fit improved. The Chi-square = 604.602, df = 284, chi-square/df = 2.129, CFI = 0.936, TLI = 0.927, GFI = 0.902, AGFI = 0.879, NFI = 0.887, PNFI = 0.773, PGFI = 0.724 and RMSEA = 0.051. Similar processes were repeated until all the standardised regression weights were greater than (>) 0.5. During this process, the following items were excluded: AW04, PQ01 and AT04. The revised CFA model—following the deletion of AW04, PQ01 and AT04—showed that the model had a further improved fit, as shown in Table 6.11; therefore, the total number of items—following the deletion of PI01, AW04, PQ01 and AT04—was reduced to 23 (see Table 6.1 for item description).

Table 6.11: Measurement Model

Indicators *	$\chi^2$	df	$\chi^2/df$	CFI	TLI	GFI	AGFI	NFI	PNFI	PGFI	RMSEA
	356.145	215	1.656	0.968	0.962	0.933	0.914	0.923	0.785	0.727	0.039

Notes: \*model fit indicators

Source: Developed by researcher for current study

In this study, several CFAs were run for concurrent model structures with one, two, three, four and five factors—although the six-factor model shows a significant chi-square ( $\chi^2$ ) the CFI, GFI, TLI and AGFI indicates a good model fit (CFI = 0.968; GFI = 0.933; TLI = 0.962; AGFI = 0.914), and the parsimonious fit indices PGFI (0.727) and PNFI (0.785) indicate a good parsimonious fit. As shown in Table 6.12, the decrease in the number of factors is accompanied by a successive decline in model fitting. The  $\chi^2$  increases as fewer factors are specified in the models, the Goodness of Fit indices indicate a decrease in fit, and the ratio chi-square  $\chi^2/df$  increases as the models include fewer factors. Only the models with four, five and the six factors show and adequate fit according to this ratio,  $\chi^2/df = 1.936$ ,  $\chi^2/df = 1.702$  and  $\chi^2/df = 1.656$  respectively. However, the six-factor model obtained overall model fit better than other models with the RMSEA = 0.039. Therefore, we favoured the six-factor model for students' attitude model than the other concurrent models (see Table 6.12).

Table 6.12: Results for Measurement Model and Concurrents Models

Models	$\chi^2$	df	$\chi^2/df$	CFI	TLI	GFI	AGFI	NFI	PNFI	PGFI	RMSEA
Six factors	356.145	215	1.656	0.968	0.962	0.933	0.914	0.923	0.785	0.727	0.039
Five factors	272.274	160	1.702	0.968	0.962	0.940	0.921	0.926	0.780	0.716	0.041
Four factors	189.712	98	1.936	0.966	0.959	0.947	0.926	0.933	0.762	0.682	0.047
Three factors	111.573	51	2.188	0.974	0.967	0.957	0.934	0.954	0.737	0.626	0.053
Two factors	65.901	26	2.535	0.980	0.973	0.966	0.941	0.968	0.699	0.558	0.060
One factor	53.040	9	5.893	0.970	0.949	0.960	0.906	0.964	0.578	0.411	0.107

Notes: \*model fit indicators

Source: Developed by researcher for current study

The researcher further clarified the additional information provided by CFA in order to identify any problems with the constructs and items that might improve the model fit, i.e. standardised residuals. Standardised residuals refer to the individual differences between observed covariance and fitted covariance (Hair *et al.*, 2010). The residuals values are utilised in order to identify pairs for which the specified measurement model does not accurately predict the observed covariance between them (Hair *et al.*, 2010). As a rule of thumb, standardised residuals less than (<) 2.5 do not suggest a problem; those between 2.5 and 4.0 are considered to be acceptable, whilst those greater than (>) 4.0 indicate an unacceptable degree of error (Hair *et al.*, 2010). In the current study, the standardised residuals values for overall pairs were found less than (<) 2.5. Only one pair of AW03 and PQ02 was found between 2.5 and 4.0, which the value was 2.60 (see Table 6.13).

Table 6.13: Standardised Residuals

	PQ07	PQ06	PQ05	PQ02	PQ03	PQ04	PI02	PI05	PI06	IR06	IR08	IR07	AT01	AT05	AT03	AT02	LP04	LP03	LP02	LP01	AW01	AW02	AW03	
<b>PQ07</b>	0																							
<b>PQ06</b>	0.61	0																						
<b>PQ05</b>	0.70	-0.19	0																					
<b>PQ02</b>	-0.63	-0.82	-0.39	0																				
<b>PQ03</b>	-0.70	-0.39	0.84	1.25	0																			
<b>PQ04</b>	-0.22	0.63	-0.48	0.05	-0.39	0																		
<b>PI02</b>	0.12	0.31	-0.12	0.31	-0.82	-0.37	0																	
<b>PI05</b>	-0.13	0.29	-0.06	1.33	-0.18	0.30	-0.11	0																
<b>PI06</b>	-0.23	-0.30	0.41	0.77	-0.15	-0.54	-0.12	0.06	0															
<b>IR06</b>	-0.69	-0.05	-0.10	-0.65	-0.81	-1.08	1.02	-0.96	-0.43	0														
<b>IR08</b>	-0.19	1.31	1.42	-0.62	0.14	0.56	0.76	0.20	0.70	0.04	0													
<b>IR07</b>	-0.99	0.03	0.87	0.03	-0.81	0.47	0.84	-0.64	0.14	0.10	-0.12	0												
<b>AT01</b>	-1.53	-0.06	-1.56	0.14	-0.25	-0.35	0.50	0.15	-0.14	-0.72	-0.57	-0.02	0											
<b>AT05</b>	0.00	1.17	-0.64	0.76	0.35	1.04	0.99	0.06	0.47	0.73	1.40	1.06	-0.21	0										
<b>AT03</b>	-1.19	1.38	-0.29	-0.63	-0.45	0.88	1.08	0.15	0.07	-0.92	0.24	-0.04	-0.47	0.10	0									
<b>AT02</b>	-2.13	1.06	-0.94	-0.64	-1.14	0.05	0.20	-0.32	-0.54	0.09	-0.06	-0.23	0.70	-0.54	0.12	0								
<b>LP04</b>	0.44	1.01	0.22	0.69	1.21	0.48	2.11	1.86	1.54	1.27	2.17	1.41	1.36	0.34	1.40	1.01	0							
<b>LP03</b>	0.08	0.74	-0.31	-0.06	-0.59	-0.19	0.00	-0.66	-0.43	-0.67	-0.70	-0.35	-0.96	-0.46	-1.02	-1.11	1.09	0						
<b>LP02</b>	0.80	0.45	-1.28	-0.16	-1.68	0.01	-0.55	-0.62	-2.32	-1.92	-0.87	-1.96	-0.78	-0.82	-0.52	-1.85	-0.51	0.15	0					
<b>LP01</b>	1.02	0.36	-1.00	-0.47	0.08	0.45	2.30	1.31	1.41	1.62	2.26	1.53	-0.30	1.74	2.26	1.10	-0.03	-0.66	0.23	0				
<b>AW01</b>	-1.39	-0.71	-0.79	-0.90	0.17	0.19	1.26	0.16	-0.69	-0.70	1.94	-0.23	1.64	1.00	0.19	-1.17	2.39	-0.21	-0.68	0.74	0			
<b>AW02</b>	-1.58	-1.37	-0.53	1.17	0.72	0.66	0.52	0.06	-0.33	-0.64	1.70	-0.21	0.66	0.97	0.40	-1.29	0.23	-0.67	-0.95	1.43	0.03	0		
<b>AW03</b>	-1.54	0.18	0.34	2.60	2.05	1.59	0.85	0.80	0.34	-1.31	-0.39	-0.73	1.33	1.31	-0.04	-0.61	1.49	-1.53	-0.79	-0.49	-0.03	-0.03	0	



Furthermore, CFA also allows for establishing whether or not the items of the specific construct share a high proportion of variance, the test of which is convergent validity (Hair *et al.*, 2010). Factor loadings, Average Variance Extracted (AVE) and composite reliability can estimate the convergent validity (Hair *et al.*, 2010; Gerbing & Anderson, 1988). As a rule of thumb, the factor loadings of all items greater than (>) 0.5, AVE greater than (>) 0.5 and composite reliability greater than (>) 0.7 indicate adequate convergent validity or internal consistency (Hair *et al.*, 2010; Kline, 1998). In CFA, factor loading is measured through standardised regression weight (SRW), AVE is computed as the total squared factor loadings divided by the number of items, and composite reliability measured by alpha ( $\alpha$ ) (Hair *et al.*, 2010).

In the current study, overall, six (6) constructs achieved high factor loadings which is all items greater than (>) 0.5; AVE values for five (5) constructs greater than (>) 0.5 with the exception of the perceived agreement construct, which had an AVE value of 0.48 (see Table 6.1 for item descriptions). In addition, the composite reliability indicates high levels of composite reliability, with values greater than (>) 0.70 for each construct (see Table 6.14). However, in this study, we decided to retain the perceived agreement construct for further analysis as the construct was found did not have a problem with the items loadings and composite reliability, as well as for theoretical reasons (the detail is further discussed in Chapter Seven).

Table 6.14: Convergent Validity

Constructs	Items	Factor Loadings	AVE	Composite Reliability
Perceived agreement	LP01	0.672	0.48	0.71
	LP02	0.750		
	LP03	0.505		
	LP04	0.509		
Media awareness	AW01	0.762	0.51	0.75
	AW02	0.765		
	AW03	0.601		
Perceived quality	PQ02	0.701	0.60	0.87
	PQ03	0.827		
	PQ04	0.846		
	PQ05	0.753		
	PQ06	0.854		
	PQ07	0.629		

Constructs	Items	Factor Loadings	AVE	Composite Reliability
Parental influence	PI02	0.625	0.64	0.84
	PI05	0.849		
	PI06	0.904		
Students' attitude	AT01	0.632	0.56	0.84
	AT02	0.811		
	AT03	0.823		
	AT05	0.715		
Intention	IR06	0.802	0.68	0.87
	IR07	0.876		
	IR08	0.799		

Notes: AVE—average variance extracted; LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention  
Source: Developed by researcher for current study

CFA is also used in order to determine the discriminant validity of the constructs, i.e. the extent to which a construct is truly distinct from other constructs (Hair *et al.*, 2010; Bagozzi, 1994). In order to establish discriminant validity in this study, the Average Variance Extracted (AVE) estimates were compared with the squared inter-construct correlations (Fornell & Larcker, 1981). If the AVE was found to be consistently higher than the squared inter-construct correlations, discriminant validity was then supported (Hair *et al.*, 2010; Anderson & Gerbing, 1988). The current study found that, for each construct, the AVE was greater than the corresponding squared inter-construct correlations (see Table 6.15).

Table 6.15: Discriminant Validity

Constructs	Perceived quality	Parental Influence	Intention	Students' Attitude	Perceived agreement	Media awareness
Perceived quality	<b>0.60</b>					
Parental Influence	0.25	<b>0.64</b>				
Intention	-0.083	0.558	<b>0.68</b>			
Students' Attitude	0.023	0.535	0.503	<b>0.56</b>		
Perceived agreement	0.238	0.043	-0.076	0.105	<b>0.48</b>	
Media awareness	0.119	0.235	0.173	0.167	0.095	<b>0.51</b>

Source: Developed by researcher for current study

The overall results of construct validity, using nomological, convergent and discriminant validity assessment of the measurement model, provided statistically and theoretically valid constructs (Hair *et al.*, 2010). Therefore, the testing stages of underlying constructs and items for the SEM were strongly established (see Table 6.16).

Table 6.16: Constructs and Items for Hypotheses Testing

Constructs	Codes	Items
Perceived agreement	LP01	I think the loan agreement was written too long
	LP02	The loan agreement was difficult to understand
	LP03	The time given to complete the loan agreement form was not enough
	LP04	The loan agreement need to use the language more easily understood
Media awareness	AW01	I am aware latest information about NHEFC loan repayment in the newspapers
	AW02	I have watched the television programme about latest information about NHEFC loan repayment
	AW03	I have read the latest information about NHEFC loan published on their website
Perceived quality	PQ02	After graduation, loan repayment will affect my decision on job options
	PQ03	After graduation, loan repayment will affect my decision on when to get married
	PQ04	After graduation, loan repayment will affect my decision on when to buy my first car
	PQ05	After graduation, loan repayment will affect my decision on when to have my first Child
	PQ06	After graduation, loan repayment will affect my decision on buying a house
	PQ07	After graduation, loan repayment will affect my decision on how much money I will contribute to my parents
	Parental influence	PI02
PI05		My parents remind me to pay back the loan after I graduate to avoid problems in the future
PI06		My parents, as guarantors of this loan, remind me to pay back the loan after graduate to avoid burden on them in the future
Students' attitude	AT01	The repayment will help other students
	AT02	Repayment is my obligation
	AT03	I have to make an effort to make repayments
	AT05	There are legal penalties for non-repayment
Intention	IR06	I will make repayment because my culture norms says debt must be repaid
	IR07	I will make repayment because my belief in religion says debt must be repaid
	IR08	I will make regular payments to reduce the debt

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention

Source: Developed by researcher for current study.

## 6.6 Structural Model Assessment and Validity

Structural model testing is conducted following the measurement model being validated and a satisfactory fit achieved (Anderson & Gerbing, 1988). The structural model aims to specify which latent constructs influence either directly or indirectly the values of other latent constructs in the model (Hair *et al.*, 2010). The current study adopted AMOS 18.0 in order to describe the various relationships in the model through the path diagram. The underlying constructs for the research model were media awareness, parental influence, perceived agreement, perceived quality, students' attitude and intention. The exogenous (independent) constructs were media awareness (AW) and perceived agreement (LP), whilst the endogenous (dependent) constructs include parental influence (PI), perceived quality (PQ), students' attitude (AT) and intention (IR). The two types of connections distinguishable in the SEM context are as follows (Hair *et al.*, 2010, p. 742; Fox, 2002, p. 2):

1. Exogenous constructs to endogenous constructs represented by symbol ( $\gamma$ ): these parameters indicate the intensity of the relationships between the exogenous constructs and endogenous constructs;
2. Endogenous constructs to endogenous constructs represented by symbol ( $\beta$ ): these parameters indicate the intensity of the relationships between the endogenous constructs and endogenous constructs.

The model proposed was specified to test the thirteen (13) causal paths represented in Hypothesis 1 ( $H_1$ ), followed by  $H_2$ ,  $H_{2b}$ ,  $H_{2c}$ ,  $H_3$ ,  $H_{3b}$ ,  $H_{3c}$ ,  $H_4$ ,  $H_{4b}$ ,  $H_{4c}$ ,  $H_5$ ,  $H_{5b}$  and  $H_{5c}$ . The developed hypotheses tested the direct relationships between constructs, as well as how the mediator affected the relationships in the model. The hypotheses testing the direct effects were represented by  $H_1$ ,  $H_2$ ,  $H_{2b}$ ,  $H_3$ ,  $H_{3b}$ ,  $H_4$ ,  $H_{4b}$ ,  $H_5$  and  $H_{5b}$  (see Table 6.19 for hypotheses description), whilst the mediation effects were represented by  $H_{2c}$ ,  $H_{3c}$ ,  $H_{4c}$  and  $H_{5c}$  (see Table 6.20 for hypotheses description).

### 6.6.1 Model Fit

The model was defined by the six (6) constructs and twenty-three (23) items, with a sample size of 428. The Goodness of Fit indices for the model indicated a good model fit, as the chi-square ( $\chi^2$ ) = 388.542, the degree of freedom (df) = 221, and chi-square rated (Chi-square/df) = 1.758. The incremental and parsimony fit indices appear important, such as Comparative Fit Index (CFI) = 0.962, Goodness of Fit Index (GFI) = 0.927, Adjusted Goodness of Fit Index (AGFI) = 0.908, Tucker-Lewis Index (TLI) = 0.956, Parsimony Goodness of Fit Index (PGFI) = 0.742, Parsimony Normed Fit Index (PNFI) = 0.800, and the Root Mean Square Error of Approximation (RMSEA) = 0.042; therefore, the model represents a high degree of accuracy. The chi-square rated (1.758), the GFI and AGFI values (0.927 and 0.908, respectively) suggest a good model fit (Marsh & Hovecar, 1985) (see Table 6.17).

Table 6.17: Model Fit Indicators

Indicators *	Chi Square	df	Chi Square/df	CFI	TLI	GFI	AGFI	PGFI	RMSEA
	388.542	221	1.758	0.962	0.956	0.927	0.908	0.742	0.042

Notes: \*model fit indicators

Source: Developed by researcher for current study

### 6.6.2 Hypotheses Testing

A research model is shown in Figure 4.2 in the research model and hypotheses chapter. Based on the structural model, the research hypotheses were tested from the standardised estimate and critical ratio (C.R.) (Hair *et al.*, 2010). For data analysis, we employed AMOS 18.0 for Windows software to run the model for examining the hypotheses.

#### 6.6.2.1 Testing for Direct Effects Model

In this study, nine (9) hypotheses were developed—H<sub>1</sub>, H<sub>2</sub>, H<sub>2b</sub>, H<sub>3</sub>, H<sub>3b</sub>, H<sub>4</sub>, H<sub>4b</sub>, H<sub>5</sub> and H<sub>5b</sub>—all of which involved testing the direct effects in the model. The details are shown in Table 6.18.

Table 6.18: Hypotheses for Direct Effects

Notation	Hypotheses
H <sub>1</sub>	The relationship between students' attitude and intention is positive and statistically significant
H <sub>2</sub>	Parental influence is positively associated with students' attitude
H <sub>2b</sub>	Parental influence will have positive effect on intention
H <sub>3</sub>	Perceived quality influence the students' attitude
H <sub>3b</sub>	Perceived quality influence the intention
H <sub>4</sub>	Perceived agreement is positively associated with students' attitude
H <sub>4b</sub>	Perceived agreement is positively influence perceived quality
H <sub>5</sub>	Media awareness is positively associated with students' attitude
H <sub>5b</sub>	Media awareness will have positive effect on parental influence

Source: Developed by researcher for current study

Using path estimates and critical ratio (t values), nine (9) hypotheses were examined. Seven (7) of the hypotheses (H<sub>1</sub>, H<sub>2</sub>, H<sub>2b</sub>, H<sub>3</sub>, H<sub>3b</sub>, H<sub>4b</sub> and H<sub>5b</sub>) were  $\pm 1.96$  critical ratio values at the 0.001 and 0.05 significant levels; thus, these hypotheses were supported. Amongst these, six (6) hypotheses were significant at  $p < 0.001$  level, whilst hypothesis H<sub>3</sub> was significant at  $p < 0.05$  level. The remaining two hypotheses (H<sub>4</sub> and H<sub>5</sub>) were found insignificant (C.R. = 1.779,  $p = 0.075$ ) and (C.R. = 1.076,  $p = 0.282$ ). The obtained results are summarised in Table 6.19.

Table 6.19: Regression Weights

Hypotheses	Paths	Estimate	S. Error	C.R.	P-value
H <sub>1</sub>	IR <--- AT	0.525	0.056	9.362	***
H <sub>2</sub>	AT <--- PI	0.421	0.044	9.540	***
H <sub>2b</sub>	IR <--- PI	0.235	0.041	5.699	***
H <sub>3</sub>	AT <--- PQ	-0.087	0.035	-2.509	0.012*
H <sub>3b</sub>	IR <--- PQ	-0.110	0.028	-3.915	***
H <sub>4</sub>	AT <--- LP	0.093	0.052	1.779	0.075
H <sub>4b</sub>	PQ <--- LP	0.338	0.085	3.994	***
H <sub>5</sub>	AT <--- AW	0.045	0.042	1.076	0.282
H <sub>5b</sub>	PI <--- AW	0.271	0.058	4.644	***

Notes: Significant at 0.001\*\*\* Significant at 0.01\*\* Significant at 0.05\* <--- = relationship  
 LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence;  
 AT—students' attitude; IR—intention

Source: Developed by the researcher for current study

Moreover, Hypothesis one ( $H_1$ ) explained the relationship between students' attitude and intention to repay loan (intention). As predicted, students' attitude was found to be related positively to intention. Results showed a significant path ( $\beta=0.52$ ,  $p<0.001$ ) ( $H_1$  accepted); therefore,  $H_1$  was supported. The standardised regression path between parental influence and students' attitude ( $H_2$ ) was significant statistically ( $\beta=0.42$ ,  $p<0.001$ ) ( $H_2$  accepted); therefore, this hypothesis was also supported. In addition, the path from parental to intention ( $H_{2b}$ ) was supported fully owing to there being a significant positive relationship ( $\beta=0.26$ ,  $p<0.001$ ) ( $H_{2b}$  accepted).

Furthermore,  $H_3$  and  $H_{3b}$  were supported fully as both relationships between perceived quality and students' attitude, and perceived quality and intention were found to be significant ( $\beta = -0.09$  and  $p<0.05$  ( $H_3$  accepted);  $\beta = -0.11$  and  $p<0.001$  ( $H_{3b}$  accepted), respectively). The regression path further shows that both of these exhibited significant negative relationships; in other words, an increasing number of students perceived that loan repayment would affect quality of life following graduation (such as owning a house or car, getting married, having a child, and supporting a family), thereby decreasing their positive attitude towards loan repayment and their intention to repay the loan.

The relationship between perceived agreement and students' attitude ( $H_4$ ) was found to be insignificant ( $\gamma=0.05$ ,  $p=0.075$ ) ( $H_4$  rejected).  $H_4$  states that perceived agreement is associated positively with students' attitude; however, the result reveals no significant correlation, and so the hypothesis was rejected. However,  $H_{4b}$  hypothesising the relationship between perceived agreement and perceived quality was found to be significant ( $\gamma=0.07$ ,  $p<0.001$ ) ( $H_{4b}$  accepted). In other words, what the students in this sample perceived about loan agreement did not affect their attitude towards loan repayment; nevertheless, it affected their perceptions that loan repayment would affect their quality of life after graduation. Hypothesis  $H_5$ —which explains the relationship between media awareness with students' attitude—was found to be insignificant ( $\gamma=0.05$ ,  $p=0.282$ ) ( $H_5$  rejected); thus, the hypothesis was rejected. However,  $H_{5b}$  hypothesised the relationship between media awareness and parental influence would be significant ( $\gamma=0.27$ ,  $p<0.001$ ) ( $H_{5b}$  accepted), and so the hypothesis was supported. In addition, the current study results indicate that media does not influence students' attitude but does influence parents. This

means that the parents of Malaysian students were more exposed to media—particularly in the case of formal issues—rather than their children. The obtained results are summarised in Table 6.20.

Table 6.20: Validation of Hypotheses about Direct Effects Model

Notation	Hypotheses	Relationships	Accepted?
H <sub>1</sub>	The relationship between Students' Attitude and Intention is positive and statistically significant	$\beta = 0.52$ ***	Yes
H <sub>2</sub>	Parental Influence is positively associated with Students' Attitude	$\beta = 0.42$ ***	Yes
H <sub>2b</sub>	Parental Influence is positively associated with Intention	$\beta = 0.26$ ***	Yes
H <sub>3</sub>	Perceived quality influences Students' Attitude	$\beta = -0.11$ *	Yes
H <sub>3b</sub>	Perceived quality influences Intention	$\beta = -0.09$ ***	Yes
H <sub>4</sub>	Perceived agreement is positively associated with Students' Attitude	$\gamma = 0.05$ , $p = 0.075$	No
H <sub>4b</sub>	Perceived Agreement is positively influence Perceived Quality	$\gamma = 0.07$ ***	Yes
H <sub>5</sub>	Media Awareness is positively associated with Students' Attitude	$\gamma = 0.05$ , $p = 0.282$	No
H <sub>5b</sub>	Media Awareness is positively associated with Parental Influence	$\gamma = 0.27$ ***	Yes

Notes: Significant at 0.001\*\*\* Significant at 0.01\*\* Significant at 0.05\*;  
Source: Developed by researcher for the purpose of this study

### 6.6.2.2 Testing for Mediation Effects

In the current study, testing for mediation followed the procedures recommended by Hair *et al.* (2010). Mediation effects are shaped when a third construct intervenes between two other related constructs (Hair *et al.*, 2010). Full mediation can then be described owing to the fact that the mediating construct completely explains the relationship between the two constructs (Hair *et al.*, 2010). However, partial mediation occurred if the relationship between the two constructs could be explained by a mediator construct, as well as a direct relationship between the two constructs (Hair *et al.*, 2010). In this study, four (4) hypotheses were developed—H<sub>2c</sub>, H<sub>3c</sub>, H<sub>4c</sub> and H<sub>5c</sub>—all of which involved testing the mediation effect. The details are shown in Table 6.21.



Table 6.21: Hypotheses for Mediation Effects

Notation	Mediation Hypotheses
H <sub>2c</sub>	The relationship between parental influence and intention is mediated by students' attitude
H <sub>3c</sub>	The relationship between perceived quality and intention is mediated by students' attitude
H <sub>4c</sub>	The relationship between perceived agreement and students' attitude is mediated by perceived quality
H <sub>5c</sub>	The relationship between media awareness and students' attitude is mediated by parental influence

Source: Developed by the researcher for current study

First, the direct effects model was examined in order to ensure the existence of the direct relationship between the A and C constructs (Hair *et al.*, 2010) (as explained in Chapter Five: Research Methodology). Subsequently, the mediation model was investigated by adding the mediation constructs (Hair *et al.*, 2010). The result is presented in Table 6.23. The Goodness of Fit indices for both models indicated a good fit; however, compared with the direct effects model, the model with mediation constructs was found to be better, as confirmed and highlighted by  $\chi^2 = 388.542$ ,  $\chi^2/df = 1.758$ , CFI = 0.962 and RMSEA = 0.042 (see Table 6.22). According to Diamantopoulos & Siguaw (2000), the model with smaller chi-square ( $\chi^2$ ) was considered a better model.

Table 6.22: Mediation Model Goodness of Fit

	$\chi^2$	df	$\chi^2/df$	CFI	GFI	TLI	AGFI	PGFI	PNFI	RMSEA
Direct effects	529.512	225	2.353	0.931	0.904	0.922	0.883	0.737	0.788	0.056
Mediation	388.542	221	1.758	0.962	0.927	0.956	0.908	0.742	0.800	0.042

Source: Developed by the researcher for current study

Furthermore, the researcher established that three direct paths were significant (see Table 6.23): the first path linked Parental Influence (PI) and intention (IR), whilst the other two paths linked Perceived Quality (PQ) and intention (IR), as well Media Awareness (AW) and Parental Influence (PI). However, the path Linked Perceived agreement (LP) and

Students' Attitude (AT) were not significant; therefore, hypothesis H<sub>4c</sub>, suggesting that the relationship between LP and AT was mediated by PQ, was not supported. This was owing to the fact that the direct relationship between LP to students' attitude AT ( $\gamma = 0.07$ ,  $p = 0.225$ ) did not exist; therefore, the mediation also did not exist (Baron & Kenny, 1986).

Regarding the other hypotheses, there was a significant relationship between PI and IR ( $\beta = 0.26$ ,  $p < 0.001$ ) before adding the mediation construct; however, when including AT as a mediating construct, the relationship value was then reduced, although this remained significant ( $\beta = 0.23$ ,  $p < 0.001$ ). Therefore, the partial mediation was supported for the H<sub>2c</sub>. Similarly, AT mediated partially between PQ and IR. The relationship between PQ and IR remained significant ( $\beta = -0.11$ ,  $p < 0.001$ ) when adding AT as a mediating construct. This supported the partial mediation; thus, H<sub>3c</sub> was supported. However, the relationship between AW and AT was significant ( $\gamma = 0.15$ ,  $p < 0.01$ ) before adding the mediation construct, but when including PI as a mediating construct, the relationship reduced to insignificant ( $\gamma = 0.05$ ,  $p = 0.282$ ). Thus, H<sub>5c</sub> was supported, thereby explaining the relationship between AW and AT as fully mediated by PI. The result details are shown in Table 6.23.

The explanatory power of the structural equation model was assessed on the basis of the squared multiple correlations (SMC) for structural equations, indicating the amount of variance in the dependent (endogenous) variable explained by the independent (exogenous) variable. In this study, the derived model explained approximately 54% of the variance in the intention construct; 37% in the students' attitude construct; 53% in the parental influence construct; and 6% in the perceived quality construct (see Figure 6.5).

Table 6.23: Validation of Mediation Hypotheses

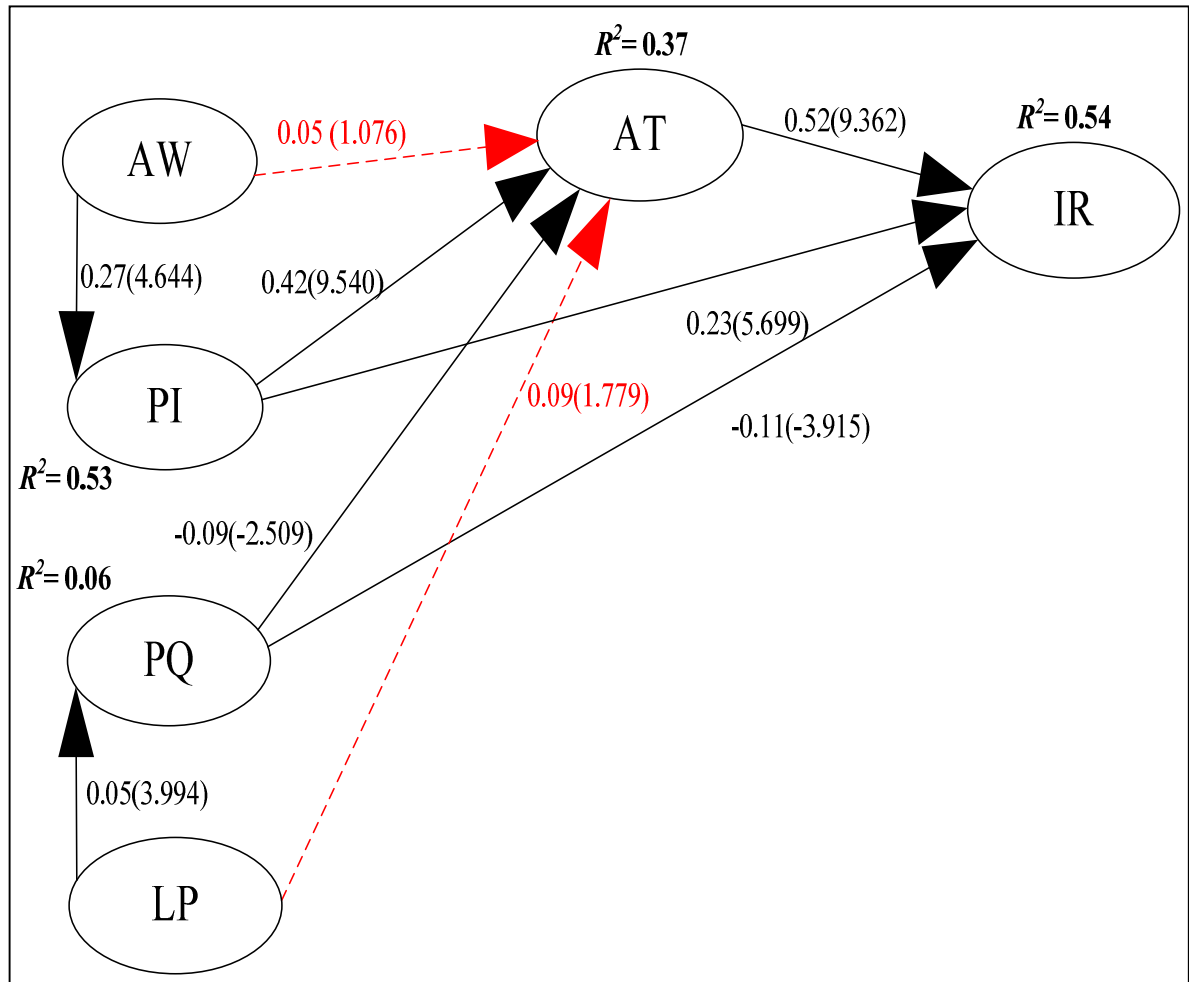
Notation	Hypotheses	Mediation Constructs	Direct effects	Mediation	Accepted?
H <sub>2c</sub>	The relationship between parental influence and intention is mediated by students' attitude	Students' attitude (AT)	IR <--- PI $\beta = 0.26^{***}$	AT <--- PI $\beta = 0.42^{***}$ IR <--- AT $\beta = 0.52^{***}$ <hr/> IR <--- PI $\beta = 0.23^{***}$	Partial mediation
H <sub>3c</sub>	The relationship between perceived quality and intention is mediated students' attitude	Students' attitude (AT)	IR <--- PQ $\beta = -0.11^{***}$	AT <--- PQ $\beta = -0.09^*$ IR <--- AT $\beta = 0.52^{***}$ <hr/> IR <--- PQ $\beta = -0.11^{***}$	Partial mediation
H <sub>4c</sub>	The relationship between perceived agreement and students' attitude is mediated by perceived quality	Perceived quality (PQ)	AT <--- LP $\gamma = 0.07$ (0.225)	PQ <--- LP $\gamma = 0.05^{***}$ AT <--- PQ $\beta = -0.09^*$ <hr/> AT <--- LP $\gamma = 0.09$ (0.075)	No
H <sub>5c</sub>	The relationship between media awareness and students' attitude is mediated by parental influence	Parental influence (PI)	AT <--- AW $\gamma = 0.15^{**}$	PI <--- AW $\gamma = 0.27^{***}$ AT <--- PI $\beta = 0.42^{***}$ <hr/> AT <--- AW $\gamma = 0.05$ (0.282)	Full mediation

Notes: Significant at 0.001\*\*\* Significant at 0.01\*\* Significant at 0.05\*;  
<--- relationship;

LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention.

Source: Developed by the researcher for current study

This study presents the test results for the thirteen (13) hypotheses: ten (10) were accepted and three (3) rejected. The results obtained for each hypothesised path are summarised in Table 6.24. The validated research model is presented in Figure 6.5.



$\chi^2$	df	$\chi^2/df$	CFI	GFI	TLI	AGFI	PGFI	PNFI	RMSEA
388.542	221	1.758	0.962	0.927	0.956	0.908	0.742	0.800	0.042

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students’ attitude; IR—intention

◄----- Non-significant relationship      ◄----- significant relationship

Example: PI ◄----- AW  $\gamma = 0.27$  (critical ratio value = 4.644)

Source: Developed by the researcher for current study

Figure 6.5: Hypothesised Structural Model

Table 6.24: Result of Hypotheses Testing

Notation	Hypotheses	Accepted?
H <sub>1</sub>	The relationship between students' attitude towards loan repayment ( <i>students' attitude</i> ) and intention to repay loan ( <i>intention</i> ) is positive and statistically significant.	Yes
H <sub>2</sub>	Parents have positive effects on the students' attitude towards loan repayment ( <i>students' attitude</i> ).	Yes
H <sub>2b</sub>	Parental influence is positively associated with intention to repay loan ( <i>intention</i> ).	Yes
H <sub>2c</sub>	The relationship between parental influence and intention to repay loan ( <i>intention</i> ) is mediated by students' attitude towards loan repayment ( <i>students' attitude</i> ).	Yes (Partial mediation)
H <sub>3</sub>	Perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ) influence the students' attitude towards loan repayment ( <i>students' attitude</i> ).	Yes
H <sub>3b</sub>	Perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ) influences intention to repay loan ( <i>intention</i> ).	Yes
H <sub>3c</sub>	The relationship between perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ) and intention to repay loan ( <i>intention</i> ) is mediated by students' attitude towards loan repayment ( <i>students' attitude</i> ).	Yes (Partial mediation)
H <sub>4</sub>	Perceptions towards loan agreement ( <i>perceived agreement</i> ) are positively associated with students' attitude towards loan repayment ( <i>students' attitude</i> ).	No
H <sub>4b</sub>	Perceptions towards loan agreement ( <i>perceived agreement</i> ) are positively influencing perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ).	Yes
H <sub>4c</sub>	The relationship between perceptions towards loan agreement ( <i>perceived agreement</i> ) and students' attitude towards loan repayment ( <i>students' attitude</i> ) is mediated by perceptions that loan repayment will affect quality of life after graduation ( <i>perceived quality</i> ).	No
H <sub>5</sub>	Awareness of loan repayment issues created by media ( <i>media awareness</i> ) has positive effects on students' attitude towards loan repayment ( <i>students' attitude</i> ).	No
H <sub>5b</sub>	Awareness of loan repayment issues created by media ( <i>media awareness</i> ) has positive impact on parents' influence on children.	Yes
H <sub>5c</sub>	The relationship between awareness of loan repayment issues created by media ( <i>media awareness</i> ) and students' attitude towards loan repayment ( <i>students' attitude</i> ) is mediated by parental influence.	Yes (Full mediation)

Source: Developed by the researcher for current study

## **6.7 Summary**

This chapter reports the results of the data analysis for the main survey. The demographic characteristics of this sample have been presented. The descriptive analysis shows very low levels of missing data, and the data which are missing were found to be completely random; however, some degree of skewness and kurtosis is present amongst the responses. Following the running of the reliability and EFA tests, it was established that three (3) items should be deleted—IR01, IR09 and IR10—each of which is highly cross-loaded with other factors that cannot be justified theoretically, as well as owing to the fact that they had low communalities. The second part of data analysis is the use of SEM, which is conducted in two stages: the measurement model and the structural model. During the first stage, the fit of measurement model was assessed using CFA. During this stage, all indicators were highly loaded on their specified factors, and the overall Goodness of Fit indices suggested acceptance of the model. Each construct was then tested for reliability and validity. Convergent validity estimated by factor loadings, composite reliability and average variance extracted were examined. Accordingly, all constructs were deemed reliable. In addition, discriminant and nomological validity for each construct was confirmed.

The next stage—the assessment of the structural model—has been undertaken. The structural model results show a good fit of the model to data. All pathways are significant, as ten (10) hypotheses have been shown to be supported. The structural model indicates that parental and perceived qualities have various different levels of impact upon students' attitude towards loan repayment. Thus, the model provides a strong test of the hypothesised relationships between the constructs of interest. The mediation effects on the model are tested, with results showing that the students' attitude construct mediated partially the relationship between parental influence and intention, and between perceived quality and intention. Furthermore, the relationship between students' attitude and media awareness is mediated fully by parental influence; thus completing the analysis with this chapter. Subsequently, the findings will be discussed in Chapter Seven.

## **Chapter Seven: Discussions**

### **7.1 Introduction**

This chapter presents the discussions of the results determined through the qualitative, pilot survey and the main survey. The structure of this chapter is as follows: in the first section, the overview of the study is presented, followed by the theory explaining relationships in the model in the second section; next, the qualitative findings are presented in the third section, and are connected to the results of scale purification in the subsequent section; in the fifth section, students' attitude towards loan repayment (students' attitude) and the intention to repay loan (intention) are presented; the sixth section describes the antecedents of students' attitude, including the effects of perceptions that loan repayment will affect quality of life after graduation (perceived quality), perceptions towards loan agreement (perceived agreement), parental influence and awareness of loan repayment issues created by media (media awareness); next, the findings of all hypotheses tested are reviewed, and an evaluation of the research hypotheses and the significance of the results are compared with previous researches; and finally, the last section details the results of the mediation effects, which are discussed.

### **7.2 Study Overview**

The objective of the study was to investigate the antecedents of students' attitude and the impact of students' attitude on the intention to repay loan. The study has also investigated the relationships of perceived agreement, perceived quality, media awareness and parental influence with students' attitude. Of these aforementioned factors, perceived quality and parental influence have been found to have a significant influence on students' attitude. In addition, further objectives included to examine whether or not any mediating effects were embedded within the relationship between the hypothesised model; notably, the objective was to examine the validity of the Theory of Planned Behaviour in explaining the relationships between the hypothesised model in a non-Western setting. This study was cross-sectional in terms of which data were gathered from final-year undergraduate students in public universities in Malaysia.

The findings of this study are that perceived agreement and media awareness are not considered to be predictive factors for students' attitude. Moreover, no mediation effect is established between perceived agreement and students' attitude by perceived quality. On the other hand, however, parental influence has been found to mediate completely the relationship between media awareness and students' attitude. In terms of the direct relationship with students' attitude, both parental influence and perceived quality constructs have been established as having a direct relationship with students' attitude. In addition, perceived agreement has been determined as influencing perceived quality, and media awareness has been found to affect parental influence. Students' attitude is found to mediate partially the relationships between parental influence and intention, as well as between perceived quality and intention. The relationship between students' attitude and intention is found to be positive and significant statistically. The findings are found to be consistent with the previous studies, whereby attitude contributes to loan repayment and defaults (Flint, 1997; Baum & O'Malley, 2003; Abu Bakar *et al.*, 2006), besides new unexpected findings; the integrative theoretical model. An explanation of these results is provided later on in this chapter.

This study has examined the antecedents of students' attitude; this involves factors which are most likely to have a significant influence on students' attitude and subsequent impacts on loan repayment within the context of educational loan. The topic of educational loans has been discussed for years, and has therefore been identified as an important topic for decades (Woodhall, 1988; Flint, 1997; Baum & O'Malley, 2003). With this in mind, it is true to state that interest surrounding studies relating to educational loans has increased at a progressive rate owing to the fact that most countries providing educational loans—particularly developing countries—have experienced problems in terms of educational loan defaults. However, thus far, limited empirical research has been carried out in this area, and the literature therefore lacks an integrative theoretical model to address the research problem.

There are several issues observed in this study: first, constructs—such as students' attitude—are difficult to define and explain clearly and unanimously. Therefore, this study has followed the definition of students' attitude from a previous study in the context of



educational loan (Abu Bakar *et al.*, 2006). The respondents in this study cannot provide a clear definition of the construct, but rather describe why they want to repay loans and why they refuse to repay loans, which relate fundamentally to their attitude than the abstract concept itself.

Similarly, it has been argued that no universal definition thus far exists for the term 'awareness'. Awareness has to be a counterpart with others, such as individuals, other people and mass media, in the specific context, i.e. in this study, in the context of educational loan. Awareness can be classified through various different approaches, such as self-awareness (Volkwein *et al.*, 1998), awareness created by other people (Grolnick & Slowiaczek, 1994), as well as awareness created by mass media (Dynarski, 1994). Accordingly, it is suggested that awareness comprises comprehensive characteristics, and is 'more often described than defined' (Suchman, 1995). In contrast, other concepts—such as parental influence, perceived quality and perceived agreement—seem to be less difficult to verbalise.

Second, the operationalisation of constructs appears to depend upon research settings:—for example country, culture or industry—as well as the unit of analysis, i.e. student or manager. For instance, in this study, when the respondents were asked to explain their attitude towards loan repayment, Malaysian students were found to place a great deal more emphasis on personal experiences and emotional attachment rather than on other concrete aspects. These possess some similarities with the findings of other studies (Abu Bakar *et al.*, 2006; Baum & O'Malley, 2003). However, some respondents in the previous studies have, for example, related their attitude towards loan repayment owing to the fact that starting salaries and current incomes are lower (Serrem, 1998; Cofer & Somers, 1999) as opposed to relating attitude with external factors, such as the job market decreasing owing to economic recession (Oosterbeek & Van Den Broek, 2009).

In order to fulfil the research aim and objectives detailed in this study, the multiple methods approach was adopted (Sekaran & Bougie, 2010). The approach comprising qualitative studies—which acts as the foundation for the quantitative study—was implemented. In addition, the qualitative study was also employed in order to cross-check

the quantitative findings. In fact, the qualitative findings mainly generated the new items to measure constructs of parental influence, perceived agreement, perceived quality and media awareness, as well as intention.

Qualitative methods are appropriate for this study as they provide the opportunity to be engaged directly and personally in the human field of activity, with the goal of generating holistic and realistic descriptions and explanations (Crabtree & Miller, 1999). Focus group discussions and semi-structured interviews methods were considered to be appropriate for this study as they permit respondents to tell their own stories in their own words and on their own terms.

Furthermore, the quantitative data—which was analysed using the analysis of moment structure (AMOS) 18.0—shows that the students' attitude model has multidimensional constructs. Additionally, the overall constructs of interest show satisfactory of reliability, convergent, nomological and discriminant validity. Notably, a number of pathways considered significant statistically have been confirmed between students' attitude and other constructs through satisfactory fit indices for both the measurement and structural model. In addition, an integrative theoretical model has been developed, illustrating the impacts of parental influence, perceived agreement, and perceived quality, and media awareness on students' attitude, which subsequently influences the intention to repay the loan.

The results of the tests show strong support for the model. Specifically, the measurement model is assessed in the main study using the stratified random samples of students at public universities in Malaysia. The confirmatory factor analysis shows that the model achieved a significant fit to the data. The chi-square = 356.145, with degrees of freedom (df) = 215, chi-square/df = 1.656, comparative fit index (CFI) = 0.968, Tucker-Lewis index (TLI) = 0.962, Goodness of Fit index (GFI) = 0.933, Adjusted Goodness of Fit Index (AGFI) = 0.914, Normed fit index (NFI) = 0.923 and Root Mean Square Error of Approximation (RMSEA) = 0.039, following the procedures recommended in Anderson & Gerbing (1988), Hair *et al.* (2010) and Tabachnick & Fidell (2007).

In testing the hypothesised model, the results indicate that the hypotheses H<sub>1</sub>, H<sub>2</sub>, H<sub>2b</sub>, H<sub>2c</sub>, H<sub>3</sub>, H<sub>3b</sub>, H<sub>3c</sub>, H<sub>4b</sub>, H<sub>5b</sub> and H<sub>5c</sub> are supported. On the other hand, the hypotheses H<sub>4</sub>, H<sub>4c</sub> and H<sub>5</sub> are rejected owing to the fact that they are not statistically significant.

Furthermore, conducting interviews in order to cross-check data or to otherwise ensure the validity of interpretations and the triangulation of the data adds credibility to the study (Creswell, 1994). Our interview findings are consistent with the quantitative results. From the interviews, the researcher here has been able to note, through utilising a qualitative methodology to assess why former students defaulted, results have been achieved which are similar to those using quantitative means.

### **7.3 Qualitative Findings**

This section provides the explanation of the qualitative findings deriving from focus group discussions and semi-structured interviews. The purpose is to highlight the contributions made in the study.

#### ***Students' Attitude***

For attitude constructs, this study has found that, overall, students have a positive attitude towards loan repayment. This finding is in contrast with the findings of Abu Bakar *et al.* (2006), who state that, overall, students have a negative attitude towards loan repayment. The positive attitude emerges from students agreeing that repayment will help other students, that repayment is their obligation, and that they will make an effort to make repayments. Students are also aware that National Higher Education Fund Corporation (NHEFC) can trace them in order to collect the loan if they do not make repayments following graduation, and there will consequently be legal actions initiated towards them. However, students also state their opinion of the importance of other items, such as that a commercial bank should be in-charge of repayment collection following bank rules and regulations, and also that the government should aim to help students to get a job with a good salary in order to enable them to repay the loan.

### ***Intention to Repay Loan***

For the intention construct, students indicate that they have the intention to repay the loan following graduation. Based on the Theory of Planned Behaviour, intention is an indication of a person's readiness and willingness to perform a given behaviour, and intentions capture the motivational factors that influence behaviours (Ajzen, 1991). Therefore, our study has established that students have positive motivational factors to make payments following graduation. For example, students state that, 'I will make repayment because it is my priority' or 'I will find any job after I graduate to pay back student loan'. Essentially, there were numerous ways through which students showed their intention to make payments after graduating, such as because of religious beliefs and cultural norms, which state that debt must be repaid. Moreover, students also want to reduce debt and future debt, and thereby avoid any and all burdens on their parents in the future.

### ***Parental Influence***

For the parental influence construct, students have expressed their opinion concerning the role of parents, such that parents advise them to find any job to repay the loan. Parents advise their children (loan borrowers) to make regular payments in order to reduce the debt. Parents are also found to be the people reminding students about the importance of making loan repayments in order to avoid problems in the future. On the other hand, the indirect influence is that parents' experience with any loan makes them more concerned of the effects of debt on their personal lives, which therefore influences students. In the case of NHEFC, for example, parents are the guarantors of the loan; therefore, in order to avoid the burden on parents in the future, students are reminded regularly to pay back the loan after graduation. In non-Western cultures, parents are considered to be very important and have a very strong relationship, with young children usually obeying their parents without question.

### ***Perceived Quality***

Previous studies indicate various reasons for delayed repayments, which include buying a home, getting married, choosing a career, having a child, choosing a place to live, and the purchase of a new car (Cofer & Somers, 1999; Hira *et al.*, 2000; Millet, 2003; Baum &

O'Malley, 2003; Abu Bakar *et al.*, 2006). Perceived quality refers to students' perceptions that loan repayment will affect their quality of life following graduation. In our study, students agreed with the existing items; however, students also indicate another factor that has the potential to delay the repayment as 'total money to contribute to their parents'. This is identified as being the most important item with which most students are concerned.

### ***Perceived Agreement***

Previous studies—such as those carried out by Abu Bakar *et al.* (2006) and Volkwein *et al.* (1998), for example—indicate that students have knowledge towards loan agreement, and that they can therefore manage their money efficiently. Nevertheless, the study here still takes into consideration loan agreement; however, we intended to investigate how students perceived loan agreement. The researcher has subsequently found that students more commonly perceive loan agreements negatively rather than positively. The negative perceptions include loan agreements being too long, the content lacking clarity, and loan agreements needing to use simpler language which is easier to understand. Moreover, students complained that the time given to complete the loan agreement form was not adequate, and also that their understanding of the content of the loan agreement and completion of the forms largely depended on the instructions given during briefings in the universities concerning filling in the loan agreement form. However, several students perceived the loan agreement as being easy to understand.

### ***Media Awareness***

Similar to the awareness of loan repayment issues created by media construct, according to respondents in the focus groups discussions and semi-structured interviews, information is received regarding loans and repayments from newspapers, the internet, television and radio. Students indicated that information from media influenced them significantly. As a result, they were more concerned regarding the importance of repayment in order to avoid their names being published in the newspaper or legal action being taken for those who default on repayment.

## 7.4 Population and Sample Issue

This study has been conducted in public universities in Malaysia. A large sample has been applied in order to represent the population and underlying structure with the aim of examining reliable correlations and the prediction power of factors (Hair *et al.*, 2010). The sample size targeted in this study follows the recommendation by Hair *et al.* (2010), as explained in Chapter Five (Research Design and Methodology), i.e. between 350 and 450 respondents; thus, the study covers a large sample and provides a substantive representation of the total population of students in public sector universities. According to Comery & Lee (1992), a sample size of 50–100 is treated as poor, 200 as fair, 300 as good, and 500 as very good.

For data collection, the sampling technique used in this instance was stratified random sampling, combining stratified sampling with random sampling (Malhotra, 2003; Teddlie & Yu, 2007) from final-year undergraduate students. The stratified random sampling was employed whilst the population was divided into main groups: field of study, gender and ethnicity. The total questionnaires distributed totalled 640 to final-year undergraduate students in selected public universities. Notably, there are 20 public universities located in Peninsular Malaysia and East Malaysia. Of these 20, 18 universities are located in Peninsular Malaysia, whilst the other two are located in East Malaysia. The universities selected for this study have been established for more than 10 years—each of which offers variety in terms of programmes/courses. The stratified sampling process involved three levels, each of which was completed with the overall sample generated, therefore totalling 453 respondents. The total samples, following stratification, 327 for Bumiputera, 83 for Chinese, 26 for Indian, and 17 for others.

From the sample data, dealing with missing data is an important issue (Hair *et al.*, 2010). In social science research, there are various suggestions made in this arena, such as using the mean of the scores on the variance or otherwise removing the sample/samples, which does/do not respond to any question (Norusis, 1995). Data must be cleaned, which involves double-checking the data entries on the computer files in order to overcome human errors—particularly with the large numbers of respondents such as in this study. The

researcher has therefore checked each section in order to identify the questionnaires with largely missing data to be excluded. At this stage, the researcher excluded one questionnaire owing to the fact that the respondent only answered demographic questions and left the other sections blank (id=8, UUM, science, male, Bumiputera). In addition, 21 additional questionnaires were identified as lacking in various demographic answers, such as age, secondary school background, religious background, parents' income, as well as father's and mother's profession; these were accordingly removed. Finally, the total respondents to be tested for this study were 431.

In an attempt to establish the missing data, the rule of thumb for missing data has been applied here, i.e. data under 10% for an individual case or observation can generally be ignored. Moreover, Tabachnick & Fidell (2007, p. 63) point out that, if only few data points are missing in a random pattern from a large data set—such as 5% or less—the problem is then not considered to be serious. As a result, no cases were deleted from our data set. Notably, however, outliers cannot be characterised categorically as either beneficial or problematic (Hair *et al.*, 2010), although they can bias the mean and therefore inflate the standard deviations (Field & Hole, 2003). Thus, we should be aware of such values as they can bias the model fit to data (Field, 2010).

In this instance, the researcher applied a graphical method for detecting the univariate outliers, and the Mahalanobis' distance case was applied for determining the multivariate outliers in order to confirm their effect (Hair *et al.*, 2010). Using Box Plot, 3 univariate outliers were established and marked with asterisks; these, once detached and compared with the Mahalanobis's distance test, identified multivariate outliers (Hair *et al.*, 2010). Having the graphical and test results, three outlier cases are thus confirmed. Moreover, after determining outliers in this study, adjustments have been made by removing three (3) cases, and thus the size of the sample ( $N$ ) was reduced to 428 for the final study.

## 7.5 Measurement Scale Purification

The first issue to be discussed is the operationalisation and validation of concepts. As mentioned in Chapter Five, we have developed measurement scales by extracting items from existing scales and from our preliminary study (focus groups discussions and semi-structured interviews). Face- and content-validity have been also examined in this study. In addition, the developed scales have been subjected to two rounds of exploratory factor analysis, followed by reliability test (Cronbach's Alpha), Confirmatory factor analysis (CFA), including several statistical tests i.e. convergent, discriminant and nomological validity test (Hair *et al.*, 2010).

A questionnaire was developed initially on the basis of the reviewed literature, and then qualitative studies were performed in order to further supplement and complement the development of the questionnaire (Hair *et al.*, 2010). The conceptual model comprising six (6) constructs was then operationalised—starting with a pilot survey—and followed subsequently by the main survey. The constructs for the study—i.e., students' attitude, intention, parental influence, perceived agreement, perceived quality and media awareness—were developed primarily on the basis of conceptual articles. The items generated from both the literature review and qualitative studies were then subjected to qualitative and quantitative refinements.

Face- and content-validity were assessed prior to the pilot survey (Hair *et al.*, 2010). The survey instrument was assessed through expert and experienced validators, as recommended by Hardesty & Bearden (2004), during the initial stage of research. Experts and validators were asked to comment on the lists of scale items (Hair *et al.*, 2010). Face- and content-validity was assessed by academics, NHEFC officers, borrowers' parents and former NHEFC borrowers; as a result, a number of items were deleted and modified. The reasons for these deletions and modifications have been explained as owing to the fact that such items could confuse respondents' understanding when tested in respect of a broader population. In this face- and content-validity procedure, we observed that the experts and validators revised the scale items based on their experiences and knowledge with which they were directly involved, with the exception of academics, who were more



comprehensive at evaluating the items. For example, NHEFC officers considered the items related to the organisation, whereas parents focused on the items related to their roles, and ex-NHEFC borrowers focused on items related to their experiences.

Moreover, the developed scales were subjected to two rounds of data reduction/item purification—EFA (one during pilot survey and another during main survey) as well as the reliability test. Moreover, in regards to the pilot survey, this study employed EFA and the reliability test. The dimensionality of almost all constructs was found to be consistent with those reported in the literature. During the first round, the categorisation was based on the literature review, whereby theoretically related constructs were joined together. The EFA was conducted in order to test each group—namely media awareness, parental influence, students' attitude and intention. However, perceived agreement and perceived quality were grouped together in order to test the EFA owing to measuring the perceived constructs.

The results highlight that three (3) constructs load clearly on one factor (a different factor for each construct); namely, the perceived quality, media awareness, and students' attitude. In addition, three (3) constructs—namely perceived agreement, parental influence and intention—loaded into more than one factor or group of predictors in the EFA. For the perceived agreement construct, one item was deleted owing to cross-loading (0.430/0.568), i.e. 'I largely depended on the instructions given to me during briefing to fill up the loan agreement form'. In the parental influence construct, a total of three (3) items were deleted. Two of the items—My parents advised me to save from the NHEFC loan whilst as a student, so that I can make payments immediately after I graduate' and 'My parents' experiences with any loan influenced me to make repayment after I graduate'—were deleted because they loaded in different factors or constructs rather than the parental influence construct. In order to retain the unidimensionality of constructs and to thereby ensure that the items represent the parental influence construct, those items were deleted.

Next, the item 'My parents, as guarantors of this loan, remind me to pay back the loan after I graduate to avoid burden on them in the future' was deleted as it loaded in two factors (0.644/0.408). For the intention construct, the EFA result recommended that 'I will find any job after I graduate to pay back my student loan' and 'I will make regular

payments through salary deduction' were deleted as the communalities were less than 0.5, turning out to be 0.408 and 0.490, correspondingly. All the items deleted included the new items derived from the qualitative studies (both focus group discussions and semi-structured interviews).

After the trimming procedure, when testing for the second round of EFA, all items were clearly loaded in their own constructs; therefore, the reliability for all constructs had been tested, which was found to be greater than 0.7 for all constructs. Reliability was tested through Cronbach's alpha ( $\alpha$ ), and  $\alpha$  greater than 0.7 was generally accepted as demonstrating a high level of homogeneity within the scale, and thereby determining whether or not the item reflected a single dimension (Churchill, 1979; Nunnally, 1967).

Furthermore, during the pilot survey, a few suggestions were received from the respondents in an attempt to strengthen and improve overall clarity for the survey questionnaire. Respondents suggested retaining the two languages (Malay and English) in this survey, which helped respondents coming from different ethnic backgrounds to understand the questions. In the perceived quality (perceptions that loan repayment will affect quality of life after graduation) scale, the phrase 'after graduation, loan repayment will affect my decision on' was applied initially once to all items at the beginning. However, respondents suggested putting this phrase with all questions, which was considered to facilitate better understanding. Overall, respondents agreed on the format of the questionnaire items in the survey instrument.

Specifically, the main survey data involves EFA, where the items of adapted scales are subjected to several rounds of adjustments and purification, which finally acquired an acceptable measurement model. The result of EFA for the first round shows that item IR09 identified low communalities, and was therefore subject for deletion, as explained in Chapter Six. Notably, the remaining items were then resubmitted to another round of EFA, with the results showing twenty-nine (29) items approximately satisfied the rule of thumb with a sample size of 428. However, items IR01 and IR10 were supposed to load under the intention construct; however, they also cross-loaded under the attitude construct, and so the two items were therefore deleted.

Importantly, it was acknowledged that EFA is the appropriate tool for identifying factors amongst multiple variables (Hair *et al.*, 2010). As such, EFA results can be useful in developing theory, which will lead to a proposed measurement model. Although thirty (30) items introduced previously are from qualitative studies and have not yet been established in other researches, EFA has nevertheless confirmed that the items represent the constructs.

The EFA of the main survey data was followed by CFA, and several statistical tests, namely nomological validity test, discriminant validity test and convergent validity test (factor loadings, composite reliability and average variance extracted). In the case of the convergent validity, all constructs have high composite reliability, greater than (>) 0.70, as recommended by Nunnally (1978), as well as factor loadings greater than (>) 0.50 and high average variance extracted which are greater than (>) 0.50 for five constructs. However, the average variance extracted (AVE) is only less than (<) 0.50 for the perceived agreement construct. The construct of perceived agreement has only four (4) items. Notably, although factor loadings for all items (>) 0.50 when calculating the mean average of the four (4) items, the value obtained was less than 0.5. Accordingly, we identified two (2) items that contributed to low AVE, which are LP03 ‘The time given to complete the loan agreement form was not enough’ and LP04 ‘The loan agreement needs to use the language more easily understood’ factor loadings were 0.505 and 0.509 respectively, therefore slightly exceeding the factor loadings requirements. The other two items obtained high-factor loadings with 0.672 and 0.750.

The average variance extracted was calculated as the mean variance extracted for the items loading on a construct, and the value was calculated based on standardised loadings (see Formula 7.1).

$$AVE = \frac{\sum_{i=1}^I (L_i)^2}{I}$$

*L<sub>i</sub>* = the standardised factor loadings

*I* = number of items

*AVE* = average variance extracted

Formula 7.1: Average Variance Extracted Calculation

So for  $I$  items, AVE is computed as the total of all squared standardised factor loadings (square multiple correlation/number of items) or average communality. Therefore, if convergent validity is less than 0.50, the variance due to measurement error is larger than the variance captured by the construct of perceived agreement. As suggested by Fornell & Larcker (1981), average variance extracted is more conservative measure than composite reliability. In fact, according to Fornell & Larcker (1981; p. 46), on the basis of composite reliability alone, they conclude that the convergent validity of the construct is adequate, even though more than 50% of the variance is due to error. Moreover, previous studies by Johansson & Yip (1994) and Cool *et al.* (1989) have similarly highlighted problems with the convergent validity, but nevertheless chose to retain the measurement items for theoretical reasons. With such views taken into consideration, in this study, we therefore chose to retain the construct for further testing.

Furthermore, in CFA, various items were excluded—PI01, AW04, PQ01 and AT04—when assessing the Goodness of Fit of the model (see the items' descriptions in Table 7.1). This was done in order to improve the model fit. As a result, the items were reduced to twenty-three (23). Accordingly, theoretically and operationally reliable and valid scales were developed. Overall, the finalised scales were found to possess satisfactory validity and reliability, and were consequently employed throughout the hypotheses-testing process.

In summary, the findings from the scale purification reflect two main ideas. First, when the scale is adapted and applied to another context i.e. country with a different culture, it is necessary to assess the relevance of the scale so as to achieve validity of inferences (Singh, 1995). First is to ensure whether or not the same context exists in another country. Moreover, if it exists, 'it may not have the same form or it may otherwise have different elements in other countries' (Craig & Douglas, 2000, p. 256). Second, in order to certify the applicability of the adapted scales, it is crucial to assess external validity, such as reliability and validity, in addition to internal criteria (Craig & Douglas, 2000). With this in mind, in this instance, the researcher assessed construct validity—which

is an essential condition for further theory-testing and theory-development (Steenkamp & Trijp, 1991; Bagozzi *et al.*, 1991).

Table 7.1: Constructs and Items used in this Study

Constructs	Codes	Items
Perceived agreement	LP01	I think the loan agreement was written too long
	LP02	The loan agreement was difficult to understand
	LP03	The time given to complete the loan agreement form was not enough
	LP04	The loan agreement need to use the language more easily understood
Media awareness	AW01	I am aware latest information about NHEFC loan repayment in the newspapers
	AW02	I have watched the television programme about latest information about NHEFC loan repayment
	AW03	I have read the latest information about NHEFC loan published on their website
Perceived quality	PQ02	After graduation, loan repayment will affect my decision on job options
	PQ03	After graduation, loan repayment will affect my decision on when to get married
	PQ04	After graduation, loan repayment will affect my decision on when to buy my first car
	PQ05	After graduation, loan repayment will affect my decision on when to have my first Child
	PQ06	After graduation, loan repayment will affect my decision on buying a house
	PQ07	After graduation, loan repayment will affect my decision on how much money I will contribute to my parents
	Parental influence	PI02
PI05		My parents remind me to pay back the loan after I graduate to avoid problems in the future
PI06		My parents, as guarantors of this loan, remind me to pay back the loan after graduate to avoid burden on them in the future
AT01		The repayment will help other students
Students' attitude	AT02	Repayment is my obligation
	AT03	I have to make an effort to make repayments
	AT05	There are legal penalties for non-repayment
	IR06	I will make repayment because my culture norms says debt must be repaid
Intention	IR07	I will make repayment because my belief in religion says debt must be repaid
	IR08	I will make regular payments to reduce the debt

Notes: LP—perceived agreement; AW—media awareness; PQ—perceived quality; PI—parental influence; AT—students' attitude; IR—intention

Source: Developed by researcher for current study.

## 7.6 Hypotheses Results

In this section, we will discuss the results of the hypotheses-testing and the justifications for the results obtained. We also provide the results from the follow-up structured interviews with graduates who are currently in the process of repaying their loans.

### 7.6.1 *Students' Attitude and the Intention to Repay Loan*

Students' attitude has been found in this study to have a significant impact on the intention to repay the loan. The findings in this study differ from previous studies in two ways. First, when comparing the findings in the attitude studies in Western countries, previous studies have determined various correlations between attitudinal variables and debt behaviour; however, the correlations established thus far have been weak (Livingstone & Lunt, 1992; Volkwein & Szelest, 1995; Baum & Schwartz, 1988). In comparison, however, in this study, the impact of students' attitude explains more than 50% variance on the intentions construct. Respondents in the follow-up interviews also confirmed this result, with one borrower stating the following, for example:

*'In my opinion Malaysian graduates afford to pay back their loan because the government's and NHEFC allow repayment as low as RM50 per month... anyone who chose to repay or not to repay their loans depends on their attitude...'* (Interviewee #1).

Second, a previous study carried out by Abu Bakar *et al.* (2006) indicates that, overall, students have negative attitudes towards loan repayment; however, our study finds that, overall, students have positive attitudes towards loan repayment. Moreover, the quantitative findings confirm that a positive attitude emerging amongst students—such as in the context of loan repayment—will help other students to recognise that repayment is their obligation, and they will therefore make an effort to make repayments. Students are also concerned about legal actions being initiated towards them if they default on their repayment agreement, which therefore indicates a lower default rate, as explained by the Theory of Planned Behaviour, which states that behavioural intention will predict actual behaviour (Ajzen & Fishbein, 1980).

Hypothesis one ( $H_1$ ) is the impact of students' attitude on the intention to repay the loan. The results show that the hypothesised relationship is statistically significant. The path coefficients from students' attitude to intention are confirmed. As hypothesised, students' attitude is found to have positive impact on the intention (0.52,  $p < 0.001$ ). The derived model explains approximately 52% of the variance in the intention construct. One respondent has reflected this idea:

*'In my case for example, I have strong determination to make repayment since I still study in the university... after I got a job I started allocating part of my salary to repay loan...'* (Interviewee #4).

Previous studies highlight various factors for default, such as students' background characteristics, academic experiences, institutional characteristics and economics factors. This study proves that students' reasons relating to their intention to make repayments after graduating are owing to their religious beliefs and cultural norms, which state that debt must be repaid in order to avoid burdens on themselves and their parents in the future. This finding is consistent with a previous study in terms of attitude (Kraus, 1995), which state that attitude influences students' choices, and that the process of selecting choices is the most powerful way in which attitude influences behaviour.

### ***7.6.2 Antecedents of Students' Attitude towards Loan Repayment***

The antecedents of students' attitude in this study are abstract rather than concrete, such as parental influence, perceived quality, perceived agreement and media awareness—the dimensions of which are difficult to visualise. In order to alter the abstract into more concrete antecedents, we depict the definition as closely as possible to the actual meaning by refereeing to previous studies.

#### ***7.6.2.1 Effects of Parental Influence***

Parental influence is associated significantly with students' attitude. Amongst all the antecedents, parental influence has the strongest effect on students' attitude. The standardised regression path between parental influence and students' attitude is ( $H_2$ ) statistically significant ( $\beta=0.42$ ,  $p<0.001$ ); thus, this hypothesis is supported. Moreover, this

model predicts 53% of variance ( $R^2$ ) in parental influence construct, and concludes that the parents' role is an important instrument in building a positive attitude amongst students, as parents usually influence children's decision-making (Olson, 1982). An example of a comment from an interviewee includes:

*'Most important decision in my life were made by my parents...I believe what my parents did and planned for me was the best because they always want all good things to happen to me... I admit that my attitude is also influenced by my parents...I think everyone would agree with me...'* (Interviewee #5).

Generally, students work together with their parents before making decisions to enrol for higher education or to borrow a loan for their studies. This result is consistent with substantial empirical literature on families of later life, which suggests that parents and their adult children typically remain very involved with one another over their life course. Parents prefer to live near their children, and most parents maintain regular and frequent contact with adult children (Rossi & Rossi, 1990). Furthermore, parents are often considered to be an important resource for their adult children (Bankoff, 1983; Cicirelli, 1989; Hagestad, 1987). The parent-child relationship is a particularly strong and unique source of social integration for parents and adult children for several reasons: first, this relationship is generally permanent and, to a great extent, involuntary. Second, children are initially dependent on their parent(s) for survival, and children and parents are strongly affected by this dependence (Rossi & Rossi, 1990), and so both parents and the child carry this distinctive history with them throughout the life course (Cicirelli, 1989). Third, social norms also strongly encourage parents and children relationships throughout the life course (Atkinson & Gim, 1989); and finally, parents and children also share many social values and attitudes (Glass *et al.*, 1986).

Parental influence is associated significantly with the intention to repay loan (intention). In addition, the path from parental influence to intention ( $H_{2b}$ ) is fully supported as there is a significant positive relationship ( $\beta=0.23$ ,  $p<0.001$ ). This result is found to be consistent with the study of Moschis (1985) in terms of consumption pattern, as he proposing that parental influence on young children often overrides any other form of



influence. Similar to the research by Basow & Howe (1980), it has been stated that both fathers and mothers have a more significant influence on young adult careers and education objectives than any other group, including peers, teachers, and other adult role models. Thus, in the case of the intention to repay the loan, parents play a significant role in the influence of their children to make repayments following graduation. A student and also a NHEFC borrower has expressed how his parents influenced him to repay his loan:

*'My parents are very important in my life ... as soon as I graduated, I got a job as an engineer...but the salary was only RM1,800 per month... as a fresh graduate the amount was just fine... my parents especially my mother always reminded me about the repayment of NHEFC loans ... I made repayment every month because I do not want to upset my parents... if I did not pay, NHEFC will send a reminder to my parents ....'*  
(Interviewee #5).

The inclusion of a path from parental influence to students' attitude in the model provides a significant best fit to the data, and also provides the best prediction to influence attitude towards loan repayment. Our findings support the study of Chang (1998) who, in a study of unethical behaviour, states a convincing improvement in fit when adding a path from subjective norms to attitude in the Theory of Planned Behaviour.

#### ***7.6.2.2 Effects of Perceptions that Loan Repayment Will Affect Quality of Life after Graduation***

The perceptions that loan repayment will affect quality of life after graduation (perceived quality) construct is introduced differently by different researchers, for example, Baum & O'Malley (2003); Cofer & Somers (2000); Zhou & Su (2000) used 'perceptions on the impact of loan after graduation' whilst Abu Bakar *et al.* (2006) used 'perceptions towards loan repayment'. In this study, we used the construct 'perceptions that loan repayment will affect quality of life after graduation'. The purpose behind modifying the term used for the construct was to make it clearer to respondents during the application of this study.

In the previous studies in the non-Western context, the item of 'loan repayment will affect my decision on the selection of the place to stay' has been found to be important.

However, in this study, Malaysian students indicated that the item has no effect on the attitude as well as on the intention to repay the loan. Therefore, we can conclude that, in a Western context, students are more concerned with moving from their parents' homes and living on their own following graduation; this differs with a non-Western culture, however. An example of a non-Western culture is children taking turns and cooperating to support and take care of their parents. This arrangement is known as the 'unique family structure' or 'take-turn stem families', whereby siblings are able to make arrangements according to a timeline whereby parents will live with them. This is because of the belief that caring for parents often brings the children into close and frequent contact with each other. This is further supported by Flanagan *et al.* (1993), who state that independent households are considered to be indicators of the transition to adulthood. Importantly, becoming an adult in a Western context means having independence, being autonomous and self-sufficient in a variety of respects. On the other hand, however, in the majority of non-Western cultures, adult status is defined not by becoming independent but by taking on new interdependencies such as marriage and living with parents (Schlegel & Barry, 1991). In addition, in non-Western cultures, the transition to adulthood is social rather than individual. It is considered that high value placed on individualism is the characteristic of the Western culture (Bellah *et al.*, 1985).

In this study, perceived quality has a statistically significant relationship with students' attitudes ( $\beta = -0.09$ ;  $p < 0.05$ ); thus, results indicate that H<sub>3</sub> is fully supported and indicates a negative contribution to students' attitude towards loan repayment. These suggest that, considering other things equal, the more predominant students' perceptions that loan repayment will affect quality of life after graduation, the less positive students' attitude towards loan repayment. The idea of perceived quality as a predictor to students' attitude is well supported by the data; however, it is nevertheless recognised that perceived quality has explained only 9% of the students' attitude construct. Respondents in the follow-up interview also confirm this result. Examples include:

*'After graduation, it took me five months before I got a job... my first salary I spent for my parents and until now every month I give my parents RM350 per month... I bought my first car after working for three months... then after two years I got married ... I*

*decided to buy a house before my age achieve 30 years ... about the NHEFC loan, I only pay RM50 per month...it is to avoid NHEFC take legal action towards me ... if I have opportunity to defer repayment I will do that... but I do not have a concrete reason to do that...’ (Interviewee #1).*

This finding indicates that, the more students concerned with home ownership, car ownership, postponing marriage, having children, and contribute part of the salary to parents, the lower their positive attitude would be towards loan repayment.

Next,  $H_{3b}$  is fully supported as the relationships between perceived quality and the intention is significant ( $\beta=-0.11$ ,  $p<0.001$ ). However, the regression path shows that it exhibits significant negative relationships. In fact, the perceived quality explains only 11% of intention constructs; in other words, the increase of students’ concern on their quality of personal life—such as owning a house, buying a car, getting married, having a child and supporting families—decreased their intention to repay the loan. the finding in this study are consistent with previous researches by Baum & O’Malley, (2003), Cofer & Somers, (2000), and Zhou & Su, (2000), which show that, in order to achieve the future quality of life, selecting jobs that interest students, getting married, buying a first car, having children and buying a house, students are tempted to postpone their educational loan repayment. Since students have many other priorities in life—such as buying a car, getting married and moving out of their parents’ house—repayment would therefore be affected. In addition, the item is raised by most respondents in the focus group discussions and semi-structured interviews, who state that they would delay loan repayment because they wanted to contribute their salary to their parents; therefore, this would reduce the burden of parents to support other siblings. In other words, students perceive loan repayment as preventing them from giving part of their salary to parents. A respondent reflected his opinion as follows:

*‘I want to marry my girlfriend...before that I have to have a car, house...I have to give money to my mother every month... at least to reduce burden on my father to support my siblings... I have four younger sisters and brother still in the secondary school and university...that is my priority...I have delayed the repayment for NHEFC because that is not my priority....’ (Interviewee #5).*

### 7.6.2.3 *Effects of Perceptions towards Loan Agreement*

The relationship between perceptions towards loan agreement (perceived agreement) and students' attitude ( $H_4$ ) is found to be insignificant ( $\gamma=0.09$ ,  $p=0.075$ ).  $H_4$  states that perceived agreement is positively associated with students' attitude; however, the result reveals no significant correlation and, as such, the hypothesis is rejected. Students confirm that what they perceived regarding loan agreement did not affect their attitude towards loan repayment; this is a rather surprising result, and a probable explanation is that, when students sign the agreement, they may only consider getting the loan to study, paid tuition fees, accommodation fees, and daily necessities—and not the implications of such. At that time, they may not think about the repayment. This explanation is supported by a respondent in the interview who used to be an NHEFC loan borrower for her studies:

*'When I signed the contract of loan agreement, I did not think of repayment at all... I just needed to get loan for my study to pay tuition and subsistence... when I graduated then I realised that I have to repay huge amount of loan... so I went to NHEFC to discuss the loan repayment schedule with the loan officer... paying RM100 per month through salary deduction... I can afford only RM100 because I also have a car loan, housing loan to pay every month... I have to give also part of my salary to my mother every month...'* (Interviewee #6).

However, perceived agreement has been found to be correlated significantly with the perceived quality.  $H_{4b}$  hypothesises the relationship between perceived agreement and perceived quality, which is found to be significant ( $\gamma=0.05$ ,  $p<0.001$ ), therefore supporting the hypothesis. However, it is nevertheless recognised that the perceived agreement has explained only 5% of the perceived quality construct. The result indicates that the perceived agreement items such as loan agreement too long, difficult to understand, complicated languages used, and not enough time to read the loan agreement form; has little impact on perceived quality. The findings of this study indicate that, the extent to which students understand the agreement contracts, and whether their understanding is positive or negative, has an effect on their perceptions whereby loan repayment will affect their quality of life following graduation. If students understand the loan agreement, they will then know and acknowledge the effects in their future life as a result of signing the agreement. For

example, they may have to pay back what they borrowed for more than 10–15 years. If this is the case, the loan repayment will affect them in terms of owning a house, buying a car, getting married, having a child or financially supporting families.

On the other hand, a study by Abu Bakar *et al.* (2006) shows that students know and comprehend the effects of the loan they have received. In the Western context, however, most students are confused by the repayment process (Volkwein *et al.*, 1998); therefore, the findings of this study prove that, when students held negative perceptions towards the loan agreement, it would have little effect on loan repayment, and would therefore affect their personal life as well. This indicates that policy makers—or the organisation providing loans—should work to overcome the complexity of contract documents, revise the loan agreement, shorten the agreement, or simplify the language in the agreement in accordance to students' capabilities in terms of understanding. Moreover, owing to the contract agreement being complicated, students should be provided with adequate time to read and understand it.

#### **7.6.2.4      *Effects of Awareness of Loan Repayment Issues Created by Media***

H<sub>5</sub> explains the relationship between the awareness of loan repayment issues created by the media (media awareness) with students' attitude. The relationship is, however, considered to be insignificant as  $\gamma=0.05$ ,  $p=0.282$ ; thus, the hypothesis is rejected. On the other hand, media awareness is correlated significantly with parental influence. H<sub>5b</sub>, hypothesises the relationship between media awareness and parental influence, and has been found to be significant ( $\gamma=0.27$ ,  $p<0.001$ ), which therefore supports the hypothesis. This study's result indicates that media does not influence students but rather influences their parents. In addition to the statistical results, one respondent gives her opinion concerning the impact of media awareness on parents, as follows:

*'My parents must watch the news on TV during prime time... live at 8pm... all the important issues will be broadcast in the news... my parents are aware of the latest information such as new policy or new legal action taken by the government... similar*

*to information in the newspapers ... I would say that parents are more likely to read the formal issues than young people like me...’ (Interviewee #1).*

The results indicate that, compared with students, parents are more concerned with the formal issues communicated through the media: for example, issues relating to loans and repayment. Therefore, the government should enhance awareness through media in order to disseminate information to parents: for example, published legal actions taken to defaulters in the newspaper, broadcasts on the television, as well as on the internet.

The findings of this study, however, are deemed to be consistent with other studies in different fields (Gillies *et al.*, 2001; Jones & Martin, 1999; Grolnick & Slowiaczek, 1994; Olson, 1982), whereby parents can be categorised as informants that have the credibility to influence their children based on the information they hold. These findings also indicate the level of credibility of parents as informants, and the extent of the influence upon subsequent attitudes and behaviours as a result of the information they provide. A study by Jacobs & Eccles (1985) states that parents are more affected by media coverage; however, exposure to media does not affect parents’ attitudes (Benbow & Stanley, 1980), but rather media has effects on parents as the content influences parents’ beliefs, as well as the appropriateness of generalising information from media to children. According to media experts, mass communications are more likely to reinforce beliefs than to change people (Klapper, 1960).

### ***7.6.3 The Mediation Effects***

The mediator effects have been tested, and the results have been reported in Chapter Six (Quantitative Analysis). Thus, this section will provide the justification of the results obtained during the course of the hypotheses testing. Students’ attitude partially mediates the relationship between parental influence and intention to repay loan. There is a significant relationship between parental influence and the intention (0.26,  $p < 0.001$ ) before adding the mediation construct; however, when including students’ attitude as a mediating construct, the relationship is reduced, but nevertheless remains significant (0.23,  $p < 0.001$ ). Thus, the partial mediation is supported for  $H_{2c}$ ; this result goes some way to justifying the

unique characteristics of the parent-child relationship in terms of educational loan repayment. The relationship establishes importance for parents and children throughout their life course, including loan repayment; however, we would not expect all parent-child relationships to be of the same quality. One respondent further reflects on this idea, stating:

*'I pay loan because I do not want my parents to have problems .... they are guarantor of my loan... however my parents can only remind me to make repayment...but the decision to repay or not depends on me...'* (Interviewee #3).

Next, students' attitude mediates partially the relationship between the perceived quality and the intention. The relationship between the perceived quality and the intention remains significant ( $-0.11$ ,  $p < 0.001$ ) when added students' attitude as a mediating construct; thus,  $H_{3c}$  is supported in terms of partial mediation. These findings can be explained as students often choose not to repay loans, even though they can afford to do so. Although loan repayment will affect their personal life following graduation, their attitude nevertheless contributes to the repayment. An example of the comment from a graduate includes:

*'In my opinion ... and based on my experiences as an NHEFC borrower.... I have commitment to my parents and I also have my own family... I have to spend my salary for car loan, housing loan, my wife and children expenses ... of course it affect study loan repayments... even though I know study loan repayments is a priority but I do not have a choice ...'* (Interviewee #2).

No mediation effect thus far has been established in the relationship between the perceived quality, perceived agreement and students' attitude. This is owing to the fact that a direct relationship does not exist between perceived agreement and students' attitude. As discussed in the effects of the perceived agreement section, the perceived agreement does not have a relationship with students' attitude. Respondents in the follow-up interview also confirm this result, as the example below shows:

*'I did not read the loan agreement contract to be honest... when I filled up the loan agreement contract I only depended on briefing... at that time I only wanted the loan to study... I did not think at all about the repayment...'* (Interviewee #5)

The relationship between the awareness of loan repayment issues created by media (media awareness) and students' attitude is significant (0.15,  $p < 0.05$ ) before adding mediation construct; however, when including parental influence as a mediating construct, the relationship is reduced to being insignificant (0.05,  $p = 0.282$ ).  $H_{5c}$  is supported by explaining the relationship between media awareness and students' attitude, which is fully mediated by parental influence. Notably, parents' role as a medium to influencing children on important issues—such as repaying their loan—has been validated in this study. The findings state that the common role model for children is their parents, even though it can be anyone individual who comes into contact with them—either directly or indirectly (Bandura, 1977). Respondents in the follow-up interview also confirm this result, with the below-detailed example emphasising this:

*'To be honest, I only read newspaper in entertainment section and I would like to watch football games in television...I enjoy reading blog in the website... My parents who watch the news on television and read newspapers on current issues will update me with the latest information on what they hear, watch and see... I still remember one time NHEFC listed names of loan defaulters in the newspapers... My parents are over-anxious, and always remind me to repay loan and not to embarrass myself and them to our families and neighbours if my name appear in the newspaper...'* (Interviewee #5).

## **7.7 Theory Explaining Model Relationships**

This section justifies the validated model derived from the literature review and the Theory of Planned Behaviour. The purpose is to highlight the contributions made in the study. Research findings have offered robust evidence, thereby demonstrating relationships in the students' attitude model. To the best of our knowledge, this is the first empirical study which applies the Theory of Planned Behaviour to developing a theoretical model in the context of educational loans. Importantly, the Theory of Planned Behaviour has been



selected as the theory, and has been proved through the course of many other studies to be strong and predictive when seeking to hypothesise in terms of behaviour.

The findings gathered through this study also support the notion that students' attitude will influence the intention to repay loan. Moreover, the subjective norms referring to constructs of parental influence and media awareness have also been tested. The results specify that parental influence (subjective norms) has a positive influence on students' attitude towards loan repayment. However, the media awareness (subjective norms) is known to affect parents'—not students'—attitudes. For parental influence, the result is found to be consistent with previous findings in different field of study, whereby the subjective norm is found to influence attitude (Shepherd & O'Keefe, 1984; Shimp & Kavas, 1984); in contrast, however, this does not apply in the case of media awareness, as the finding validates that media awareness does not affect attitude but rather correlates with parental influence.

The perceived behavioural control component in the Theory of Planned Behaviour refers to the perceived quality and perceived agreement. This study finds that loan repayment will affect graduates' decisions in terms of job options, when to get married, when to buy a car, when to have a first child, when to buy a house, and the total money to contribute to parents. This suggests that loan repayment does not affect decisions concerning where the graduate chooses to live upon completing their studies. Previous studies (Baum & O'Malley, 2003; Millet, 2003; Zhou & Shu, 2000; Baum & Sounders, 1988) indicate that—at least in a Western context—the selection of a place in which to live is one of the most important factors affecting loan repayment by students; however, Malaysian students did not agree with this item. We can justify that Malaysian students are concerned with the decisions and opinions of family members in making important decisions in life, as proved by Hofstede (1998) in terms of collectivism—although after completing their studies they still refer to immediate families and persons in relation to decision-making. Notably, this is the perceived reason as to why they prefer—and are comfortable—to stay with family. Moreover, it is also noted that job selection itself is a fundamental concern, as this will stipulate whether or not they should stay with family.

This study has found that perceived agreement does not influence students' attitude; however, perceived agreement influences perceived quality. The students' perceptions towards loan agreement also depend on their ability to make the effort to understand the agreement requirements prior to signing the contract. Loan agreements in this sense refer to contracts that students have to sign before the organisation will provide them with the loans. In the context of educational loans, when students understand the agreement, they will know and understand the consequences of borrowing loans, such as, within the specific period of time, they have to contribute their salary to repay the loan; therefore, if students do not understand the loan agreement—or otherwise do not read the loan agreement carefully—this will therefore affect their repayments, as well as their future lives. If they read the loan agreement carefully, they will study hard to achieve good results so that they do not have to repay the loan following graduation. For example, in Malaysia, students earning a CGPA of above 3.75 can convert the educational loan to full scholarship.

### ***7.7.1 Theory of Planned Behaviour and Validated Model***

One of the objectives of this study was to assess the applicability of the Theory of Planned Behaviour (TPB) in order to explain students' attitude model. This study also aims to test causal links which have not yet been included in the Theory of Planned Behaviour (see Figure 7.1(b)). Specifically, we included the causal path linking subjective norms (media awareness and parental influence) to attitude and linking perceived behavioural controls (i.e. perceived quality and perceived agreement) to attitude in our final model (see Figure 7.1(b)). We also include the paths to be tested, i.e. between media awareness and parental influence, as well as between perceived quality and perceived agreement (see Figure 7.1(b)).

The results establish that the selected theory supports the model as ten (10) hypotheses are supported in this study. The results also show the validity of the Theory of Planned Behaviour as applied to the students' attitude model, which accordingly provides a much more solid theoretical basis for the study of students' attitude, intention, parental influence, media awareness, perceived quality and perceived agreement.

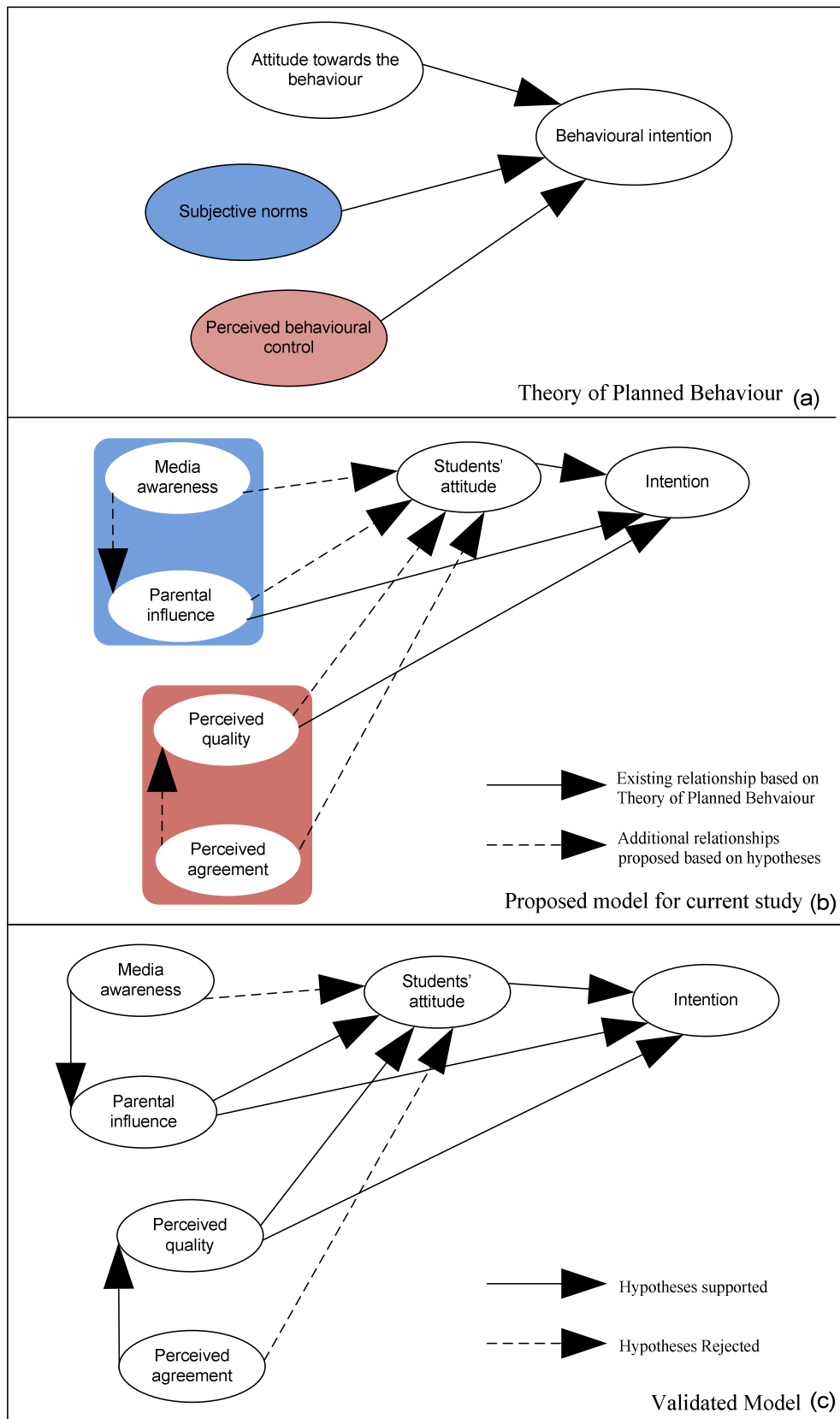


Figure 7.1: Existing Theory and Researcher's Proposed Extension

Our results show that attitude and subjective norms are not as independent as the theory predicts. The addition of the causal path from subjective norms to attitude, and from perceived behavioural control to attitude improves the model fit considerably  $\chi^2 = 388.542$ ,  $\chi^2/df = 1.758$ , CFI = 0.962 and RMSEA = 0.042. Without this, students' intention to perform the action will be lower—irrespective of how favourable their attitudes are towards loan repayment. This result contributes to theory extension in the context of educational loans.

The significant causal path from subjective norms to attitude suggests that the positive attitude towards behaviour is affected by how significantly others influence the performance of the behaviour. In this study, we test the relationship between parental influence and students' attitude. Notably, however, although the theory did not explain the relationships, this study nevertheless indicates parental influence as having positive effects on students' attitude towards loan repayment. This result also contributes to theory extension in the context of educational loans.

The significant causal path from perceived behavioural controls to attitude suggests that attitude towards behaviour is also affected by perceived difficulty to perform the behaviour. Our findings support the conclusion provided by Ajzen (1991), who—based on a review of sixteen (16) studies of prediction intention using the Theory of Planned Behaviour—concludes that the inclusion of perceived behavioural controls significantly improves the prediction of intention. Importantly, however, although the theory did not explain the relationships, our study has nevertheless established perceived behavioural control in terms of predicting students' attitude towards loan repayment (see Figure 7.1(c)). This is evident when considering the significant relationship between perceived quality and students' attitude. This result also contributes to theory extension in the context of educational loans.

Moreover, this study has also established that media awareness has insignificant relationships with regarding students' attitude; however, media awareness is found to have a significant relationship with parents. Similarly, perceived agreement is found to have no

relationship with students' attitude; on the other hand, it has a significant relationship with the perceived quality (see Figure 7.1(c)).

In summary, one of the objectives of our study was to test the ability of the Theory of Planned Behaviour in an attempt to explain the students' attitude model. Our results suggest that the theory is capable of explaining the model in a non-Western setting, and have been validated throughout the course of this study. The model also provides a good fit to the data. Students' attitude is found as being the important predictor on the intention to repay loan following graduation.

## **7.8 Summary**

In conclusion, this chapter has provided a discussion of the qualitative findings, the population and sample issue, the measurement scales purification, hypotheses-testing and the Theory of Planned Behaviour validating the students' attitude model. All hypotheses developed in the model are discussed in relation to previous literature. Follow-up structured interviews are utilised as a tool to establishing and explaining the findings. Overall, both statistical findings and interview results support the propositions in the students' attitude model.

The findings in this study show that the relationship between students' attitude and intention is both statistically positive and significant. The perceptions towards loan agreement (perceived agreement) and the awareness of loan repayment issues created by media (media awareness) are not considered to be a predictive factor to students' attitude. In terms of the direct relationship with students' attitude, both parental influence and perceptions that loan repayment will affect quality of life after graduation (perceived quality) constructs have been found to have direct relationships with students' attitude towards loan repayment. Similarly, both constructs have also been determined as having direct relationships with the intention to repay the loan. Essentially, perceived agreement is found to influence perceived quality, and media awareness is found to affect parental influence.

Students' attitude is found to mediate partially the relationships between parental influence and the intention to repay loan, as well as perceived quality and the intention to repay loan. Moreover, no mediation effect has thus far been established between the perceived agreement and students' attitude by perceived quality. On the other hand, however, parental influence is found to completely mediate the relationship between media awareness and students' attitude.

# **Chapter Eight: Conclusions and Recommendations**

## **8.1 Introduction**

This chapter is concerned with providing conclusions and recommendations to the research problem with regards to the antecedents of students' attitudes and the impact of students' attitude on the intention to repay loan. All research questions presented in Chapter One are highlighted here, including the contributions of the research findings. Current research limitations are also reviewed, and future research directions are outlined at the end of the chapter.

## **8.2 Study Overview**

The high default rate—as indicated statistically by the government and the National Higher Education Funds Corporation (NHEFC) in Malaysia—has provided the reason and stimulant for the present research on the antecedents of students' attitude and the impact of students' attitude on the intention to repay loan. Educational loan default has been identified as a problem occurring in countries all over the world. Importantly, defaults—as established through the course of many studies—are often associated with students' background, failure to get a job, unemployment and income uncertainty, academic experiences, and institutional characteristics, i.e. where students enrol for their studies. However, there are few studies focused purely on borrowers' attitudes towards loan repayment.

The scope of this study therefore examines students' attitude antecedents and the impact of students' attitude on the intention to repay loan. Based on a thorough review of existing literature and a range of theoretical perspectives, an integrated theoretical model has been developed here, which is composed of students' attitude towards loan repayment (students' attitude), intention to repay loan (intention), parental influence (parental influence), perceptions that loan repayment will affect quality of life after graduation (perceived quality), perception towards loan agreement (perceived agreement) and awareness of loan repayment issues created by the media (media awareness).

This study has applied both phenomenological and positivist approaches contributing to the overall methodology. Focus groups and semi-structured interviews have been utilised in order to verify the model and to thereby generate items for the development of the questionnaire. A survey questionnaire is then employed to obtain quantitative data and to accordingly test the hypotheses. Moreover, structured interviews are utilised at the end in order to cross-check quantitative findings. The data for this study have been obtained from final-year undergraduate students at public universities in Malaysia. The initial data collection involves thirty-two (32) students in focus group discussions, followed by six (6) students through semi-structured interviews. Subsequently, for the quantitative analysis, data are collected from a further 428 students from four (4) public universities. The samples are selected from four (4) different regions in Malaysia in order to increase the generalisation quality of the findings. Finally, six (6) graduated students participate in the structured interviews; the criteria for their selection is that they used to be NHEFC borrowers and are currently in the stage of making repayments. The Nvivo 8.0 software is used to analyse qualitative data, and structural equation modelling techniques are applied to test the hypotheses using Analysis of Moment Structure (AMOS) software.

### **8.3 Research Questions: Discussion and Answers**

Throughout this study, the antecedents of students' attitudes and the impact of students' attitude on the intention to repay loan have been examined. The study contributes to filling research gaps—mainly by providing alternative insights to the widespread view on the antecedents associated with students' attitude and its consequence as a model. This work also fills a gap by introducing modifications to the Theory of Planned Behaviour, and then building a corresponding model and testing it in a non-Western setting (Malaysia). In addition, this study has employed a mixed methodology, comprising focus group discussions, semi-structured interviews and structured interviews and analysis, as well as a questionnaire survey and structural equation modelling, in order to develop measurement scales, test hypotheses and cross-check quantitative findings.

In summary, it has been determined that each element of the construct of interest—such as students' attitudes towards loan repayment (students' attitude) and intention to



repay loan (intention), parental influence (parental influence), perception that loan repayment will affect quality of life after graduation (perceived quality), perception towards loan agreement (perceived agreement) and awareness of loan repayment issues created by media (media awareness)—in the students' attitude model has unidimensional items in the context of the present study. The modified Theory of Planned Behaviour has been considered in order to explain the developed research model. Furthermore, the overall qualitative and quantitative findings also support the model. As a result, the study provides a model that can be deemed useful in terms of predicting loan repayment. Students' attitude is found to influence the intention to repay loan and the relationship is positive. Furthermore, constructs—such as perceived quality and parental influence—are identified as antecedents or factors influencing fundamentally students' attitude towards loan repayment.

In addition, students' attitude is also found to mediate partially the relationship between the perceived quality and the intention to repay loan, as well as mediating partially the relationship between parental influence and intention to repay loan. The media awareness construct is further found to correlate with parental influence, whilst perceived agreement is found to correlate with perceived quality. The relationship between students' attitude and media awareness is found to be fully mediated by parental influence.

This study has answered the following research questions:

1. What is the relationship, if any, between students' attitude and intention to repay the educational loan?
2. Are the perceptions that loan repayment affects quality of life after graduation (perceived quality), parental influence, awareness of loan repayment issues created by the media (media awareness), and perceptions towards loan agreement (perceived agreement) qualify as the antecedents of students' attitude in the context of educational loans repayment? How these factors integrate as a model?
3. Is the impact of the relationship in the students' attitude model direct? In other words, are there any mediating effects embedded within the relationships in the hypothesised model?
4. Is the Theory of Planned Behaviour can explain the students' attitude model? How?

## **8.4 Contributions to the Research Field**

This study has made significant contributions to knowledge in the area of educational loans default/repayment—particularly to the research in terms of the role of students’ attitude and related factors in the model in the context of educational loans. The contributions involve elements related to three different aspects: theoretical, methodological, and policy-/decision-making or managerial aspect. The contributions regarding the theoretical perspective are discussed in the next section, followed by the sections discussing the methodological and managerial perspectives, correspondingly.

### ***8.4.1 Contributions to Theory***

#### ***Theory Extension:***

First, to the best of the researcher’s knowledge, this is the first study synthesising concepts from the Theory of Planned Behaviour (TPB) in an attempt to assess students’ attitude in a more holistic manner and also in a Malaysian context. In the case of the present study, an integrated model is developed combining constructs associated with the students’ attitude towards loan repayment. Although a few studies (Abu Bakar *et al.*, 2006; Baum & O’Malley, 2003) have investigated the attitude and perceptions of university students towards loan repayment, there has thus far been no study concerning how these constructs relate to each other; therefore, this study replicates partly the previous studies by selecting the aforementioned two constructs, i.e. attitude and perceived quality, and further incorporating other construct, i.e. parental influence, media awareness, perceived agreement and intention. Subsequently, such studies are then extended by investigating the relationship between all constructs, thereby developing the overall model. This aggregated model is notably transferable, and can therefore be utilised in order to examine attitude and its antecedents in diverse cultures, context and countries. This study adds to the educational loans literature by applying the modified TPB so as to explain the model. It is the first study which explores actively and utilised the theory on an empirical basis with the aim of explaining the constructs in the students’ attitude model, and to highlight correspondingly the relationships between the constructs in the context of educational loan.

Furthermore, the theoretical TPB model involves components at a high level of abstraction. Still at a theoretical but lower abstract level, these components are matched and replaced with constructs identified through a thorough review of the literature on educational loan default and repayment. The current study therefore demonstrates that the paths which have been proposed in the modified theoretical construct are found significant and correlated; therefore, it may be applicable to other countries and should be tested on other corresponding samples. Importantly, a particular contribution towards theory extension in the context of educational loans is the result of this study, thereby indicating that parental influence—which represents the subjective norms in the theoretical model—has a positive effect on students' attitude towards loan repayment. In addition, our study further establishes that perceived quality—which represents the perceived behavioural control components in the theoretical model—shows a significant relationship with students' attitude.

Third, attitude has gained significant attention in the literature on social psychology. In this particular aspect, the application of the TPB is a contribution to knowledge owing to the fact that it can help to explain the students' attitude model. Importantly, no study has so far utilised the TPB for measuring students' attitude and its antecedents in the context of educational loans. In addition, no study has tested previously the viability of the TPB in different contexts than where it was initially established. Thus, the current study has provided a new perspective to the social psychology theory in a broader sense, and is an addition to the understanding of the unified TPB within the context of educational loan in a more concrete sense.

***Comprehensive Integrated Model:***

The novelty of this research is based on the development of a comprehensive theoretical and empirical model which seeks to examine the antecedents of students' attitude and the impact of students' attitude on the intention to repay the loan. Previous studies which have been conducted in the area of educational loans have so far not focused on these factors as a model. Thus, it can be claimed that this is the first time that this model has been extended theoretically and tested empirically. This study therefore makes an important contribution to the literature by studying the interaction between students' attitudes, intention, parental

influence, perceived quality, perceived agreement and media awareness in the context of educational loans.

Through the analysis of the results, the interaction shows how one factor affects another significantly, as has been verified via statistical tests. The findings show that two key antecedents affect the construct of students' attitude from the students' perspective: perceived quality and parental influence. This study validates further that perceived agreement has little impact on perceived quality. Moreover, media awareness has also been established as having a correlation with parental influence. Interestingly, students' attitude is found to mediate partially the relationship between parental influence and intention to repay loan, and between perceived quality and intention to repay loan. Moreover, parental influence is found to mediate fully the relationship between students attitude and media awareness. Thus, a relationship between students' attitude and media awareness is identified, but then found to be mediated fully by parental influence. This is the only study which has sought to deal with mediating affects in the context of educational loans.

There is also strong support for the hypotheses that students have varying degrees of influence over various different constructs. This result offers some degree of insight into how students might seek to enhance a positive attitude. Moreover, the role of the parents is considered to be important—not only in terms of influencing students to make repayments but also in influencing their children's future in its entirety. For example, following graduation, money contributed to parents causes delays in students' loan repayments, as explained by the item in the perceived quality construct. The role of the printed and electronic media is also deemed significant, and contributes to enhanced media awareness amongst parents, such as through the potential of non-repayment to invoke legal actions, for example.

Moreover, the model developed in this study can also be used as a standard measurement tool to measure antecedents of students' attitude towards the intention to repay loan. Since there is currently no model concerned with actively measuring attitudes in the context of educational loans, this research has contributed to the body of knowledge in that respect. In other words, it increases the understanding of educational loans repayments

from a non-economic perspective. Moreover, it is the first study exploring the parental influence, perceived quality, perceived agreement and media awareness as the antecedents of students' attitude in the context of educational loans. It is also the first model developed which yields a new perspective, thereby making a contribution to the educational loan literature.

Despite their obvious importance, proposed constructs—such as media awareness and perceived agreement—in the context of educational loans have not been thoroughly explored in previous studies. It is noted that both constructs have not often been employed in the case of educational loans literature; essentially, no empirical analysis exists currently which addresses the effect of both constructs. This study has bridged the gap by investigating the two constructs thoroughly and empirically, thereby contributing to knowledge in the context of educational loans.

***Generalisation Quality of Findings:***

Another notable contribution to knowledge is that this study is the first in terms of collecting valuable data from four (4) public universities in Malaysia and focusing on final-year undergraduate students. A previous study relating to attitude and perceptions towards educational loans in Malaysia, carried out by Abu Bakar *et al.* (2006), collected data from one (1) public university only, and the sampling procedure was less thorough than that applied in this research. The data collected in this instance increases generalisability to broader populations and wider validity of findings.

The results of this study demonstrate that students' attitude model fit the data fairly well, indicating that the measurements are appropriate for representing the concepts. The students' attitude model is considered to be appropriate for Malaysian students, and it is therefore expected that other researchers may use the model to test in terms of different samples and in different contexts. Owing to the fact that no previous study has so far examined students' attitude, intention, parental influence, perceived quality, perceived agreement and media awareness—as well as the relationships between the constructs—no direct comparison with previous studies can therefore be made in this respect. In many previous studies of students' attitude, research was carried out in relation to each construct

independently; however, this study confirms the validity proposed conceptual model. The findings of this study offer evidence concerning the construct validity and the reliability of previous scales of items in students' attitude and perceived quality constructs. Moreover, the study also developed new scales of items in the parental influence, media awareness, perceived agreement and intention to repay loan constructs.

This study brings empirical evidence from a relatively new context, taking into account that most of the prior studies have taken place in the USA. This is the first study to have developed a model considering students' attitude, intention, parental influence, perceived quality, perceived agreement and media awareness. It is significant in terms of permitting a test of a wider validity of findings derived from study conducted in non-western context.

#### ***8.4.2 Contributions to Methodology***

##### ***Multiple Methods***

This study employs triangulation data collection, which involves focus groups, semi-structured interviews, questionnaire surveys, and structured interviews. Focus group discussions and semi-structured interviews are used to generate new scale items and to accordingly refine existing scale items from the literature in an attempt to achieve a deeper understanding of the constructs in the students' attitude model before the survey is conducted. Furthermore, the use of focus group discussions and semi-structured interviews enables the researcher to gather a vast amount of data, which are useful in terms of identifying the different aspects of constructs that not examined previously, and also in refining and validating the integrated model. The model is subsequently translated into a survey design for the next quantitative phase. Next, the structured interviews are conducted in order to cross-check the quantitative findings. The combination of focus groups discussions, semi-structured interviews, survey and structured interviews had been used for the first time to study in the context of educational loans. Such an attempt should therefore set a new standard for research conducted in this field.

Most of the previous studies—such as those reported in the literature in the context of educational loans—employ longitudinal studies and utilise secondary survey data. This study, on the other hand, is a cross-sectional study conducted in a non-Western country, involving the collection of primary data.

Moreover, this study employs a deductive approach complemented by an inductive perspective, whereby the deductive approach owes more to positivism whilst the inductive approach owes more to phenomenology. The use of combined reasoning helps the researcher to formulate the conceptual model and to refine it, and to then test the hypotheses and cross-check the findings.

### ***Robust Statistical Techniques***

In relation to the quantitative stage, the measurement items of the study constructs were identified, refined and subjected to rigorous statistical testing with the purpose of determining validity and reliability. This also included—as part of the scale validation process—deleting many items from the conceptual model. The robust techniques—namely exploratory factor analysis (EFA) and structural equation modelling (SEM), particularly CFA, as previously discussed—were employed in order to test the measurement properties. Finally, SEM also was used in order to test and validate the students' attitude model. For the first time, the analysis used SEM in the main stage of this study. As is well-known, the application of SEM involves a thorough investigation of data in pre-stages of checking and cross-checking before the application of the model.

Importantly, overall, the results show a high degree of validity and reliability, i.e. nomological, discriminant and convergent. The findings confirm that most of the measurement items satisfy the reliability and validity criteria, although some items were deleted. In addition, the satisfactory fit indices with significant pathways in the hypothesised direction between the theorised constructs are evident.

### ***Scale Item***

This study makes a contribution to the literature by developing new scale items to measure four (4) constructs of parental influence, awareness, perceived agreement and intention, and

thereby testing them within the context of educational loans. The combination of focus group discussions and semi-structured interviews methods used to uncover the scale items for parental influence, perceived agreement, media awareness, and intention constructs, as well as to generate additional items for students' attitude and perceived quality constructs.

### ***Sampling***

This work has employed a very thorough sampling process, which is also considered to be a contribution to the research design and methodology in terms of conducting studies in this particular area. A stratified random sampling was employed, thereby combining stratified sampling with random sampling. The population was stratified based on the field of study, gender and ethnicity.

### ***Study Setting***

Focusing on the contributions at a closer level, we are still able to consider the fact that this is the first study testing a students' attitude model in a non-Western set up (particularly in Malaysia) as a contribution to the research design and methodology. This study has filled gaps by testing constructs in various different settings, which is useful for generalising such constructs. Notably, examining the constructs in Malaysia provides additional insights into existent literature as Malaysian students' backgrounds differ substantially from students in Western countries. Accordingly, the findings of the study suggest that students in Malaysia agree regarding the overall concept reported in the literature. In addition, the conceptual model explains the antecedents of students' attitude towards educational loan repayment, thereby indicating that the model developed here may also be used effectively in other countries as well.

### ***8.4.3 Policy Implications: Managerial Perspective of Contributions***

This study makes some very important policy recommendations based on the analysis of primary data concerning the reason behind educational loans default. It is considered that the primary user of policy recommendations will be the Malaysian government, which has spent RM 25.89 billion (£5.18 billion) on educational loans. Malaysia is categorised as a developing country, with approximately 80% of students taking loans from the NHEFC to



enrol for higher education (HE). Educational loans are one of the best ways of affording university studies. When students borrow, they take serious risks and make a serious commitment, which will ultimately affect their life upon graduation. Unlike other types of loans, educational loans have special terms, which make them fundamentally easier to afford and a more reasonable commitment for university students. However, the organisation providing loans has to continue with the aggressive plans to improve the loan repayment system. The challenge associated with creating a positive students' attitude toward loan repayment is found to be important. With a 50% default rate, the loss of revenues that can be recycled into more productive users is clearly huge; therefore, it is very much hoped that the recommendations put forward in this thesis will help the Malaysian government to understand one of the key reasons behind loans default, which involves students' attitude and its antecedents and to thereby take corrective actions.

The findings of this study have several practical implications. First, the study highlights the importance of students' attitude and its antecedents to influence the intention to repay loan amongst final-year undergraduate students. In other words, the results of this study show that attitude contributes to loan repayment. When students perceive the positive attitude—especially during their final year of study—they are more likely to act positively and significantly; thus, they make efforts to repay loans following graduation.

Second, this study contributes to the policy and managerial perspective by providing factors that affect and predict how loan repayments can be increased. Based on such findings, when organisations want to improve loan repayments, they should therefore enhance the positive attitude amongst borrowers, educate parents directly and through media, comprehend the impacts of loans to borrowers by providing repayment plans for borrowers, and simplify loan agreements. In this study, parental influence has been found to be an important antecedent of students' attitude towards loan repayment. This finding may help the government and the organisations providing loans to develop a strategy concerned with educating parents so as to improve students' positive attitudes towards loan repayments. This finding can be taken into account by organisations when redirecting their planning and attempting to improve loan repayment by educating of parents; therefore, parents can influence positive values to their children (borrowers), such as the repayment of

the loans is the student's responsibility and that repayment will contribute to maintaining the fund required to help other poor students to pursue their studies.

In addition, by setting effective ways of approaching the media and parents, such organisations may then be able to increase the degree of influence of awareness of loan repayment issues created by media and of parental influence—both of which may influence students' attitude directly and indirectly. The findings of this study can help the government to develop appropriate strategies in order to enhance awareness through mass media, of the consequences associated with non-repayment, such as legal actions and long-term effects, as well as sustaining funds required for future students and the future generation of student loan borrowers. The impacts of loan repayments to borrowers following graduation have found to influence borrowers attitude towards loan repayments. A commitment to improve the quality of life includes buy a house, car, get married and having children as well as to support their parents. Therefore, the organisation providing loans should provide repayment plans for borrowers, so that they can equally balance their needs and their responsibility. Moreover, the organisation has to find ways of improving the loan agreement document. The improvement should cover the use of language, the number of pages in the document, and fine-tune the document in order to enable students easily understand the content.

Results of this study—especially concerning constructs discouraging or encouraging students' attitudes—are important and useful to organisations seeking to provide a service which meets borrowers' needs. Furthermore, the findings are relevant not only to academic researchers interested in examining the distinctiveness of the constructs integrated in this study, but also to experts at managerial levels—particularly in developing countries with reforming educational loan systems. Furthermore, it is noted that the findings can support decision-making in terms of what strategy should be utilised in order to improve students' attitude positively, taking into consideration how the strategy is likely to be perceived by students.

## **8.5 Research Limitations**

This study provides an extensive investigation of the construct of students' attitude, its antecedents, and the impact of students' attitude on the intention to repay loan. Importantly, despite there being a thorough investigation, it is still not possible to carry out a study that provides a comprehensive investigation of all elements causing the phenomenon. Moreover, whilst the findings provide valuable information concerning the ways in which loan repayment can be improved through students' attitude model, they must be considered in direct relation to study limitations. This section will therefore discuss the limitations of the study, and divide them into theoretical and methodological limitations.

### ***8.5.1 Theoretical Limitations***

Despite the promising results, there have nevertheless been various limitations to the study, which should be noted and addressed in the case of future research. For example, the study was conducted specifically to develop a students' attitude model in the context of educational loans. Therefore, based on the literature review and the modified Theory of Planned Behaviour (TPB), this study includes various constructs as antecedents of the students' attitude and the intention to repay loan as a consequence. However, the selected constructs for this study possibility do not cover all sets of antecedents of students' attitude. For example, the researcher did not include culture as one of the constructs. With this in mind, when seeking to test a Western-developed theory in relation to a non-Western country, the culture factor is expected to play an important role.

Furthermore, all constructs are measured in conceptual ways; this is the usual method of behaviour. Other constructs could have been more effective when compared with the constructs used in this study, given that this study represents a first attempt at examining the students' attitude, its antecedents and consequences, and limited previous literature available in this respect. Moreover, it is possible that various important constructs have not been included properly in the study's theoretical model, or that the model includes some constructs that may not be entirely appropriate.

TPB only provides a conceptual framework for explaining the relationship between the constructs of behavioural patterns on only three factors: attitude towards the behaviour, subjective norms, and perceived behavioural control. According to the theory, only in the presence of a number of factors—i.e. a strong attitude, significant approval from others, notable capabilities and strong intentions—the more likely the behaviour is to be performed. Applied studies using TPB have established relationship between perceived difficulty of performing behaviour, behavioural intentions and behaviour; between attitudes, behavioural intentions and behaviour; and subjective norms, behavioural intentions and behaviour (Ajzen, 1991; Conner & Armitage, 1998; Conner & Sparks, 1996; Godin & Kok, 1996; Sparks, 1994; Pavlou & Fygenson, 2006; Ravis et al., 2010; Lapple & Kelley, 2010; Hardeman et al., 2010). However, the intentions to perform the behaviour vary across respondents and populations; therefore other predictors may have to be added to the theory to strengthen the model. For instance, a variable such as culture that can influence the model is not accounted for in the TPB. Our study also applies the TPB without accounting for culture. This is the general limitation of TPB that also applies to this work.

Theoretically, one could also argue that some other variables which are difficult to measure, such as cross-regional or cross-country effects, can also influence the model. The TPB does not mention any such variables. In our study, we also do not account for these variables.

Cross-sectional studies, such as this one, using the TPB can create questionnaires, biases because the relationships between attitudes, intentions and behaviour are measured separately. This study developed a predictive model for final year undergraduate students towards educational loans repayment; however, to identify whether students make repayments or not, another study would need to be conducted. Future research could address the actual behaviour, as well.

### ***8.5.2 Methodological Limitations***

The research design utilised in this study has various methodological limitations. One of the limitations is the cross-sectional design of the study. The causality between constructs cannot be proven fully, and so caution is deemed necessary when gathering the exact direction of the cause and the effect on the relationships amongst the constructs in this study. Owing to the fact that cross-sectional data capture the linkages of constructs at a point in time, there may be peculiarity, which would not be detected if the data were to be collected during other periods. Moreover, as the data were collected at a single point in time, one is unable to establish with certainty the cause-and-effect relationships amongst the constructs of interest. Besides, it is not possible to determine chronological inconsistency information in this study. With this in mind, in order to understand fully whether students really implement what they say, longitudinal data collection with the same students following graduation would be necessary.

A further limitation is that part of this survey utilised measurement scales adapted from previous literature, as well as results from the qualitative studies conducted here, such as focus groups discussions and semi-structured interviews. Subsequently, the measurement scales were refined using results from the qualitative studies following the item-purification process. In fact, four (4) constructs used the items from the qualitative studies entirely. Notably, although the proposed measurement scales items provided high degrees of validity and reliability overall, various measurement items were nevertheless eliminated during the item-purification process. The deletion of such items could be owing to the fact that the items did not measure the constructs very well. Furthermore, the scale items developed for students' attitude model did not go through the process of validation in term of testing the behaviour of scale items in a different context of study that used the similar theory component and similar constructs.

This study is based mainly on final-year undergraduate students. This decision is made as the undergraduate students are ranked amongst the highest borrowers of NHEFC loans in Malaysia. Therefore, the findings may be considered as providing understanding but only from undergraduate students' points of view. Essentially, however, it is considered

that these limitations do not minimise the significance of the findings in the study, but rather direct the attention of future researches by identifying and helping further enhancement in this area. Moreover, students in other countries may not resemble those of this study's populations; the findings may be limited to the Malaysian context, and may not necessarily reflect students in other countries; therefore, there is the need to replicate and extend this study to other contexts.

The current study has not managed to include a comparative study, although this was attempted at the beginning of this study to test our proposed model with the data from other developing and developed countries. For a developing country, Chile was chosen owing to the advanced student loan system financed by capital market and banking systems that the country introduced in 2007, and for the developed country, the UK student loan system was selected owing to the low default rate reported. As the model required detailed information from both the government and funding organisation on a large sample of students, we tried over the period of a few months to compile all the data required. However, we were unable to get the details data from the Chile funding agency (Ingenta) as well as from the Student Loan Company for the UK, meaning it was not possible to carry out testing in this study.

Whilst this study has produced interesting findings, it does, however, have certain limitations. One limitation is in respect of the findings, which may be limited to the populations, type of factors investigated or the context of the study. The study is conducted within the specific domain of students' attitude in the context of educational loan repayment. As a result, it is yet to be tested whether or not the findings can be applied more broadly to other forms of educational loan matters.

This study is only conducted with data from public universities. Thus the results may not be applied generally to other type of institutions such private universities, polytechnics and colleges.

Although the student loans context provides a huge selection of opportunities for students, the focus of this study on the final year undergraduate students with a few selected

courses may limit the generalisability of the findings. In addition, the study focuses on universities from four regions in Malaysia —Universiti Utara Malaysia (UUM) from north, Universiti Putra Malaysia (UPM) from central, Universiti Teknologi Tun Hussein Onn Malaysia (UTHM) from south; all in peninsular Malaysia and Universiti Malaysia Sabah (UMS) from east Malaysia. It is possible that different research results emerge from other regions of the country.

The qualitative part of the study includes a limited number of respondents. For the focus groups discussions, four (4) groups were involved consisting of eight (8) respondents in each group and six (6) respondents participated in the interviews. The results could be different if the sample size was increased.

Finally, the content validity in this study did not include the rated scale index to rate each item in the construct, as suggested by Rubio et al., (2003). Future research may consider rated scale index, so that the accuracy of the expert opinions and validators can be improved by using the numerical rated scale for each item.

## **8.6 Recommendations for Future Research**

Having identified the limitations of the study, this section provides various suggestions for future researches in order to extend the current body of knowledge in the literature on educational loans—particularly regarding students' attitude models. One of the key issues for future researchers is to address concerns relating to the examination of more constructs as antecedents of students' attitude and their relationships. For example, awareness of loan repayment issues created by family and friends were not covered in this study, and so future research should consider this variable. Moreover, the researcher further suggests that future researches consider including culture as an antecedent of students' attitude; therefore, in terms of methodology, future studies should attempt to validate extensively all measurement scales purified in this study, develop further constructs, and thereby provide evidence for the generalisability of constructs and concepts.

The unit of analysis in this study are final-year undergraduate students. Therefore, in order to verify the actual situation concerning whether or not intention predicts the actual behaviour, it is important to continue research on attitude amongst graduates. Longitudinal studies may help to determine whether such relationships studied here differ depending upon the stage of the process. When resources are available, longitudinal studies may be a more appropriate design, owing to the fact that they allow researchers to observe the dynamic of causal relationships over time. It may also be useful to conduct an empirical research focused on various different types of academic disciplines or at different levels of university education, i.e. undergraduate, master, PhD, as the findings may not be directly generalised to all types of borrowers.

Future researches can extend generalisability to a broader population by conducting interviews and focus groups with the larger sample. In fact, it is possible that a fully qualitative approach be conducted in order to further develop and enhance the students' attitude model. This study has only examined students' attitude in selected public universities in Malaysia. With this in mind, future studies are needed in order to further test the private universities and other colleges. In other words, it would be interesting to increase the generalisability of the model by testing the model in other contexts and different types of institutions.

Moreover, it is recognised that different samples—such as those drawn from diverse types of universities, for example—could be employed for comparison with the results of the current study. Future researches should replicate the findings of the current study to test the generalisability of the research results, and should therefore use the same multidimensional model with other possible students' attitude antecedent construct, such as future employer. In addition, future researches could use the same model as that of the current study, and also adopt theoretical propositions in order to study the effects of the specific course taken in the university on students' attitude towards loan repayment, as well as how the factors in the model affects different ethnic groups. Owing to the time constraints of this study, the researcher is unable to explore this relationship; however, this may present new insight into the nature of the construct.



Furthermore, TPB has never before been used to predict student loan default or repayment. This research proves that TPB can be used in the context of loan repayment; therefore, the researcher suggests the exploration and identification of another theory from psychology that may be applied to this context, with the subsequent thorough development and implementation of a corresponding model, and final results comparison.

Finally, future researches can consider the comparative study by testing the model with the data from other developing and developed countries.

## **8.7 Summary**

In summary, this doctoral research proposes a new way of explaining the process of developing model of students' attitude towards loan repayment. In addition, it shows that the Theory of Planned Behaviour can also explain the antecedents and consequences associated with students' attitude. It also highlights that the operationalisation of relevant concepts can differ from one country to another—despite fundamental interpretations being identical overall. Since certain limitations exist, however, it is recognised that future research be carried out in light of the suggestions detailed in an attempt to further complement this study. Methodologically, future studies are suggested to be conducted cross-culturally and over varying periods of time. Measurement scales should also be re-examined in order to establish a strong basis for the generalisability of future findings.

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## Appendix 1: Focus Group Participant Consent Form

### Ph.D. Research Project:

**Investigating on students' attitude towards educational loan repayment in Malaysia:  
A study from the students' perspective**

### Focus Group Participant Consent Form

*(Borang Kebenaran Peserta Temuduga Berkumpulan)*

Name of Participant: \_\_\_\_\_ Email: \_\_\_\_\_  
*(Nama Peserta)* *(Emel)*

1. I consent to participate in the above project, the details of which have been explained to me *(Saya bersetuju untuk menyertai temuduga ini, seperti yang diterangkan kepada saya)*
2. I authorise the researcher (Shafinar Ismail) to record my interviews as described in the information sheet provided *(Saya membenarkan penyelidik (Shafinar Ismail) untuk merakam temuduga ini, seperti dimaklumkan di dalam lampiran)*
3. I hereby give the researcher (Shafinar Ismail) the right to use the data I provide, including voice-taped interviews and key-incident diary entries for the PhD research, conference papers, journal articles and other academic publications. *(Saya memberi kebenaran sepenuhnya kepada penyelidik (Shafinar Ismail) hak untuk menggunakan maklumat yang diperolehi di dalam temuduga ni termasuk perbualan yang dirakam dan maklumat berkaitan untuk kajian PhD, pembentangan kertas kerja, artikel untuk jurnal dan lain-lain penerbitan akademik)*
4. I acknowledge that the possible effects of this research have been explained to me to my satisfaction. *(Saya mengesahkan telah dimaklumkan dengan jelas tentang kesan kemungkinan yang akan berlaku lanjutan daripada temuduga ini)*
5. I understand that, unless I specifically request it, I will not be identified in the PhD thesis nor in any presentation or publication and that all the information I provide will be treated as confidential. *(Saya memahami (kecuali saya dimaklumkan) yang segala*

*maklumat peribadi saya tidak akan dikeluarkan di dalam tesis, pembentangan atau penerbitan dan semua maklumat tentang diri saya adalah sulit).*

6. While accepting the above arrangement, I wish the following further restrictions to be placed on the use of the data I contribute to this research project (*Dengan menerima perjanjian ini, saya memohon agar maklumat yang diperolehi di dalam temuduga ini digunakan sebaiknya*) :

I do/ do not\* wish my name to be used in connection with the data I contribute to this research project. (\* Delete as appropriate)

*(Saya membenarkan / tidak membenarkan nama saya dikaitkan dengan sebarang maklumat yang diberikan di dalam kajian ini) (\*Potong yang berkenaan)*

Signed: \_\_\_\_\_  
(Tandatangan)

Date: \_\_\_\_\_  
(Tarikh)



## Appendix 2: Topic Guide for Focus Groups

### TOPIC GUIDE

The moderator will firstly provide respondents (students) with explanations about objectives of the research. The respondent will be asked about an overall view of constructs proposed.

This study aims to investigate the antecedents of students' attitude and the impact of students' attitude on the intention to repay the loan amongst final-year undergraduate students in public universities in Malaysia

### CONSTRUCTS DEFINITION

#### Students' Attitude towards Loan Repayment

Attitude is defined in the literature as 'represents his evaluation of the entity in question' (Ajzen and Fishbein, 1977, p. 889). Attitude is the way in which a person views something or tends to behave towards it, often in an evaluative way (World English Dictionary, 2009). In the literature, students' attitudes towards loan repayment refers to students' attitude, which could subsequently affect their tendency to default on loans (Gross et al., 2009).

#### Intention to Repay the Loan

Behavioural intention is an indication of a person's readiness to perform a given behaviour (Ajzen 2006). Intention is predicted as being the actual behaviour (Ajzen, 1991; p. 181). For example, students will have greater intention to make a loan repayment if they have a positive evaluation of loan repayment. In this study, intention to repay the loan measures the extent to which students have the intention to repay their educational loan and the construct is intention.

#### Parental Influence

In the literature, parents' influences on their children are identified as being either direct or indirect (Davies-Kean, 2005). Direct influence relates to parents involved in children's decisions whilst indirect influence means children's behaviours are influenced by their parents' approval. Influence in this context means the power to have an effect on people or things. Direct is defined 'going in a straight line towards somewhere or someone' whilst indirect is defined 'happening in addition to an intended result, often in a way that is complicated or not obvious' (Cambridge Dictionary Online,

2010). In this study, parental influence refers to a parent’s role, as guardian, to influence their children (loan borrower), and the construct is parental influence.

Perceptions that Loan Repayment Will Affect Quality of Life after Graduation

The construct of perceptions that loan repayment will affect quality of life after graduation refers to students’ perceptions on loan repayment that can influence their future decisions. Future decisions can relate to ‘job options, when to buy a car, when to get married, when to have children, when to move from parents’ house, and when to buy a house’ (Baum & O’Malley, 2003, p. 17). In this study, the perceptions that loan repayment will affect quality of life after graduation construct is perceived quality.

Awareness of Loan Repayment Issues Created by the Media

Awareness is defined as “the knowledge that something exists, or the understanding of a situation or subject at the present time based on information or experience” (The Cambridge English Dictionary, 2009). In the literature, awareness of loan repayment issues created by media refers to information disseminated and received by students through ‘various media channels’ (Dynarski, 1994, p. 56). The focus of this study is on information received through electronic and printed media, such as television, radio, newspaper and websites. We name this construct as media awareness.

Perceptions towards Loan Agreement

Loan agreement refers to contracts between the organisation as a lender and the student as a borrower. The loan agreement contains the requirements relating to loans as well as loan repayment. In this study, the perceptions towards loan agreement are expected to influence the students’ attitude towards loan repayment in future. The name of this construct in this study is perceived agreement.

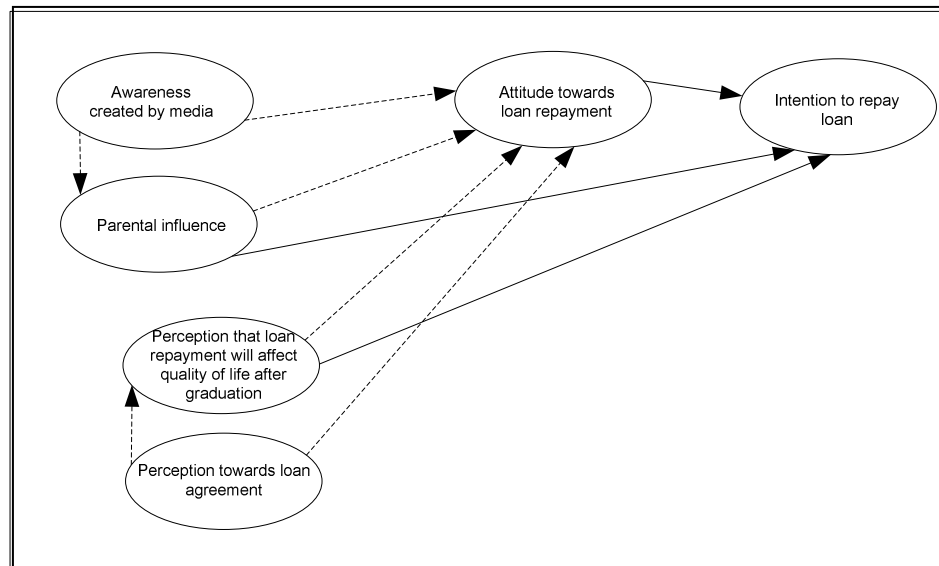
1. Do you agree that these constructs (mention the name of constructs and definitions) will affect your attitude towards loan repayment?

Research Questions & Hypotheses	Existing Items	Qualitative Questions
1. What is the relationship, if any, between students’ attitude and intention to repay the educational loan?		
<i>H1 The relationship between students’ attitude towards loan repayment and intention to repay the loan is positive and statistically significant</i>	<ul style="list-style-type: none"> <li>• Not easy to repay the loan</li> <li>• The repayment can help other students</li> <li>• Repayment is my obligation</li> <li>• NHEFC can trace me to collect the loan</li> </ul>	<ul style="list-style-type: none"> <li>• Do you think loan repayment is important?</li> <li>• Will you please explain what cause you repay/not to repay loan?</li> <li>• Items of attitude generated from the literature will be shown, then the respondent will be asked: What items in this page do you think</li> </ul>

	<ul style="list-style-type: none"> <li>• There are legal penalties for non-repayment</li> <li>• I have to put an effort to make repayment</li> </ul>	are not relevant to influence your attitude? And Why?
		<ul style="list-style-type: none"> <li>• Do you have the intention to repay loan?</li> <li>• Will you please explain why you want to make repayment after graduation?</li> </ul>
2. Are the constructs of perceptions that loan repayment affects quality of life after graduation, parental influence, awareness of loan repayment issues created by the media, and perceptions towards loan agreement antecedents of students' attitude?		
<i>H2</i>	<i>Parental influence is positively associated with students' attitude towards loan repayment</i>	
<i>H2a</i>	<i>Parental influence will have positive effect on intention to repay the loan</i>	<ul style="list-style-type: none"> <li>• Do you parent know that you borrow loan?</li> <li>• Do your parents involves with the borrowing?</li> <li>• What they (parents) say about your loan? Are they encouraging you to pay or to postpone repayment?</li> </ul>
<i>H3</i>	<i>Perception that loan repayment will affect quality of life after graduation influence the students' attitude towards loan repayment</i>	<ul style="list-style-type: none"> <li>• Loan repayment will affect my decision on <ul style="list-style-type: none"> <li>• The selection of the place to stay.</li> <li>• Job options.</li> <li>• When to get married.</li> <li>• When to buy my first car</li> <li>• when to have my first child</li> <li>• Buying a house</li> </ul> </li> <li>• How do you perceived loan?</li> <li>• Do you think loan is important for you? Do you think loan will affect your life after graduation?</li> <li>• Items of <i>perceptions that loan repayment will affect life after graduation</i> generated from the literature will be shown, then the respondent will be asked: What items in this page do you think are not relevant to influence your attitude? And Why?</li> </ul>
<i>H3b</i>	<i>Perception that loan repayment will affect quality of life after graduation influence the intention to repay the loan</i>	
<i>H4</i>	<i>Perception towards loan agreement is positively associated with students' attitude towards loan repayment</i>	<ul style="list-style-type: none"> <li>• Do you know about loan agreement and requirements?</li> <li>• Will you please explain what the contents of loan agreement and requirement are?</li> <li>• What is your opinion of loan agreement?</li> </ul>
<i>H4b</i>	<i>Perception towards loan agreement is positively influence perception that loan repayment will affect quality of life after graduation</i>	

<p><i>H5 Awareness of loan repayment issues created by media is positively associated with students' attitude towards loan repayment</i></p> <p><i>H5b Awareness of loan repayment issues created by media will have positive effect on parental influence on children</i></p>		<ul style="list-style-type: none"> <li>• Will you please name the mass media tools that you always use?</li> <li>• Do you think (tools you mention) will influence you to make repayment?</li> <li>• Do you think (tools you mention) will influence your parents in the context of loan repayment?</li> <li>• If the (tools you mention) publish about loan information about educational loans and repayment, do you think it will affect you?</li> <li>• If the (tools you mention) publish about loan information about educational loans and repayment, do you think it will affect your parents?</li> </ul>
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**Summary**



1. The proposed conceptual model generated from the literature will be shown. Then, the moderator will ask if the respondents have any changes or additions to be made.
2. Do you agree with the proposed conceptual model developed in this study? (Show the model and explain the proposed relationships).
3. The moderator will summarise the key points of the discussion.
4. The main goals of this focus group discussion are: to discover the relationship, if any, between students' attitude and intention to repay the educational loan; whether the constructs of perceptions that loan repayment affects quality of life after graduation, parental influence, awareness of loan repayment issues created by the media, and perceptions towards loan agreement are antecedents of students' attitude towards loan repayment from your perspective as loan borrower. Are there any other points that you would like to add?

Thank you very much for your kind participation, co-operation and valuable time.

## Appendix 3: Interview Participant Consent Form

### Ph.D. Research Project:

**Investigating on students' attitude towards educational loan repayment in Malaysia: A study from the students' perspective**

### Interview Participant Consent Form

*(Borang Kebenaran Peserta Temuduga Individu)*

Name of Participant: \_\_\_\_\_ Email: \_\_\_\_\_  
*(Nama Peserta)* *(Emel)*

7. I consent to participate in the above project, the details of which have been explained to me (*Saya bersetuju untuk menyertai temuduga ini, seperti yang diterangkan kepada saya*)
8. I authorise the researcher (Shafinar Ismail) to record my interviews as described in the information sheet provided (*Saya membenarkan penyelidik (Shafinar Ismail) untuk merakam temuduga ini, seperti dimaklumkan di dalam lampiran*)
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10. I acknowledge that the possible effects of this research have been explained to me to my satisfaction. (*Saya mengesahkan telah dimaklumkan dengan jelas tentang kesan kemungkinan yang akan berlaku lanjutan daripada temuduga ini*)
11. I understand that, unless I specifically request it, I will not be identified in the PhD thesis nor in any presentation or publication and that all the information I provide will be treated as confidential. (*Saya memahami (kecuali saya dimaklumkan) yang segala maklumat peribadi saya*)

*tidak akan dikeluarkan di dalam tesis, pembentangan atau penerbitan dan semua maklumat tentang diri saya adalah sulit).*

12. While accepting the above arrangement, I wish the following further restrictions to be placed on the use of the data I contribute to this research project (*Dengan menerima perjanjian ini, saya memohon agar maklumat yang diperolehi di dalam temuduga ini digunakan sebaiknya*) :

I do/ do not\* wish my name to be used in connection with the data I contribute to this research project.

(\* Delete as appropriate)

(*Saya membenarkan / tidak membenarkan nama saya dikaitkan dengan sebarang maklumat yang diberikan di dalam kajian ini*) (\*Potong yang berkenaan)

Signed: \_\_\_\_\_  
(*Tandatangan*)

Date: \_\_\_\_\_  
(*Tarikh*)

## Appendix 4: Topic Guide for Interviews

### TOPIC GUIDE

The interviewer will firstly provide respondents (students) with explanations about objectives of the research. The respondent will be asked about an overall view of constructs proposed.

This study aims to investigate the antecedents of students' attitude and the impact of students' attitude on the intention to repay the loan amongst final-year undergraduate students in public universities in Malaysia

### CONSTRUCTS DEFINITION

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In the literature, parents' influences on their children are identified as being either direct or indirect (Davies-Kean, 2005). Direct influence relates to parents involved in children's decisions whilst indirect influence means children's behaviours are influenced by their parents' approval. Influence in this context means the power to have an effect on people or things. Direct is defined 'going in a straight line towards somewhere or someone' whilst indirect is defined 'happening in addition to an intended result, often in a way that is complicated or not obvious' (Cambridge Dictionary Online, 2010). In this study, parental influence refers to a parent's role, as guardian, to influence their children (loan



borrower), and the construct is parental influence.

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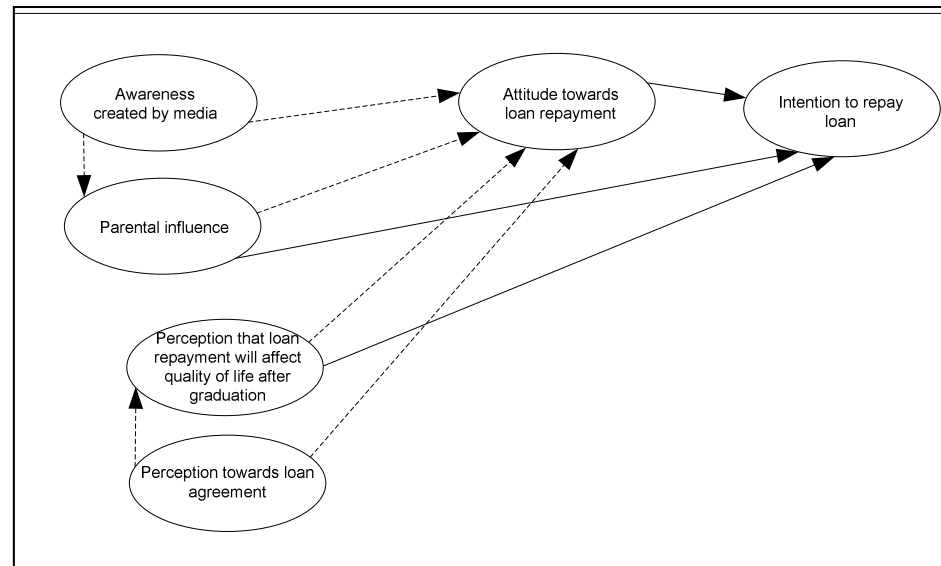
2. Do you agree that these constructs (mention the name of constructs and definitions) will affect your attitude towards loan repayment?

Research Questions & Hypotheses	Existing Items	Qualitative Questions
3. What is the relationship, if any, between students’ attitude and intention to repay the educational loan?		
<i>H1 The relationship between students’ attitude towards loan repayment and intention to repay the loan is positive and statistically significant</i>	<ul style="list-style-type: none"> <li>• Not easy to repay the loan</li> <li>• The repayment can help other students</li> <li>• Repayment is my obligation</li> <li>• NHEFC can trace me to collect the loan</li> <li>• There are legal penalties for non-</li> </ul>	<ul style="list-style-type: none"> <li>• Do you think loan repayment is important?</li> <li>• Will you please explain what cause you repay/not to repay loan?</li> <li>• Items of attitude generated from the literature will be shown, then the respondent will be asked: What items in this page do you think are not relevant to influence your attitude?</li> </ul>

	repayment <ul style="list-style-type: none"> <li>• I have to put an effort to make repayment</li> </ul>	And Why?
		<ul style="list-style-type: none"> <li>• Do you have the intention to repay loan?</li> <li>• Will you please explain why you want to make repayment after graduation?</li> </ul>
4. Are the constructs of perceptions that loan repayment affects quality of life after graduation, parental influence, awareness of loan repayment issues created by the media, and perceptions towards loan agreement antecedents of students' attitude?		
<i>H2</i> Parental influence is positively associated with students' attitude towards loan repayment  <i>H2a</i> Parental influence will have positive effect on intention to repay the loan		<ul style="list-style-type: none"> <li>• Do you parent know that you borrow loan?</li> <li>• Do your parents involves with the borrowing?</li> <li>• What they (parents) say about your loan? Are they encouraging you to pay or to postpone repayment?</li> </ul>
<i>H3</i> Perception that loan repayment will affect quality of life after graduation influence the students' attitude towards loan repayment  <i>H3b</i> Perception that loan repayment will affect quality of life after graduation influence the intention to repay the loan	<ul style="list-style-type: none"> <li>• Loan repayment will affect my decision on             <ul style="list-style-type: none"> <li>• The selection of the place to stay.</li> <li>• Job options.</li> <li>• When to get married.</li> <li>• When to buy my first car</li> <li>• when to have my first child</li> <li>• Buying a house</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• How do you perceived loan?</li> <li>• Do you think loan is important for you? Do you think loan will affect your life after graduation?</li> <li>• Items of <i>perceptions that loan repayment will affect life after graduation</i> generated from the literature will be shown, then the respondent will be asked: What items in this page do you think are not relevant to influence your attitude? And Why?</li> </ul>
<i>H4</i> Perception towards loan agreement is positively associated with students' attitude towards loan repayment  <i>H4b</i> Perception towards loan agreement is positively influence perception that loan repayment will affect quality of life after graduation		<ul style="list-style-type: none"> <li>• Do you know about loan agreement and requirements?</li> <li>• Will you please explain what the contents of loan agreement and requirement are?</li> <li>• What is your opinion of loan agreement?</li> </ul>

<p><i>H5 Awareness of loan repayment issues created by media is positively associated with students' attitude towards loan repayment</i></p> <p><i>H5b Awareness of loan repayment issues created by media will have positive effect on parental influence on children</i></p>		<ul style="list-style-type: none"> <li>• Will you please name the mass media tools that you always use?</li> <li>• Do you think (tools you mention) will influence you to make repayment?</li> <li>• Do you think (tools you mention) will influence your parents in the context of loan repayment?</li> <li>• If the (tools you mention) publish about loan information about educational loans and repayment, do you think it will affect you?</li> <li>• If the (tools you mention) publish about loan information about educational loans and repayment, do you think it will affect your parents?</li> </ul>
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**Summary**



1. The proposed conceptual model generated from the literature will be shown. Then, the interviewer will ask if the respondents have any changes or additions to be made.
2. Do you agree with the proposed conceptual model developed in this study? (Show the model and explain the proposed relationships).
3. The interviewer will summarise the key points of the discussion.
4. The main goals of this interviews are: to discover the relationship, if any, between students' attitude and intention to repay the educational loan; whether the constructs of perceptions that loan repayment affects quality of life after graduation, parental influence, awareness of loan repayment issues created by the media, and perceptions towards loan agreement are antecedents of students' attitude towards loan repayment from your perspective as loan borrower. Are there any other points that you would like to add?

Thank you very much for your kind participation, co-operation and valuable time.

## Appendix 5: Qualitative Findings

Construct	Items (8)
Students' attitude towards loan repayment <i>(Students' attitude)</i>	<b>1. Not easy to repay loan</b>
	<ul style="list-style-type: none"> <li>• Repayment is not easy...</li> </ul>
	<b>2. Repayment will help other students.</b>
	<ul style="list-style-type: none"> <li>• In my opinion loan must be repaid for other students to enrol for their education</li> <li>• Other students also require this loan and repayment will help others. If we failed to do so, others will be deprived with this facility. ...</li> <li>• Besides, we also obtained various governments' assistance. It is our responsibility that repayment are made promptly in order to help other students as well...</li> <li>• Government can use our loan repayment to help other students... although the amount may just be small. ...</li> <li>• If I do something good in return better things will come to me. My future generation will suffer if I do not make good my repayment...</li> </ul>
	<b>3. Repayment is my obligation.</b>
	<ul style="list-style-type: none"> <li>• Personally, the obligation if on us for the, loan to be repaid accordingly ...</li> <li>• It is my obligation that loan must be repaid and I will have problems later on if I failed to do so ...</li> <li>• Since I borrowed the loan it is my obligation to make repayment ...</li> <li>• Although I intend to postpone the repayment it is my obligation that I will repay later on ...</li> <li>• I have to make repayment because I took this loan ...</li> </ul>
	<b>4. I must put an effort to make repayments.</b>
	<ul style="list-style-type: none"> <li>• No matter how difficult for me in making repayments, I still have to make good my obligations whether I like it or not....</li> <li>• It depends on the individual whether to pay or not. Although my parents afford to pay on my behalf and since I was the borrower, I will make the necessary repayment to avoid any complication in the future. Although I will earn a small salary, I will be able to repay if I manage my finances well. Importantly I must have self-awareness ...</li> </ul>
	<b>5. NHEFC can trace me to collect the loan.</b>
	<ul style="list-style-type: none"> <li>• It is my obligation that I repay the loan that I borrowed because twenty thousand comes from the government and this amount is not small. Furthermore NHEFC will issue me reminders if I default my loan. This will create problems for me in the future. ...'</li> </ul>
	<b>6. There are legal penalties for non-repayment.</b>
	<ul style="list-style-type: none"> <li>• Legal action will be taken against me if I default my loan. ...'</li> <li>• Although loan given out by banks are stricter than loan given out to students, we should not take lightly the obligation to repay. It is</li> </ul>

	of the view that NHEFC should also adhere to the same principles and regulation adopted by banks. In this way, student will feel more obligated to repay. ...’
	<b>7. Repayment collection should be in-charge by a commercial bank following bank rules and regulations</b>
	<ul style="list-style-type: none"> <li>• Banks rather than NHEFC should supervise loan repayment ...</li> <li>• Banks should monitor the repayment since banks are stricter than NHEFC...</li> </ul>
	<b>8. Government should help me in getting a good paying job for me to repay my loan</b>
	<ul style="list-style-type: none"> <li>• I will only repay If the government provides me with a job ...</li> <li>• Government should offer me a good paying job ...</li> </ul>
<b>Construct</b>	<b>Items (7)</b>
Perception that loan repayment will affect quality of life after graduation ( <i>Quality perception</i> )	<b>1. After graduation, loan repayment will affect my decision on the selection of the place to stay.</b>
	<ul style="list-style-type: none"> <li>• Rental and furnishing .....only a small sum for repayment...</li> <li>• Want to live my own life... I do not want to stay with my parents...</li> </ul>
	<b>2. After graduation, loan repayment will affect my decision on job options.</b>
	<ul style="list-style-type: none"> <li>• Most importantly is my salary...however small ...I will make repayment</li> </ul>
	<b>3. After graduation, loan repayment will affect my decision on when to get married.</b>
	<ul style="list-style-type: none"> <li>• Personally, I think I will postpone the repayment after I got married because of higher expenses incurred....</li> <li>• I will first get married. Loan repayment will only come later. ...</li> <li>• My needs is to own a car, ...married with children but unsure about repayment ...</li> <li>• Since marriage will affect repayment...I hope repayment could be reduced to the amount I could afford to....</li> <li>• Marriage will only come later until I’m stable since high cost of living involved ...</li> </ul>
	<b>4. After graduation, loan repayment will affect my decision on when to buy my first car</b>
	<ul style="list-style-type: none"> <li>• After completing my studies, I will definitely purchase a house and a car. ...</li> <li>• The first thing I do with my salary is to buy a car ...</li> <li>• Maybe I’ll buy a second hand car with my first salary ...</li> <li>• I will get married with children, own a car and a household maid. But I’m unsure about the loan repayment...</li> <li>• I like my own life and own a car... I do not want to stay with my parents.....</li> <li>• I’ll only pay my student after I graduated and ...get a job... buy a car and a house.....</li> <li>• I’ll only pay my student loan after I graduated, get a job, buy a car and a house...</li> <li>• I will settle my loan first.....then I will consider buying car and house...</li> </ul>
	<b>5. After graduation, loan repayment will affect my decision on when to have my first Child</b>
	<ul style="list-style-type: none"> <li>• I’m not sure about the loan because first I need to have a car, get married with children ...</li> </ul>
	<b>6. After graduation, loan repayment will affect my decision on buying a house</b>
	<ul style="list-style-type: none"> <li>• I will purchase a house and a car after completing my course ...</li> </ul>

	<ul style="list-style-type: none"> <li>• I want to build my own wealth ...and help my family first...</li> <li>• I will only pay my student loan after purchasing a house and a car after getting a job.</li> <li>• I will settle my loan ...then I will consider buying car and house...</li> </ul>
	<b>7. After graduation, loan repayment will affect my decision on how much money I will contribute to my parents.</b>
	<ul style="list-style-type: none"> <li>• I have serious intentions to contribute to my parents and to reduce my parents' burden in supporting my siblings...</li> <li>• My first priority is my parents ...</li> <li>• Renovating parent's home, sending them for pilgrimage and other important matters concerning them. ...</li> <li>• Contribute to family especially parents...</li> <li>• After graduation, I like to contribute to my parents since they are well over 60 and before they passed on ...</li> <li>• To fulfil my parents' dream in renovating and expanding their house...</li> <li>• To contribute to parents and little repayment on loan...</li> <li>• It is my responsibility to take care of my mother, a single mother and also help in raising my siblings ...</li> <li>• I will give money to my parents every month after getting a job...</li> <li>• Being Muslim... children must first take care of their parents by contributing to them ...however; I will still repay the loan...</li> <li>• I'm indebted to my parents for raising me...I will only pay little amount for my loan...</li> <li>• I will help my parents... by reducing their burden...</li> <li>• I will help my parents first once I get a job...</li> <li>• My family comes first and loan repayment will be postponed as long as I can.....</li> <li>• I will find any job as long as I can contribute to my family depending on my salary.....</li> <li>• My first priority to my family is to take care of their hospital bills, medication. Student loan repayment is secondary...</li> </ul>
<b>Construct</b>	<b>Items (7)</b>
Perception towards loan agreement ( <i>Agreement Perception</i> )	<b>1. I think the loan agreement was written too long.</b>
	<ul style="list-style-type: none"> <li>• Loan Agreement is too long...</li> <li>• I prefer not to read the agreement but only glanced through. It'll take you four or five pages to describe an issue ...</li> <li>• Loan agreement is too long and thick ...</li> <li>• As far as I'm concern, no one really read the agreement because it is too long and we do not have time to read them...</li> <li>• Since it is long, I only read only half of that agreement...</li> </ul>
	<b>2. Term used in loan agreement is only suitable for Law students.</b>
	<ul style="list-style-type: none"> <li>• Law terms used belongs to student practicing law ...but not me</li> </ul>
	<b>3. The loan agreement was easy to understand.</b>
	<ul style="list-style-type: none"> <li>• It is not easy to understand the loan agreement ...</li> <li>• I need only r the first three pages to understand...</li> </ul>

	<ul style="list-style-type: none"> <li>• I don't need read the agreement because it is easy to follow.....</li> <li>• I realized that it is easy to understand after reading the loan agreement and also to ensure that I know the detail of the contract ...</li> </ul>
	<b>4. The time given to complete the loan agreement form was not enough.</b>
	<ul style="list-style-type: none"> <li>• I just signed the form because I do not have enough time to read the agreement since I was just thinking about the loan at that time ...</li> </ul>
	<b>5. The loan agreement need to use the language more easily understood.</b>
	<ul style="list-style-type: none"> <li>• The term used is difficult to understand especially the clauses...</li> </ul>
	<b>6. The loan agreement content is not clear.</b>
	<ul style="list-style-type: none"> <li>• I did not read because there are too many rules and regulations...</li> <li>• The agreement is too complicated...</li> <li>• Since we have no choice and desperate for a loan, we are less concerned about the content of the agreement ...</li> <li>• No, I do not understand the content of agreement...</li> <li>• Repayment clause is unclear and difficult to understand...</li> <li>• I think the term used is complicated. Preferably that the agreement is short and precise ...</li> <li>• It is too long and complicated...</li> </ul>
	<b>7. I largely depended on the instructions given to me during briefing to fill up the loan agreement form.</b>
	<ul style="list-style-type: none"> <li>• I think is adequate to only listen on what instructions given to me during briefing in the university</li> <li>• I did not read but just signed the agreement after the officer explanation ...</li> <li>• We will enquire all important issues highlighted by the officer that we do not understand promptly during the briefing ...</li> </ul>
<b>Construct</b>	<b>Items (4)</b>
Awareness of Loan Repayment Issues created by media ( <i>Media Awareness</i> )	<b>1. I have watched the television about latest information about loan repayment.</b>
	<ul style="list-style-type: none"> <li>• NHEFC used TV to distribute information...</li> <li>• I know about the latest loan issues ...I have watched on TV ...</li> </ul>
	<b>2. I have read of latest information about NHEFC loan repayment in the newspapers.</b>
	<ul style="list-style-type: none"> <li>• We are aware about the loan defaulters since their names appeared in the newspaper to serve as a warning for future students. I think it's better to pay up...</li> <li>• Borrowers are angry with NHEFC because if they default their loan, their names will appear in newspaper. We should take heed of this warning to make payment promptly.</li> <li>• Whenever I noticed names of student who defaulted their loan repayment appearing in the newspapers I realized that these people only like to borrow but are unable to honour the repayment ...</li> <li>• My family obtained the information from newspaper...</li> <li>• Now NHEFC publishes all loan defaulters in the newspaper...</li> </ul>



	<ul style="list-style-type: none"> <li>• The newspaper I read highlighted that many students failed to repay back their loans...</li> <li>• NHEFC just published those who failed to pay in the newspaper however there was no further action taken. Furthermore, I do not know anyone in the list ...</li> <li>• I am aware of NHEFC new rules and regulations from the newspaper...</li> </ul>
	<b>3. I have read the latest information about loan published on their website</b>
	<ul style="list-style-type: none"> <li>• It is easy to view the website online ...</li> <li>• I obtained Information NHEFC website ...</li> </ul>
	<b>4. I heard the latest information about loan which is broadcast on the radio.</b>
	<ul style="list-style-type: none"> <li>• I have listened to radio to obtain information about loans...</li> </ul>
<b>Construct</b>	<b>Items (10)</b>
Parental Influence	<b>1. My parents advised me after I graduate to find any job to pay the loan first.</b>
	<ul style="list-style-type: none"> <li>• My mother nags frequently about the loan that I took and stressed that it is my responsibility I repay the loan after securing a job...</li> <li>• My parents advised me not to be selective about job offers because I could not repay my loan without a secured job ...</li> <li>• My parents will probably find me a job so I can repay my loan ...</li> </ul>
	<b>2. My parents pay tax to government so I do not have to pay back loan.</b>
	<ul style="list-style-type: none"> <li>• I do not have to pay back this loan because my parents pay taxes to government ...</li> <li>• Loan comes from taxes that have been paid by my parents ...</li> </ul>
	<b>3. My parents advised me after I graduate to make regular payments to reduce the debt.</b>
	<ul style="list-style-type: none"> <li>• Initially I thought of postponing the repayment but since my parents and families are aware about the loan I obtained from NHEFC, they are adamant and monitoring closely the loan repayment, I have no choice but to pay back the loan...</li> <li>• My mother wants me to be responsible and take the loan repayment issue seriously</li> <li>• Being a Muslim my parents always remind me of the necessity and the requirement of making repayment...</li> <li>• My mother advised me to fully settle the loan however my father insisted on monthly repayment...</li> <li>• My mother insisted me to make monthly payment and never to postpone repayment in which failure to do so will increase the loan amount</li> </ul>
	<b>4. My parents borrow loan from commercial bank to repay my educational loan.</b>
	<ul style="list-style-type: none"> <li>• It is my parents responsibility to borrow from bank to pay my loan ...</li> </ul>
	<b>5. My parents advised me to save from the loan while studying, so that I can make payments immediately after I graduate.</b>
	<ul style="list-style-type: none"> <li>• My father and mother supported the notion that I save part of the proceed of the student loan after graduation to pay back the loan ...</li> <li>• My mother gives me r money during my studies She also asked me to save the loan because she wants me to pay the loan immediately after graduation to reduce the loan outstanding ...</li> </ul>

<ul style="list-style-type: none"> <li>• My father always reminded me that the loan is for study purposes only and part of the loan to be saved ...</li> <li>• Although my parents are not educated they asked me to save part of the loan so that I can pay back loan if I was still jobless ...</li> <li>• My parents reminded me to save part of the loan in the bank in order for me to pay back to the loan ...</li> </ul>
<b>6. My parents' experiences with any loan influence me to make repayment after I graduate.</b>
<ul style="list-style-type: none"> <li>• My parents are aware of the effects of loan defaulting since they have borrowed before ...</li> <li>• My parents' experiences in borrowings and the consequences of failure to make repayment ...</li> <li>• It reminded me of my parents' experiences with other loans and the consequence of failure to repay ...</li> <li>• It reminded me of my parents' experiences with credit cards ...prompted me to pay back loan regularly and reducing the loan amount ...</li> </ul>
<b>7. My parents' huge debt affected me</b>
<ul style="list-style-type: none"> <li>• My father could not help pay my education debt due to his huge credit card debt...</li> </ul>
<b>8. My parents reminded me of the importance of making loan repayment after I graduate.</b>
<ul style="list-style-type: none"> <li>• According to my father, besides from repaying my loan, I must also buy my own car and purchase my own things ...</li> <li>• Since I am already in the final year, my parents always discussed about loans repayment ...</li> <li>• My parents, especially my mother, keep reminding me about my plans in paying back the loan ...</li> <li>• I feel very unhappy whenever my parents remind me about my failure to make repayment ...</li> <li>• The last time I remember when my mother was very worried when NHEFC issued me a loan statement and enquired me on numerous occasion about the loan ...</li> </ul>
<b>9. My parents reminded me to pay back the loan after I graduate to avoid problems in the future.</b>
<ul style="list-style-type: none"> <li>• My parents always remind me to pay back the loan although they do not know how much I borrowed from NHEFC ...because they do not want me to face problems in future especially when NHEFC published my name in the newspaper...</li> <li>• My parents always reminded me to find any job in order to pay back the loan...</li> <li>• My parents always reminded me the importance of making loan repayment however it is all up to me to do so...</li> <li>• Although my parents are not educated but they always remind me as when and how much should I pay after I graduated...</li> <li>• My mother keeps reminding me about paying back the loan as she does not want me to face any problems in future whilst my father only mentioned this on certain occasion only...</li> <li>• My parents remind me to repay loan to reduce the loan amount ...</li> <li>• My parents do not want me to face any problems in future and to pay back the loan ...</li> <li>• Whenever the loan statement arrived, my mother will ask about the content of the statement. Although she is illiterate, I was taught by my parents to pay back any loan.</li> <li>• I was taught by my parents since I was young that debt must be repaid...</li> </ul>
<b>10. My parents, as guarantors of this loan, reminded me to pay back the loan after graduate to avoid burdening them in the future.</b>

	<ul style="list-style-type: none"> <li>• My parents always reminded me to make repayment after I graduated since they stood as guarantor for my loan .They do not want to have unnecessary complication in future...</li> <li>• Since my parents stood as guarantor for my loan, they received bills and statements from NHEFC. They always reminded me to make good the payment after I graduated ...</li> <li>• My parents are well aware of the consequences of not repaying the loan being guarantors for the loan...</li> <li>• My parents fear that NHEFC will take legal action against them if I failed to repay because they act as guarantors for my loan. ...</li> <li>• Being guarantor for my loan, my parents always monitor for any NHEFC letter or statement that I received...</li> </ul>
<b>Construct</b>	<b>Items (11)</b>
Intention to repay loan ( <i>Intention</i> )	<b>1. I will make repayment because it is my priority.</b>
	<ul style="list-style-type: none"> <li>• Personally, since we were given the opportunity to borrow, I will try my best to pay back the loan ...</li> <li>• To pay back NHEFC is my priority although I intend to purchase a car and house...</li> <li>• I'm grateful to the government for giving me the loan and I should thank them by repaying back the loan as soon as possible ...</li> </ul>
	<b>2. I will find any job after I graduated to pay back student loan.</b>
	<ul style="list-style-type: none"> <li>• I will pay back the loan because I do not want my parents to face problem in future if anything untoward befalls me...</li> <li>• I will find any job as long as the loan is repaid...</li> <li>• I am not bothered although it is a part time job as long as I can pay back loan...</li> <li>• Importantly, the loan that I took must be repaid accordingly. It does not matter if it does not commensurate against my degree, as long my salary is able to cover my repayment...</li> </ul>
	<b>3. If I am unemployed after I graduate, my parents will make repayment, and I will continue paying the remainder after I get a job.</b>
	<ul style="list-style-type: none"> <li>• Since my parents acted as guarantors, they will pay back my loan until I get a job...</li> <li>• Since my parents are guarantors of my loan, they will pay back my loan until I get a job and continue paying the loan balance ...</li> </ul>
	<b>4. I will save part of the loan during study, so that I can make repayments immediately after I graduate</b>
	<ul style="list-style-type: none"> <li>• I plan to save part of the loan to make payment before I get a job...</li> <li>• I will repay immediately after I graduate by saving part of my loan...</li> </ul>
	<b>5. I never think about loan repayment, for me it is not important.</b>
	<ul style="list-style-type: none"> <li>• Why should I think about loan repayment since this is not important to me ...</li> </ul>
	<b>6. I will make regular payments through salary deduction.</b>
	<ul style="list-style-type: none"> <li>• I will pay my loan through salary deduction since I will be a teacher after graduation...</li> <li>• I do not have to think about repayment since I repayment is through salary reduction</li> <li>• After securing a job, I will pay every month from salary deduction...</li> <li>• Repayment deducted from my salary or instalment payments if working with the Government...</li> </ul>

<b>7. I will make repayment because my culture norms say debt must be repaid.</b>
<ul style="list-style-type: none"> <li>• It is in our norms that in order to avoid sinister gestures and unnecessary comments from neighbours about loans granted to us and our parents, we must ensure that debt must be repaid under any circumstances ...</li> <li>• All debts must be paid not matter which culture we belongs or comes from. The government has given us the opportunity to enter university and provide loans and in return we have to honour the gesture by making repayments. ...</li> <li>• Planning our expenses is important by putting aside part of our salary monthly to pay back our loans...</li> <li>• Since my culture and my family values have great influence in me, paying my loan is a priority...</li> <li>• In order to make repayment seriously, all repayment should be handled by commercial banks since banks adhered to strict rules and regulations ...</li> </ul>
<b>8. I will make repayment because my belief in religion says debt must be repaid.</b>
<ul style="list-style-type: none"> <li>• It is my obligation that I repay my loan obligation. As a Muslim debt must be repaid and there is no excuse whatsoever for not settling all debts due...</li> <li>• Knowledge in religion will encourage me to honour debt repayment...</li> <li>• Being a good Muslim, one of the underlying requirement is debt repayment ...</li> <li>• I prefer to salary deduction however, sometimes being human, we tend to forget. No matter what, I will find any job regardless what others say as I'm more incline towards religious notation that I must settle all debts ...</li> </ul>
<b>9. I will make regular payments to reduce the debt.</b>
<ul style="list-style-type: none"> <li>• Frankly, I will repay my loan although the repayment amount is small ...</li> <li>• I will put all the effort to make regular payment as I do not want to burden my parents in future since I love them very much ...</li> <li>• I will make repayment to reduce debt...</li> <li>• When I get a job I will use my salary to make repayment to reduce my debt...</li> </ul>
<b>10. I will make regular payments to avoid problems in the future.</b>
<ul style="list-style-type: none"> <li>• It is similar to stealing or robbing the government if we borrow and failed to pay back the loan. As such, I will honour my repayment of the loan accordingly ...</li> </ul>
<b>11. I will make regular payments after graduate to avoid burdening my parents in the future.</b>
<ul style="list-style-type: none"> <li>• I prefer to pay my loan than postponing to avoid burdening my parents in future ...</li> </ul>

## Appendix 6: Questionnaire

### QUESTIONNAIRE ON STUDENTS' ATTITUDE TOWARDS EDUCATIONAL LOAN REPAYMENT IN MALAYSIA

Shafinar Ismail, Ph.D. Researcher  
Room 355, Michael Sterling Building,  
Brunel Business School , Brunel University,  
UB8 3PH, Uxbridge, United Kingdom  
Telephone: (44)-07964747457 Email: Shafinar.Ismail@brunel.ac.uk

Dear Student,

I am writing this letter to ask for your help with my PhD research which I am currently pursuing at Brunel University in the UK. I will be very grateful if you could please complete this questionnaire on student loans. I am aware that your time is extremely valuable. I can only assure you that the result of this study will be useful for all students. I do not require your name or address in this questionnaire. The data will be used in aggregates only. **Student who only have National Higher Education Fund Corporation (NHEFC) loan need to complete this.** NHEFC is the agency responsible giving loans to students to enrol for higher education in Malaysia. Please complete the questionnaire in full to the best of your knowledge. Your participation is strictly voluntary, it will take only about 10 minutes to complete. If you have any questions please contact me at my email address. Thank you once again for your help.

Pelajar yang dihormati,

Saya menulis surat ini untuk memohon bantuan anda bagi menjayakan penyelidikan PhD saya di Brunel University, UK. Saya amat berbesar hati sekiranya anda dapat menjawab soal selidik berkenaan dengan pinjaman pelajar. Saya sedar bahawa masa anda amat berharga. Saya ingin menyakinkan anda bahawa hasil kajian ini akan berguna kepada semua pelajar. Nama dan alamat anda tidak diperlukan dalam soal selidik ini. Data yang terkandung akan digunakan secara agregat sahaja. **Hanya pelajar yang memperolehi pinjaman Perbadanan Tabung Pengajian Tinggi Nasional (PTPTN) yang perlu mengisi borang soal selidik ini.** PTPTN ialah agensi yang bertanggungjawab memberi pinjaman kepada pelajar yang mendaftar di pusat pengajian tinggi di Malaysia. Soal selidik ini hanya mengambil masa selama 10 minit sahaja. Sila sempurnakan soal selidik ini sebaik mungkin. Sekiranya anda mempunyai sebarang pertanyaan, sila hubungi saya di alamat email saya. Terima kasih atas bantuan anda.

Sincerely,

*Shafinar Ismail*

**SECTION A: DEMOGRAPHIC**

**Instruction:** Please tick (✓) as appropriate. (*Sila tandakan (✓) pada kurungan berkenaan*)

- (a) Gender (*Jantina*):                      ( ) Male (*lelaki*)                                      ( ) Female (*perempuan*)
- (b) Ethnic (*Bangsa*):                      ( ) Bumiputera (*Bumiputra*)                                      ( ) Chinese (*Cina*)  
( ) Indian (*India*)                                      ( ) Other (Please specify)/*Lain-lain* (*Sila nyatakan*)\_\_\_\_\_
- (c) Age (*Umur*):                      ( ) 18 to 20              ( ) 21 to 23              ( ) 23 and above (*23 dan ke atas*)
- (d) Field of study category (*Kategori bidang pengajian anda*) :  
( ) Science (*Sains*)                      ( ) Arts (*Sastera*)
- (e) Secondary school background  
(*Latar belakang sekolah menengah*)                                      ( ) Boarding school (*Sekolah asrama penuh*)  
( ) Private school (*Sekolah swasta*)  
( ) Public school (*Sekolah harian biasa*)  
( ) Islamic school (*Sekolah agama*)
- (f) Religion (*Agama*):                      ( ) Muslim (*Islam*)                                      ( ) Buddhist (*Buddha*)                                      ( ) Hindu (*Hindu*)  
( ) Christian (*Kristian*)                                      ( ) No religion (*Tiada agama*)
- (g) Total approximate **monthly** parents income/( *Jumlah anggaran pendapatan **bulanan** ibu-bapa anda*):  
( ) RM 1000 and below (*RM 1000 dan ke bawah*)                                      ( ) RM 3001 to RM 4000  
( ) RM 1001 to RM 2000                                      ( ) RM 4000 and above (*RM 4000 dan ke atas*)  
( ) RM 2001 to RM 3000
- (h) Father's profession (*Pekerjaan bapa*):  
( ) Government servant (*Kakitangan kerajaan*)  
( ) Professional – Grade 41 and above  
(*Profesional – Gred 41 ke atas*)                                      ( ) Non-Professional- below Grade 41  
(*Bukan Profesional – bawah Gred 41*)  
( ) Private company employee (*Kakitangan swasta*)

- Executive level (*Eksekutif*)
- Pensioner (*Pesara kerajaan*)
- Executive level (*Eksekutif*)
- Self-employed (*Bekerja sendiri*)
- Unemployed (*Tidak bekerja*)

Non-executive level (*Bukan Eksekutif*)

Non-executive level (*Bukan Eksekutif*)

(i) Mother's profession (*Pekerjaan ibu*):

- Government servant (*Kakitangan kerajaan*)
  - Professional – Grade 41 and above  
(*Profesional – Gred 41 ke atas*)
- Private company employee (*Kakitangan swasta*)
  - Executive level (*Eksekutif*)
- Pensioner (*Pesara kerajaan*)
  - Executive level (*Eksekutif*)
- Self-employed (*Bekerja sendiri*)
- Unemployed (*Surirumah*)

Non-Professional- below Grade 41  
(*Bukan Profesional – bawah Gred 41*)

Non-executive level (*Bukan Eksekutif*)

Non-executive level (*Bukan Eksekutif*)

### SECTION B: PERCEPTIONS TOWARDS LOAN AGREEMENT

**Instruction:** Please tick (✓) as appropriate. (*Sila tandakan (✓) pada kurungan berkenaan.*)

		(1) <b>Strongly disagree</b> <i>(Sangat tidak bersetuju)</i>	(2) <b>Disagree</b> <i>(Tidak bersetuju)</i>	(3) <b>Neutral</b> <i>(Neutral)</i>	(4) <b>Agree</b> <i>(Setuju)</i>	(5) <b>Strongly agree</b> <i>(Sangat bersetuju)</i>
1	The loan agreement was written too long ..... <i>Saya berpendapat borang perjanjian pinjaman terlalu panjang untuk dibaca .....</i>	( )	( )	( )	( )	( )
2	The loan agreement was difficult to understand..... <i>Isi kandungan di dalam borang perjanjian pinjaman adalah sukar untuk difahami .....</i>	( )	( )	( )	( )	( )
3	The time given to complete the loan agreement form was not enough ..... <i>Masa yang diberikan untuk melengkapkan borang perjanjian pinjaman adalah tidak mencukupi .....</i>	( )	( )	( )	( )	( )

4	The loan agreement need to use the language more easily understood .....					
	<i>Perjanjian pinjaman perlu menggunakan bahasa yang lebih mudah difahami .....</i>	( )	( )	( )	( )	( )
5	The loan agreement content is not clear .....					
	<i>Kandungan perjanjian pinjaman tidak jelas.....</i>	( )	( )	( )	( )	( )
6	I largely depended on the instructions given to me during briefing to fill up the loan agreement form <i>Saya sangat bergantung kepada arahan-arahan yang diberikan semasa taklimat untuk mengisi borang permohonan pinjaman.....</i>	( )	( )	( )	( )	( )

**SECTION C: AWARENESS OF LOAN REPAYMENT ISSUES CREATED BY MEDIA**

**Instruction:** Please tick (√) as appropriate. (*Sila tandakan (√) pada kurungan berkenaan*).

		(1) <b>Strongly disagree</b> <i>(Sangat tidak bersetuju)</i>	(2) <b>Disagree</b> <i>(Tidak bersetuju)</i>	(3) <b>Neutral</b> <i>(Neutral)</i>	(4) <b>Agree</b> <i>(Setuju)</i>	(5) <b>Strongly agree</b> <i>(Sangat bersetuju)</i>
1	I am aware latest information about NHEFC loan repayment in the newspapers..... <i>Saya sedar maklumat terkini PTPTN tentang pembayaran balik pinjaman di dalam akhbar-akhbar .....</i>	( )	( )	( )	( )	( )
2	I have watched the television programme about latest information about NHEFC loan repayment .....					
	<i>Saya pernah menonton program di televisyen berkaitan maklumat terkini pembayaran balik pinjaman .....</i>	( )	( )	( )	( )	( )
3	I have read the latest information about NHEFC loan published on their website .....					
	<i>Saya pernah membaca maklumat terkini PTPTN yang disiarkan di dalam laman web .....</i>	( )	( )	( )	( )	( )
4	I hear that latest information about NHEFC loan which is broadcast on the radio .....					
	<i>Saya ada mendengar maklumat terkini berkaitan pinjaman PTPTN yang ke udara di radio .....</i>	( )	( )	( )	( )	( )



**SECTION D: PERCEPTIONS THAT LOAN REPAYMENT WILL AFFECTS QUALITY OF LIFE AFTER GRADUATION**

**Instruction:** Please tick (✓) as appropriate. (*Sila tandakan (✓) pada kurungan berkenaan.*)

	(1) <b>Strongly disagree</b> <i>(Sangat tidak bersetuju)</i>	(2) <b>Disagree</b> <i>(Tidak bersetuju)</i>	(3) <b>Neutral</b> <i>(Neutral)</i>	(4) <b>Agree</b> <i>(Setuju)</i>	(5) <b>Strongly agree</b> <i>(Sangat bersetuju)</i>
1 After graduation, loan repayment will affect my decision on the selection of the place to stay ..... <i>Selepas saya tamat belajar, pembayaran balik pinjaman akan memberi kesan terhadap pilihan samaada tinggal dengan ibu bapa atau menyewa rumah sendiri atau tinggal dengan kawan-kawan</i>	( )	( )	( )	( )	( )
2 After graduation, loan repayment will affect my decision on job options ..... <i>Selepas saya tamat belajar, pembayaran balik pinjaman akan memberi kesan terhadap keputusan saya berhubung pilihan kerjaya</i>	( )	( )	( )	( )	( )
3 After graduation, loan repayment will affect my decision on when to get married ..... <i>Selepas saya tamat belajar, pembayaran balik pinjaman akan memberi kesan terhadap keputusan saya berhubung masa yang sesuai untuk berkahwin</i>	( )	( )	( )	( )	( )
4 After graduation, loan repayment will affect my decision on when to buy my first car ..... <i>Selepas saya tamat belajar, pembayaran balik pinjaman akan memberi kesan terhadap keputusan saya berhubung masa yang sesuai untuk membeli kereta</i>	( )	( )	( )	( )	( )
5 After graduation, loan repayment will affect my decision on when to have my first child ..... <i>Selepas saya tamat belajar, pembayaran balik pinjaman akan memberi kesan terhadap keputusan saya berhubung masa yang sesuai untuk mempunyai anak pertama</i>	( )	( )	( )	( )	( )
6 After graduation, loan repayment will affect my decision on buying a house ..... <i>Selepas saya tamat belajar, pembayaran balik pinjaman akan</i>	( )	( )	( )	( )	( )

- memberi kesan terhadap keputusan saya untuk membeli rumah
- 7 After graduation, loan repayment will affect my decision on how much money I will contribute to my parents .....
- Selepas saya tamat belajar, pembayaran balik pinjaman akan memberi kesan terhadap keputusan saya berhubung jumlah wang yang akan saya berikan kepada ibu bapa .....*
- ( )                      ( )                      ( )                      ( )                      ( )

**SECTION E: PARENTAL INFLUENCE**

**Instruction:** Please tick (√) as appropriate. (*Sila tandakan (√) pada kurungan berkenaan.*)

	(1) <b>Strongly disagree</b> <i>(Sangat tidak bersetuju)</i>	(2) <b>Disagree</b> <i>(Tidak bersetuju)</i>	(3) <b>Neutral</b> <i>(Neutral)</i>	(4) <b>Agree</b> <i>(Setuju)</i>	(5) <b>Strongly agree</b> <i>(Sangat bersetuju)</i>
1 My parents advise me after I graduate to find any job to pay the loan first .....					
<i>Ibu bapa menasihatkan saya untuk mencari apa sahaja pekerjaan untuk membayar balik pinjaman .....</i>	( )	( )	( )	( )	( )
2 My parents advise me after I graduate to make regular payments to reduce the debt .....					
<i>Ibu bapa menasihatkan saya untuk membayar balik pinjaman secara berterusan, ini akan mengurangkan bebanan hutang ....</i>	( )	( )	( )	( )	( )
3 My parents advise me to save from the NHEFC loan while a student, so that I can make payments immediately after I graduate					
<i>Ibu bapa menasihatkan saya untuk menyimpan sebahagian daripada pinjaman PTPTN untuk membayar balik pinjaman sejurus selepas tamat pengajian .....</i>	( )	( )	( )	( )	( )
4 My parents' experiences with any loan influence me to make repayment after I graduate .....					
<i>Ibu bapa yang ada pengalaman tentang pinjaman seperti pinjaman rumah, kereta dan sebagainya akan mempengaruhi saya untuk membuat bayaran balik pinjaman selepas tamat belajar.....</i>	( )	( )	( )	( )	( )
5 My parents reminded me of the importance of making loan					

	repayment after I graduate .....					
	<i>Ibu bapa mengingatkan saya tentang kepentingan membuat bayaran balik pinjaman selepas tamat belajar .....</i>	( )	( )	( )	( )	( )
6	My parents remind me to pay back the loan after I graduate to avoid problems in the future .....					
	<i>Ibu bapa mengingatkan saya untuk membayar balik pinjaman selepas tamat belajar bagi mengelakkan saya menghadapi masalah pada masa depan .....</i>	( )	( )	( )	( )	( )
7	My parents as guarantors of this loan remind me to pay back the loan after graduate to avoid burden on them in the future .....					
	<i>Ibu bapa sebagai penjamin pinjaman ini mengingatkan saya untuk membayar balik pinjaman selepas tamat belajar bagi mengelakkan beban pada mereka pada masa depan .....</i>	( )	( )	( )	( )	( )

**SECTION F: STUDENTS' ATTITUDE TOWARDS LOAN REPAYMENT**

**Instruction:** Please tick (√) as appropriate. (*Sila tandakan (√) pada kurungan berkenaan.*)

	(1) <b>Strongly disagree</b> <i>(Sangat tidak bersetuju)</i>	(2) <b>Disagree</b> <i>(Tidak bersetuju)</i>	(3) <b>Neutral</b> <i>(Neutral)</i>	(4) <b>Agree</b> <i>(Setuju)</i>	(5) <b>Strongly agree</b> <i>(Sangat bersetuju)</i>
1	The repayment can help other students .....				
	<i>Pembayaran balik dapat membantu pelajar-pelajar lain.....</i>	( )	( )	( )	( )
2	Repayment is my obligation .....				
	<i>Pembayaran balik pinjaman adalah kewajipan saya .....</i>	( )	( )	( )	( )
3	I have to put an effort to make repayments .....				
	<i>Saya mesti berusaha untuk membayar balik pinjaman .....</i>	( )	( )	( )	( )
4	NHEFC can trace me to collect the loan .....				
	<i>PTPTN boleh mengesan saya untuk mendapatkan semula pinjaman.....</i>	( )	( )	( )	( )
5	There are legal penalties for non-repayment .....				
	<i>Tindakan undang-undang akan dikenakan jika gagal membayar balik pinjaman.....</i>	( )	( )	( )	( )

**SECTION G: INTENTION TO REPAY LOAN**

**Instruction:** Please tick (√) as appropriate. (*Sila tandakan (√) pada kurungan berkenaan.*)

	(1) <b>Strongly disagree</b> <i>(Sangat tidak bersetuju)</i>	(2) <b>Disagree</b> <i>(Tidak bersetuju)</i>	(3) <b>Neutral</b> <i>(Neutral)</i>	(4) <b>Agree</b> <i>(Setuju)</i>	(5) <b>Strongly agree</b> <i>(Sangat bersetuju)</i>
1 I will make repayment because it is my priority..... <i>Pembayaran balik adalah keutamaan bagi saya .....</i>	( )	( )	( )	( )	( )
2 I will find any job after I graduate to pay back educational loan <i>Saya tidak akan memilih bidang pekerjaan untuk membayar balik pinjaman.....</i>	( )	( )	( )	( )	( )
3 If I am unemployed after I graduate, my parents will make repayment, I will continue paying the remainder after I get a job <i>Ibu bapa akan membayar balik pinjaman sebelum saya mendapat pekerjaan dan saya akan menyambung pembayaran balik selepas mendapat kerja.....</i>	( )	( )	( )	( )	( )
4 I will save part of the loan during study, so that I can make repayments immediately after I graduate .....	( )	( )	( )	( )	( )
<i>Saya akan menyimpan sebahagian dari pinjaman diperolehi, oleh itu saya dapat terus membayar pinjaman sebaik sahaja tamat belajar .....</i>	( )	( )	( )	( )	( )
5 I will make regular payments through salary deduction .....	( )	( )	( )	( )	( )
<i>Saya akan membayar pinjaman melalui potongan gaji.....</i>	( )	( )	( )	( )	( )
6 I will make regular payments to reduce the debt .....	( )	( )	( )	( )	( )
<i>Saya akan membayar balik pinjaman secara berterusan, ini akan mengurangkan bebanan hutang .....</i>	( )	( )	( )	( )	( )
7 I will make regular payments to avoid problems in the future <i>Saya akan membayar balik pinjaman secara berterusan bagi mengelakkan saya menghadapi masalah pada masa depan .....</i>	( )	( )	( )	( )	( )

- |    |   |    |    |    |    |    |
|----|---|----|----|----|----|----|
| 8  | I will make regular payments after graduate to avoid burden on my parents in the future .....   |    |    |    |    |    |
|    | <i>Saya akan membayar balik pinjaman secara berterusan selepas tamat belajar bagi mengelakkan beban pada ibu bapa pada masa depan .....</i> | () | () | () | () | () |
| 9  | I will make repayment because my culture norms says debt must be repaid.....  |    |    |    |    |    |
|    | <i>Saya akan membuat pembayaran balik pinjaman kerana budaya masyarakat saya menyatakan hutang mesti dibayar.....</i>                       | () | () | () | () | () |
| 10 | I will make repayment because my belief in religion says debt must be repaid .....  |    |    |    |    |    |
|    | <i>Saya akan membuat pembayaran balik pinjaman kerana kepercayaan saya terhadap agama saya menyatakan hutang mesti dibayar.....</i>         | () | () | () | () | () |

**THANK YOU FOR YOUR KIND COOPERATION**  
*(Terima kasih di atas kerjasama yang diberikan)*

## Appendix 7: Survey Questionnaire Coding and Labelling

Q. No.	Question Code	Question Label
1	UNIV_id	Universities
2	FIELD_id	Field of study
3	GEN_id	Gender
4	ETHN_id	Ethnicity
5	Relig_demo	Religion
6	Age_demo	Age
7	School_demo	Secondary school
8	P_income_demo	Parents income
9	Father_demo	Fathers' profession
10	Mother_demo	Mothers' profession
11	LP01	Loan agreement was written too long
12	LP02	Loan agreement was difficult to understand
13	LP03	Time given not enough
14	LP04	Language more easily understood
15	LP05	Content is not clear
16	LP06	Largely depended on briefing
17	AW01	Newspapers
18	AW02	Television
19	AW03	Website
20	AW04	Radio
21	PQ01	Selection of the place to stay
22	PQ02	Job options.
23	PQ03	When to get married
24	PQ04	When to buy my first car
25	PQ05	When to have my first Child
26	PQ06	Buying a house
27	PQ07	Money I will contribute to my parents
28	PI01	Find any job to pay loan
29	PI02	Make regular payments to reduce the debt
30	PI03	Save from the loan while studying

31	PI04	Parents' experiences with other loans
32	PI05	Importance of making loan payment
33	PI06	To avoid problems in the future
34	PI07	To avoid burdening on parents
35	AT01	Repayment will help other students
36	AT02	Repayment is my obligation
37	AT03	I have to make an effort to make repayments
38	AT04	NHEFC can trace me to collect the loan
39	AT05	There are legal penalties for non-repayment
40	AT06	Not easy to repay the loan
41	AT07	In-charge by commercial bank
42	AT07	Government help to get better salaries
43	IR01	My priority
44	IR02	I will find any job after I graduated
45	IR03	My parents will make repayment, and I will continue later
46	IR04	I will save part of the loan during study
47	IR05	Make regular payments through salary deduction
48	IR06	My culture norms says debt must be repaid
49	IR07	Belief in religion says debt must be repaid
50	IR08	Make regular payments to reduce the debt
51	IR09	Make regular payments to avoid problems in the future
52	IR010	Make regular payments to avoid burdening my parents

<b>Constructs Code</b>	<b>Construct Name</b>	<b>Constructs phrase used for this study</b>
demo	Demographic	
LP	Perceptions towards loan agreement	Perceived Agreement
AW	Awareness of loan repayment created by media	Media Awareness
PQ	Perceptions that loan repayment will affect quality of life after graduation	Perceived Quality
PI	Parental Influence	Parental Influence
AT	Students' Attitude towards Loan repayment	Students' Attitude
IR	Intention to Repay Loans	Intention

## Appendix 8: Missing Value Analysis

Result Variable	N of Replaced Missing Values		Case Number of Non-Missing Values		N of Valid Cases		Creating Function	
	First	Last	First	Last	First	Last	First	Last
LP01_1			1	431	431			SMEAN(LP01)
LP02_1	2		1	431	431			SMEAN(LP02)
LP03_1	3		1	431	431			SMEAN(LP03)
LP04_1	17		1	431	431			SMEAN(LP04)
AW01_1			1	431	431			SMEAN(AW01)
AW02_1			1	431	431			SMEAN(AW02)
AW03_1			1	431	431			SMEAN(AW03)
AW04_1	2		1	431	431			SMEAN(AW04)
PQ01_1			1	431	431			SMEAN(PQ01)
PQ02_1			1	431	431			SMEAN(PQ02)
PQ03_1	1		1	431	431			SMEAN(PQ03)
PQ04_1	1		1	431	431			SMEAN(PQ04)
PQ05_1	1		1	431	431			SMEAN(PQ05)
PQ06_1			1	431	431			SMEAN(PQ06)
PQ07_1			1	431	431			SMEAN(PQ07)
PI01_1	4		1	431	431			SMEAN(PI01)
PI02_1	2		1	431	431			SMEAN(PI02)
PI05_1	2		1	431	431			SMEAN(PI05)
PI06_1	3		1	431	431			SMEAN(PI06)
AT01_1	2		1	431	431			SMEAN(AT01)
AT02_1	3		1	431	431			SMEAN(AT02)
AT03_1	10		1	431	431			SMEAN(AT03)



AT04_1	2	1	431	431	SMEAN(AT04)
AT05_1	4	1	431	431	SMEAN(AT05)
IR01_1	1	1	431	431	SMEAN(IR01)
IR06_1	5	1	431	431	SMEAN(IR06)
IR07_1	1	1	431	431	SMEAN(IR07)
IR08_1	1	1	431	431	SMEAN(IR08)
IR09_1	3	1	431	431	SMEAN(IR09)
IR10_1	3	1	431	431	SMEAN(IR10)

## Appendix 9: Exploratory Factor Analysis (Main Survey)

### KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.855
Bartlett's Test of Sphericity	Approx. Chi-Square	5429.611
	df	351
	Sig.	.000

### Rotated Component Matrix(a)

	Component					
	1	2	3	4	5	6
LP01_1						.748
LP02_1						.789
LP03_1						.671
LP04_1						.654
AW01_1				.757		
AW02_1				.833		
AW03_1				.724		
AW04_1				.706		
PQ01_1	.655					
PQ02_1	.753					
PQ03_1	.842					
PQ04_1	.847					
PQ05_1	.797					
PQ06_1	.847					
PQ07_1	.698					
PI01_1			.611			
PI02_1			.793			
PI05_1			.749			
PI06_1			.739			
AT01_1		.722				
AT02_1		.766				
AT03_1		.742				
AT04_1		.719				
AT05_1		.755				
IR06_1					.782	
IR07_1					.769	
IR08_1					.788	

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 a. Rotation converged in 6 iterations.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.053	22.420	22.420	6.053	22.420	22.420	4.454	16.496	16.496
2	4.583	16.973	39.393	4.583	16.973	39.393	3.307	12.248	28.745
3	2.165	8.018	47.411	2.165	8.018	47.411	2.464	9.125	37.869
4	2.023	7.492	54.903	2.023	7.492	54.903	2.457	9.099	46.969
5	1.322	4.895	59.798	1.322	4.895	59.798	2.335	8.649	55.618
6	1.025	3.794	63.593	1.025	3.794	63.593	2.153	7.975	63.593
7	.869	3.219	66.812						
8	.822	3.044	69.856						
9	.770	2.851	72.706						
10	.696	2.578	75.285						
11	.674	2.495	77.779						
12	.655	2.425	80.204						
13	.620	2.297	82.501						
14	.528	1.955	84.457						
15	.476	1.763	86.219						
16	.462	1.713	87.932						
17	.418	1.548	89.480						
18	.385	1.427	90.907						
19	.368	1.363	92.270						
20	.330	1.221	93.491						
21	.304	1.125	94.615						
22	.295	1.093	95.708						
23	.281	1.040	96.748						
24	.262	.972	97.720						
25	.212	.785	98.505						
26	.208	.769	99.274						
27	.196	.726	100.000						

Extraction Method: Principal Component Analysis