

**Faculty of Business and Law**  
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**The role of Personality in the Career Choice Commitment of  
university students in Hong Kong**

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**the Degree of Doctor of Business Administration**  
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### **Statement of Originality**

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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May 2012

# Abstract

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## **Background**

Previous research including Reed et al (2004), Wang et al (2006), Nauta (2007) and Tang and Newmeyer (2008) indicate that personality is influential in the career choice decision-making process of university and high school students. In this research, the Five-Factor Model of Personality and the Theory of Planned Behaviour are used to examine the role of personality in affecting career choice commitment of university undergraduate students in Hong Kong.

## **Summary of research and model**

As the Theory of Planned Behaviour (TPB) (Ajzen, 1991) suggests, attitude triggers intention and intention shapes behaviour. The current project applies this theory to students' career choice behaviour and investigates personality as a factor that influences attitude towards career aspiration. Based on the TPB, attitudes to career impact on intention and lead students to perform those behavioural actions necessary to enter the career they have chosen. Personality is identified as an influential factor in influencing attitude towards career choice commitment.

In this study, intention is regarded as (and measured by) the career choice commitment. Under the TPB, each personality trait of a person under the Five-Factor Model of Personality (FFM) influences one's attitude toward career aspiration which triggers intention (career choice commitment). Adopting a quantitative research design, this study surveyed more than 280 undergraduate students in universities in Hong Kong by anonymous questionnaire and useful data were collected. Using quantitative method and statistical techniques to analyze the data, several hypotheses were tested to investigate relationship between personality traits and career

# Abstract

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choice commitment, finally some important results and findings were obtained in this study. The most important findings are that the personality trait of a person is very fundamental to determine one's career choice commitment because four of the five personality traits namely extraversion, neuroticism, openness and conscientiousness influence one's attitude towards career goal very much, and attitude will cause intention (career choice commitment) logically. Attitude is also found to mediate the relationship between conscientiousness and career choice commitment. Therefore, understanding on their personality proved to be very important to university students for career planning and development.

## **Value and significance of the research**

This study provides university curriculum planners with useful information to inform curriculum design for more compulsory academic courses good for students' self-understanding. It also provides career counselors with better understanding of characteristics of students (with strength in what personality trait) for a better and more tailor-made career planning, guidance and development services.

This study also makes a theoretical contribution by applying the TPB to career choice concept and exploring the link between personality and attitude at the same time in this context. Very little research has applied the TPB to the specific subject of career choice commitment and also simultaneously investigated the relationship between personality and career choice commitment before.

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## **Chapter 1: INTRODUCTION**

This chapter presents an overview of the dissertation. It contains five parts. Part 1 outlines the research background and objectives and introduces the organization of this dissertation. Part 2 presents the core research area and the major research gap through a literature review. Part 3 presents the research methodology, research questions, the models, hypotheses and design that are used. Part 4 highlights the results and findings of the study. Finally, Part 5 summarizes the discussion and implications of the findings of the study and introduces the potential value and significance of the research.

### **1.1 Background and objectives**

In every society, university students are the future leaders who will strive for the betterment and advancement of society. To understand what factors will most influence their career choice is important for curriculum planners in universities to design appropriate educational programmes to cater for students' diverse needs. It is also crucial for student affairs professionals to provide suitable support services, including career guidance and counselling, in order to assist the students in their career planning and development process through graduation.

The objective of this research study is to investigate the relationship between university students' personality traits and their attitudes towards career goals, as well as

the relationship between their personality traits and the career choice commitment process and the degree to which they undertake this.

Previous research (Nauta 2007; Reed et al. 2004; Tang & Newmeyer 2008; Wang et al. 2006) indicates that Personality is influential in the career choice decision-making process of university and high school students. In this research, the personality traits within the context of Five-Factor Model of Personality are applied in the framework of Theory of Planned Behaviour (TPB) to examine the role of personality in influencing the career choice commitment of university undergraduate students in Hong Kong under the research question: **“The role of Personality in the Career Choice Commitment of university students in Hong Kong”**.

## **1.2 Organization of the dissertation**

This dissertation consists of five chapters. Chapter 1 provides an overview of the whole dissertation with the gist of the whole research study and its objectives, core issues involved and the organization and sequence of the chapters for elaborations and explanations. Chapter 2 introduces a comprehensive and critical literature review, identifies major theoretical framework and model on which this study is based. Relevant hypotheses for investigating correlations among variables in this study are introduced and justified and related research gap is identified, followed by some suggestions for future research areas. Chapter 3 outlines the research methodology and design, and the instruments and procedures of how this study is conducted. Considerations on the questionnaire design, data collection processes, ethical

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consideration, data analysis methods, as well as ways to enhance the validity and reliability of the study are elaborated and justified in this chapter. Chapter 4 presents the results and findings of this study in details. Descriptive statistics on respondents' profile, the major findings on correlations among independent and dependent variables are explained using various analytical methods with verifications. Finally, Chapter 5 provides a critical discussion on all the findings and sheds useful light on the important implications on related theories and practices on the related professions under the subject area of this research study.

### **1.3 Core Research area and major research gaps**

#### **1.3.1 Career Choice and Career Choice Commitment (CCC)**

Some literature clearly explains the importance of an appropriate match between career choice and the personality of a person. Ajzen and Fishbein (1980) suggest that a good career and personality match is an important step in building a satisfying and fruitful career. In the new and ever-developing work world that now includes such careers and vocational fields as the digital entertainment industry, multi-media and other social network-related business as well as traditional industries, such as the accountancy, engineering, banking and finance and civil service careers (just to name a few), this notion is still valid and applicable to university students and graduates.

In the vocational realm, commitment to a career choice encompasses a clear sense of one's occupational preference, along with a firm attachment to a particular vocational goal (Jordaan & Heyde 1979; Super 1957). In their maintenance of high levels of

commitment to career choices, individuals would be expected to develop specific plans for implementing their objectives and, also, would be prepared to overcome obstacles to achieve their choices (Harren 1979; Jordaan 1974).

The strong level of attachment or “subjective conviction” (Harren 1979, p. 122) about one’s vocational choices implied in the commitment construct presents a somewhat different perspective in comparison with the current definition of career decidedness. While career decidedness refers to an individual’s level of certainty about career choices, the notion of commitment to career choices captures a position that includes certainty as well as self-confidence about one’s choices, a positive sense of one’s vocational future, and an awareness of potential obstacles. In effect, the commitment to career choices construct posited here encompasses many elements of career decidedness (e.g., certainty about one’s career choices), but is more comprehensive in that it incorporates aspects that are not present in current definitions of career decidedness.

### **1.3.2 Research Gaps**

Hence, this research study aims to investigate the relationship between one’s Personality, Attitude, Subjective Norm, perceived Behavioural control, and (Behavioural) Intention, which is regarded as one’s career choice commitment. In other words, the study will examine how an undergraduate university student’s personality influences his or her career choice commitment by means of Personality

affecting Attitude (towards career goal), which triggers his/her Intention (career choice commitment) and leads to Behaviour (career exploration behaviours, as well as entering into a career field). This is within the framework and reasoning of the Theory of Planned Behaviour (TPB), which is the contemporary version of the Theory of Reasoned Action (TRA). Very few previous studies have investigated exactly how the TPB, together with the personality traits in the Five-Factor Model of Personality (FFM), relate to and explain their relationship with the career choice commitment of university students. This research study aims to achieve this purpose.

A closer look at the literature relating to FFM focuses on the relationship between Personality and career exploration, but not between Personality and career choice that people make or to which they commit. Moreover, while there is a substantial amount of literature on similar topics concerning working people, only a few studies specifically target university students or graduating university students. Thus, a research study that focuses particularly on the relationship between university students' personality and their career choice commitment will be useful and important for relevant educationalists and student affairs professionals in universities; they are the ones who provide support services to the students who are puzzling about which career choice to make upon their graduation from university.

## **1.4 The Research Question**

The research question for this study is **“The role of Personality in the Career Choice Commitment of university students in Hong Kong”**.

### **1.4.1 Research sub-questions**

Incorporated into this main research question are three research sub-questions: **(1)** What is the effect of Personality in affecting Attitude, which will in turn influence the Intention (career choice commitment) of university students in Hong Kong? **(2)** What is the effect of each of the five personality traits (under the FFM) in influencing the career choice commitment of university students in Hong Kong?; and **(3)** Does any element under the TPB have a mediating effect on any one of the personality trait(s) (under the FFM) in influencing the career choice commitment of university students in Hong Kong?

### **1.4.2 Research Design**

It is believed that, with a review of relevant literature, an appropriate research design and method, and the testing of useful hypotheses by appropriate quantitative statistical means, such as the linear regression analysis and Sobel Testing, answers will be found to address the above research questions and to achieve the research purpose. More details and elaboration will be provided in Chapter 3 of the dissertation.

### **1.4.2.1 The Theory of Reasoned Action and the Theory of Planned Behaviour**

For many years, the Theory of Reasoned Action (TRA) (Sheppard et al. 1988) has been a highly predictive and persuasive theory with frequent application, which suggests that there must be a reason for any action taken by people, as people's intention leads to action. The more contemporary version of TRA, the Theory of Planned Behaviour, is a theory about the link between attitudes and behaviour. It was proposed by Icek Ajzen (1988, 1991) as an extension of the Theory of Reasoned Action. It has also become one of the most predictive persuasion theories and has been applied to studies of the relations between beliefs, attitudes, behavioural intentions, and behaviours in various fields.

The theory states that Personal Attitude, Subjective Norms, and Perceived Behavioural Control together shape an individual's behavioural intentions and behaviours. It is useful to provide an elaboration of each of these concepts before the examination of their inter-relationship is conducted later in this dissertation.

Behavioural Beliefs or Attitude generally concerns the favorable or unfavorable consequences that affect behaviour. "Since the attributes that come to be linked to the behavior are already valued positively or negatively, we automatically and simultaneously acquire an attitude toward the behavior." (p.191) (Ajzen 1991). Thus Attitude refers to "the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question." (p.188) (Ajzen, 1991)



Normative Beliefs or Subjective Norms refers to an individual's "perceived social pressure to perform or not to perform the behavior" (p.188), it is also concerned with a person's perception on the "likelihood that important referent individuals or groups approve or disapprove of performing a given behavior." (p. 195) (Ajzen 1991)

Perceived behavioural control, in Ajzen's words, is "an individual's perceived ease or difficulty of performing the behavior." (p.188) (Ajzen 1991) It is assumed that Perceived Behavioural Control is determined by the total set of accessible control beliefs. With this understanding of the elements under TPB framework, there will be an integration of adding personality traits into the TPB model and an application of TPB into the career choice commitment concept simultaneously in this study.

#### **1.4.2.2 Application of the Theory of Planned Behaviour in the research study**

According to the TPB (Ajzen 1991), Attitude triggers Intention and Intention shapes Behaviour. This study applies this theory to students' career choice behaviour and investigates Personality as a factor that influences Attitude towards career aspiration. Based on TPB, attitudes to career impact on intention and lead students to perform those behavioural actions necessary to enter the career they have chosen. The reason for this is that Personality is identified as an influential factor in determining Attitude towards career; this follows research indicating that Personality is an important factor that influences college students' perception and thinking in the whole process of their career choice commitment (Wang et al. 2006).

In the context of this study, intention is regarded as (measured by) career choice commitment. By examining the relationship between personality and the student's career choice commitment, this study will provide useful information for career-development processes both in terms of curriculum and in career counseling.

#### **1.4.2.3 Five Factor Model of Personality (FFM)**

The Five-Factor Model (FFM) of Personality (Goldberg 1990; McCrae & Costa 1992, 1996, 1999), which is an empirically validated, taxonomic model for personality traits, was a theoretical model for using personality in predicting certain aspects of career development and vocational behaviour. Under the FFM, the five personality dimensions are openness, conscientiousness, extraversion, agreeableness and neuroticism.

The FFM suggests that these five factors foster specific career-related behaviours including self-exploration, career information seeking, stress regarding career exploration, and career search self-efficacy (Reed, Bruch & Haase 2004).

#### **1.4.2.4 Summary of research and the model of the hypotheses**

As the Theory of Reasoned Action (TRA) (Sheppard et al. 1988) or the more contemporary version of TRA, the Theory of Planned Behaviour (TPB) (Ajzen 1991) suggests, Attitude triggers intention and Intention shapes Behaviour. This project applies this theory to students' career choice behaviour and investigates Personality as a

factor that influences Attitude towards career aspiration. Based on TPB, Attitudes to career impact on Intention and lead students to perform those behavioural actions necessary to enter the career they have chosen. Personality has been identified as an influential factor in determining an Attitude towards a career; this follows research indicating that Personality is an important factor which influences college students' perception and thinking in the whole process of their career choice commitment (Wang et al. 2006).

In the context of this study, intention is regarded as (measured by) career choice commitment. By examining the relationship between Personality and the student's career choice commitment, this study will provide useful information for career-development processes both in terms of curriculum and in career counseling.

Based on the TPB, each personality trait of a person under the Five-Factor Model of Personality (FFM) influences one's Attitude toward career aspiration which triggers Intention (career choice commitment); hence, there are several hypotheses to be tested when describing the relationship between personality traits and Intention (career choice commitment) in this study.

Thus, based on the above reasoning, the overall model is illustrated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \varepsilon \quad ; \text{ where}$$

Y is the score on Vocational Exploration and Commitment (VEC),

$X_1$  is the score on Extraversion,

$X_2$  is the score on Agreeableness,

$X_3$  is the score on Conscientiousness,

$X_4$  is the score on Neuroticism,

$X_5$  is the score on Openness,

$X_6$  is the score on Subjective Norm,

$X_7$  is the score on Attitude,

$X_8$  is the score on Perceived Behavioural Control, and

$\varepsilon$  is the corresponding random disturbance term in the regression equation.

#### 1.4.2.5 Hypotheses

The following five hypotheses are put forward according to the understanding of each of the five personality traits, as elaborated by Goldberg (1990) and Costa and McCrae (1992):

<b>Hypothesis 1a</b>	There is a positive relationship between “extraversion” and career choice commitment.
<b>Hypothesis 1b</b>	There is a negative relationship between “neuroticism” and career choice commitment.
<b>Hypothesis 1c</b>	There is a positive relationship between “openness” and career choice commitment.
<b>Hypothesis 1d</b>	There is a positive relationship between “conscientiousness” and career choice commitment.
<b>Hypothesis 1e</b>	There is a positive relationship between “agreeableness” and career choice commitment.

Given that intention is regarded and measured by career choice commitment in the present study, it is based on the reasoning and logical framework of TPB that the following four additional hypotheses (**H2** to **H5**) are formulated:

<b>Hypothesis 2</b>	“Attitude” is positively related to career choice commitment.
<b>Hypothesis 3</b>	“Subjective norm” is negatively related to career choice commitment.
<b>Hypothesis 4</b>	“Perceived behavioural control” is positively related to career choice commitment.
<b>Hypothesis 5</b>	“Attitude” mediates “Conscientiousness” relationship with career choice commitment.

#### 1.4.2.6 Research Design

Using quantitative methodology, this study investigates the links between Personality, Attitude and career choice commitment through an anonymous questionnaire distributed to undergraduate university students.

Descriptive statistics are used to present the demographic information. Regression analysis and Sobel Testing are used to test the relationships between the personality of university students and their career choice commitment.

## **1.5 Potential value and significance of the research**

This study will provide university curriculum planners and career counselors with useful information for informing curriculum design and career planning and development. This study will also make a theoretical contribution by applying the TPB to career choice and exploring the link between Personality and Attitude in this context. Very little research has applied the TPB to the specific subject of career choice commitment and, also, simultaneously investigated the relationship between Personality and career choice commitment.

### **1.5.1 Summary of the study results and findings**

The findings and results of this study have shed light on the current theoretical framework or theories in the related areas, the implications for the policies concerning curriculum planning in the university management, as well as providing insights for student affairs professionals, especially career counsellors who provide career guidance and counselling services to students throughout the process of their entry into and their graduation from university. The results and finds are summarized as follows.

It is found that personality is identified as an influential factor in determining attitude towards career; this follows and is consistent with the research indicating that personality is an important factor that influences college students' perception and thinking in the whole process of their career choice commitment (Wang et al. 2006). And this important finding has shed special light on the relevance and applicability of

adding one more element, namely personality into the original three elements / variables to predict intention and behaviour under the TPB model.

The most important findings are that the personality trait of a person is very fundamental to determine one's career choice commitment because four of the five personality traits namely extraversion, neuroticism, openness and conscientiousness influence one's attitude towards career goal very much, and attitude will trigger career choice commitment (intention) logically under the TPB. It is also found that attitude mediates the positive relationship between one personality trait namely conscientiousness and career choice commitment. Therefore, understanding on their personality proved to be very important to university students for committing to a career choice.

## **1.6 Summary on the discussion of implications on theory and practice**

The findings of this study bear particular relevance and implications to the beginning stage of career planning and development of a person as one's attitude towards making a career planning and career choice was proved empirically to have a significant impact on the degree of commitment in making career choice (Norman and Bonnett, 1995 and Giles and Rea, 1999) and actions taken in the subsequent stages in the realization of one's chosen goal.

### **1.6.1 Implications on academic side – curriculum planning**

A better understanding of the relationship between students' personality traits and their behaviour in, approach toward and level or degree in setting their career goal and making a commitment to their career choice, will give the academic staff in universities more information and a better basis for designing more tailor-made academic courses for undergraduate students. Curriculum planners are in a better position to offer and strengthen academic courses in order to facilitate students' self-understanding via earning credit points, for example with core or compulsory courses/modules/subjects for every undergraduate students, or electives courses/modules/subjects that are offered for the same purpose.

### **1.6.2 Implications on non-academic side – career planning and development programmes and services**

With better information and understanding of the importance of a good match between students' personality and their career choices, non-academic staff in universities can provide more effective and targeted career planning and development programmes and career counseling services, in order to assist students in their career development process. All the above services and career development programmes are important and beneficial to students as this is about the active promotion of career information-seeking behaviour through a variety of interventions which are supported and acknowledged by Aiken and Johnston (1973), Prediger and Noeth (1979), and Thoresen, Krumboltz and van Huirst (1967).



### **1.6.3 Implications on theory**

On the contribution to the existing theoretical framework on career choice commitment, both FFM and TPB model are applied at the same time. This study applies the TPB theory to students' career choice behaviour and investigates Personality as an additional factor that influences Attitude towards career aspiration under the TPB model. This provides a new way of looking at linkage and relationship among personality, elements of TPB and career choice commitment.

### **1.6.4. Implications on practice**

To provide guidance to students from the self-understanding stage (the beginning stage) to the consolidation stage, career counsellor can assess what the student can do according to the information on the relationship between Personality Trait and Career Choice Commitment, and on the relationship between Attitude and Career Goals and their suitable career exploration activities of certain personalities. Finally, the counsellor will assess what follow up coaching, career information needed, workplace skill training and preparation would be most suitable to be applied to a particular student. In fact, this career planning and guidance process is very important and beneficial to students because according to Goffin, Rothstein and Johnston (1996), years of research has shown that a good career and personality match does have a positive impact on job performance.

## 1.7 Conclusion

This research study is one of the first few studies that investigate the relationship between university students' personality traits and their attitudes towards career goals, as well as the relationship between their personality traits and the career choice commitment process and the degree to which they do this.

The results and findings of this study (1) shed light on a new way of looking at the current theoretical framework or theories in the related areas; (2) articulate important implications for the curriculum planning policies of university management and calls for more self-understanding compulsory courses for undergraduate students and a better synergy of academic and non-academic unit collaborations within university; and (3) provide insights into the practice of student affairs professionals, particularly career counsellors who provide career guidance and counselling services to students throughout the process from their entry to their graduation from university.

Based on the successful conduct of the study and on the results from testing the hypotheses by valid quantitative research methodology in this study, the role of Personality in influencing students' Career Choice Commitment has been clarified and the answers are able to address the research questions in this study.

## **Chapter 2: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter consists of four sections. The first section relates to Career Choice Commitment, the second section relates to Theory of Planned Behaviour (TPB), the third section relates to the influence of personality from the Five Factor Model (FFM) angle in TPB and in career choice commitment, and the fourth section argues why an additional personality component should be included as another variable in the TPB model. A brief summary will be provided at the end of the chapter.

### **2.2 Career Choice and factors influencing Career Choice**

#### **2.2.1 Career Choice**

In every society, university students are the future leaders for the betterment and advancement of society. When universities design education programmes that will cater for their society's needs, an understanding of what factors will most influence students' career choice is important. This is also crucial for student affairs professionals in providing suitable support services including career guidance and counselling, especially for the university graduating students.

It is generally accepted that career choice making is important. According to Harren (1979), making a career choice is a very essential developmental task for young people at their late adolescence and early adulthood period. Making a good career

choice is also critical for university students who will enter the job markets after graduation. In the context of this research study that investigates the meaning of making career choices, Blustein, Ellis and Devenis (1989) define commitment to a career choice as the point where an individual has a clear sense of his or her occupational preferences along with firm attachment to a specific set of career goals, such as becoming a teacher, a doctor, an accountant or an engineer, etc.

In the past few decades, there has been ongoing debate about what factors influence the career choice commitment of university students. According to the literature, personality is one factor that is commonly recognized by researchers and psychologists as being influential in the process undertaken by university students in making a commitment in their career choice. This will be elaborated in the next part in this section.

### **2.2.2 Factors affecting Career Choice**

Previous literature showed that a number of factors, such as career interest, occupational environment, personality and self-efficacy, are commonly recognized as being influential factors in the career choice-making process for people of the age group to which university students belong. The following review on literature illustrates on some influential factors affecting students' career choices.

According to Lent, Brown and Hackett (1994), the three key influences on individuals' career choices are their career interest, self-efficacy expectations and

personality traits. Nauta (2007) noted that these variables may theoretically inhibit or facilitate tendencies to engage in career exploration with the understanding that assessments of these variables are most commonly used to assist people to identify career choices that would fit their personal characteristics (Krumboltz & Worthington 1999).

Holland's (1959) Theory of Vocational Choice suggests that there are various factors affecting people's vocational choice; these factors include the relationship between the occupational environment, the person himself/herself and his/her development, and the interactions of the person and the vocational environments. Holland (1959) points out that "a person's knowledge of occupational classes sets loose limits on his range of choice" (p.40) and this theory was one of the earliest to describe the relationship between a person's interest, their personal orientation and the vocational environments when making a vocational choice.

However, from the scope of this theory, it seems that an element in the career choice making process, namely the person's expectation about his or her ability to succeed at tasks (Bandura 1986) which is a self-efficacy belief, had not been elaborated at that stage. In the context of this research study, the Theory of Planned Behaviour (TPB) is included for the purpose of achieving an integrated investigation of relationship between various factors and career choice, and, hence, the three concepts under TPB, namely Perceived Behavioural Control, Subjective Norm and Attitude are included as factors having a relationship with career choice. As these three concepts cover the nature, broader meaning and implication of self-efficacy belief and career

interest, they are chosen, instead of self-efficacy belief and career interest, as useful factors (in addition to personality) in the investigation.

### **2.2.3 Theoretical Framework on Career Choice built from related literature**

A summary of related literature on this subject, namely the factors affecting career choice, reveals that personality is commonly recognized by researchers and psychologists as being influential in the process. As part of the process of reviewing the relevant literature, several important articles in the following paragraphs are chosen for review to provide relevant theoretical frameworks for analyses of factors and backgrounds. The ultimate objective of this is to describe the actual foundations and motivators for people's career (vocational) choice and commitment.

Among the chosen literatures which are fundamental in nature in laying the foundation for understanding the concept of career (or vocational) choice, four articles are reviewed for a synthesis of analysis. These articles include: "A theory of vocational choice" (Holland 1959), "Self-esteem as the moderator of the relationship between self-perceived abilities and vocational choice" (Korman 1967), "Social foundations of thought and action: a social cognitive theory" (Bandura 1986), and Self Efficacy (Bandura 1977 and 1997). The commonality of these four articles is that they describe and explain various frameworks and a number of the factors, such as personality, career interest, self-efficacy and the occupational environment, that are commonly recognized

as being fundamental and influential factors in the career choice-making process for people of the age group of university students.

To supplement the above-elaborated literatures, three other articles are reviewed to examine the perspective on what factors, and in whatever theoretical framework, will influence the career choice and commitment (intention) on a certain career field of a person. The first article is “The developmental perspective on vocational behaviour: a review of theory and research” (Jepsen 1984), which provides a further perspective on the notion of vocational behaviour and choice, especially from a developmental viewpoint in order to explain what influences people’s career choice; this may be regarded as an extension of the perspective that is based on Holland’s vocational choice theory.

The second article is “How well can the Theory of Planned Behaviour account for occupational intentions?” (Arnold, Loan-Clarke, Coombs, Wilkinson, Park, and Preston, 2006), it attempts to use the TPB to explain the reasons for and causes of occupational intentions. This article addressed the TPB as well as the vocational intentions, decisions and behaviour and found that there is positive relationship among the elements under TPB with career choice commitment (occupational intention). The third article in this group is “Predicting career information-seeking behaviour of school pupils using the theory of planned behaviour” (Millar & Shevlin 2003), which again attempts to apply the TPB to predict the career information-seeking behaviour of students. As this article covers career information-seeking behaviour, it provides a good reference for

more general career exploration behaviours, including career choice and preference issues; thus it also addresses both the TPB and career behaviour.

The above articles provide the key framework and analyses on influential factors affecting university students' career choices. Also, from a review of the above-mentioned literatures, it is noted that, having made the effort to engage in career exploration activities, university students can make an informed career choice upon graduation.

#### **2.2.4 Personality and Intention as the focus of this study**

In the context of this study, intention is regarded as (measured by) the career choice commitment. By examining the relationship between personality and students' career choice commitment, this study provides useful information for career-development processes both in terms of curriculum and in career counseling.

#### **Research Question**

The research question in this study is: **“What is the role of Personality in the Career Choice Commitment of university students in Hong Kong?”**

There are three research sub-questions relating to the main research question: **(1)** What is the effect of Personality in affecting Attitude which will in turn influence the



Intention (career choice commitment) of university students in Hong Kong? **(2)** What is the effect of each of the five personality traits (under the FFM) in influencing the career choice commitment of university students in Hong Kong? **(3)** Does any variable of TPB have a mediating effect on any personality trait (under the FFM) in influencing career choice commitment of university students in Hong Kong?

### **2.3 The Theory of Planned Behaviour (TPB)**

The second section of the literature review focuses on the Theory of Planned Behaviour (TPB), starting with an introduction to the TPB and a justification for its utility in understanding career choice.

As the Theory of Reasoned Action (Sheppard, Hartwick & Warshaw 1988) or the more contemporary version of TRA, the Theory of Planned Behaviour (TPB) (Ajzen, 1991), suggests, Attitude triggers Intention and Intention shapes Behaviour. Putting this theory into the context of the research question, it appears that different factors help constitute the attitude of students, and attitude subconsciously triggers the student's intention to pursue their aspiration; subsequently, the students perform those behavioural actions to pursue their career choice with commitment.

This research applies this theory (TPB) to students' career choice behaviour and investigates personality as a factor that influences attitude towards career aspiration. However, a review of key literature shows that only a very few studies have addressed exactly how personality in particular influences the career choice commitment of

university students in Hong Kong and their entrance to certain career fields upon graduation. In a further exploration of the phenomenon, this study aims to investigate this area with more depth in the context of Hong Kong with a critical literature review being the first step.

The TPB of Ajzen (1991) is a theory explaining how human actions can be deliberated by manipulating the relationship between attitudes and behaviour. TPB is the extension of the Theory of Reasoned Action introduced by Ajzen and Fishbein (1975, 1980) and it shows that behaviour is not totally voluntary, but can be guided by three kinds of considerations, namely: Behavioural Beliefs, Normative Beliefs and Control Beliefs.

This study aims to examine the research problem of the role of personality as a commonly recognized influential factor in influencing the career choice commitment of university students in Hong Kong by using the TPB model. Based on the TPB, attitudes to career impact on intention and lead students to perform those behavioural actions necessary to enter the career they have chosen. Personality is thus identified as an influential factor in determining attitudes towards careers. This supports the research that indicates that personality is an important factor that influences college (university) students' perception and thinking in the whole process of their career choice commitment (Wang et al. 2006).

### **2.3.1 Behavioural Beliefs / Attitude**

Behavioural Beliefs or Attitude generally concerns the favorable or unfavorable consequences that affect behaviour. “Since the attributes that come to be linked to the behavior are already valued positively or negatively, we automatically and simultaneously acquire an attitude toward the behavior.” (p.191) In this connection, as a person, we learn to “favor behaviors we believe have largely desirable consequences and we form unfavorable attitudes toward behaviors we associate with mostly undesirable consequences” (p.191) Thus, Attitude refers to “the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question.” (p.188) (Ajzen, 1991)

### **2.3.2 Normative Beliefs / Subjective Norms**

Normative Beliefs or Subjective Norms refers to an individual’s “perceived social pressure to perform or not to perform the behavior” (p.188), it is also concerned with a person’s perception on the “likelihood that important referent individuals or groups approve or disapprove of performing a given behavior.” (p. 195) (Ajzen 1991)

### **2.3.3 Control Beliefs / Perceived Behavioural Control**

Control Beliefs is the surrounding setting that facilitates or impedes the behaviour in question. Perceived behavioural control, in Ajzen’s words, is “an individual’s perceived ease or difficulty of performing the behavior.” (p.188) (Ajzen 1991) It is assumed that perceived behavioural control is determined by the total set of accessible

control beliefs as it is assumed “to reflect past experience as well as anticipated impediments and obstacles.” (p.188) (Ajzen, 1991)

### **2.3.4 Relationship amongst the three core TPB elements**

In short, the TPB states that personal attitude, subjective norms, and perceived behavioural control, together shape an individual's behavioural intentions and behaviours. The theory has been one of the most predictive persuasion theories so far that has been applied to studies of the relations among beliefs, attitudes, behavioural intentions and behaviours in various fields. A general understanding on each of the above concepts is useful before examination of their inter-relationship is conducted later in this chapter.

According to the TPB (Ajzen, 1991), attitude triggers intention and intention shapes behaviour. This research applies this particular theory to students' career choice behaviour and investigates personality as a factor that influences attitude towards career aspirations. Based on the TPB, attitudes to career impact on intention and lead students to perform those behavioural actions necessary to enter the career they have chosen. Personality is identified in this study as an influential factor, or the root factor in determining an attitude towards career, indicating that personality is an important factor which influences college students' perception and thinking in the whole process of their career choice commitment (Wang et al. 2006). Thus, personality or the Five-Factor Model of Personality (FFM) is applied by this research into the framework and

reasoning of the TPB as one additional factor that will trigger intention (defined here as career choice commitment) which will lead to behaviour according to the same logic as with other applications of the TPB.

### **2.3.5 TPB application into the research question**

The TPB has formed the basis for further investigation in this literature review process of examining what motivates or triggers university students to make their career choice and career decisions upon graduation,. This study asserts that, according to the TPB, attitude triggers intention which will, in turn, lead to behaviour. As elaborated above, different factors help constitute the attitude and aspiration of the student, and this leads the student's intention to pursue career aspiration; the student's behaviour then is to make a career choice by entering into a career. As it is the most basic and fundamental theory which provides the basis for explanation and application in this research study, the TPB model and framework inform the parent literature.

A review of the article entitled "Undergraduate intentions to apply to the Northern Ireland Civil Service: the application of a Theory of Planned Behaviour model" (Cammock, 2009) shows that the TPB was applied in an attempt to investigate and account for the undergraduate students' career intentions in applying for the civil service in Northern Ireland. This is a particularly relevant and useful reference literature as it attempts to apply the TPB (an extended TPB model, viz ETPB, which incorporates a measure of self-efficacy) to explore the attitude/-behaviour relationship

and, at the same time, addresses the issue of intention in choosing a career that is, in the civil service of Northern Ireland. Therefore, the implication and results found in this article provide a reference base as with other literatures.

The literature on TPB, as elaborated above, is fundamental (like a parent literature) as it provides the most basic foundation behind the reasoning for conducting a research study of this kind. The theories and findings from various subsequent research studies of this nature are built upon the parent literature. The reason why the TPB theoretical framework has been chosen as the key fundamental literature is mainly due to the fact that it is a frequently applied theoretical and reasoning model for explaining human behaviour and actions, with substantial years of existence and validated research findings.

In addition, some intermediate literatures which are based on the parent literature of the main framework as explained above, were reviewed according to two main perspectives, namely the psychological and sociological perspectives with an view to getting even better understanding on the topic. The Five-factor Model of Personality and Career Exploration (Goldberg 1990; Nauta 2007; Reed, Bruch & Haase 2004) provides perspectives that serve as the framework for intermediate literatures belonging to the psychological school, whereas in parallel, under the sociological school, the Social Cognitive Analysis (Blustein, Ellis & Devenis 1989; Lent, Brown & Hackett 1994, 2000) was put forward as a theoretical framework for research studies.

An in-depth study and review was conducted on several quantitative research studies (as immediate literatures) on topics that include, “The role of personality and career decision-making self-efficacy in the Career Choice Commitment of college students” (Wang et al. 2006), “Personality, career decision self-efficacy and commitment to the career choice process among Chinese graduate students” (Jin, Watkins & Yuen 2009), “A five-factor theory of personality” (McCrae & Costa 1999), “A model of career decision making for college students” (Harren 1979), “Factors Influencing high school students' career aspirations” (Tang, Pan & Newmeyer 2008), “The school-to-work transition from a learning theory perspective” (Krumboltz & Worthington 1999), and “The effects of message framing on college students' career decision making” (Tansley et al. 2007). From the findings of these research studies, there are common results and implications. One key message is that there is certainly a significant relationship between personality and career choice exploration and commitment, and between self-efficacy and career decision making behaviour or career choice commitment. A preliminary shape on the understanding of the whole topic (the relationship between personality and career choice commitment) emerged.

Having explained why the above literatures were chosen and the rationale of how the understanding on this subject was achieved from synthesizing different layers of literatures, a critical review was undertaken on the relationship between personality and career exploration and/or career choice commitment. In the coming section, some hypotheses will be put forward to describe the relationship between different personality traits and the career choice commitment of university students.

## **2.4 Five-Factor Model (FFM) of Personality and related hypotheses**

### **2.4.1 Five-Factor Model (FFM) of Personality**

After the Theory of Vocational Choice (Holland 1959) was introduced, in the subsequent forty years there has been literature that gives more emphasis to the relationship between personality and career exploration. For example, the study of Reed, Bruch & Haase (2004) investigates whether the dimensions of the Five-Factor Model (FFM) of Personality are related to specific career exploration. Later, Nauta (2007) applied factors like career interests and self-efficacy (using the Holland Hexagon or the Holland Occupational Themes of RIASEC: realistic, investigative, artistic, social, enterprising, and conventional types) and the big five personality dimensions (FFM) to predict students' career exploration behaviours.

The FFM groups together all personality trait variables into the above-named five factors of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness and suggests that these five factors foster specific career-related behaviours, including self-exploration, career information seeking, stress regarding career exploration, and career search self-efficacy (Reed, Bruch and Haase 2004).

A closer look at the literature concerning FFM reveals that among the large amount of literature on similar topics about such relationships of working people, only a few are specifically on university students or graduating university students. Thus, a research study particularly on the relationship between university students' personality and their career choice commitment will be useful and important for relevant



educationists and student affairs professionals in universities in providing support services to the students who are attempting to make career choices upon their graduation from university.

#### **2.4.2 The hypothesis made in this research study**

In the few decades before the 1990s, personality variables were used in the vocational psychology field. Until the 1990s, there was a theoretical model of using personality in predicting certain aspects of career development and vocational behaviour. This is the Five-Factor Model (FFM) of Personality (Goldberg 1990; McCrae & Costa, 1992, 1996, 1999), which is an empirically validated, taxonomic model for personality traits.

To answer the research questions by way of getting a relationship between independent variables including the five personality traits (under FFM), attitude, subjective norm and perceived behavioural control (under TPB) and the dependent variable career choice commitment, the quantitative research methodology will be adopted and the related hypotheses used in this research study will be tested.

### 2.4.2.1 Justifications for Hypotheses 1a to Hypotheses 1e

The following **hypotheses** are put forward. Hypotheses **1a** to **1e** are formulated according to the understanding of each of the five personality traits as elaborated by Goldberg (1990), Costa and McCrae (1992), and Reed et al (2004).

It is noted that the literature on the FFM (e.g. Piedmont, 1998) describes each of the five factors in terms of different facets of personality that define the high order factor. According to Reed, Bruch and Haase (2004), these definitions of each of the five factors of personality provide the basis of predictions relative to career exploration behaviours; and based on this, hypotheses on the relationship between the five personality traits and career choice commitment are made in this study as follows.

**H 1a:** Extraversion is a construct originally proposed by Eysenck (1990) that reflects an individual's sociability, which means that individuals who are high in extraversion are sociable, assertive, active and talkative. According to Reed et al (2004), individuals high in extraversion are stimulated by the company of others and are described as cheerful, energetic, and optimistic. But Costa and McCrae (1992) noted that introversion is not the opposite of extraversion but rather the relative absence of extraversion.

With these characteristics, it is reasonable to hypothesize that extraversion can be related to a greater degree of career information seeking as well as a higher career search self-efficacy. And in the case of self-efficacy, Reed et al (2004) pointed out that extraversion should be associated with more efficacious beliefs as the assertiveness,

social poise, and positive affect reflected should enhance one's beliefs in his/her ability to achieve various tasks and activities. To put this understanding into context of career information seeking, as Reed et al (2004) noted, the proactive and energetic nature of extraverts should facilitate their comfortableness in the types of social transactions necessary for acquiring career information; for example, seeking advice from faculty staff and career office staff about possible careers, talking with employers about information on specific occupations, etc.

There are also support for this hypothesis: Philip and Bruch (1988) and Hamer and Bruch (1997) found that shyness (that is negatively related to extraversion) (Briggs, 1988) was negatively related to the frequency of such information-seeking behaviours. Therefore, it is predicted that extraversion is positively related to both career search self-efficacy and the degree of career information seeking, and hence career choice commitment.

From the above understanding and based on FFM, "extraversion" mainly refers to an individual's sociability and pro-activeness. This contains traits such as positive effects, approaching activities with energy, sociability, assertiveness and talkativeness (Costa and McCrae, 1992). It is natural and reasonable that a person with an extravert personality will be more assertive and active socially and, thus, will be more involved in career information seeking and will demonstrate greater career search self-efficacy, as well as career choice commitment.

Therefore, **Hypothesis 1a** is that there is a positive relationship between “extraversion” and career choice commitment.

**H 1b:** As another personality trait, “neuroticism” under FFM, as Reed et al (2004) refers to the general tendency to experience negative feeling states such as fear, sadness, and anger-hostility; and individuals who are high in this trait are more prone to self-deprecation, are impulsive, and are less effective in coping with stress.

Costa and McCrae (1992) pointed out that neuroticism is a dimension of normal personality and is not assumed to reflect the presence of any type of psychopathology. Thus, it is hypothesized that neuroticism should be related to the exploration variables of career search self-efficacy and stress regarding career exploration. Solberg et al (1994) defined career search self-efficacy as an individual’s expectations regarding his/her ability to successfully engage in various career exploration and job search activities.

Based on this definition, Reed et al (2004) pointed out that it appears likely that higher neuroticism would be associated with lower self-efficacy as the negative affect and feelings of vulnerability indicative of neuroticism should lead to the belief that an individual is less capable of performing various exploration tasks and activities. Therefore, it was predicted that neuroticism would be negatively related to career search self-efficacy, and hence to career choice commitment as well.

There is also support from Jordaan (1963) on this hypothesis especially in the process of career exploration leading to a person's career choice commitment because the career exploration process can be very stressful as it may elicit difficult questions and concerns about one's self and the future. Based on such an experience in the process, Reed et al (2004) made a hypothesis that a neurotic person's proneness to negative affect and poor coping ability would also make him/her more likely to experience stress relative to career exploration. Thus, in this present study, a similar hypothesis is made between neuroticism's negative relationship with career choice commitment.

More support for this hypothesis is drawn from previous research including Chartrand, Rose, Elliot, Marmarosh, and Caldwell (1993) who found that people high in neuroticism have adverse reactions to exploration tasks that involve self-appraisal and decision making, it is thus predicted that neuroticism would be positively related to stress that is associated with career exploration, and in this present study, associated with career choice commitment.

To sum up all implication of "neuroticism" personality on career choice commitment, "neuroticism" refers to various types of negative effects such as anxiety, vulnerability to stress, depression, and self-consciousness (Costa and McCrae, 1992) to a person. With "neuroticism" showing the emotional instability of a person, the person with a relatively lower emotional stability will be less likely to be involved in career information-seeking and, hence, have less self-efficacy in career choice commitment.

Thus, **Hypothesis 1b** is that there is a negative relationship between “neuroticism” and career choice commitment.

**H 1c:** “Openness” under FFM is an individual’s openness to experiences, which refers to a tendency to be curious about inner and outer worlds, a willingness to entertain novel ideas and unconventional values, and having broad interests (Costa & McCrae 1992). According to Reed et al (2004), openness to experience is defined as the purposeful seeking and appreciation of experience for its own sake; so open people are described as intellectually curious, original, creative and attentive to inner feelings.

From the above two notions, openness in a personality also implies a person’s acceptance of new things and a willingness to share ideas with others. It also follows logically that a person high in “openness” will be more open-minded in trying and accepting new ways of doing things in daily life, including in the workplace. Therefore, he/she will be more involved in career information seeking and will accept and share other various career options and information that are provided. That is why Reed et al (2004) hypothesized that openness should be associated with a greater degree of self-exploration relative to an individual’s career development, the greater intellectual curiosity and sensitivity to inner feelings of more open individuals should increase the likelihood that they engage in self-reflection relative to career tasks, thus in this study, career choice commitment is included in the career tasks described here.

Super (1980) suggested that an exploratory attitude is characterized by a more open and less rigid approach to relating to the world, thus openness would be positively related with degree of self-exploration. This is indeed a support for this hypothesis of positive relationship between openness and career choice commitment in the present study.

Dollinger (1995) found an inverse relationship between openness and a foreclosed identity status based on Marcia's (1966) theory, suggesting that open individuals are less likely to foreclose (TTF) on a career choice without considering their own interests, skills, and values. It should be noted that VEC is different from TTF, VEC refers to the continuum whereby a person has gone through a career exploration process which will lead to a commitment with informed decision and choice, thus, it is the reverse meaning with TTF. Hence, compared to Dollinger's (1995) finding of an inverse relationship between openness and TTF, the hypothesis in this present study is a negative relationship between openness and VEC, meaning that a more open person will have a higher likelihood to engage in self-reflection, in career exploration that will be helpful for him or her to make an informed decision on the career choice commitment by going through a process, but not in a hurry without an informed decision. It is noted that VEC is a reverse scale for the overall Career Choice Commitment Scale.

Therefore, based on the above reasoning, **Hypothesis 1c** is that there is a positive relationship between "openness" and career choice commitment.

**H 1d:** “Conscientiousness” under FFM refers to striving for achievement, self-discipline, dutifulness and order. It is also an individual’s persistence in exercising his or her conscience in doing things in daily life, including in workplace (Costa & McCrae 1992). Conscientiousness is also characterized by personal competence, dutifulness, organization, and persistence; where people high in conscientiousness are described as achievement oriented, possessing self-control, and at times compulsive in their behaviour, high scores are punctual and reliable, whereas low scores are less exacting in working toward goals. (Reed et al, 2004). Thus by definition, conscientious people are goal directed and persistent and thus more likely to follow through and complete exploration activities including career information-seeking tasks.

In this context, a person high in “conscientiousness” will be disciplined in doing things and will be loyal to his or her choice in daily life including in workplace. It is also reasonable that the more conscientious a person is, the more commitment the person will give to his/her career choice. Therefore, Reed et al (2004) hypothesized that conscientiousness should be related with a greater degree of career information seeking and greater career search self-efficacy; moreover, the conscientious person’s tendency to be competent and disciplined should lead to increased self-efficacy beliefs regarding career exploration tasks where these tasks in the present study include career choice commitment.

Thus, **Hypothesis 1d** is that there is a positive relationship between “conscientiousness” and career choice commitment.



**H 1e:** “Agreeableness” under FFM expresses interpersonal tendencies, such as flexibility, tolerance, compliance, altruism, cooperation, and trust (Costa & McCrae 1992). Agreeableness in fact pertains to some interpersonal tendencies such as the personality of extraversion. As Reed et al (2004) pointed out, agreeable people tend to be more altruistic, sympathetic, and trusting of others. Although Reed et al (2004) also noted that as there appears not much theoretical or empirical bases for a strong linkage between agreeableness and the career exploration variables, the agreeableness was still included in their analysis of personality because it is a component of the FFM.

From the understanding of the meaning and scope of agreeableness from previous research as elaborated above, it includes an individual’s tendency to agree with and accept views and ideas put forward by others. Based on the characteristics of this type, a person with high “agreeableness” will be more willing to accept the ways of doing things by others, and, thus, will be more involved in career information sharing, and that he or she is also more acceptable after a choice made by himself or herself as well. A hypothesis can be drawn from this is that agreeableness is positively related to career choice commitment.

Thus, **Hypothesis 1e** is that there is a positive relationship between “agreeableness” and career choice commitment.

#### 2.4.2.2 Justifications for Hypotheses 2 to Hypotheses 5

In fact, Van Hooft, Born, Taris, and van der Flier (2004) found that some studies have applied the TRA (or TPB) to related behaviours such as career choice (Giles & Rea, 1999; Strader & Katz, 1990), women's career behaviour (Vincent, Peplau, & Hill, 1998), and intention to switch from a full-time job to a part-time job (Van Vianen & Nieuwland, 1985). Most of these studies supported the relations of attitude and subjective norm with intention as predicted by the TRA or TPB. Given the fact that intention is regarded and measured by career choice commitment in the present study, it is based on the reasoning and logical framework of TPB that the following four additional hypotheses (**H2** to **H5**) are formulated.

**H 2:** In this study, the second hypothesis predicts that “Attitude” is positively related to Career Choice Commitment. The reason for this hypothesis is that for a person with a high score in Attitude, it represents a positive evaluation of oneself in making certain decisions, including those in the workplace, like a commitment to career choice.

Although the TPB research in the vocational field is limited (Arnold et al. 2006), a review on research about the application of core elements of TPB on vocational and career related studies has meaningful finding. For examples, Norman and Bonnett (1995) pointed out that all three core elements (attitude, subjective norm and perceived behavioural control) under TPB could explain significant variance in managers'

intention to undertake a vocational qualification. Moreover, Giles and Rea (1999) discovered that attitude and perceived behavioural control explained significant variance in intention to pursue certain kinds of career.

An article entitled “Undergraduate intentions to apply to the Northern Ireland Civil Service: the application of a Theory of Planned Behaviour model” (Cammock et al, 2009) is critically reviewed, it shows that the TPB was applied in an attempt to investigate and account for the undergraduate students’ career intentions in applying for the civil service in Northern Ireland.

It is a particularly relevant and useful reference literature as it attempts to apply the TPB (an extended TPB model, viz ETPB, which incorporates a measure of self-efficacy) to explore the attitude/behaviour relationship and, at the same time, addresses the issue of intention in choosing a career that is, in the civil service of Northern Ireland. Therefore, the result and finding of this article provide useful reference and support that a possible hypothesis that attitude is related to career choice commitment for people.

Furthermore, in studying people’s career exploration behaviour, Millar and Shevlin (2003) found that in the TPB, only attitude added to the prediction of intention when past behaviour was taken into account. Based on all these studies, it is predicted that there is a relationship between attitude and career choice and commitment to behaviour.

Therefore, the second hypothesis predicts that “Attitude” is positively related to career choice commitment.

**H 3:** The third hypothesis is that a “subjective norm” is negatively related to career choice commitment. Previous research studies on TPB, like Vincent, Peplau and Hill (1998) found that attitude and subjective norm predicted women’s career intention (whereas perceived behavioural control was not assessed in the study). Van Hooft, Born, Taris, and van der Flier (2004) discovered that attitudes and subjective norm explained variance in intention to job search over and above control variables.

Based on the above studies with application of TPB elements to career related areas, the third hypothesis is that a “subjective norm” is negatively related to career choice commitment. High scores in the subjective norm indicate a high likelihood of individuals being influenced by social normative pressures not to commit to certain career choices, thus revealing a lower career choice commitment. Low scores represent a lower likelihood of individuals being affected by norms; he or she can determine a career choice with less influence from the norms and, therefore, can be more committed to their career choice.

There is more support from previous research for this hypothesis. Norman and Bonnett (1995) pointed out that all three core elements (attitude, subjective norm and perceived behavioural control) under TPB could explain significant variance in managers’ intention to undertake a vocational qualification.

Therefore, given the support and justifications elaborated above, the third hypothesis is that a “subjective norm” that does not support career choice commitment is negatively related to career choice commitment.

**H 4:** The fourth hypothesis predicts that “perceived behavioural control” is positively related to career choice commitment. Apart from Norman and Bonnett (1995) who pointed out that all three core elements (attitude, subjective norm and perceived behavioural control) under TPB could explain significant variance in managers’ intention to undertake a vocational qualification. There is another TPB research which can support that the element perceived behavioural control which predicts career choice commitment. Van Breukelen, Van der Vlist, and Steensma (2004) pointed out that all the three TPB elements (variables) significantly predicted turnover intentions among the Dutch naval professionals, though other variables such as job satisfaction also mattered.

Moreover, Giles and Rea (1999) discovered that attitude and perceived behavioural control explained significant variance in intention to pursue certain kinds of career, including career choice, and in the present study, career choice commitment is included in the broader notion of career related behaviour.

Under the TPB model, perceived behavioural control is an individual’s perceived ease of difficulty of performing a particular behaviour. High scores represent that one finds it relatively easy to perform a particular behaviour, such as having a specific career goal if he/she wants. Low scores, on the other hand, represent that one finds it hard to perform certain behaviours, such as committing to certain career choices. Based on the finding by Van Breukelen et al (2004) elaborated above, it follows that, the Hypothesis 4 predicts that “perceived behavioural control” is positively related to career choice commitment.

**H 5:** From the rationale and meaning of all the above hypotheses, it is worthwhile to investigate if any one element of TPB can mediate the relationship between one personality trait and career choice commitment. It is hypothesized that Attitude mediates the relationship between Conscientiousness and Career Choice Commitment.

As a support of the hypothesis, Blustein (1989) found that goal directedness was associated with environmental exploration, it was found that interventions that bolster confidence in one area of decision making may also foster confidence in deciding to engage in exploratory activities. Based on this understanding, Reed et al (2004) pointed out that by extension, the conscientious person's tendency to experience success in one domain (e.g., academic) due to his or her competence and self-discipline is likely to generalize to other domains (e.g. career). It is therefore as Reed et al (2004) noted, conscientiousness would be positively related with both career information seeking and career search self-efficacy (and other career related behaviours such as career choice commitment). This explains why **Hypothesis 1d** – Conscientiousness is positively related to Career Choice Commitment is established above.

In this study, from the above **Hypothesis 1 d** and **Hypothesis 2** (Attitude is positively related to Career Choice Commitment), and based on a wide coverage of literature review (as above) on the meaning of the FFM of personality, it is found that due to the possible effects and nature of the personality trait Conscientiousness in striving for achievement, self-discipline, dutifulness and order; and as Giles and Rea (1999)'s study discovered, attitude explained significant variance in intention to pursue certain kinds of career behaviour (such as career choice commitment), it is logical to

hypothesize that Attitude can have potential reinforcement effect on one person's conscientious personality on doing things. Therefore, it follows that one more **Hypothesis 5** can be made, which is that a person's Attitude mediates Conscientiousness' relationship with Career Choice Commitment.

In summary, this study examined the predictors of five different personality traits under the FFM and the three variables of TPB on the university students' intention (career choice commitment), using the reasoning and logical framework of the Theory of Planned Behaviour (TPB). The eight independent variables are hypothesized to predict the career choice commitment as the dependent variable. One TPB variable Attitude is hypothesized to mediate the effect of one other variable Conscientiousness' relationship with career choice commitment.

## **2.5 Personality as an additional component and variable in the TPB model when explaining career choice**

### **2.5.1 Critical analysis of the Five-Factor Model of Personality**

Under the FFM framework, with the rapid development of society and with the internet allowing people to access to all sorts of information across borders, it is possible that an individual's personality traits will not remain stable, but are subject to changes in his or her knowledge, experience and other societal changes. Hence, the

assumption that the personality traits of a person will remain stable (Wiggins & Trapnell 1997) may not be justified. On the other hand, other model such as the Social Cognitive Career Theory (SCCT) by Lent, Brown and Hackett (1994) which focuses on a person's experience in shaping career behaviours, has received increased attention.

Since the FFM model focuses on the role of basic personality in the shaping of an individual's career development behaviours (Reed, Bruch & Haase 2004), this suggests that the common variance amongst almost all of the personality variables can be summarized by the five factors only, namely, neuroticism, extraversion, openness to experience, conscientiousness, and agreeableness. Such a perspective, however, might be seen as an over-simplification of the complexity of human nature. It is because nowadays, people live in a global village where information technology advances rapidly and many communication channels emerge to let people be exposed to wider perspectives. Thus as pointed out above, an individual's personality trait will likely be subject to changes in his or her experience, knowledge of others and of other societal changes. The assumption of the FFM of Personality that the personality traits of a person will remain stable (Wiggins & Trapnell 1997) might be deemed as a bit of over-simplification of the complexity of human nature.

Moreover, since people with different backgrounds and cultures, although with similar personality traits, may not show similar patterns in their career behaviours, another limitation of this model which worth attention is that the relationship between personality factors and career exploration variables may not be the same for people of different age, race and socio-economic status (Reed, Bruch & Haase 2004).



### **2.5.2 Why the Five Factor Model of Personality has been chosen as part of Theory of Planned Behaviour model**

Based on the TPB, each personality trait of a person under the Five-Factor Model of Personality (FFM) influences one's attitude toward career aspiration, which triggers intention (career choice commitment), as elaborated above. Several hypotheses have been put forward in this study to be tested for describing the relationship between personality traits and intention (career choice commitment) in this study.

The overall revelation of the literature review above is that, amongst all factors, one essential factor is influential in affecting the career choice commitment of people of young age including university students; and this factor has been neglected and denied of its importance, both from the perspective of psychological stream or the sociological stream. This factor is personality. Therefore, in this research study, the Five-Factor Model of Personality will be used to examine the role of personality in influencing and shaping the career choice commitment of university students. According to the TPB framework, it is suggested that attitude triggers intention and intention shapes behaviour. This research applies this theory to students' career choice behaviour by adding personality as an additional factor that influences attitude towards career aspiration in the whole TPB model.

Based on a comprehensive literature review as analysed above and on some hypotheses to be tested by quantitative research methodology as planned in this study, it is expected that the correlation between the factor of personality and students' career

choice commitment can be investigated, so that its role in influencing students' career choice commitment can also be examined to address the research question.

## **2.6 Possible area for Future Research**

It is hoped that through this research study, useful information, answers and clues can be found to fill the gaps in the literature and previous research results. It is also hoped that contributions can be made to theories and conceptual frameworks in this area.

However, owing to the limitations of time and scale for a single researcher, no attempt has been made to investigate any direct and straight forward answer as to whether there is a direct or causal relationship between other factors (other than personality and the elements in TPB in this study) and career choice commitment (not career exploration). With this possible research gap and differences, further research into these specific areas identified will be needed and the findings in this research study are recommended for future researchers' consideration or reference.

Two key theories relating to a Theory of Vocational Choice by Holland (1959) and the Social Cognitive Career Theory by Lent, Brown & Hackett, (1994) were discussed from the psychological and sociological perspective respectively in this dissertation, such that future researchers who are interested in this subject area can build their theories and assumptions upon the conclusions. The discussion included the works of Nauta (2007), Wang et al. (2006), Tang et al. (2008), and Tansley et al. (2007), most of

who conducted in-depth research studies around the issues and notions of career interests, personality types, career decision-making self-efficacy, career exploration, as well as career choice commitment.

## **2.7 Justification of integrating the TPB with FFM in predicting Career Choice Commitment (CCC)**

The SCCT perspective is a quite different view-point from the psychological theories which emphasize one's personality trait that primarily influences one's career choice. However, according to the TPB model in this study, the elements, namely Perceived Behavioural Control and Subjective Norm, refer to one's perception and understanding of the societal and environment factors around oneself, together with the element of Attitude, which is naturally formed by one's learning experience from an early age; the integration of personality in the FFM model (psychological view-point) and the three elements in the TPB model mentioned previously could somehow address both psychological and sociological perspectives. That is why it is reasonable and justifiable in using the integrated approach of both FFM and TPB models in the present study. However, since this study has not covered the area of self-efficacy in particular due to the time and scale limitations, further investigation into this area is recommended for future researchers.

## 2.8 Summary

To understand what factors most influence university students' career choice is very important for universities educationalists in designing education programmes and for student affairs professionals in providing support services including career guidance and counselling, especially for the graduating students. As elaborated above, previous literature has shown that personality is an influential factor in the career choice decision making process of young people, including university students. In this chapter, two broad streams of theoretical frameworks and perspectives, the psychological and sociological perspective respectively, has been reviewed and analysed. Within the broad psychological perspective, the Five-Factor Model (FFM) of Personality has been used to examine the role of personality in influencing and shaping the career choice of commitment university students in this study. At the same time, according to the TPB, it is suggested that attitude triggers intention and intention shapes behaviour. The current study applies this theory to students' career choice behaviour and investigates personality as an additional factor that influences attitude towards career aspiration under the TPB model.

Based on a comprehensive and critical literature review and on some hypotheses to be tested by quantitative research methodology in this study, the relationship between the factor of Personality and students' Career Choice Commitment can be investigated,

and, hence, Personality's role in influencing students' Career Choice Commitment can be examined to address the research question.

## **CHAPTER 3: RESEARCH METHODOLOGY**

This chapter introduces and discusses the research design and methodology of the study with the dissertation topic, “The role of personality in the career choice commitment of university students in Hong Kong”. The chapter includes an introduction and an elaboration and explanation of key areas, namely: 1) Research design; 2) Methodology and method; 3) Sampling and Instrument; 4) Sample size justifications; 5) Construct operationalization; 6) Measures – scale items; 7) Questionnaire design; 8) Statistical analysis; 9) Validity; and 10) Limitations.

### **3.1 Research design**

The previous chapter, the Literature Review, outlined and explained the theory, concept and framework used in this research study, namely the Theory of Planned Behaviour (TPB), the Five Factor Model of Personality (FFM) and the Career Choice Commitment (CCC). All of these are inter-related and an understanding of this relationship has impacted on the research design and methodology of this research study, as will be explained and elaborated upon in this chapter.

Before explaining the choice of an appropriate research design, it will be useful to re-cap the five hypotheses made in this study, as explained in last chapter, so that the research method, data collection and analysis approach will be easier to understand.

Based on the TPB, each personality trait of a person under the FFM influences one’s attitude toward career aspiration, which triggers intention (career choice commitment) and, thus, there are several hypotheses to be tested when describing the

relationship between personality traits and intention (career choice commitment) in this study. Considering the FFM and the CCC together, the following **hypotheses** are put forward. Hypotheses **1a** to **1e** are formulated according to the understanding of each of the five personality traits as elaborated by Goldberg (1990) and Costa and McCrae (1992):

<b>Hypothesis 1a</b>	There is a positive relationship between “extraversion” and career choice commitment.
<b>Hypothesis 1b</b>	There is a negative relationship between “neuroticism” and career choice commitment.
<b>Hypothesis 1c</b>	There is a positive relationship between “openness” and career choice commitment.
<b>Hypothesis 1d</b>	There is a positive relationship between “conscientiousness” and career choice commitment.
<b>Hypothesis 1e</b>	There is a positive relationship between “agreeableness” and career choice commitment.

Van Hooft, Born, Taris, and van der Flier (2004) found that some studies have applied the TRA (or TPB) to related behaviors such as career choice (Giles & Rea, 1999; Strader & Katz, 1990), women’s career behavior (Vincent, Peplau, & Hill, 1998), and intention to switch from a full-time job to a part-time job (Van Vianen & Nieuwland,

1985). Most of these studies supported the relations of attitude and subjective norm with intention as predicted by the TRA or TPB. Given the fact that intention is regarded and measured by career choice commitment in the present study, it is based on the reasoning and logical framework of TPB that the following four additional hypotheses (**H2 to H5**) are formulated:

<b>Hypothesis 2</b>	“Attitude” is positively related to career choice commitment.
<b>Hypothesis 3</b>	“Subjective norm” is negatively related to career choice commitment.
<b>Hypothesis 4</b>	“Perceived behavioural control” is positively related to career choice commitment.
<b>Hypothesis 5</b>	“Attitude” mediates “Conscientiousness” relationship with career choice commitment.

The overall model is written as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \epsilon ;$$

where,

Y is the score on Vocational Exploration and Commitment,

X<sub>1</sub> is the score on Extraversion,



$X_2$  is the score on Agreeableness,

$X_3$  is the score on Conscientiousness,

$X_4$  is the score on Neuroticism,

$X_5$  is the score on Openness,

$X_6$  is the score on Subjective Norm,

$X_7$  is the score on Attitude,

$X_8$  is the score on Perceived Behavioral Control, and

$\varepsilon$  is the corresponding random disturbance term in the regression equation.

### **3.1.1 Quantitative and qualitative research approach**

It is important to decide on which approach to take in conducting a research study, either the qualitative or quantitative approach. The two broad paradigms for the qualitative and quantitative approaches are interpretive and positivist respectively. There are advantages and disadvantages for using each of the approach, depending on the need. The most essential consideration is fitness for purpose, followed by issues of validity, reliability and trustworthiness. The following sections will first compare and contrast the main differences between quantitative and qualitative research, and then discuss the advantages of using quantitative research.

### **3.1.2 Qualitative research as compared with quantitative research**

Qualitative research is extremely varied in nature. In simple terms, according to Lofland & Lofland (1984), qualitative research involves methods of data collection and analysis that are non-quantitative. Another explanation according to Berg (1989) is that qualitative research focuses on quality which is referring to the essence or ambience of something, in this context, as research.

Qualitative research is broadly defined as meaning "...any kind of research that produces findings not arrived at by means of statistical procedures or other means of quantification" (Strauss & Corbin 1990, p.170). This clearly shows the irrelevance of a statistical or quantitative emphasis when doing qualitative research.

As a general understanding, while quantitative researchers seek causal determination, prediction, and generalization of findings, according to Hoepfl (1997), qualitative researchers seek instead illumination, understanding, and extrapolation to similar situations to those of the quantitative researchers by different approaches.

In short, throughout the building and development of theory, qualitative research provides an understanding of the behaviour in its natural setting from the perspective of the research participant and in order to understand the meanings people give to their experience.

Patton (2002) defined qualitative research as a natural approach to seeking understanding of the phenomena in its context-specific settings, that is, in the real world setting. As for the researcher of qualitative research, the researcher does not attempt to

manipulate the phenomenon of interest, instead the researcher will let the phenomenon of interest unfold naturally (Patton 2002). This shows the emphasis of qualitative researchers on the open and natural approach to understanding the phenomena.

On the other hand, the aim of using quantitative approach is to find answers such as “right” or “wrong” for hypotheses about a phenomenon (with the analysis of statistics), which is very different from the aim of using the qualitative approach.

To compare and contrast the main differences between quantitative and qualitative research, Bryman and Bell (2007) made reference to previous researchers’ (Bryman 1988a; Halfpenny 1979; Hammersley 1992b) views and have summarized them as the following:

The first point concerns the nature of reality. According to the principles of quantitative research, reality is regarded as being “objective” and distinct from the researcher, whereas according to qualitative research, reality is regarded being as “subjective” as it is concerned with understanding from the informant’s perspective.

The second point relates to the position of the researcher. The researcher is independent according to the principles of quantitative research, while the researcher interacts with and is “immersed” in the research according to qualitative research.

The third point addresses how the research will be conducted. The approach utilized via quantitative research will most likely be deductive in nature, with theory that is largely causal, whereas the approach taken according to qualitative research will most likely be inductive in nature, with some or no theory being presumptive.

The fourth point raises the question of the concepts used in the process of research. The concepts are always expressed as distinct variables under the umbrella of quantitative research, while the concepts can be expressed as themes and generalizations under qualitative research.

The fifth point provides a comparison of how the data are collected. The data are created and collected through standardized processes including experiments and surveys via the quantitative research principles, while the data are collected through methods such as observation and interview via qualitative research.

The sixth point concerns the analysis and presentation of the data. Since the data rely on precise (statistical) measurement, they are presented as numbers in quantitative research, whereas the data are analyzed by themes and, thus, tend to be presented in words in qualitative research.

The seventh and final point relates to the number of cases or subjects. There are generally many cases and subjects involved in quantitative research, while there are generally only few cases or subjects involved in qualitative research.

From the above comparison, it is clear that, while the quantitative research approach will be more likely to provide hard and reliable data in the process, the qualitative research approach can provide rich and deep data, and that, therefore, there is no absolute superiority of one approach over the other as they serve different purposes. Moreover, while quantitative research is concerned with people's behavior, and qualitative research is concerned more on people's meaning of actions, it must be

recognized that the former approach is depicted as presenting a static image of social reality while the latter is depicted as a process of events over time and of the interconnections between the actions of participants in social settings. (Bryman & Bell (2007)).

To sum up, qualitative research gives an in-depth and detailed understanding of the phenomenon without being constrained by predetermined analytical categories; this is unlike quantitative research which tries to generalize the phenomenon and concentrates on different parts of phenomena rather than on the phenomena as a whole.

In 2008, Koma suggested an explanation for the balance and complementary nature between “Yin” and “Yang” as being two different elements of describing nature of matters, and as an analogy for describing how the quantitative and qualitative research methods can work together. According to this perspective, the applicability of quantitative and qualitative research is very much like “Yin” and “Yang” which are interdependent, and compatible with each other. (Please refer to the picture below.)



Koma, B. (2008)

(<http://blog.vovici.com/blog/bid/17990/Quantitative-and-Qualitative-Research-The-Yin-and-Yang-of-MR> on-line accessed on 18 February 2012)

### **3.1.3 The reasons why the quantitative approach has been chosen**

Based on the significant principle of fitness for purpose, which is an approach allowing the research study in question to test the hypotheses, the quantitative approach has been chosen. Moreover, there certainly are merits for adopting the quantitative approach in this research study, including objectivity, validity, as well as other reliable measures that are elaborated in the section below. The reason why quantitative method is chosen is mainly due to the fact that an extant theory (TPB) is being used to build a model that it is hoped to test with the aim of generalising the findings to the population in which the model of this study is being investigated. Therefore quantitative method fits for the purpose of this study.

### **3.1.4 Advantages of the quantitative research approach**

Firstly, the results of quantitative research are generalizable, while those of the qualitative research have limitations to a particular context, and there is also no general theory from qualitative research that can be applied in most situations. Indeed, some writers treat “qualitative research” and “case study research” as being more or less synonymous terms (Rist 1984, p. 160).

Secondly, the results obtained from qualitative research are frequently not open to exterior cross-checking, therefore, may have poor overall validity. The data collected is “not easy to aggregate for systematic comparison” as well (Ratcliffs 2006), since the research format is adopted in a more open and unstructured way. The results obtained

from quantitative research generally have higher validity.

Thirdly, concerning the ethical perspective, there is a problem or difficulty in hiding the identity of the case, because, as qualitative research requires a detailed and thick description of case(s) under study, many details, in-depth accounts and descriptions need to be given to the readers in order to understand the story, thus rendering the hiding of the identity of the case (or subject person, unit or organization) quite difficult. This kind of problem does not apply in quantitative research.

Fourthly, although the result gained from qualitative research is thick and revealing, it is quite labor intensive and time consuming when recording the evidence that is used to build up the “thick descriptions” for one single case. This is a concern for researchers.

Last, but not least, qualitative research, which is based on the case study methodology, is open to issues of observer bias and researcher emotional involvement in contrast with the dispassionate neutrality of the researcher using quantitative research. Therefore, issues of reliability, objectivity and trustworthiness arise. Quantitative research has the merits of objectivity, trustworthiness and reliability in measures.

### 3.2 Methodology and Method

Among the many data collection methods, such as the door to door survey, executive survey, mail intercepts survey, central location telephone survey, mail questionnaire and self-administered questionnaire, the latter has been chosen for this research study. Since the main research objective is to test the hypothesis developed in the conceptual framework in order that the relationship among different variables (dependent and independent variables) can be discovered, the self-administered questionnaire for conducting surveys as a quantitative research method was used.

In particular, this study is about testing a sample size of university students' career choice commitment as a result of their personality traits; a self-administered questionnaire survey was chosen as the data collection method to collect the necessary information, because it is more efficient to operate and is more convenient for the respondents to complete and return. Moreover, the questionnaire survey is a widely-used research technique that is applied in quantitative research for identifying data patterns (Aaker 1997) or testing a pattern of relationships (Chaudhuri, 2002; Yoo, Donthu & Lee 2000). Thus, the self-administered questionnaire survey was decided upon as being the most appropriate method for the purposes of this research. Details of the sampling, selection of participants and profiles, as well as the questionnaire design will be discussed below.



### 3.3 Sampling and Instrument

The various sampling methods used to collect data can be divided into two categories: probability sampling and non-probability sampling methods. According to Lohr (1999), The category of probability sampling includes random sampling, systematic sampling, stratified random sampling, cluster sampling, and multi-stage sampling methods, etc. whereas in the category of non-probability sampling includes quota sampling, purposive sampling, snowball sampling, self-selection sampling, and convenience sampling can be found. From all the sampling methods, random sampling in the category of the probability type was chosen. In this study, three universities were chosen as the target research sites as they have the faculties and the general disciplines that are included in the target of the research, as well as accessibility both to the physical campus to conduct the research and for the access of data; this will be discussed in the section below.

The random sampling method was chosen as classes in this study were to be chosen randomly from a list provided by the universities, and all students within the chosen classes would be invited to participate. The main considerations for using random sampling included the ease of access to data and information for carrying out the research, the ethical considerations when collecting the data, and the ability and capacity of a single researcher to manage the sampling work. According to Black (1999), the benefits of using random sampling include that it guarantees that the sample chosen is representative of the population and it ensures that the statistical conclusions

will be valid. On balance, after considering the merits and demerits of all possible options, the random sampling was chosen for this research study.

The questionnaires were distributed and collected during regular lectures/classes. The participants completed the questionnaires anonymously and voluntarily. The information collected was kept strictly confidential. Each of the participants completed one questionnaire, which included demographic details, in class. Completion of the questionnaires took approximately 10 to 15 minutes. Only data from participants who completed all questions in the questionnaire were included in the sample. A small number of participants (N=17) were removed from the data prior to analysis, as they had provided the same response option for all items (e.g. a response of “strongly disagree”), or had completed the measure in an implausibly fast time (e.g. less than 1 minute), or had skipped some questions. Details of the research procedures are explained in Section 3.5.

### **3.4 Sample Size Justification**

For regression analysis, the general rule of thumb is at least 50 participants (Wilson Van Voorhis & Morgan, 2007). Green (1991) suggests the sample size should ideally be  $50 + 8(k)$  for testing a full regression or  $104 + k$  when testing individual predictors, where  $k$  is the number of predictors. In our study,  $k = 8$ , therefore at least sample size of 112 is needed for testing a full regression and 112 participants are needed when testing individual predictors.

As recommended by Voorhis & Morgan (2007), approximately 30 participants per variable are required for better power to detect a small effect size. In this case, 240 students are essential for this study (30 participants x 8 variables).

Given the consideration of feasibility and the time and resources constraints of a single researcher, while also balancing the concern of validity, this research aimed at surveying around 250 students as the original target number.

### **3.5 Procedure – Construct Operationalization**

#### **3.5.1 Ethics Approval**

The design of the questionnaire had obtained ethics approval from the University of Newcastle (the approval number is H-2011-0266) to ensure that the human subjects in the research were well protected throughout the research process and that the research would be carried out in an ethical manner.

#### **3.5.2 Piloting**

Upon confirmation of obtaining ethics approval from the university and after clearance with the supervisor, the researcher piloted the research by inviting a small number of human subjects of the targeted age to try filling out the questionnaire. Some 30 university undergraduate students of the targeted age accepted the invitation to fill in the questionnaire as a pilot group in order to give feedback on the design and operation

of the questionnaire. According to Lancaster, Dodd and Williamson (2004), the purpose of piloting is to assess the feasibility of a large, expensive full-scale study, and is, in fact, an essential pre-requisite. Thus, conducting a pilot prior to the main study can have the merit of enhancing the likelihood of its success. The purpose of the pilot study in this study, therefore, was to elicit issues relating to the questions in the questionnaire about career choice commitment and personality, and to test the time needed to complete the questionnaire. The pilot test also served to demonstrate whether all the questions were understandable to students in the targeted age groups, whether the use of language and tone matched their education level, and if there was any confusion regarding similar wordings of questions asked, and the like. The pilot also served to ascertain the smoothness and feasibility of the questionnaire distribution and collection procedures.

These pilot subjects were not included in the study sample. Despite this, the small number of student participants who had filled in the pilot questionnaires had indicated in their consent that their participation was voluntary and that they recognised that the comments of individual participants would remain confidential. Upon completion of the pilot test, it showed that all possible issues discussed above (the questions are understandable, even though some of them are phrased using similar wording, the use of the English language, and the tone matched their education level) did not constitute any problem at all. Nevertheless, some students suggested that at the top on each page of the questionnaire, it would be better to re-print the heading of each scale, that is, 1 stands for “Strongly Disagree” through to 7 stands for “Strongly Agree”, so that participants would not use the wrong number, but be consistent when doing the

questionnaire. Therefore, the final version of questionnaire took this feedback into consideration and was printed accordingly. As a result of this, the researcher had more confidence in distributing and collecting valid data for this research study, and in understanding that the questionnaire should be no problem for the targeted participants in the targeted age groups.

Throughout the whole actual survey process for the study, the student participants and respondents were given full instructions by the researcher in person before filling out the questionnaire. The researcher went through the objectives of the questionnaire design and research purpose each time in the lectures and classes. The participants filled out the questionnaire in the lectures without disturbance from lecturers and/or the researcher. They were asked if they had any questions before filling out the questionnaire and no participants raised questions regarding their understanding of the items in the questionnaire or the wordings in each item. Therefore, from the feedback gained from the participants, it appears that the experience gained from the pilot test by the researcher before the actual survey exercise had helped prepare for the smooth conduct of the actual survey exercise.

### **3.5.3 Data Collection**

With the ethics approval and pilot test completion, the researcher sought consent from different local universities by means of an organisation consent form pre-approved by the University of Newcastle. Following organisational consent, the researcher sought permission from the relevant class lecturers to visit the classes and invite the students to

participate in the study. An information sheet was provided to the undergraduate programmes outlining the purpose, procedures and ethical approval of the research study. After several rounds of discussion over several weeks, some faculties and programmes offered their consent for access for this research and the relevant class lecturers also gave their consent for the researcher to access students in their classes.

The undergraduate classes were chosen randomly from a list provided by the universities concerned. All students within the chosen classes were invited to participate. No incentive for participation was offered. The researcher made appointments and visited the various undergraduate classes in person, and brought along a locked collection box containing questionnaires to be distributed at the end of the classes. Potential participants were given the questionnaire as well as a participant information sheet by the researcher for the purposes of explaining the research project and their voluntary participation in completing the questionnaire after class. The students were briefed and given the explanation that the completion and submission of the survey were deemed to be recruitment to the survey process. Students were also informed that completing and returning the survey implied consent. Most students were very cooperative and returned their completed questionnaires to the box. After completion of the whole survey exercise on an anonymous basis in different universities in Hong Kong, some 289 completed questionnaires were collected.

**Table 1 - Construct Operationalization**

<b>Construct</b>	<b>Construct (abbreviation)</b>	<b>Operationalization</b>	<b>Construct References</b>
Vocational Exploration & Commitment	VEC	VEC is defined as progress in the commitment process from an uncommitted, exploratory phase to a highly committed phase.	Blustein, Ellis & Devenis 1989, p. 342
Tendency to Foreclose	TTF	TTF measures the manner or style with which one approaches commitment to career choice. Foreclosure is defined as committing to a choice in the absence of exploration.	Blustein, Ellis & Devenis 1989, p. 342  Adapted from Marcia, 1966, as cited in Blustein & Philips 1990, p.161
Extraversion	E	Extraversion contains traits as positive effects: approaching activities with energy, sociability, assertiveness, and talkativeness.	Costa & McCrae 1992
Agreeableness	A	Agreeableness expresses interpersonal tendencies, such as flexibility, tolerance, compliance, altruism, cooperation, and trust.	Costa & McCrae 1992
Conscientiousness	C	Conscientiousness refers to striving for achievement, self-discipline, dutifulness, and order.	Costa & McCrae 1992
Neuroticism	N	Neuroticism refers to various types of negative effects, such as anxiety, vulnerability to stress, depression, and self-consciousness.	Costa & McCrae 1992
Openness	O	Openness to experiences refers to a tendency to be curious about inner and outer worlds, a willingness to entertain novel ideas and unconventional values, and having broad interests.	Costa & McCrae, 1992
Subjective Norm	subnorm	Subjective norm refers to an individual's perception of social normative pressures, or relevant beliefs others, such that he or she should or should not perform such behavior.	Ajzen, 1991
Attitude	attr	Attitude towards behaviour is an individual's positive or negative evaluation of self-performance of a particular behavior. It is determined by the total set of accessible behavioral beliefs linking the behaviour to various outcomes and other attributes.	Ajzen, 1991
Perceived Behavioral Control	PBCr	Perceived behavioral control is an individual's perceived ease or difficulty of performing the particular behaviour and it is assumed that it is determined by the total set of accessible control beliefs.	Ajzen, 1991

## **3.6 Measures**

### **3.6.1 Measure of Five-factor of personality traits**

The International Personality Item Pool (IPIP; Goldberg 1990) measures interests in personality and individual differences by providing a range of constructs and different sets of items to widely known commercial and previously published personality inventories. The Mini-IPIP personality scale was developed as a 20 item short form of the 50 item IPIP-FFM (Goldberg 1990). The original IPIP provides a number of measures of the five-factor model (FFM) personality traits whilst the Mini-IPIP can be used for more time constraint research situation. The Mini-IPIP also showed similar patterns of relationships with the original IPIP when correlating the measure with different aspects of the FFM and the other relevant personality measures (Donnellan et al. 2006). The researcher found the Mini-IPIP more applicable than the full original IPIP due to the limited time and the nature of the research in this study that required only a short assessment. Cooper, Smillie and Philip (2010) performed a confirmatory factor analysis of the Mini-IPIP five-factor model personalities scale and suggested that the Mini-IPIP personality scale as a short-form measure of the FFM is particularly useful for situations where time is limited and the assessment scale is small. The Mini-IPIP scale showed acceptable reliability and a clearly interpretable factor structure. The research conducted by Cooper, Smillie and Phillip (2010) reconfirmed and supported the original data provided by Donnellan et al. (2006). Therefore the Mini-IPIP as a measurement tool was used in this study and the 20 questions were included in the questionnaire.



### **3.6.2 Justifications on using the Mini-IPIP Scale**

There are justifications of using this measurement tool instead of the original IPIP Scale long version. Firstly, the Mini-IPIP is used to provide a short measure of the five-actor personality traits, this is not meant to be a replacement for the original IPIP Scale longer measures. There are merits of using this Mini-IPIP Scale, especially for research subject to time and scale limitation (Cooper, Smillie and Philip (2010)), as well as for consideration of the length of the questionnaire in which the 20-items are included; although a researcher should be more cautious in interpreting the assessment results. Secondly, as the study results of Cooper, Smillie and Philip (2010) confirmed, the Mini-IPIP Scale measure has acceptable reliability and a clearly interpretable factor structure. Therefore, it is justifiable to use this Mini-IPIP Scale of 20 measure items in this research study.

### **3.6.3 Measurement on Commitment to Career Choices Scale (CCCS)**

Measure of career commitment: the Commitment to Career Choices Scale (CCCS; Blustein, Ellis & Devenis, 1989) has two subscales, each of which independently measures one's disposition toward making a career choice. The authors have conceptualized that career choice commitment consists of two dimensions, exploration that leads to a commitment and one's style of making a commitment.

The following are the details of the two subscales:

**3.6.3.1 The Vocational Exploration and Commitment (VEC) subscale of the**

**CCCS** measures the level of exploration and commitment toward career choice.

The subscale measures “progress in the commitment process from an uncommitted, exploratory phase to a highly committed phase” (Blustein, Ellis & Devenis, 1989, p. 342).

**3.6.3.2 The Tendency to Foreclose (TTF) subscale of the CCCS** measures the

manner or style with which one approaches the task of commitment to career choice. Scores from the TTF indicate one’s tendency to foreclose along a continuum, which ranges from “an openness to the experiences of the commitment process to a closed, dualistic approach” (Blustein, Ellis & Devenis, 1989, p. 342).

Foreclosure, represented in the TTF subscale, is defined as committing to a choice in the absence of exploration or “by adopting the attitudes of parents without deliberation or exploration” (adapted from Marcia, 1966, as cited in Blustein & Phillips, 1990, p. 161). “Individuals with strong levels of the TTF may not be able to develop alternative options, thereby limiting their flexibility in selected vocational situations”, rather than “refining and adapting their career choices to changing environmental conditions” (Blustein, Ellis & Devenis, 1989, p. 348).

The CCCS measure consists of 28 items, with nine items devoted to the TTF subscale and 19 devoted to the VEC subscale. Both subscales are composed of a 7-point Likert

scale. In line with what was mentioned above, high scores on the VEC indicate an uncommitted posture. High scores on the TTF indicate a strong tendency to foreclose.

#### **3.6.4 Consideration when using the Commitment to Career Choices Scale**

There are considerations and points of caution when applying the measurement tools of the CCC Scale. First, the authors of the measure suggested that the VEC subscale scale not be used alone, but with other indices of vocational behaviour (such as exploratory activity and vocational maturity) and other relevant features of the individual's particular context. The measure was based upon themes consistently found in career development literature: that individuals' progress from an undecided, uncommitted position to a decisive, confident, and committed position regarding career choice (Ward 2004).

Second, the level of career choice commitment and how one commits to such choice (the strength of tendency to foreclose) are two distinct issues. The relationship of these issues is unclear, as Blustein (1988; cited in Blustein, Ellis, & Devenis, 1989) found no relationship between career commitment and other vocational maturity indices, such as decision-making or exploration. (Ward 2004). With these considerations in mind, caution and prudence were needed when applying the CCC Scale in this study. Thus, one important point to note in the present study is that for the two subscales of CCC Scale, VEC is a reverse scale (the higher the scores, the less progress if the career choice commitment with informed career exploration activities) whereas the higher scores of TTF, the stronger style is the person to commit to a career choice without much and due exploration and information-seeking process on career options.

**Table 2. Scale Items – table showing the corresponding questions in the questionnaire and its Cronbach alpha**

<b>Construct</b>	<b>Abbreviation</b>	<b>Scale Items as the question numbers in the questionnaire</b>	<b>Cronbach alpha</b>
Vocational Exploration & Commitment	VEC	A 10 - 28	0.863
Tendency to Foreclose	TTF	A 1 - 9	0.531
Extraversion	E	B 1, 6, 11, 16	0.674
Agreeableness	A	B 2, 7, 12, 17	0.747
Conscientiousness	C	B 3, 8, 13, 18	0.575
Neuroticism	N	B 4, 9, 14, 19	0.662
Openness	O	B 5, 10, 15, 20	0.735
Subjective Norm	subnorm	C 5, 6, 7, 8, 9	0.735
Attitude	attr	C 1, 2, 3, 4	0.829
Perceived Behavioral Control	PBCr	C 10, 11, 12, 13, 14	0.581

\* For the exact wordings of each scale item and corresponding question, please refer to the attached final version of questionnaire at Appendix I

### 3.7 Questionnaire design

The questionnaire was designed to survey university undergraduate students in Hong Kong to investigate the relationship between personality traits and career choice commitment. It was an anonymous questionnaire distributed to university students to collect data for the latter purpose. The design of the questionnaire aimed to reflect different preferences and perception of students, so as to achieve the objective of providing curriculum planners with useful information on designing appropriate career education curricula for better self-understanding of the students. The design would also provide useful information for career counsellors to assist students in their career planning and development process through and post-graduation.

In light of the above aims and objectives of the questionnaire design, it comprised three separate parts: Part A) Career Choice Commitment; Part B) Personality; and Part C) Attitude, Subjective Norm and Perceived Behavioural Control towards Career Goal. A total of 62 items was listed with a scale of 1 – 7 given for students to circle the appropriate number that most accurately reflected the extent to which they agreed or disagreed with the wordings or statements. Scale 1 represented the student “strongly disagreeing” with the given statement/wordings, whilst Scale 7 represented the students “strongly agreeing” with it. Students could also choose Scale 4, which represented a neutral stance after reading the sentence given. After filling out the 62 items listed in Parts A – C, a final part, Part D) Demographics, asked students about their personal information for analysis use. Information regarding age, previous employment, gender, mode of study, year of study, whether students have a part-time or full-time job at that

time, and students' area of study were included in Part D). Such a questionnaire design could allow the researcher to investigate the relationship of Parts A – C with the demographic data provided by students in Part D.

The questionnaire was structured in a way that that the students had to first answer 28 items relating to their career choice commitment. Students did not necessarily have to have a specific career goal, but they were asked to respond in a way that would reflect their behaviour and attitudes as if they did not have an occupational preference. Questions such as those asking about whether they would consider more than one specific career goal and whether only one occupation would be right for them aimed at reflecting their career choice commitment. After completing Part A), students would then proceed to answer items about themselves, regarding their personality. 20 sentences of descriptions were presented to students in Part B) as 20 questions/statements so that they could circle the number scale that best reflected the extent to which each of the personality characteristics described themselves. They had to show whether they agreed with sentences such as “I like order” or “I get upset easily” so that the researcher could collect relevant data to draw relationship between personality and career choice commitment. Part C) had relatively fewer items and these were designed to understand the student's attitude, the subjective norm and the perceived behavioural control towards career goals in order to reveal the relationship.

### **3.8 Statistical Analysis**

Descriptive statistics were used to present the demographic information. Regression analysis was used to test the relationships between the personality of university students and the three core elements in the TPB framework and their career choice commitment based on the model outlined in Section 3.5. A Sobel test will be conducted to verify the relationships among variables.

#### **3.8.1 Data analysis process**

The data analysis process was started in November 2011 with the use of SPSS for all the descriptive statistics, as well as the factor analysis, regression analysis, Sobel test.

To analyze the research information collected, the analytical approach involves a two-step process. In the first step, observed variables are hypothesized (e.g. H1 to H5 above-explained) to measure the underlying constructs using a factor analysis. The second step focuses on testing hypotheses about relationships among the variables. Compared with a one-step approach, a two-step approach allows meaningful inferences to be made so that tests of the significance for all pattern coefficients can be done. A two-step approach also allows an assessment of whether any structural models could be given a suitable fit and makes an asymptotically independent test of the substantive or theoretical model of interest. Employing the two-approach means a better realisation of

confirmatory in practice, which is the reason why it is used in this research study (Anderson & Gerbing, 1988).

Mediation analysis is used to investigate the mediating effect of Attitude in the relationship between Conscientiousness and VEC. The steps below are suggested by Baron and Kenny (1986) for testing mediation effect. Firstly, a regression analysis is conducted with Conscientiousness to predict VEC. Then, a regression analysis is performed to investigate the relationship between Attitude and Conscientiousness. Finally, Conscientiousness and attitude are used as independent variables to predict VEC. The mediation effect is supported if both condition fulfilled, 1) coefficients for Conscientiousness have to be statistical significant in all three regressions and 2) coefficient for attitude has to be statistical significant in the last regression. The Sobel test performs a statistical test to see if the indirect path from independent variables to VEC is statistically significantly different from zero. The critical value of the test is 1.96, which means there are mediation effect if any value calculated from the test is larger than 1.96.

### **3.9 Validity**

Validity is one of the main concerns with research. "Any research can be affected by different kinds of factors which, while extraneous to the concerns of the research, can invalidate the findings" (Seliger & Shohamy 1989, p. 95). Thus, controlling all possible factors that threaten the research's validity is a primary responsibility of every good research study.



### **3.9.1 Factor Analysis**

To address the issue of validity, a factor analysis was conducted to assess the construct validity. The Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy (as a kind of factor analysis) was used to assess the extent the indicators of a construct have convergent validity (Premkumar and Ramamurthy 1995). The details are elaborated in Chapter 4 – Results and Findings and in the relevant excel spread-sheet.

Factor analysis was performed using SPSS 19.0. Principal components analysis with Varimax rotation was used. A combination of the Scree test and the total variance explained is used to determine the appropriate number of factors to be extracted (Cattell, 1966).

Moreover, there are other considerations relating to two other aspects of validity, namely Internal Validity and External Validity.

### **3.9.2 Internal Validity**

Internal Validity is affected by flaws within the study itself, such as not controlling some of the major variables (a design problem), or problems with the research instrument (a data collection problem). "Findings can be said to be internally invalid because they may have been affected by factors other than those thought to have caused them, or because the interpretation of the data by the researcher is not clearly supportable" (Seliger & Shohamy 1989, p. 95). Some factors that may affect internal validity include subject variability, the size of the subject population, the time given for

the data collection or experimental treatment, history, attrition, maturation and instrument/task sensitivity, and the like, according to Seliger & Schohamy (1989).

To address these possible factors or issues of internal validity, the researcher first conducted a pilot test by inviting a small number of undergraduate students as a group of random participants from different disciplines and years to fill out the questionnaire, as discussed above, so as to ascertain if the questions appeared valid and understandable to them and other issues of internal validity that could be addressed prior to the commencement of the survey exercise. As for the data collection process and considerations, the explanation and elaborations in the above sections, 3.2 and 3.3, have shown that every means was used to ensure the largest internal validity in this study (e.g. headings were added at the top on each page of the questionnaire to indicate the “Strongly Agree” or “Strongly Disagree” blank corresponds to each of the scale in each item of the questionnaire) as the feedbacks from the pilot test were taken into consideration.

### **3.9.3 External Validity**

According to Seliger & Shohamy (1989), external validity is the extent to which the research study can generalize the findings to a larger group or other contexts. If the research study lacks external validity, the findings cannot be applied to contexts other than the one in which the study is carried out. For example, if the subjects are all males from one ethnic group, the findings might not apply to females or other ethnic groups.

Or, if the research study is conducted in a highly controlled laboratory environment, the findings may not faithfully represent what might happen in the real world.

"Findings can be said to be externally invalid because [they] cannot be extended or applied to contexts outside those in which the research took place" (Seliger & Shohamy 1989, p.95). Some factors that may affect external validity include population characteristics (subjects), interaction of subject selection and research, descriptive explicitness of the independent variable, the effect of the research environment, researcher or experimenter effects, data collection methodology, and the effect of time, and the like, according to Seliger & Schohamy (1989).

It is noted that the 272 samples collected have characteristics relatively similar to the characteristics of the university students in Hong Kong (i.e. similar to the local Chinese university student population in general, e.g. the gender ratio, age group by their study year, with or without employment experience, etc.); thus, there is reasonable ground to say that the results and findings can have a certain degree of reasonable generalizability. All the explanations of the research data collection methodology and processes have been provided above in details in Sections 3.2, 3.3, 3.4 and 3.5.

### **3.10 Limitations**

As with many other research studies, this study has some limitations. In this research study, some 272 undergraduate students from different faculties (other than faculties of professional disciplines like Medicine, Dentistry, Law and Architecture, etc.) from different universities in Hong Kong were invited to answer the survey questionnaires for this study. The rationale for inviting these students to be participants in the study was due to the fact that they were not in the faculties of professional or specific disciplines where the students' choice study disciplines have somehow reflected or determined their career choice when they enrolled in their programmes. On the other hand, students studying more general disciplines like Arts, Social Science, Business and Humanities, and the like, have no such pre-determination of career choice; thus, inviting them to participate into the study fits in well with the objective of the study.

However, the first limitation in this study was that, with this random sample of university students and a relatively small sample size (around 272 undergraduate university students), any external generalization should therefore be made with caution. The second limitation was that the study was somehow correlational and cross-sectional in nature, so it could not be assumed that personality factors should causally influence the career exploration variables; and therefore, prospective research designs may be needed to test the potential causal role of personality in career exploration and then in career choice commitment.

It is hoped that, through this research study, useful information, answers and clues can be found to fill the gaps in the relevant literature and previous research results. It is also hoped that contributions can be made to theories and conceptual frameworks in this area.

## **CHAPTER 4: RESULTS AND FINDINGS**

This research aimed to survey university undergraduate participants in Hong Kong to investigate the relationship between personality trait and career choice commitment. This aim was achieved by using an anonymous questionnaire distributed to university participants to collect data for the above purpose. The design of the questionnaire aimed to capture different preferences and perception of participants, so as to achieve the objective of providing curriculum planners with useful information on designing appropriate career education curricula for better self-understanding of participants. The design also aimed to provide useful information for career counsellors to assist participants in their career planning and development process through graduation.

### **4.1 Introduction**

Following Chapter 3 on the methodology of this research study, this chapter reports on results and findings. The first section presents the descriptive results including the demographic data and a table of the means, standard deviations, scale reliabilities and correlations. This is followed by a discussion of the factor analysis results. The chapter then reports on the investigation of each hypothesis.

## 4.2 Respondent Profile

This research study was conducted in the form of anonymous questionnaires to be distributed and collected in classes of undergraduate participants in university campuses. Of the 272 questionnaires collected, 112 participants were males (i.e. 41.2%) and 160 (i.e. 58.8%) were females recruited from three universities in Hong Kong. 50 participants were enrolled in their year 1 (i.e. 18.4%), 80 were in year 2 (i.e. 29.4%), 86 were in their year 3 (31.6%), the remaining 56 participants were in their year 4 (i.e. 20.6%). Except three participants who studied in part-time mode (i.e. 1.1%), 269 participants were in full-time mode (i.e. 98.9%). Majority of participants were below 22 years old, with 106 participants (i.e. 39%) were below 20 and 120 participants were between 21 – 22 years old (i.e. 44.1%). 40 participants were between 23 - 24 years (i.e. 14.7%). 4 participants were between 25 – 28 years old (i.e. 1.5%) and 2 participants were between 29 – 35 years old (0.7%).

Among all, 142 sample participants were majoring in business administration or studies (i.e. 52.2%), while 128 participants were majoring social sciences (i.e. 47.1 %). Two participants were of exception who majored in engineering (i.e. 0.7%). A total of 49 (i.e. 18%) participants reported no formal previous employment experience before entering the university. Nearly half of the sample participants had less than or up to 1 year part-time employment, which comprised of 121 participants (i.e. 44.5%). 74 participants (i.e. 27.2%) had more than 1 year part-time employment experience prior to entering universities. 19 participants (i.e. 19%) had less than or up to 1 year full-time employment. Minority of participants were experienced in the job

market before receiving tertiary education. 5 participants (i.e. 1.8%) had more than 1 year full-time employment and 4 participants (i.e. 1.5%) had both full time and part-time employment experience. There was no major difference between the number of participants working for a part-time job at the moment and those who had no part-time job. 123 participants (i.e. 45.2%) had a part-time job and 149 participants (54.8%) did not have a part-time job at the moment. Table 1 summarizes the demographic information of respondents in the questionnaire survey.



**Table 3 - Respondents' Profile**

<b>Age</b>		
	Frequency	Percent
Below 20	106	39.0
21-22	120	44.1
23-24	40	14.7
25-28	4	1.5
29-35	2	.7
Total	272	100.0

<b>Employment experience</b>		
	Frequency	Percent
No Previous Employment	49	18.0
Less than or up to 1 year part-time employment	121	44.5
More than 1 year part-time employment	74	27.2
Less than or up to 1 year full-time employment	19	7.0
More than 1 year full-time employment	5	1.8
Both full time and part-time employment	4	1.5
Total	272	100.0

<b>Gender</b>		
	Frequency	Percent
Male	112	41.2
Female	160	58.8
Total	272	100.0

<b>Mode of Study</b>		
	Frequency	Percent
Full Time	269	98.9
Part Time	3	1.1
Total	272	100.0

Year of Study		
	Frequency	Percent
1	50	18.4
2	80	29.4
3	86	31.6
4	56	20.6
Total	272	100.0

Having Part-time employment at present		
	Frequency	Percent
Yes	123	45.2
No	149	54.8
Total	272	100.0

Area of Study		
	Frequency	Percent
Business	142	52.2
Engineering	2	.7
Social Science	128	47.1
Total	272	100.0

### 4.3 Computation of Scales

The design of the questionnaire was that it comprised three parts, part A) Career Choice Commitment; Part B) Personality; C) Attitude, Subjective Norm and Perceived Behavioural Control towards Career Goal. Totally 62 items were included, using a scale of 1 – 7. Participants were asked to choose by circling the appropriate number that most accurately reflects the extent to which they agree or disagree with the wordings or statement. The lower scale anchor, ‘1’, was “strongly disagree” whilst the upper scale ‘7’ was “strongly agree”.

The questionnaire was structured in a way that participants had to first answer 28 items related to their career choice commitment (CCS = 19 VEC subscale + 9 TTF subscale). Participants did not necessarily have a specific career goal, they were asked to respond in a way that would reflect their behaviour and attitudes as if they did not have an occupational preference.

After completing part A), participants proceeded to answer items about their personality. Twenty sentences were presented to participants in part B) which asked participants to indicate the extent to which each of the personality characteristics described themselves. Part C) was designed to investigate participant’s attitude, subjective norms and perceived behavioural control towards career goal. It is noted that each construct items were summated as a subscale.

**Table 2 - Scale Items – Table showing the corresponding questions in the questionnaire and its Cronbach's Alpha coefficient**

Construct	Abbreviation	Scale Items as the question numbers in the questionnaire	Cronbach's alpha
Vocational Exploration and Commitment	VEC	A 10 - 28	0.863
Tendency to Foreclose	TTF	A 1 - 9	0.531
Extraversion	E	B 1, 6, 11, 16	0.674
Agreeableness	A	B 2, 7, 12, 17	0.747
Conscientiousness	C	B 3, 8, 13, 18	0.575
Neuroticism	N	B 4, 9, 14, 19	0.662
Openness	O	B 5, 10, 15, 20	0.735
Subjective Norm	sub	C 5, 6, 7, 8, 9	0.735
Attitude	attr	C 1, 2, 3, 4	0.829
Perceived Behavioral Control	PBC	C 10, 11, 12, 13, 14	0.581

\* For the exact wordings of each scale item and corresponding question, please refer to the questionnaire at Appendix 1.

## 4.4 Validity and Reliability of Scales

To address the issue of validity, a factor analysis is conducted to assess the construct validity.

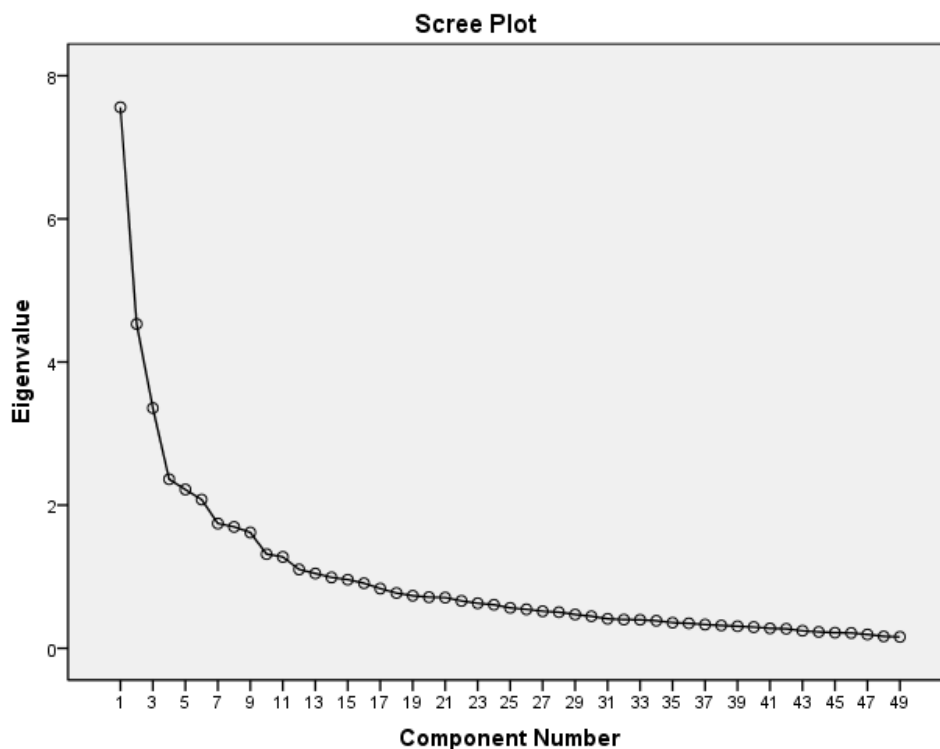
### 4.4.1 Factor Analysis

The Kaiser-Mayer-Olkin (KMO) measure of sampling adequacy (as a kind of factor analysis) is used to assess the extent the indicators of a construct have convergent validity (Premkumar and Ramamurthy 1995). It is suggested that the overall KMO measure should be greater than 0.80; a value of 0.60 is acceptable (Sharma, 1996). In this research, the value of 0.785 for the overall KMO measure shows the correlation matrix is appropriate for factoring.

Factor analysis was performed using SPSS 19.0. Principal components analysis with Varimax rotation was used. A combination of the Scree test and the total variance explained is used to determine the appropriate number of factors to be extracted

(Cattell, 1966), The completed factor analytic results are found in Table 4 and section 4.4.2 below.

The Scree plot table below indicates that ten components were found with an eigenvalue over 1.0. This indicates that scale items loaded on ten factors, which aligns with our measurement model.



Thirteen items had factor loadings below the chosen cut-off ( $<0.4$ ) and were considered to demonstrate inadequate discriminant validity (Hanzaee and Salehi, 2011). Subsequent to the removal of factors that did not meet this threshold or showed significant cross-loading, ten factors account for 58.12% of the total variance are identified. The table below shows the loadings of the items on the factors.

Table 4 - Rotated Component Matrix<sup>a</sup>

	Component									
	VEC	TTF	att	Open	agree	sub	extra	neu	pbc	cons
vec15	.761	.030	-.137	.074	-.168	-.093	-.069	.016	.008	-.048
vec9	.710	-.026	-.145	-.127	-.013	.063	-.052	.072	-.056	-.050
vec11	.665	.105	.141	-.248	-.128	.046	.025	.217	-.049	.003
vec10	.654	-.058	-.093	-.035	-.052	.083	-.021	.074	-.123	.165
vec18	.624	-.104	-.209	-.170	-.019	.064	-.120	-.041	-.041	.016
vec8	.617	.034	-.235	.034	.046	-.071	-.016	-.108	-.032	-.002
vec7	.610	.073	-.024	.044	-.008	.099	-.106	-.053	.139	.004
vec12	.607	-.029	.018	-.089	-.038	.099	-.091	-.095	-.154	.056
vec13	.558	.100	.149	-.278	-.022	.035	.058	.311	.071	-.060
vec17	.555	.213	.111	-.285	-.068	.119	.034	.245	-.023	-.184
vec3	.537	-.159	-.039	-.033	.023	.040	.095	.071	.063	-.011
vec6	.523	-.056	-.190	.121	-.165	-.082	.053	.031	.058	-.146
vec16	.522	-.180	-.175	.061	.035	-.192	-.166	.037	-.273	-.215
vec14	.490	.053	-.020	-.088	.031	-.072	-.315	.124	-.424	-.215
tff5	.039	.842	.022	-.057	-.067	.044	-.032	.062	-.086	-.034
tff8	.075	.802	-.021	-.085	-.069	.125	-.042	-.074	-.024	-.006
tff9	-.029	.799	.073	-.112	-.082	.054	-.014	.000	-.020	.025
tff2	-.032	.758	.010	-.076	-.084	-.004	-.051	.003	-.082	-.025
tff7	.010	-.544	.094	.069	-.054	-.059	-.039	-.131	.146	.035
tff3	-.288	.502	.066	.012	.128	.144	.090	-.007	.107	.053
att1	-.121	.116	.828	-.034	.038	.155	.042	.024	.025	.171
att4	-.071	.084	.825	.029	.019	.117	.126	.004	.138	.076
att3	-.267	-.106	.733	.048	.184	-.088	-.006	.016	-.012	-.038

att2	-.254	-.102	<b>.683</b>	.018	.126	-.017	-.105	-.045	.005	-.041
open2	-.101	-.044	.093	<b>.725</b>	.265	-.069	-.124	.007	-.066	-.196
open4	-.119	-.163	.023	<b>.722</b>	-.065	-.098	.173	.063	-.016	.103
open1	-.009	-.168	-.083	<b>.681</b>	-.205	.031	.318	.180	.108	.136
open3	-.246	-.137	.025	<b>.647</b>	.257	-.009	-.120	-.150	.065	-.026
agree4	-.119	-.160	.111	.001	<b>.749</b>	.029	.280	.001	.014	-.075
Agree2	-.096	-.007	.105	.033	<b>.737</b>	.032	.259	.098	-.097	.077
agree3	-.038	-.001	.102	.276	<b>.579</b>	.056	.120	-.016	.309	.203
agree1	.032	.071	.152	.188	<b>.419</b>	-.024	.208	.093	.350	.224
sub4	.033	.111	.032	-.121	.069	<b>.813</b>	-.097	.034	-.015	-.055
sub5	.032	.078	.167	.111	-.004	<b>.776</b>	-.072	-.070	.103	-.068
sub2	.017	.155	-.014	-.048	-.040	<b>.691</b>	.177	.037	-.220	.159
sub3	.213	.066	-.015	-.191	.008	<b>.593</b>	.185	.129	-.331	.215
extra3	-.089	-.035	-.048	-.029	.228	.094	<b>.718</b>	-.050	.070	.034
extra1	-.065	-.010	-.020	.110	.080	-.050	<b>.687</b>	-.174	.109	.072
extra2	-.156	.001	.182	.033	.260	-.009	<b>.669</b>	.000	-.065	-.058
neu1	.104	.015	-.046	-.062	-.056	.018	.144	<b>.758</b>	-.041	.182
neu3	.227	.136	.012	-.042	-.047	.099	-.078	<b>.741</b>	.028	.167
neu4	-.005	.016	.029	.085	.019	-.056	-.117	<b>.590</b>	.035	-.386
neu2	-.053	-.038	.013	.086	.113	-.015	-.174	<b>.562</b>	-.050	-.025
pbc1	-.023	-.143	.014	-.054	.109	-.049	-.008	.013	<b>.800</b>	-.015
pbc2	-.055	-.139	.057	.037	.006	-.153	.057	-.033	<b>.783</b>	-.015
cons1	-.137	-.055	.064	.054	.150	.044	.000	.115	.075	<b>.695</b>
cons4	-.369	-.217	.039	.026	.391	-.149	-.235	-.207	.017	<b>.412</b>

Extraction Method: Principal Component Analysis.  
Rotation Method: Varimax with Kaiser Normalization.

#### 4.4.2 Reliability

Based on the factor analysis above, the original scales items which did not load on their parent scales or cross-loaded when explored through factor analysis have been dropped out. The total number of items for 5 scales have been changed, namely, Vocational Exploration and Commitment (from 19 items to 14 items), Tendency to Foreclose (from 9 items to 6 items), Extraversion (from 4 items to 3 items), Conscientiousness (from 4 items to 3 items) and Perceived Behavioral Control (from 5 items to 2 items). This also explains why the alpha coefficients in Table 2 are different from the alpha coefficients in Table 4 which are more reliable and satisfactory.

Reliability checking was carried out utilizing SPSS 19.0. Inter-item correlations. Corrected inter-item correlations and Cronbach's alpha coefficient were used to conduct item analyses and test the internal consistency reliability. An acceptable item was expected to positively correlate with other items within a particular scale (after recording the reversed working items). Cronbach's alpha coefficient with 0.60 or above indicates acceptable internal consistency reliability for group research (Nunnally, 1967). The inter-item correlations are expected to range from 0.30 to 0.70 (Nunnally & Bernstein, 1994), suggesting that the items consistency measured out to the same construct without much redundancy. The corrected item-total correlations are expected to reach 0.30 or above, indicating an item would account for more than 10% of the total variance.



**Table 5 – Cronbach's Alpha coefficient of reliability test**

Scale	Number of items	Alpha
Vocational Exploration and Commitment	14	0.88
Tendency to Foreclose	6	0.60
Extraversion	3	0.726
Agreeableness	4	0.747
Conscientiousness	3	0.58
Neuroticism	4	0.662
Openness	4	0.735
Attitude	4	0.829
Subjective Norm	5	0.735
Perceived Behavioral Control	2	0.743

From the results of the above factor analysis, nine out of the ten factors have reliability figures greater than or equal to 0.6, with the exception of Conscientiousness (C) which has the alpha coefficient of 0.58. Nonetheless, with alpha coefficient 0.58, it is very close to 0.60 and is regarded as acceptable. (Ku and Shen, 2009)

#### **4.4.3 Career Choice Commitment**

As seen in Table 4, alpha coefficients were found to be 0.88 for the 14-item VEC and 0.60 for the 6-item TTF, indicating that the level of internal consistency reliability for each subscale of the career choice commitment was satisfactory.

#### **4.4.4 Theory of Planned Behaviour – Attitude, Subjective Norm, Perceived Behavioural Control**

Alpha coefficients were found to be 0.829 for the original 4-item Attitude, 0.735 for the original 5-item Subjective Norm and 0.743 for 2-item Perceived Behavioural Control (PBC), indicating that the level of internal consistency reliability for each subscale of the career choice commitment was satisfactory.

#### **4.4.5 Five Factor Model of Personality**

Observation from Table 4 also reveals that four out of the five factor model of personality had satisfactory alpha coefficients of 0.6 or above. Alpha coefficients were found to be 0.674 for “extraversion”, 0.747 for “agreeableness”, 0.662 for “neuroticism”, and 0.735 for “openness”.

The factor of “conscientiousness” was found to have alpha coefficients of 0.58, which approached the threshold of 0.6.

#### **4.4.6 Descriptive Statistics**

Table 5 presents the number of items, means, standard deviations, the minimum and maximum measured variables.

**Table 6 - Descriptive Statistics of Variable**

	No. of items	Mean	Standard Deviations	Minimum	Maximum
Vocational Exploration and Commitment	14	56.24	12.360	15	88
Tendency To Foreclose	6	18.29	4.032	7	34
Extraversion	3	11.99	3.655	4	21
Agreeableness	4	20.42	3.517	8	28
Conscientiousness	3	13.58	3.127	5	21
Neuroticism	4	16.85	4.020	7	28
Openness	4	18.83	4.136	5	28
Attitude	4	21.07	3.564	4	28
Subjective Norm	5	19.35	4.575	5	34
Perceived Behavioral Control	2	9.68	2.348	4	14

#### **4.4.7 Relationships between Variables**

Regression Coefficient was computed in order to examine the relationships among the variables used in the study. The relationships among the scores of dependent and independent variables for the total sample are presented in Table 6 below. Based on the two-tailed significance testing at the 0.05 level, it was found that all the five personality traits, attitude, perceived control behaviour and subjective norms related significantly to VEC.

On the other hand, most demographic aspects like “age, gender, whether participants have been employed before or having part-time employment at present” did not have a significant relationship to VEC and TTF, except the year of study (refer to Table 7 below). This will be further elaborated in the later section in this chapter.

Table 7 - Correlation Matrix of variables

	VEC	TTF	E	A	C	N	O	att	Sub	PBC	age	employ	employr	Gender	mode	dy	parttime	area
VEC																		
TTF	-.058 .337																	
E	-.213** .000	-.009 .883																
A	-.225** .000	-.094 .124	.366** .000															
C	-.333** .000	-.093 .125	.048 .435	.324** .000														
N	.207** .001	.016 .789	-.071 .240	-.028 .652	-.132* .030													
O	-.277** .000	-.188** .002	.153* .012	.246** .000	.078 .199	-.002 .975												
att	-.310** .000	.091 .134	.141* .020	.261** .000	.211** .000	.009 .886	.075 .218											
Sub	.133* .028	.213** .000	.080 .186	.066 .277	-.079 .194	.082 .175	-.154* .011	.150* .013										
PBC	-.135* .026	-.105 .083	.076 .214	.199** .001	.174** .004	-.054 .379	.092 .130	.092 .129	-.253** .000									
age	.008 .899	-.105 .083	-.047 .442	-.076 .211	-.022 .721	.018 .770	.051 .403	-.042 .487	-.041 .505	-.049 .418								
employ	-.038 .532	-.024 .699	.063 .297	-.045 .462	-.020 .745	.033 .592	.005 .932	.013 .834	-.049 .424	-.088 .147	.420** .000							
employr	-.022 .719	-.036 .560	.087 .151	-.034 .572	-.010 .866	.021 .731	.018 .769	-.037 .549	-.027 .658	-.032 .599	.250** .000	.627** .000						
Gender	.071 .245	-.060 .321	.066 .277	.034 .578	-.095 .116	.066 .280	-.161** .008	-.017 .780	.045 .461	-.021 .732	-.025 .687	.045 .461	-.046 .452					
mode	.041 .503	-.016 .789	.020 .746	-.063 .303	-.099 .104	-.093 .128	-.064 .294	-.052 .397	.061 .314	.000 .994	.204** .001	-.001 .983	.050 .416	-.054 .376				
YearrofStudy	-.123* .043	-.143* .018	-.034 .581	.011 .858	.023 .710	.065 .286	.016 .795	.062 .309	-.004 .951	-.005 .937	.579** .000	.381** .000	.299** .000	.070 .251	.082 .176			
parttime	.030 .626	.009 .887	.020 .744	-.032 .602	-.045 .463	-.026 .674	-.095 .117	.011 .854	-.003 .958	-.070 .250	.220** .000	.297** .000	.234** .000	.151* .012	-.025 .679	.139* .022		
area	.114 .060	-.085 .163	-.112 .066	-.129* .033	-.145* .017	-.092 .132	-.001 .987	-.057 .345	-.053 .386	-.157** .010	.423** .000	.315** .000	.253** .000	.027 .660	-.030 .626	.236** .000	.388** .000	

## 4.5 Testing of the Hypotheses

**Table 8 – Testing of the Hypotheses using multiple linear regression.**

Variable	Model	
	Vocational Exploration & Commitment	
Control variable	Employment Experience	$\beta=0.66$
	Gender	$\beta=0.38$
	Year of study	$\beta=-1.49^{**}$
Main effects	Extraversion	$\beta=-0.5^{**}$
	Agreeableness	$\beta=0.05$
	Conscientiousness	$\beta=-0.9^{**}$
	Neuroticism	$\beta=0.51^{**}$
	Openness	$\beta=-0.6^{**}$
	Attitude	$\beta=-0.83^{**}$
	Subjective Norm	$\beta=0.31^{**}$
	Perceived Behavioral Control	$\beta=-0.04$
R-Square	0.30	

#### 4.5.1 Control Variables

Three variables are selected as control variables, namely gender, year of study and employment experience. The reason why these three are selected as control variables is that based on previous research (Betz & Serling, 1993; Blustein et al., 1989, Jin et al., 2009), their studies used gender and year of study as control variables in the investigation of different relationships among variables (male and female were assumed not to have different preferences in career choice commitment due to their gender). It was believed and assumed that according to study experience and time spent on career exploration activities, more mature students might know themselves better, thus having better commitment to career choice.

For the third control variable, namely employment experience, Lent, Brown and Hackett (1994) found that according to Social Cognitive Career Theory, personal inputs (e.g., gender, race, and personality), contextual factors (e.g., social/academic status, culture, and family), and learning experiences (e.g., work experiences) would influence career behaviors in some important ways. Thus, it is useful for analysis to set employment experience as control variable as it might have impact on career choice commitment.

From the above table, among the three control variables, the regression result showed that only the year of study is significantly and negatively related to VEC ( $\beta=-1.49$ ). As VEC is a reverse scale, it means that the higher the student's year of study, the higher is his/her career choice commitment. This result is reasonable to the normal phenomenon as students become more mature into penultimate year and final

year, they have acquired more self-understanding and been equipped with more career information and job required skills, it is likely that their commitment to career choice will be higher. However, regression results showed that gender ( $\beta=0.38$ ) and employment experience ( $\beta=0.66$ ) are not significantly related to VEC, meaning that the student's gender and employment experience in this study do not have significant influence on his/her career choice commitment.

On potential impact of gender on career choice commitment, since the disciplines of respondents are mainly from business and social science (which are more general disciplines), they are all undergraduate students most of whom are with age from 20 to 22, it is not surprising that whether they are male or female, it is not a main factor in determining their career choice commitment, which is proved by the insignificance of the relationship between the two variables ( $\beta=0.38$ ).

#### 4.5.2 Regression analysis of each of the Hypotheses

The first hypothesis, **Hypothesis 1a** predicted that "extraversion" would be related positively to career choice commitment. The regression results in Table 8 showed that extraversion had a statistically significant negative relationship with VEC ( $\beta = -0.5$ ,  $t\text{-value} = -2.569$ ,  $p=0.011$ ) meaning that a person high in extraversion has a lower score of VEC, representing a higher level of progress in achieving career choice commitment, being more assertive and active socially to demonstrate greater career search self-efficacy and commitment. The **Hypothesis 1a** was found to be supported. It is note that the VEC scales are reverse-coded so that higher scores represent lower career choice commitment.



The second hypothesis, **Hypothesis 1b** predicted that “neuroticism” would be negatively related to career choice commitment. The regression results indicated that neuroticism had a statistically significant positive relationship with VEC ( $\beta = 0.51$ ,  $t\text{-value} = 3.120$ ,  $p = 0.002$ ) meaning that a person showing emotional instability will be very unlikely to be involved in much career-choice information seeking. Thus support was found for this **Hypothesis 1b**.

The **Hypothesis 1c** predicted that “openness” would be positively related to career choice commitment. The regression results supported this hypothesis. Openness has a statistically significant negative relationship with VEC ( $\beta = -0.6$ ,  $t\text{-value} = -3.593$ ,  $p = 0.000$ ). Since VEC is a reverse scale, it is therefore “openness” is positively related to career choice commitment. Thus support is found for **Hypothesis 1c**.

The **Hypothesis 1d** predicted that “conscientiousness” would be positively related to career choice commitment. The regression result indicated a statistically negative relationship between “conscientiousness” and VEC ( $\beta = -0.9$ ,  $t\text{-value} = -4.005$ ,  $p = 0.000$ ). The low scores in VEC again indicated a higher level of progress in committing to career choice. Support was found for **Hypothesis 1d**.

The **Hypothesis 1e** in this study predicted that “agreeableness” would have a positive relationship with career choice commitment. The regression result showed that

agreeableness did not have a significant relationship with VEC ( $\beta = 0.05$ ,  $t\text{-value}=0.236$ ,  $p=0.882$ ) meaning that **Hypothesis 1e** was not supported.

The second hypothesis, **Hypothesis 2** predicted that “Attitude” would be positively related to career choice commitment. The regression results showed that attitude was negatively related to VEC ( $\beta = -0.83$ ,  $t\text{-value}=-4.321$ ,  $p=0.000$ ), which means that having a positive evaluation of self-determination is linked to higher progress in career choice commitment. The **Hypothesis 2** was thus supported. It is noted that VEC is a reverse scale, thus its relationship with Attitude is negative, and it means that a high attitude score means a higher progress in career choice commitment.

**Hypothesis 3** predicted that “subjective norm” would be negatively related to career choice commitment. The regression results also showed “subjective norm” was positively related to VEC ( $\beta= 0.31$ ,  $t\text{-value}=2.046$ ,  $p=0.042$ ), and since VEC is reverse scale, thus meaning that a person having a higher score in subjective norm is more likely to have a slower progress in career choice commitment. The **Hypothesis 3** was thus supported.

Perceived behavioural control is an individual’s perceived ease or difficulty in performing the particular behaviour. **Hypothesis 4** predicted that “perceived behavioural control” would be positively related to career choice commitment. The regression results showed that PBC was not significantly related to VEC ( $\beta=-0.049$ ,  $t\text{-value}=-0.147$ ,  $p=0.884$ ), **Hypothesis 4** was not supported.

**Hypothesis 5** predicted that Attitude mediates the relationship between Conscientiousness and Career Choice Commitment (in which VEC is a reverse subscale, the lower VEC score, the higher is the overall progress on career choice commitment). The regression result is at Table 9 below:

**Table 9 - Attitude as mediator between Conscientiousness and VEC**

	Model 1	Model 2	Model 3
	Attitude	Vocational Exploration & Commitment	Vocational Exploration & Commitment
Variable			
Employment Experience	$\beta=-0.49$	$\beta=1.07$	$\beta=0.66$
Gender	$\beta=-0.16$	$\beta=0.52$	$\beta=0.38$
Year of Study	$\beta=0.26$	$\beta=-1.71^{**}$	$\beta=-1.49^{**}$
Agreeableness	$\beta=0.16^{**}$	$\beta=-0.08$	$\beta=0.05$
Extraversion	$\beta=0.06$	$\beta=-0.55^{**}$	$\beta=-0.5^{**}$
Neuroticism	$\beta=0.02$	$\beta=0.49^{**}$	$\beta=0.51^{**}$
Openness	$\beta=0.03$	$\beta=-0.62^{**}$	$\beta=-0.6^{**}$
Subjective Norm	$\beta=0.13^{**}$	$\beta=0.2$	$\beta=0.31^{**}$
Perceived Behavioral Control	$\beta=0.1$	$\beta=-0.13$	$\beta=-0.04$
Main effects			
Conscientiousness	$\beta=0.18^{**}$	$\beta=-1.05^{**}$	$\beta=-0.9^{**}$
Attitude			$\beta=-0.83^{**}$
$\Delta R$ -Square	<b>0.123<sup>**</sup></b>	<b>0.25<sup>**</sup></b>	<b>0.05<sup>**</sup></b>

**\*\* denotes significance**

The regression analysis result shows that the effect of conscientiousness weakens when attitude is entered into the regression equation. Also, as verified by the change in the R square in the SPSS table which shows the significant effect on the relationship between Conscientiousness and Career Choice Commitment when Attitude is entered. Thus, the **Hypothesis 5** is supported by regression analysis, that is to say, Attitude mediates the relationship between Conscientiousness and Career Choice Commitment.

In addition, a Sobel test was conducted to verify on the relationship among variables, the test result showed a support for mediation ( $z=2.11$ ,  $p=0.034$ ), so, the hypothesis that Attitude is mediating the relationship between Conscientiousness and Career Choice Commitment is established. Thus, **Hypothesis 5** is supported.

**Table 10 - Summary of regression findings for all hypotheses in this study**

Hypothesis 1a	Supported
Hypothesis 1b	Supported
Hypothesis 1c	Supported
Hypothesis 1d	Supported
Hypothesis 1e	Not Supported
Hypothesis 2	Supported
Hypothesis 3	Supported
Hypothesis 4	Not Supported
Hypothesis 5	Supported

## 4.6 Summary of results and findings

The above Table 10 summarized the regression analysis results for all the nine hypotheses (and sub-hypotheses) in this study and concluded that seven of them were supported while the remaining two which were not supported were all found to have beta coefficients that were not significant at the  $\alpha = 0.05$  level.

It is noted that unlike another subscale TTF, VEC is a subscale of the overall Career Choice Commitment which is a reverse scale, i.e., higher scores in VEC means longer time to explore and not committed to any career choice yet, thus this might pose some difficulties for reader to understand quickly when relationships are drawn above. Nonetheless, with clear elaborations and explanation on the nature of this subscale, all the above findings are clear for understanding the relationships of all variables in this study. Implications of all these findings will be discussed in the next chapter.

## **Chapter 5: DISCUSSION, IMPLICATIONS ON THEORY AND PRACTICES**

### **Introduction**

As elaborated in previous chapters, it is very important for young undergraduate university students to match their personality and career choice well in order to develop a fruitful and satisfactory career (Ajzen & Fishbein 1980). It is also acknowledged that university students are the future leaders for the advancement and development of every society. Understanding what factors influence their career choice most is important for academic staff and curriculum planners in universities in designing appropriate academic courses and education programmes to cater for the students' diverse needs. This is also essential for non-academic staff, such as career counsellors, in providing suitable career guidance and counselling services to assist the students in their career planning and development through to graduation.

This research study investigates the relationship between university students' personality traits and their attitudes towards career goals, as well as the relationship between their personality traits and the career choice commitment process and the degree to which they do this. The results and findings of the study include the relationships found between the above-mentioned independent variables and dependent variables, and the insignificant relationships found between some variables. This chapter comprises a general discussion on all the findings on relationships among

different variables as mentioned above, and an analysis on the implications of the findings on three aspects.

The three aspects of implications are namely: these findings (1) shed light on a new ways of looking at the current theoretical framework or theories in the related areas; (2) have some implications for the curriculum planning policy of university management; and (3) provide insights into the practice of student affairs professionals, particularly career counsellors who provide career guidance and counselling services to students throughout the process from their entry to their graduation from university. There will be detailed discussion on these three aspects in a later section in this chapter.

## **5.1 General discussion**

As the general education standard has been rising and given increasing number of university students in recent decades, there is a growing number of university graduates entering the employment market every year in Hong Kong. When they are in their undergraduate period, a better self-understanding and relevant and suitable career planning and development guidance service are very useful for the students. Relatively little, however, is known about the relationship between their personality and their career choice commitment of this target group – undergraduate students. The results and findings of the present study can shed some light on this important area as follows.

**5.1.1** Below is a brief recap and summary of all the research results and findings for reference.

<b>Hypothesis 1a</b>	There is a positive relationship between “extraversion” and career choice commitment. (Supported)
<b>Hypothesis 1b</b>	There is a negative relationship between “neuroticism” and career choice commitment. (Supported)
<b>Hypothesis 1c</b>	There is a positive relationship between “openness” and career choice commitment. (Supported)
<b>Hypothesis 1d</b>	There is a positive relationship between “conscientiousness” and career choice commitment. (Supported)
<b>Hypothesis 1e</b>	There is a positive relationship between “agreeableness” and career choice commitment. (Not supported)
<b>Hypothesis 2</b>	“Attitude” is positively related to career choice commitment. (Supported)
<b>Hypothesis 3</b>	“Subjective norm” is negatively related to career choice commitment. (Supported)
<b>Hypothesis 4</b>	“Perceived behavioural control” is positively related to career choice commitment. (Not supported)
<b>Hypothesis 5</b>	“Attitude” mediates “Conscientiousness” relationship with career choice commitment. (Supported)



## **5.1.2 Implications from the findings on relationships among variables**

**5.1.2.1** As mentioned, the relationships among scores of all dependent and independent variables for the total sample are presented in the previous chapter, it was found that four of the five personality traits (except agreeableness), Attitude, and Subjective Norms (but not Perceived Control Behaviour) relate significantly to the Career Choice Commitment, meaning that they have a relationship with Career Choice Commitment.

However, on the other hand, demographic aspects such as age, gender, and “whether participants have been employed before” or “have part-time job engagement” did not have a significant relationship to VEC and TTF. Thus, no substantial finding has been gathered on these aspects, and statistical relationship can hardly be reported with significant meaning. However, three variables namely year of study, gender and previous employment are used as control variables to test the hypotheses in this study through regression analysis.

### **5.1.2.2 Relationship between all independent variables and two dependent variables - VEC + TTF (Career Choice Commitment)**

The study results did support that there is significant relationship between the personality traits and the career choice commitment. Based on the two-tailed significance testing at the 0.05 level, it was found that all the five personality traits,

attitude, perceived behaviour control and subjective norms (the three elements under the Theory of Planned Behaviour) related significantly to Vocational Exploration and Commitment (VEC). However, only one personality trait, namely Openness, related negatively and significantly to Tendency to Foreclose (TTF), whereas the other four personality traits did not have any significant relationship with TTF. Analysis on details of this set of relationships will be provided in the later section in this chapter.

#### **5.1.2.3 Relationship between variables in TPB and Career Choice Commitment**

As hypothesized in Chapter 2, the students' personal attitude was strongly related to intention (which was measured by career choice commitment scale in this study), and likewise, as hypothesized, the students' subjective norm was negatively related to intention (career choice commitment), the findings in this study supported the hypotheses. However, perceived behavioural control did not show a significant positive relationship with career choice commitment,. These relationships will be elaborated in more details in the coming section and paragraphs.

In contrast with other TPB research (e.g. Shepperd, Hartwick, & Warshaw, 1988), but consistent with Van Hooft et al.'s (2004) analysis of job search intentions (especially for ethnic minority respondents in that study), the finding of this study shows that the subjective norm of university students plays an important role in their occupational intentions (career choice commitment in this study) as the two variables

(subjective norm and VEC) are positively related, meaning that the stronger a student is influenced by the subjective norm, the less progress is in the student's commitment in the career choice. Subjective norm, as measured in this study, refers to the norm that students would not commit to the career choice in the career decision making process as it has positive relationship with the scores of the VEC which is a reverse scale to the overall Career Choice Commitment scale.

This finding helps to contribute to our better and deeper understanding on theoretical framework on the relationship between a TPB element "subjective norm" and career choice commitment and challenges previous TPB research, for example, Shepperd, Hartwick, & Warshaw (1988). The reasons why most of the predictions (hypotheses) in this study are supported (H1a, H1b, H1c, H1d, H2, H3 and H5) and the remaining two predictions not supported (H1e and H4) are not known, it may be due to the sample or other reason(s), it is suggested for future research that qualitative research be conducted to explore the relationship between subjective norm and commitment across different study samples to better understand its role in this type of decision, say career choice commitment.

### **5.1.3 Application of Theory of Planned Behaviour in the context of Career Choice Commitment**

The current study examined the validity and applicability of the TPB in the context of career choice commitment. The framework of TPB was found to be a valid framework to predict career choice commitment of university students with different personality traits looking for employment, because it was found that both attitude and subjective norm were significantly related to their career choice commitment, with the former being positively related while the latter being negatively related. This echoed Van Hooft, Born, Taris, and van der Flier (2004) and Strader & Katz (1990) results regarding significant relationship between attitude and career choice commitment and between subjective norm and career choice commitment as were hypothesized as H2 and H3 above respectively.

For perceived behavioural control, it was hypothesized (H4) as having positive relationship with career choice commitment (Norman and Bonnett, 1995 and Giles and Rea, 1999). However, our insignificant regression result renders this hypothesis unsupported. The findings in the above, again, help to contribute to our better and deeper understanding on theoretical framework on the relationship between all three TPB elements and career choice commitment, while verifying and echoing some previous TPB research finding such as Van Hooft, Born, Taris, and van der Flier (2004) and Strader & Katz (1990).

Our findings are not aligned with some previous TPB research such as Norman and Bonnett (1995) and Giles and Rea (1999) on that unlike their finding, this study found that perceived behavioural control did not have significant relationship with career choice commitment (which was hypothesized in H4 above). This study contributes to the understanding of TPB's application in career choice commitment concept in the way that it was probably the first time (study) or one of the first two studies in which such results have been found in this study population in Hong Kong, an international city of China.

In summary, the findings of this study have made a meaningful contribution to the current understanding of relationship between the TPB as a theory and career choice commitment. Students' attitude has an important role to play in the career choice commitment process. Attitude towards career goal is found to have positive and significant relationship with career choice commitment, echoing the reasoning under TPB that attitude would trigger intention (career choice commitment) which will lead to behaviour (Ajzen, 1991). This important finding also supports and confirms both Norman and Bonnett's (1995) and Giles and Rea's (1999) TPB research finding that attitude has a significant relationship with intention in career (career choice commitment in this study). Therefore, the model of TPB is again supported as effectively applicable in this study of career choice commitment of undergraduate students.

In fact, the findings of this study have built on previous studies. While most of the previous studies on TPB and/or career choice commitment are mostly in the North America, Europe or other regions and countries, this is one of few studies, or one of the first two studies (to the best knowledge of the researcher), that investigates the relevance and applicability of TPB in a population of students from China. This is a useful empirical contribution, as the number of students pursuing university qualifications in this context has increased significantly over the past decade or so. And there has been a huge number of Chinese students who are pursuing their degree study not just in Mainland China, but also to overseas countries and cities all over the world in the last 15 to 20 years which becomes the largest supplier of incoming university students to many countries and cities in the world. This study examines the local Chinese students in Hong Kong, as a city in China, although the education system in Hong Kong is a bit different from that in Mainland China, the findings still bear good reference in this subject area – TPB and career choice commitment.

#### **5.1.4 Relationship between Personality traits and Career Choice Commitment**

In addition to the TPB variables, the present study examined the effects of the five personality traits under the FFM as independent variables that have been found to be important in the career choice commitment as a dependent variable. Extraversion, openness, agreeableness and conscientiousness demonstrated significant positive relationship with career choice commitment, whereas neuroticism was found to have a significantly negative relationship with career choice commitment.

Thus, the present findings would lead one to conclude that the five personality traits under the FFM can provide a useful conceptual framework to understand the career choice commitment of young people as university undergraduate students. This study provides new information and understanding on the relationship between model of FFM and career choice commitment in two aspects (1) by providing a sample of Chinese student population into investigating the application of the personality under FFM to predict career choice commitment and (2) by examining the relationship between personality traits under the FFM and career choice commitment but not exploration which only very little previous research study dealt with before. This is one of the first few research studies examining the relationship between personality traits under the FFM and career choice commitment of university undergraduate students in Hong Kong.

#### **5.1.5 The Relationship between Personality traits and variables in TPB**

The results and findings of this study show that, there is a significant relationship between three personality traits under Five Factor Model of Personality (FFM) namely extraversion, agreeableness and conscientiousness and attitude under TPB framework as all three personality traits have positive relationship with attitude. As explained in Chapter 2, “Conscientiousness” under FFM refers to striving for achievement, self-discipline, dutifulness and order. It is also an individual’s persistence in exercising his or her conscience in doing things in daily life, including a positive attitude in acting in workplace (Costa & McCrae 1992).

Also as elaborated in Chapter 2, based on FFM, “extraversion” mainly refers to an individual’s sociability and pro-activeness. This contains traits such as positive effects, approaching activities with energy, sociability, assertiveness and talkativeness (Costa and McCrae, 1992). It is argued that a person with an extravert personality will have a more assertive attitude and be more active socially and, thus, will be more involved in career information seeking and hence in career choice commitment.

Philip and Bruch (1988) and Hamer and Bruch (1997) found that shyness (that is negatively related to extraversion) (Briggs, 1988) was negatively related to the frequency of such (career) information-seeking behaviours. Therefore, it is predicted that extraversion is positively related to both career search self-efficacy and the degree of career information seeking, and hence career choice commitment.

As Reed et al (2004) pointed out, agreeable people tend to be more altruistic, sympathetic, and trusting of others. Although Reed et al (2004) also noted that as there appears not much theoretical or empirical bases for a strong linkage between agreeableness and the career exploration variables, the agreeableness trait was still included in the analysis of personality because it is a component of the FFM.

There is also a significant relationship found between two personality traits agreeableness and conscientiousness and perceived behavioural control.



“Conscientiousness” under FFM refers to striving for achievement, self-discipline, dutifulness and order. It is also an individual’s persistence in exercising his or her conscience in doing things in daily life, including in workplace (Costa & McCrae 1992), and given this, influences the extent to which an individual is likely to perceive his/her behavior is under his/her control.

#### **5.1.6 Personality as an influencing factor on Attitude under TPB as a new way to look at the subject of career choice commitment**

According to the TPB (Ajzen 1991), Attitude triggers Intention and Intention shapes Behaviour. This study applies this theory to students’ career choice behaviour and investigates Personality as a factor that influences Attitude towards career aspiration. Based on TPB, attitude to career impacts on intention and leads students to perform the behaviour. The results suggest that personality is an influential factor in determining attitude towards career; this follows and tallies with the research indicating that personality is an important factor that influences college students’ perception and thinking in the whole process of their career choice commitment (Wang et al. 2006). And this important finding has shed light on the relevance and applicability of adding one more element, namely personality into the original three elements/variables to predict intention and behaviour under the TPB model.

This study provides new information and understanding on the relevance and applicability of Personality as an influencing factor on Attitude as one variable under the theoretical framework of TPB which has relationship with career choice commitment in two aspects (1) by providing a sample of Chinese student population in Hong Kong into this investigation to predict career choice commitment and (2) by examining the relationship between personality traits under the model of FFM and Attitude under the TPB theoretical framework with which only very little previous research study dealt before. This is one of the first few research studies examining this relationship.

## **5.2 Implications for curriculum planning**

As elaborated in chapter 2, according to Harren (1979), making a career choice is a very essential developmental task for young people in their life period of late adolescence and early adulthood. It is acknowledged that making a good career choice is also critical for university students who will enter the job markets after graduation. A better understanding of the relationship between students' personality traits and their behaviour, of the approach to and degree of setting their career goal and commitment to their career choice, will give the academic staff of universities more information and a basis for designing more tailor-made academic courses for undergraduate students.

Nowadays, many undergraduate students (normally from 19 to 23 years old on average in Hong Kong) lack understanding of their own personality type and do not

know how to make a career choice, or commitment to a career once they have graduated. Bouchard & Loehlin, (2001) suggests that people will normally not be as extravert as they were young when they grow older as extraversion declines with age. Thus, if they understand more about their own personality while they are still young, they will know how to strengthen the positive effect of being an extravert, by undertaking a more active engagement in career information seeking and career exploration activities.

With more information on and understanding of this subject, curriculum planners are in a better position to offer and strengthen academic courses to facilitate students' self-understanding via the earning of credit points. For example, there can be more core or compulsory courses/ modules/subjects for every undergraduate student to take, or the university can offer more electives courses/modules/subjects for the same purpose. However, built-in compulsory academic modules or courses at foundation level are regarded as a more effective way to facilitate students' natural self-understanding or self-discovery. This research posits that, according to the research results and the literatures (as elaborated upon in Chapter 2), a better understanding of personality, will equip students in taking the best direction such that their career search and development path are more smooth (Ajzen and Fishbein, 1980).

### **5.3 Implications for theory**

**5.3.1** Two key theories relating to a Theory of Vocational Choice by Holland (1959) and the Social Cognitive Career Theory by Lent, Brown and Hackett (1994) were discussed in this study from the psychological and sociological perspective respectively in the Literature Review Chapter 2. It is noted that the later researchers built their theories and assumptions upon the conclusions on these two earlier theories. There are also discussions included in the chapter on the works of Nauta (2007), Wang et al. (2006), Tang et al. (2008), and Tansley et al. (2007), who conducted in-depth research studies around the issues and notions of career interests, personality types, career decision-making self-efficacy, career exploration, as well as career choice commitment.

This is one of the first few studies to investigate how the TPB elements (Attitude, Subjective Norms and Perceived Behavioral Control), together with the personality traits in the Five-Factor Model of Personality (FFM), relate their relationship to the career choice commitment of university undergraduate students. This study also examines the suitability and applicability of putting personality as an additional element in the TPB model to draw any relationship with the career choice commitment simultaneously. Thus by doing this, the TPB elements/variables have been expanded in application in this study as only very little research has made attempt in this approach in the past. This leads to more understanding on the relationships among all the variables concerned not being found before.

This study is a further support for the general applicability of the TPB across a wide range of intentions and circumstances as demonstrated in the findings in this study as elaborated in above sections. This study also supports Ajzen's (1991) argument that the relative strength of the core TPB variables can vary somewhat according to people's different situations including different personalities and progress in career choice commitment (intention).

In summary, this study provides new information and understanding on the relationship among model of FFM, theoretical framework of TPB and career choice commitment in two aspects (1) by providing a sample of Chinese student population into investigating the application of the personality under FFM to predict career choice commitment and (2) by examining the relationship between personality traits under the FFM and career choice commitment but not career choice exploration with which only very little previous research study dealt before. This is one of the first few research studies examining the relationship between personality traits under the FFM and career choice commitment of university undergraduate students in Hong Kong as part of China. Given that the number of Chinese university student population has been increasing sharply in the past decade or so, this study has made contribution in this context by providing useful reference information on the relationship between personality of these Chinese students and their career choice commitment.

**5.3.2** However, since this study has not covered the area of self-efficacy due to time and scale limitations, further investigation into this area is recommended for future researchers.

## **5.4 Implications for career guidance and counseling service**

While it is important to help students to understand themselves better through academic study in their early years of study, it is equally necessary and important that there be support services for the students from the personal growth and career development perspective.

As a support to the enhancement of personal effectiveness by way of tailored and individualized programmes, 'Life and Career Planning' could be introduced as a Co-curricular Learning course in the first year of the curriculum. In this course, each student would take a career interest test or use a personality assessment tool, such as the Myers-Briggs Type Indicator (MBTI) and/or the SDS (Self-Directed Search), to learn about their own personality, the concept of career planning, appreciate the transferability of the academic skills gained from the subject, and participate in a project in which the workplace is observed in order to pave the way towards making an informed career choice. What is important and beneficial to students is the promotion of career information-seeking behaviour through a variety of interventions which are

supported and acknowledged by Aiken and Johnston (1973), Prediger and Noeth (1979), and Thoresen, Krumboltz and van Huirst (1967).

The synergy of efforts between the academic and career staff in universities could help students see the connection between their academic and career education learning, and develop a stronger confidence and planning over their career development. More elaborations with examples of career development services and programmes will be provided in the next sections.

#### **5.4.1 Practical Implications**

This study has investigated the Personality Traits' relationship with the Attitude towards career determination and progress in career choice commitment among university students. The findings of the varying degree of impact associated with different Personality Traits on the readiness to make a career choice commitment have provided to be an insightful input to the career counseling process.

##### **5.4.1.1 Principle of Kaihe in Careers Planning and Development process**

Among the Chinese, the concept of **Kaihe** <開合> is a familiar and famous concept employed in Chinese literature as well as Chinese painting, which describes the natural development process of many things, ideas, concepts as well as relationships in the world. It is a kind of an accumulation of the Chinese people's experience and

wisdom over hundreds or even thousands of years of history and culture. The concept of **Kaihe** <開合> comprises four stages: <起> (qǐ), <承> (chéng), <轉> (zhuǎn), and <合> (hé), according to the Baidu Baike (encyclopedia). This refers to the ancient Chinese poem/essay writing (back in the Yuan Dynasty) that included four different stages: “introduction, elucidation of the theme, transition to another viewpoint and summing up; the four steps in the composition of an essay” (on-line accessed: <http://baike.baidu.com/view/169067.htm> 18 February 2012). (There is no academic literature particularly on this but the above encyclopedia on website)

To put this **Kaihe** framework into the context of this research study, the four stages can be regarded as being the (1) Beginning, (2) Continuation, (3) Transition, and (4) Consolidation stages. In their journey of career planning and development, university students go through these four stages in a similar way whereby the following actions are taken:

**Beginning:** understand themselves and explore careers;

**Continuation:** define career goals and prepare for the aspired career;

**Transition:** review the preparation experience against self and adjust career goal if necessary; and

**Consolidation:** make further preparation and seek jobs in the career field.



### 5.4.2 The Beginning Stage

The findings of this study bear particular relevance to the Beginning stage and Continuation stage as one's attitude towards making a career decision or career choice was proved empirically to have a significant impact on the degree of commitment in making career choice (Norman and Bonnett, 1995 and Giles and Rea, 1999) and actions taken in the subsequent stages in the realization of one's chosen goal.

1. Given the Personality Traits' influence on one's Career Choice Commitment, personality tests are useful at this early stage to enhance each student's self-understanding of his/her disposition so that strengths can be maximized and weaknesses recognized. When supported by career exploration exercises (e.g. MBTI, SDS), students can have heightened career awareness, see their limitations and take deliberate efforts to overcome them.

As shown in the findings in chapter 4, certain positive personality traits may lead to more healthy and successful career seeking behaviours; for example, people with high Extraversion scores will be more active socially, be more proactive both in their career information search and in exploring different career options before they make an informed career choice (Reed et al, 2004). The examples may also include having: social skills and energy as in the Extraverted person (Costa & McCrae, 1992); broader interests and inquisitive mind as in the Open person (Reed et al, 2004); acceptance of different views as in the Agreeable person (Reed et al, 2004); and diligence and organizational skills as in the Conscientious person (Reed et al, 2004).

It is recommended that a **Personal Development Action Plan** could be devised such that specific objectives are set by students to learn and perform behaviours in order to make good use of their strength of personality traits for enhancing personal effectiveness and future career development. For example, some students are high in Openness or Agreeableness; from the findings of this research study, both personality traits are positively related to the career choice commitment score, meaning a higher degree of matured commitment through their understanding of different career options and making good progress in being committed to certain career fields for development. This supports Super's (1980) suggestion that an exploratory attitude is characterized by a more open and less rigid approach to relating to the world, thus openness would be positively related with degree of self-exploration including career options.

However, with the development and enhancement in more personality traits other than that was originally their major trait (e.g., Openness and Agreeableness in the above example), such as the Extraversion trait, these students will be more active in career exploration and information seeking activities (Costa and McCrae, 1992), while also complementing and supplementing their existing major personality trait, so that they will achieve a more beneficial career planning and development process. Career counsellor may guide the students in the above process.

2. As for the career guidance and career counseling service by careers counselors in the university, the personality tests could also enable early identification of students with barriers to career choice commitment and those who tend to jump to premature career decisions (i.e., high scores on Tendency to Foreclose (TTF) only, but lower scores on Vocational Exploration and Commitment (VEC)). Supporting the point made by Krumboltz & Worthington (1999) as explained in chapter 2, that assessment of variables including career interest, self-efficacy expectations and personality traits are commonly used to assist students to identify career choices that would fit their personal characteristics, this study's finding may enable career counsellors to assist the student concerned to remove barriers and attain positive changes. When becoming clearer about his/her own personality and the career options, the student concerned will have more confidence in the career planning and career choice commitment process.

These efforts could be complemented by Personal Growth Workshops and related trainings. For example, the students who display "Neuroticism" and emotional instability may need to attend self-esteem and relationship workshops to foster confidence and trust in themselves and others. It is because according to Reed et al (2004) as explained in chapter 2, neurotic person normally experience negative feeling states such as fear, sadness, and anger-hostility and are more prone to self-deprecation, impulsive, and less effective in coping with stress.

Personality is generally accepted to be fixed, and therefore it appears not likely to be changed through workshops. Nonetheless, while personality is a relatively stable trait (Costa and McCrae 1992), it may be possible for career planners to utilize training or other mechanism to minimize the influence of neuroticism on the career choice process.

As Wang et al (2006) pointed out (as elaborated in chapter 2), personality is an important factor which influences college students' perception and thinking in the whole process of their career choice commitment, personality is indeed fundamental to all of one's attitudes and pursuits, study, career and relationships.

Thus, an early start in the self-exploration and self-understanding process in the first year of university study is of crucial benefit to one's later adjustment and development.

3. As a support to the enhancement of personal effectiveness through tailored and individualistic programmes, including the proposed "Life and Career planning" Co-curricular Learning course for the first year curriculum, each student, after taking a career interest test, will learn about the concept of career planning, appreciate the transferability of his academic skills gained from the subject and participate in a project to observe the workplace, such as engaging in an internship programme. Thus, first and/or second year students (assuming a four year undergraduate study curriculum) are recommended to engage in the

above-explained programmes, services and activities which will lay a good foundation for self-understanding and, hence, pave the way for the career planning and development process.

#### **5.4.3 The Continuation Stage**

1. As has been clearly substantiated in earlier section in this chapter, a positive attitude towards one's career choice determination has a positive influence on one's readiness to make a career commitment. In order to promote a positive attitude, sharing session by successful alumni, alumni career advisers, mentorship and talks by leaders in different sectors may foster students' career awareness and enhance their learning. As shown in the findings, stronger negative subjective norm was inversely related to career choice commitment. Thus, a subjective norm that was positive towards career choice commitment would be useful as it has been linked to career intention in previous studies on TPB, like Vincent, Peplau and Hill (1998) found that subjective norm predicted people's (women in their particular study) career intention (career choice commitment). Hence, success stories from leaders in one's society may encourage students to see the benefit of a more committed attitude towards career choice and preparation.
2. There are various kinds of career guidance workshops and seminars as well as experience-sharing sessions inviting not just alumni, but also senior business

leaders or executives, government officials in the society, and the Meet-the-CEO sessions from various industries on campus, which are mainly organized by the Student Affairs Office or Career Office in respective university campuses, the effect being that, through sharing with their senior fellow alumni and leaders from different industries, the crux of success will be shared and students' career development or job searching process will be reviewed. This will provide very useful information for students with a high score in Subjective Norm for making an informed decision and choice, being more positive in their Attitude towards their career goal set and being more pro-active in the career preparation process, including a firmer career choice commitment (Norman and Bonnett, 1995 and Giles and Rea, 1999).

#### **5.4.4 The Transition and Consolidation Stage**

1. Upon the accumulation of exposure to various careers and the sharing of experiences with seniors in relevant fields, students should be offered career counseling sessions to reflect on their experiences in relation to their interest, ability, personality, and values. A review should be performed on their career preparation road map and adjustments made as appropriate.
2. Obtaining appropriate career information is desirable and requires what Stumpf, Colarelli and Hartman (1983) defined as “purposive behaviour and cognitions that

afford access to information about occupations, jobs, or organizations that was not previously in the stimulus field” (p.192), it is therefore suggested that various kinds of career seminars, talks and workshops that give a more in-depth understanding of the operation and skill requirements of different industries and career fields should be organized by the university career office as these activities are suitable for students in their second or third year (assuming a typical university undergraduate study comprises four years of study). A series of career preparation and enhancement training to students in the related area is described with details at Appendix III.

3. In summary, with the accumulation of the previous years’ self-exploration and discovery in terms of Personality, values and career interest, together with a broad exposure to different career options and their related job requirements, added to the intensive training in internships and work place skills training, in their final year, students should have equipped themselves with polished skills for securing job offers so that they can enter their chosen career field which fits their personality and interests. According to Goffin, Rothstein and Johnston (1996), years of research has shown that a good career and personality match does have a positive impact on job performance.

## **5.5 Implications on policy and practice**

**5.5.1** As discussed earlier in this chapter, it is acknowledged that with better facilitation of students' career planning and development, and more informed choice in their career decision making, it will enhance the likelihood of the graduates (currently students) having a firmer commitment to their career choice. This will be equally important for our future leaders to have identified suitable and preferred careers in which they are really interested and have a high level of commitment to pursue, rather than spending much time in their late 20s and early 30s shifting around between different jobs and careers in order to understand if a final career really fits in with their personality, values and interest. This is a support to the notion of Edwards and Barnes (1997) that it is important for young people to have access to a wide range of comprehensive, current information in effective career education programmes.

**5.5.2** As explained in the above section, Section 5.2, with better knowledge and information about the extent of career choice commitment that students of each type of personality normally possess in their career search process; or about what kinds of Attitude, Subjective Norm or Perceived Behavioral Control are related to students of each kind of personality trait, the university management will be in a better position to plan, in terms of resources, what additional or particular academic courses and what career services can assist the students to have a smoother career development process in these aspects according to the diverse characteristics and needs of the general student population. This effort would be



done better from a more macro view so that synergy between academic staff and non-academic staff can be maximized to provide a more efficient and effective service to students.

**5.5.3** As suggested in earlier section, it is of the utmost importance for young people at the age of university undergraduate students to undergo comprehensive and effective self-understanding and career planning with a view to leading a successful and fruitful career development. As Bouchard & Loehlin, (2001) suggested, people will diminish in their extraversion personality trait when they grow in age. So, when they are still young and if they understand more about their own personality, they will know how to equip themselves to overcome, strengthen or improve what is the shortcoming of a particular personality trait, for an overall better career preparation, choice and development process.

**5.5.4** This process is not just beneficial at the point when university graduates enter into a suitable and preferred career that will match well with their personality, but is also very important for their sustainable development throughout their career life. According to Goffin, Rothstein and Johnston (1996), years of research has shown that a good career and personality match does have a positive impact on job performance. Thus, since career development requires decades of work experience for a person, it makes perfect sense for our university students and young graduates to invest more time in understanding themselves and investigating the available career options to ensure a good career choice and personality match for their sustainable career development.

**5.5.5** To make good and wise career choice decisions, students need to understand themselves and their potential career options well, as well as the necessary information and workplace skill sets that are required and suitable to a particular industry and career field. As Killeen and Kidd (1991) noted, most career education programmes include objectives that endorse the acquisition of information related to both the self and career options and the information constitutes the basis for the development of self-awareness and opportunity awareness, that are the two important generic learning outcomes of guidance.

**5.5.6** Therefore, the role of career counselors in universities becomes more and more important in this fast developing globalized age. It is because various new careers and jobs emerge with the advancement of technology, and they are changing their business models and operation modes frequently, thus also requiring the skill sets of new employees to be changing frequently. Assuming that university graduates are also interested and suitable in joining all those new careers and jobs (on top of all traditional and on-going career fields and job opportunities), qualified and effective professionals in the career counseling and guidance services in the university will certainly be very helpful in guiding students from the self-understanding stage (the beginning stage in the **Kaihe** framework mentioned above) to the consolidation stage. To do this, the career

counsellor will assess what the student should do according to the information on the relationship between Personality Trait and Career Choice Commitment, and on the relationship between Attitude and Career Goals and the career exploration activities of certain personalities. Then, the career counsellor will provide guidance services by recommending what career information and workplace skill training would be most suitable to the student(s) concerned. In fact, as elaborated in earlier section, all the above refers to the promotion of career information-seeking behaviour through a variety of interventions which are supported and acknowledged by Aiken and Johnston (1973), Prediger and Noeth (1979), and Thoresen, Krumboltz and van Huirst (1967).

**5.5.7** Concerning the role and professionalism of career counseling services for students in universities, there are still people who do not quite believe in the value of using a test for choosing a career. As Ajzen and Fishbein (1980) point out, this doubt may be due to the possibility that, after people completed a valid personality test, they did not have the guidance of an experienced career development professional to help them understand and apply the results to make a good career and personality match. In this connection, the career counselors in universities play an important role and exercise their professionalism to help the students throughout the university period as elaborated above. This will save students much time and will guide them to go through a long road of career planning and development in an appropriate direction without losing track or

going in the wrong direction. It should be noted that a good career personality test is developed through vast amounts of objective scientific testing and volumes of psychological research (Ajzen & Fishbein 1980), thus the possible doubts of some people have been resolved in this regard.

## **5.6 Limitations of this study**

**5.6.1** Although this study identified several meaningful relationships between personality and the dimensions of the Career Choice Commitment process, the findings and results need to be considered in the light of the following limitations.

**5.6.2** When considering the generalizability of the present study's findings, potential limitations must be noted. First of all, it is the cross-sectional design of the study which entails the corresponding inability to draw causal conclusions. As Bryman and Bell (2007) noted, it is not saying that it is not possible to draw casual inferences from research based on cross-sectional design, though casualty as drawn from experimental design gains more credibility. That is to say, although several significant relationships among variables were found, causation cannot be inferred due to the fact that all predictors and outcome variables were assessed at a single point in time. Longitudinal research on this subject is needed and recommended for future research direction.

**5.6.3** The second limitation of this study is that the sample size of around 270 participants out of the thousands of undergraduate student population in Hong Kong is considered relatively small, although every means has been taken to ensure the validity and reliability of the research design and findings such as using methods such as random sampling, factor analysis and reliability tests. Therefore, caution is recommended when the findings and conclusions are being considered in making inferences and generalization for other contexts.

**5.6.4** Spector (2006) points out that common method bias refers to the degree to which correlations between the dependent and independent measures are altered (inflated/deflated) due to the self-report survey method is used. Since this study used a single source (questionnaire) to report the independent and dependent measures, this increases the likelihood that some of the relationships were inflated due to common method bias. Given that not all of the hypotheses/relationships were supported in this study, the risk of bias is less likely. Future research in this area should use different sources to measure independent and dependent measures, i.e. qualitative research methods, for example, observation or peer ratings to control over the effect of social desirability (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

## **5.7 Research gaps and Future Research**

**5.7.1** As mentioned in the earlier chapter, owing to the limitations of time and scale for a single researcher, no attempt in this study has been made to search for any direct and straight forward answer as to whether there is a direct or causal relationship between other factors (other than personality and the elements in TPB in this study) and Career Choice Commitment (not career exploration). These other factors could include career interest and self-efficacy. With this research gap and these differences, further research into these identified specific areas will be needed, It is recommended that future research could broaden the range of variables investigated to include career interest and self-efficacy, etc.

**5.7.2** As opposed to the theoretical frameworks under the psychological perspective, such as the Theory of Vocational Choice and the Five-Factor Model, there has also been another stream of theories, according to the sociological perspective, which emphasizes the importance of self-efficacy in the process of peoples' career decision making processes. A literature review shows that the Social Cognitive Career Theory (SCCT; Lent, Brown & Hackett 1994) emphasized the importance of self-efficacy in one's career choice. This SCCT was, in fact, derived from Bandura's (1977, 1986, 1997) Social Cognitive Theory. According to Bandura (1986), one chooses to engage in or avoid a specific task

based on that person's self-perceived competency in accomplishing the task, while attempting to attain equilibrium in the Self-System, in which self-efficacy plays the major role. Therefore, the SCCT (Lent, Brown & Hackett 1994) suggests that career choice is shaped by outcome expectancies, career interests, and career self-efficacy.

**5.7.3** This study has not covered the area of self-efficacy under the framework of SCCT, which has also been identified as one of the influential factors affecting career choice of people, owing to the time and scale limitation of a single researcher. Further investigation into this area is thus recommended for future researchers to conduct an even more comprehensive study on this subject about the relationship between additional factors (be they from psychological or sociological perspective) and Career Choice Commitment.

**5.7.4** Finally, according to the findings in this study, one element Attitude, under the TPB model, acted as the mediator in the relationship between one personality trait, Conscientiousness and the Career Choice Commitment. It is recommended that more studies on any other element/variable under TPB may help further elaborate on the theoretical significance of using the TPB model to explain the relationship between personality and Career Choice Commitment.

## **5.8 Summary and Conclusions**

**5.8.1** Important results and findings were obtained in this study. To address the Research Question “what is the role of Personality in the Career Choice Commitment of university students in Hong Kong?”, the most important and useful findings are that the personality trait of a person is very fundamental to determine one’s career choice commitment because four of the five personality traits namely extraversion, neuroticism, openness and conscientiousness influence one’s attitude towards career goal very much, and attitude will trigger career choice commitment (intention) logically under the TPB. These findings have answered both Sub-question (1) “what is the effect of Personality in affecting Attitude, which will in turn influence the Intention (career choice commitment)?” and also Sub-question (2) “what is the effect of each of the personality traits in influencing the career choice commitment?”

It is also found that one element/variable under the TPB, Attitude, mediates the positive relationship between one personality trait namely conscientiousness and career choice commitment. This finding has also answered the Sub-question (3) “does any element under the TPB have a mediating effect on any one of the personality trait(s) under the FFM in influencing the career choice commitment?” From the findings of this study, better understanding on their personality will be very important to university students for committing to a career choice.



**5.8.2** This research study makes a theoretical contribution by applying the TPB to the Career Choice Commitment conceptual framework and by exploring the link between personality and attitude in this context at the same time. In fact, very little research has applied the TPB model to the specific subject of Career Choice Commitment and also simultaneously investigated the relationship between Personality and Career Choice Commitment. In this sense, this study provides a possible new way of looking at the career choice concept by allowing both the personality trait (under the FFM model) and TPB model to constitute a relationship with Career Choice Commitment simultaneously. This is one of the first few studies investigating the relationships among the abovementioned areas simultaneously with a Chinese student population in Hong Kong, as a city in China. The useful findings will provide good future reference.

**5.8.3** To conclude, the findings and results of this study have shed light on new ways of looking at the current theoretical framework and theories in its related areas. The findings have suggested the implications on the policies on curriculum planning for more self-understanding academic courses for university management, as well as provided insights for reference for student affairs professionals especially career counsellors who provide career guidance and counselling services to the students throughout the process from their entry to their graduation. Thus, a clear and precise answer to the Research Question in this study is that Personality of university student in Hong Kong is a very important and influential factor in determining his or her Career Choice Commitment.

## **APPENDIX I - QUESTIONNAIRE FOR SURVEY**

**University of Newcastle, Australia**  
**School of Business**  
**Student survey on Relationship**  
**between Personality and Career Choice Commitment**  
**Participant Information Statement/**  
**Instructions on how to complete this questionnaire**

### **(1) Introduction and objective of the questionnaire**

The objective of this questionnaire is to survey university undergraduate students in Hong Kong to investigate the relationship between personality trait and career choice commitment. This is an anonymous questionnaire to be distributed to university students to collect data for the above purpose. No identifiable personal information will be collected in the completed questionnaire. This survey aims to provide curriculum planners with useful information on designing appropriate career education curricula for better self-understanding of students. It also aims to provide useful information for career counselors to assist students in their career planning and development process through graduation.

Any information collected by the researcher will be stored securely and only accessed by the researcher unless you consent otherwise, except as required by law. The original data will be in soft copy kept on a password-protected personal computer in the office of the researcher along with the aggregate data. Only the researcher and research supervisor will have access to the data. The data will be kept for a minimum of five years and will be stored and disposed of in accordance to the University of Newcastle's policy regarding the storage and disposal of confidential material and research data.

### **(2) How to complete the questionnaire**

Your participation is voluntary. Due to the anonymous nature of the research, you will not be able to withdraw your data once you have returned your completed questionnaire.

For the 62 items that are listed below, please circle the appropriate number that most accurately reflects the extent to which you agree or disagree with the wordings or statement. Remember there are no right or

wrong answers. You will notice that some of the questions appear to be asking the same thing. This is required for accurate analysis. Please answer all of the questions.

By completing and returning the questionnaire, you are giving your consent to participate voluntarily. Please return your completed questionnaire into a locked collection box which is located at the entrance of the classroom/lecture theatre near the door at the end of the class. Thank you.

### (3) Contacts of the Researcher

If you have any question on this questionnaire, or if you want to receive a brief report of the findings, please contact the researcher Mr. Tom FONG, DBA candidate and researcher of the University of Newcastle by email : wingho.fong@uon.edu.au or by phone : (852)-6030-0103. Thank you very much for your participation.

#### Questionnaire on students' career choice commitment

##### A. Career Choice Commitment

<p><b>This section asks you about career choice commitment. Please answer based on your own perspective. If you do not currently have a specific career goal, please respond to the following items in a way that would reflect your behavior and attitudes as if you did have an occupational preference. Please circle the number that best reflects the extent of your agreement to that statement.</b></p> <p><b>Remember that there are no right or wrong answers.</b></p>								
	Strongly disagree	Please circle your response.					Strongly agree	
1. I believe that it is a sign of maturity to have one career goal	1	2	3	4	5	6	7	
2. I think I am suitable for only one occupation	1	2	3	4	5	6	7	
3. I will follow through with my career choices no matter what happens	1	2	3	4	5	6	7	
4. I believe that career decisions can be right or wrong	1	2	3	4	5	6	7	
5. I think only one occupation is right for my abilities	1	2	3	4	5	6	7	
6. I like to consider many options before committing myself	1	2	3	4	5	6	7	
7. I will not consider more than one career goal	1	2	3	4	5	6	7	
8. I think only one occupation is right for my values	1	2	3	4	5	6	7	
9. I think only one specific career goal is right for me	1	2	3	4	5	6	7	
10. I will end up with the kind of work I	1	2	3	4	5	6	7	

most want							
11. I need to learn about myself before committing to a single career choice	1	2	3	4	5	6	7
12. It is hard for me to decide of the best career choice because of too many possibilities	1	2	3	4	5	6	7
13. I have information about career fields that are interesting	1	2	3	4	5	6	7
14. I have thought about obstacles to gaining a job in my chosen career field	1	2	3	4	5	6	7
15. I am uncomfortable about committing to a specific occupation	1	2	3	4	5	6	7
16. I am uneasy about committing to a career choice because I am unaware of related options	1	2	3	4	5	6	7
17. I cannot focus on one specific career goal	1	2	3	4	5	6	7
18. I do not know enough about myself to commit to one career choice	1	2	3	4	5	6	7
19. I am uncommitted about my career because I am unsure about future	1	2	3	4	5	6	7
20. I have difficulty in committing to important decisions	1	2	3	4	5	6	7
	<b>Strongly disagree</b>	<b>Please circle your response.</b>					<b>Strongly agree</b>
21. There is lack of information about career fields of interest to me	1	2	3	4	5	6	7
22. I have difficulty in making decision when faced with options	1	2	3	4	5	6	7
23. I am confident in my ability to achieve career goals	1	2	3	4	5	6	7
24. I am uneasy in committing to a specific career plan	1	2	3	4	5	6	7
25. I am able to commit myself firmly to a specific career goal	1	2	3	4	5	6	7
26. I worry about my ability to make effective decisions	1	2	3	4	5	6	7
27. I am not very certain about the kind of work I want to do	1	2	3	4	5	6	7
28. I would change plans if my field became more competitive	1	2	3	4	5	6	7

**B. Personality**

This section's wording is used to describe your personality. Please respond to it based on your own perspective. Please circle the number that reflects the extent to which each of the personality characteristics describes yourself. It is important to be as honest as possible – your response will be completely anonymous.

	Strongly disagree	Please circle your response.						Strongly agree
1. I am the life of the party	1	2	3	4	5	6	7	
2. I sympathize with others' feelings	1	2	3	4	5	6	7	
3. I get chores done right away.	1	2	3	4	5	6	7	
4. I have frequent mood swings.	1	2	3	4	5	6	7	
5. I have a vivid imagination.	1	2	3	4	5	6	7	
6. I don't talk a lot	1	2	3	4	5	6	7	
7. I am not interested in other people's problems	1	2	3	4	5	6	7	
8. I often forget to put things back in their proper place.	1	2	3	4	5	6	7	
9. I am relaxed most of the time	1	2	3	4	5	6	7	
10. I am not interested in abstract ideas	1	2	3	4	5	6	7	
11. I talk to a lot of different people at parties	1	2	3	4	5	6	7	
12. I feel others' emotions	1	2	3	4	5	6	7	
13. I like order	1	2	3	4	5	6	7	
14. I get upset easily	1	2	3	4	5	6	7	
	Strongly disagree	Please circle your response.						Strongly agree
15. I have difficulty understanding abstract ideas.	1	2	3	4	5	6	7	
16. I keep in the background	1	2	3	4	5	6	7	
17. I am not really interested in others	1	2	3	4	5	6	7	
18. I make a mess of things	1	2	3	4	5	6	7	
19. I seldom feel blue	1	2	3	4	5	6	7	
20. I do not have a good imagination	1	2	3	4	5	6	7	

**C. Attitude, Subjective Norm and Perceived Behavioral Control towards Career Goal**

**Please indicate how strongly you agree or disagree with following statements by circling the number of your response.**

	Strongly disagree	Please circle your response.					Strongly agree
1. For me, having a specific career goal is good	1	2	3	4	5	6	7
2. For me, having a specific career goal is unwise	1	2	3	4	5	6	7
3. For me, having a specific career goal is harmful	1	2	3	4	5	6	7
4. For me, having a specific career goal is beneficial	1	2	3	4	5	6	7
5. Generally speaking I usually do what most people who are important to me would accept	1	2	3	4	5	6	7
6. My friends think I should have a specific career goal and therefore I do	1	2	3	4	5	6	7
7. Generally speaking I usually do what my friends say I should do.	1	2	3	4	5	6	7
8. Generally speaking the important people think that one specific career goal is the best approach.	1	2	3	4	5	6	7
9. Generally speaking I think that the important people in my life would agree that having one specific career goal is best..	1	2	3	4	5	6	7
10. Whether or not I have a specific career goal is entirely up to me.	1	2	3	4	5	6	7
11. I have complete control over whether or not I have a specific career goal.	1	2	3	4	5	6	7
12. It will be difficult for me to have a specific career goal.	1	2	3	4	5	6	7
13. I would like to have a specific career goal but I don't really know if I can.	1	2	3	4	5	6	7
14. I am confident that I could have a specific career goal over the next month if I wanted to.	1	2	3	4	5	6	7

Finally, this section asks you on some personal information for analysis use. All Information provided will be kept confidential.

#### D. Demographics

Age	<input type="checkbox"/> Below 20 years of age <input type="checkbox"/> 20 – 24 years <input type="checkbox"/> 25 – 30 years <input type="checkbox"/> 31 – 35 years <input type="checkbox"/> Above 35 years of age
Previous employment	<input type="checkbox"/> No <input type="checkbox"/> Yes, less than or up to 1 year part-time employment <input type="checkbox"/> Yes, more than 1 year part-time employment <input type="checkbox"/> Yes, less than or up to 1 year full-time employment <input type="checkbox"/> Yes, more than 1 year full-time employment
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female
Mode of Study	<input type="checkbox"/> Full Time <input type="checkbox"/> Part Time
Year of study	<input type="checkbox"/> Year 2 <input type="checkbox"/> Year 3 <input type="checkbox"/> Year 4 <input type="checkbox"/> Other (please specify: _____)
Do you have any full/part-time job now?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Area of study	<input type="checkbox"/> Arts <input type="checkbox"/> Business Administration <input type="checkbox"/> Engineering <input type="checkbox"/> Science <input type="checkbox"/> Social Science <input type="checkbox"/> Other (please specify: _____)

End of questionnaire

Thank you very much for your participation. Please return it by putting it into the locked collection box located near the entrance of the classroom / lecture theatre at the end of your class.

## APPENDIX II

### DIAGRAMS SHOWING PATHS OF HYPOTHESES H1A TO H5

DIAGRAM 1

Diagram showing paths of hypotheses H1a to H4 (Theory of Planned Behaviour)

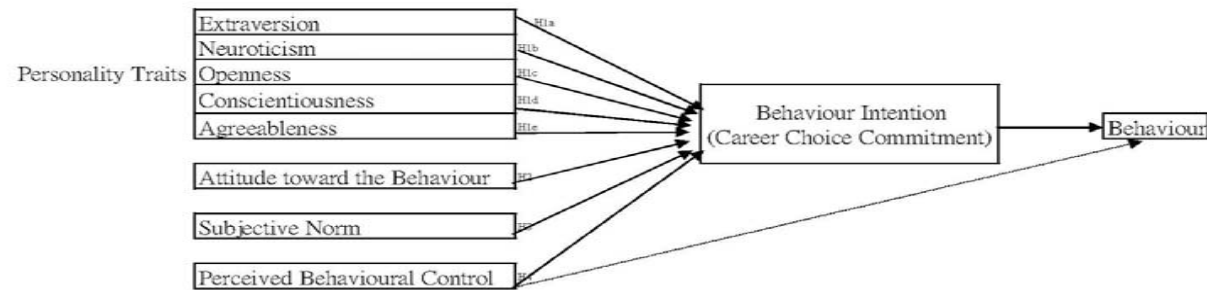


DIAGRAM 2

Diagram showing path of hypothesis H5

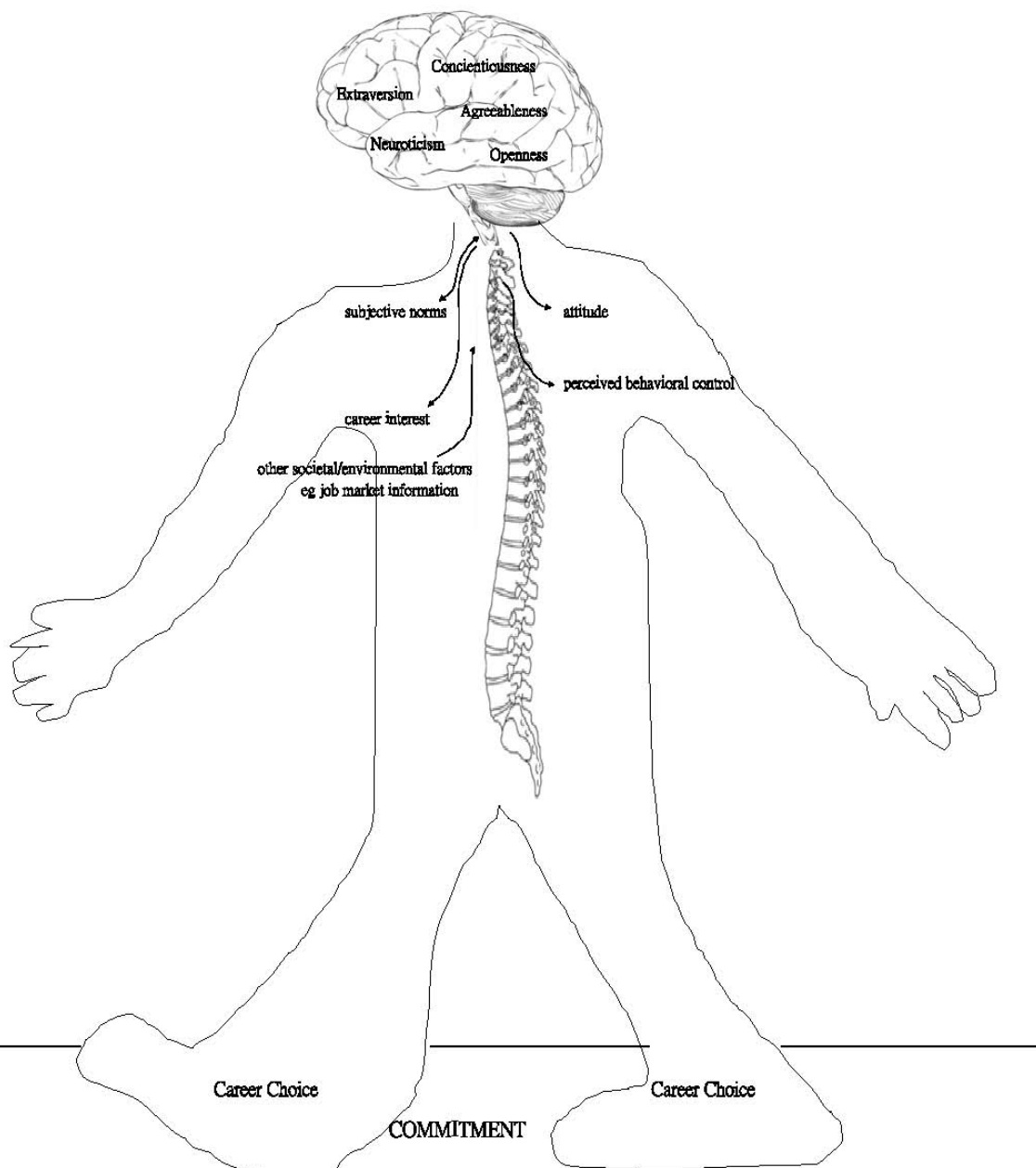




### APPENDIX III

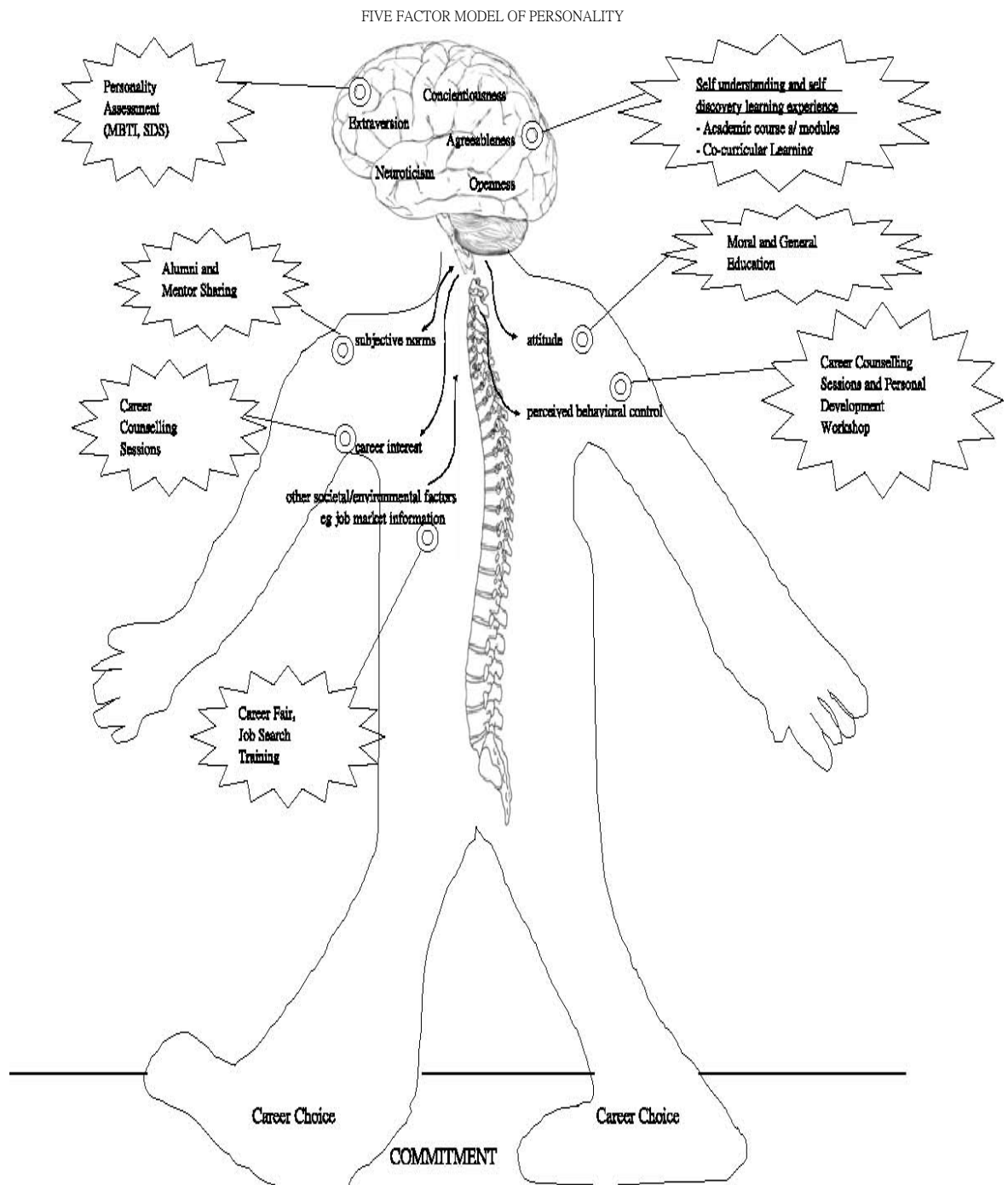
## DIAGRAM ANALOGY FOR A PERSON TO COMMIT TO CAREER CHOICE BEFORE GOING THROUGH CAREER GUIDANCE SERVICES

### FIVE FACTOR MODEL OF PERSONALITY



## APPENDIX IV

DIAGRAM ANALOGY FOR  
A PERSON TO COMMIT TO CAREER CHOICE  
AFTER GOING THROUGH CAREER GUIDANCE SERVICES



## **APPENDIX V**

### **SERIES OF CAREER PREPARATION WORKSHOP, TRAININGS AND SERVICES FOR UNIVERSITY STUDENTS**

#### **(A) Relationship among a person's personality, career choice commitment and career guidance experience**

1. There is a conceptual explanation of how the personality will influence career choice commitment and an application of how to provide career guidance services to students in an analogy diagram of a person in Appendix III and IV.
2. With all his five personality traits in his brain, which are the fundamental source of values, interests, attitude, preferences and intention, and behaviour. Along his spine there are various elements under the TPB model framework, including Attitude, Subjective Norm and Perceived Behavioural Control.
3. There are other concepts and elements along the spine of the person, namely career interest, self-efficacy and other societal factors affecting career choice (such as job market information, etc.)
4. Career choice is placed on the two legs of the person which is analogous to the fact that the person can take control of which career they choose to enter, but the level of commitment is represented by the continuum in

a scale format because the CCCS consists of two subscales (i.e. VEC and TTF) whereby the person needs to pursue their career choice on a continuous basis.

5. After a better understanding on a student's personality is obtained, there are a roadmap and series of career planning, guidance and developmental activities for the student. These include, personality assessment session, career counselling session, self-confidence training workshop, mentorship and alumni sharing sessions, good resumes and job application letters writing workshop, internship programmes, work-shadowing, career fairs and mock interview workshop, etc.
6. For each of the elements of the TPB model, such as attitude, subjective norms and perceived behavioural control, there is at least one career service or activity to be provided or recommended to this person (symbolizing as a person), synergy between academic and non-academic programmes will help this person to achieve a whole person development. (The second diagram attached shows the same person provided and groomed with all the above mentioned career services and programmes, which depicts the useful help to be provided to undergraduate students is actually essential for a better career planning and development process of the student) (Please refer to the diagrams in Appendix III and IV about a person's career choice commitment before and after his/her going through career guidance and services)

**(B) Career Preparation training for students in Transition and Consolidation Stage**

1. Students in their penultimate year are recommended particularly to participate in a range of career education, career planning and guidance activities and services. Since it is not their final or graduating year, they therefore still have much time for more exposure and networking. This will replace the need to attend numerous recruitment talks given by employment organizations, or to attend written and selection interviews required by the organizations, both of which can use a substantial amount of their precious time in their final year.
2. Activities such as work-shadowing, workplace attachment, sandwich programmes or internship programmes can be undertaken to explore alternative career paths or more in-depth preparation of chosen career goals for students of various disciplines and are also useful career training and preparation. The enhancement of their workplace skills and generic skills is essential for senior year students (penultimate year and final year students) before they really encounter the process of job searching in their graduating year.
3. A most important series of career training and preparation activities that is recommended and suitable for graduating students includes the training workshop on writing good resumes and job application letters, as well as the mock interview workshop. Students should engage in

these activities before facing the recruitment season at the start of final academic year, which usually occurs in September in Hong Kong.

4. Second and third year students (assuming a four year undergraduate study curriculum) are recommended to engage in the above-mentioned programmes, services and activities which will continue to equip students with more information on career options and understanding from first-hand experience shared by seniors in the career fields in which they are interested. This will build on the good foundation already built in first year in the career planning stage, again paving the way for a mature career planning and development process.
5. However, on the other hand, the Careers Counsellors should be mindful of the negative aspects of high compliance to social normative pressure on career choice commitment. During this phase, students might be overwhelmed by the multitude of career options and run the risk of not committing fully to the process of career choices. More importantly, career counselling sessions are recommended to be provided to students as it is crucial to inspire them to appreciate for themselves the meaning and value of career planning, and, hence, take a more proactive and purposeful manner in preparing for one's chosen career.

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