

Factors affecting student retention in the Hong Kong Continuing Education Institution

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STATEMENT OF ORIGINALITY

This dissertation 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. When deposited in the University Library, I give consent to this copy of my dissertation being made available for loan and photocopying subject to the provisions of the Copyright Act 1968.

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SYNOPSIS

The purpose of this document is to present the findings of a Doctor of Business Administration research project. The primary objective is to investigate the critical factors that affect students' college experience, satisfaction, and completion of their courses at the Open University of Hong Kong (OUHK). Data sources include responses to questionnaires and secondary sources of data, such as published literature on student enrolment, satisfaction and retention. Three variables were tested in this study: faculty performance, advisory staff performance and classes. Results found that, compared to classes, both faculty and advisory staff were more influential on students' college experience, satisfaction, intention and retention.

The method used to conduct this research project is questionnaire administration at OUHK. Data collected and analysed are primarily quantitative from the questionnaire administered to students at the institution.

Our research recommendations are: (i) That as “support strategies” is an ongoing process especially appropriate for upper level students, mentoring and life-long learning seminars would improve their academic performance and help students to develop skills, set goals and enhance personal development in their college life; (ii) More practical classes in the community setting would provide real life business experience to facilitate students' learning interest, thus improving their overall student satisfaction and retention. (ii) Financial aid may be another factor affecting students' intention to stay or drop-out, especially in relation to self-financing students. If the OUHK can provide some financial

assistance, such as scholarship programmes, this may encourage students to persist to graduate at the institution.

ABSTRACT

Keywords: *Student retention; Student retention in Hong Kong; Student retention in Asia; Student retention in Asian Open Universities; Student satisfaction in Higher Education in Hong Kong*

Student retention studies have been examined for many years for reasons of students' educational experience and the determinants in affecting students' overall satisfaction, intention and retention. However, most of the published literatures are in English and undertaken in the western world context, particularly the United States and in Western Europe. As such, not much is known about the practices in Asia and in the Chinese context in particular.

This study focuses on the Hong Kong Special Administrative Region of The People's Republic of China. The researcher reviews the major factors that most influence student satisfaction and retention. Another objective is to discover whether the institution's current "support strategies" have a positive impact on student satisfaction, intention and retention at the continuing education institution of OUHK. The findings of this research can be a useful starting point for educators who may want to understand why Chinese students choose to persist in a programme or decide to drop-out. The study can generally provide information on the key factors that most influence student satisfaction and their intention to stay at the institution.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
GPA	Grade Point Average
HKCAAVQ	Hong Kong Council for Accreditation of Academic and Vocational Qualification
HKDSE	Hong Kong Diploma of Secondary Education
HKSAR	Hong Kong Special Administrative Region
SPSS	Statistical Package for Social Science
OUHK	The continuing education institution of the Open University of Hong Kong
UK	United Kingdom
US	United States

CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1 presents the justification for undertaking this research on the relationship between student enrolment satisfaction and retention in the continuing education institutions in Hong Kong, specifically at the Open University of Hong Kong. Chapter 1 also presents an overview and outline of the dissertation. The study focuses on investigating the relationship among student enrolment, satisfaction and retention at the continuing education institution of the Open University of Hong Kong (OUHK).

In the 1950s, the continuing education environment in Hong Kong was regarded as education for people who had missed a formal education; and from 1954 to 1978, a number of continuing education institutions were proactively established by the Government. The Government played an even more proactive role in the 1970s by paying more attention to the development of educational opportunities for mature and adult students. At the time, manufacturing industries in sectors such as textiles, apparel and plastic were compelled to move from the outskirts of Hong Kong Special Administrative Region (H.K.S.A.R) to a second tier city in mainland China. As a result of this and other reasons, many workers were laid off in industry; and needed to be re-trained to learn new skills and knowledge in order to enable them to seek job opportunities in other industries. This demand for re-skilling in turn resulted in rapid growth of the number of continuing education institutions set up by the Government and private individuals. It also underscored the growing socio-economic importance of continuous education institutions as training and educational

institutions in Hong Kong even up to and beyond the late 1980s (Cheung, 2006). In addition, in the 1990s, Hong Kong experienced an economic downturn and a further rise in unemployment and the laying off of even more workers who needed to re-skill and prepare for the advent of a knowledge-based economy and the hand-over to China. This further resulted in the Government taking the view that aside from re-training, lifelong education was important and significant in the future development of H.K.S.A.R (Tung, 1998). Thus, the Government boosted the number of education funding schemes to subsidise workers and people who wanted to pursue continuing education opportunities, and many private providers took advantage of the growing demand for continuing education (HKVTC, 2012).

From the student's perspective, due to the rapid growth and large number of continuing education institutions and courses on offer made it difficult to choose about which institution and / or program to enrol. Furthermore, once enrolled, difficult issues in relation to assess quality of the programs, the institutions and overall student satisfaction which influences retention arose of which there is minimal understanding in the context of Hong Kong because few studies have been undertaken in this area. It is therefore important to investigate the critical factors that students consider when selecting the institution and / or program of studies to enrol, determining factors that influence satisfaction with their choice of enrolment, i.e. choice of institution and course chosen and thus willingness to stay and complete the program retention in the institution. This is one major rationale for undertaking this study.

A second rationale for undertaking this study is from the institutional perspective. Often, the operations of each institution are influenced by major stakeholders including management and students. The number of student enrolments, satisfied and retained

students will have important financial, marketing and other implications for the continuity and long term success of each institution (HKVTC, 2012). Hence, a study of student enrolment, satisfaction and retention is important to progress our understanding in the context of Hong Kong.

1.1 Motivation for the research

There are two factors that have motivated the undertaking of this research. First, there is minimal scholarly understanding of the relationship between student enrolment, satisfaction and retention in continuing education institutions in Hong Kong (Wong & Wong, 2011). Second, there are many alternative theories about student satisfaction and their intention to remain studying, however many of these reasons are influenced by historical and current contexts (Astin, 1993; Bean, 1980; Bean & Metzner, 1985; Terenzini & Pascarella, 1980; Tinto, 1975, 1993).

1.2 Dissertation goals, objectives, methods and findings

The dissertation is concerned with the relationship between student enrolment, satisfaction and retention in continuing education institutions in Hong Kong, specifically at the OUHK.

The specific research objectives are:

- (1) To determine whether faculty performance (i.e. understanding, accessibility, professionalism, reliability and feedback), academic advisory staff (i.e. accessibility, reliability, willingness to help and understanding) and classes (i.e. cognitive development, career programs, and business skills) influence student satisfaction in OUHK.
- (2) To determine whether there is a positive impact of faculty performance, academic advisory staff, classes and student satisfaction on student retention in the OUHK.

(3) To determine whether there is a positive impact on economic and environment issues (i.e. family support, politics, climate, price, immigration ease of visas) that affect student retention in the OUHK.

The key questions in this study include:

- (1) What factors impact students' satisfaction, intention to stay, leading to retention?
- (2) Do support strategies improve satisfaction, intention and retention?

A questionnaire was administered to a sample of students in OUHK and hypotheses testing. The findings of the study extend the understanding of the key factors that affect student enrolment, satisfaction and retention in the context of the OUHK.

Further, the findings may enable an objective comparison of influences on student enrolment, satisfaction and retention in continuing education in Hong Kong, to students in countries such as Australia, Canada, U.K., U.S., Africa, Singapore, and Malaysia students where similar research have been conducted. Also the findings may allow the extent to which three variables including faculty performance, academic advisory staff and classes have impacted on students' satisfaction and retention. Findings from the study may inform the development of a conceptual model of student-institutional relationships (before enrolment, their satisfaction while enrolled and their retention in the institution). This model would assist college administrators to consider factors that students consider valuable, and thus, contribute to increasing student retention on the long run.

1.3 Dissertation outline

The dissertation is structured as follows:

Chapter 1 describes the focus of the research; and the motivation and need for undertaking such research. Chapter 1 also highlights the goals of the research — investigating the relationship between student enrolment, satisfaction and retention in the continuing education institutions in Hong Kong, specifically at the OUHK.

Chapter 2 provides a review of the academic literature on student enrolment, satisfaction and retention. It also provides an understanding of some of the models in the area. Further, Chapter 2 also highlights the research gaps within studies of student enrolment satisfaction and retention in the continuing education. The Chapter concludes with a discussion of the theoretical framework and hypotheses arising from the literature review.

Chapter 3 discusses the methodology and research design implemented, and the rationale for the choice of methodology utilized. Chapter 3 also discusses quantitative approaches to education and educational management research as well as empirical data collection processes and procedures using questionnaires, and how the data was analysed.

Chapter 4 provides a discussion and interpretation of the statistical results arising from the analysis of data and hypotheses testing.

Chapter 5 discusses the result and findings emanating from the analysis of data. Chapter 5 also summarises and makes recommendations about critical factors that impact on the student enrolment, satisfaction and retention in a continuing education institution in Hong

Kong. Chapter 5 concludes with a discussion of the limitations of the research and provides suggestions for future research.

1.4 Summary and conclusion

Chapter 1 presented the focus and objectives of the research as well as the academic motivation for undertaking research in this area. It also presented an overview of the dissertation, its goals, objectives, methods and findings as well as its overall structure and outline.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

Chapter 2 comprises the review of academic literature on customer satisfaction, student satisfaction and student retention in higher education. This Chapter also comprises the identification and discussion of resulting research gaps, emerging research questions, and identification of variables to be tested from the literature. The primary aims of this Chapter are to (a) demonstrate a clear understanding of the literature, theories, studies, concepts, models and ideas related to the focus of the dissertation (the focus being student enrolment, satisfaction and retention); (b) clarify definitions and terminology as they arise; and (c) identify an important research issue and specific research questions that can be feasibly addressed.

Chapter 2 is structured into 5 sections: Section 2.1 begins with a description of the strategy used to select the articles reviewed and a rationale for selecting and reviewing these articles. Section 2.2 reviews, synthesizes and summarizes the academic marketing literature on customer satisfaction and links it with student satisfaction as well as student intention to persist in higher education and student retention. Section 2.3 reviews and summarizes the academic literature on proposed models of student retention in higher education. Section 2.4 discusses emerging research gaps, aims and questions, and identifies important variables from the literature to be tested in the research. Section 2.5 summarises the chapter.

The chapter structure follows the suggestions of (Rudestam & Newton, 2007) that a conceptual framework, which is simply a less developed form of a theory, consists of statements that link abstract concepts to empirical data. Theories and conceptual frameworks are developed to account for or describe abstract phenomena that occur under similar conditions. The rationale for the adopted chapter structure is that this structure facilitates the effective communication of the line of reasoning and logic of the literature review, and therefore enables the literature review to unfold logically and sequentially.

In delimiting the literature review, the review is focused on academic literature published in journals. The review of the literature assumes ‘models’ to be the same as ‘frameworks’. Hence, for the purpose of this research, ‘frameworks’ and ‘models’ are used interchangeably and no strict distinction is made.

2.1 Strategy and rationale used to select the articles reviewed

Research on university student retention is voluminous and published over several decades (Rendon, Jalomo, & Nora, 2000). A quick search on Google scholar using the keywords ‘student retention’ generated over 500 articles on the subject matter. Hence, it was necessary to systematically select and review articles that only directly relate to the research questions, aims and focus of this research. As a result, the researcher decided to review, synthesize and summarize the academic marketing literature on customer satisfaction, the education literature on student satisfaction, education literature on student satisfaction and the literature on models of student retention in higher education.

The search strategy involved identification and selection of 15 keywords: customer satisfaction; student satisfaction; student intention to persist; student retention; student

attrition; student persistence; educational services; student services in higher education; student completion; student progression; higher education quality; student enrolment; student satisfaction and retention in Asia; student satisfaction and retention in Hong Kong; student satisfaction and retention in the context of continuing education; and student satisfaction and retention in distance learning. The selection strategy for the keywords appeared to ensure maximum capture across the range of literature.

Each of these key words was inserted into the Google scholar search engine and searched in the titles, abstracts and bodies of texts of refereed journal articles published in English from 1960 to 2013. The keywords selected were closely aligned with the focus of the research and were words that identified articles that were focused on the subject matter under investigation.

A further rationale for selecting these keywords was that they were the same keywords often used by authors in many published refereed articles on student retention. Moreover, the keywords selected included some compound words and sentences for more precision. They also included words that were often used interchangeably such as ‘attrition’, ‘drop-out’ ‘persistence’, and ‘retention.’ Hence, this increased the likelihood that these keywords would capture most or all relevant articles in the databases searched.

The English language literature on customer satisfaction, student satisfaction and student retention in higher education is quite mature, and often relates to issues, such as content design, structure, and evaluation methods for the assessment of student retention and departure (Tinto, 1987). Much of the thrust of the literature on student retention in higher education involved (i) the testing of suggested models of student retention (Cabrera, Nora, &

Castaneda, 1993; Nora, 1987); and (ii) the role of self-efficacy, stress, social integration, and family support in Latino college students' persistence and health (Cabrera et al., 1993; Torres & Solberg, 2001). In short, there is a range of other perspectives on student retention. However, no attempt has been made to present all that has ever been established by research.

2.2 Customer satisfaction, student satisfaction and retention in higher education

In today's competitive markets, customer satisfaction is an important performance indicator for marketers and service providers to drive their business strategy. Customer satisfaction largely depends on the quality of the product or service supplied by the organization and accompanying customer support services and relationships built to deliver customer benefits that satisfy the customer (Cheng & Tam, 1997). Customer satisfaction literature argued that customer satisfaction is the result of a customer's evaluation of his total purchase experience in relation to their buying experience, expectation and consumption of a product or service (Munteanu, Ceobanu, Bobalca, & Anton, 2010).

When customers perceive the service as high quality, and the outcome matches with their initial expectation, then the customer will be satisfied. Grönroos (1994) and Vorhies, Rao, and Kurtz (1998) found that the key step to making and keeping satisfied customers is to build a trusting relationship and maintain good quality of services that match with customers' expectations right from the start. This is because customers tend to perceive high service quality when satisfaction is linked with customers' buying and consumption experiences (Elliott & Shin, 2002). With such experience, customers will recommend the service to their relatives and friends, and have a tendency to keep the relationship with the service provider for the long term.

Customers are satisfied when the offered products or services meet their needs, desires and requests, thus, creating customer values. Businesses are satisfied when exchanges and relationships result in profitability and create economic customer values. This relationship is based on marketing philosophy (Ames, 1970; Anderson & Mittal, 2000; Kohli & Jaworski, 1990; Narver & Slater, 1990). According to Raval and Gronroos (1996), customer value is comprised of two attributes: the organization's product as well as its service. Consequently, it is important that customers experience satisfaction with the organizations' reputation as this creates customer loyalty (customer retention) especially for professional service providers (Bush, Ferrell, & Thomas, 1998; Cetin, 2003; Helgesen, 2008; Raval & Gronroos, 1996; Sevier, 1994)

Higher education is purely a service and requires one-to-one interaction among people to build relationships. For service organizations such as higher education institutions, there is increasing competition for students and potential students or 'customers' to have many alternatives. Many potential students can even succeed without attending a formal institution of higher learning; and enrolled students are easily able to switch education providers by comparing programme contents, academic performance, quality of service and other evaluative parameters with very few barriers to freedom of choice. Students may also transfer from one university to another at the end of the semester. Hence, it is important for educational institutions and their managers to meet each student's or individual's needs and satisfy them in order to attract and retain them (Cheng & Tam, 1997; Boyd, 2012)

In this research, it is argued that the concept of customer satisfaction and retention as proposed by Hennig-Thurau and Klee (1997) is useful and applicable in understanding student satisfaction and retention in self-financing continuing educational institutions (Kotler, Armstrong, Saunders, & Wong, 2002).

The researcher takes the view that in order to attract students before admission, institutions must create awareness and provide information about the quality of programmes and services on offer. Once enrolled, institutions must provide quality career advice, guidance and counselling services, and treat students as long-term partners. This is essential in optimizing students' experiences from admission to graduation and throughout the enrolment process (DeShields, Kara, & Kaynak, 2005). These will influence students' satisfaction or dissatisfaction with the institution.

One of the goals of higher education institutions is to create happy and satisfied customers, whether they are students, parents, alumni, employers or government stakeholders. More importantly, developing customer value was crucial and enhancing customer satisfaction was critical for universities (DeShields et al., 2005).

Indeed, in earlier studies, Sevier (1996) found that the university's overall augmented product is much broader and more important than mere academic programmes on offer. In terms of a university's broad augmented product, Sevier (1996) argued that, apart from offering academic programmes, universities should provide facilities and services to meet other needs of students such as social, physical and spiritual needs as well as other forms of student support.

Regarding academic needs, for example, students' happiness and their satisfaction were driven by both the quality of the academic programme/ course curriculum and students' total learning experiences within the institution. The quality of faculty members' teaching performance is directly related to students' perception of the quality of their overall experience in the institution. This is a key motivator and satisfier for students and ultimately influences students' decision to persist and stay at the institution (Browne, Kaldenberg, Browne, & Brown, 1998; Elliott & Shin, 2002). Hence, the quality of teaching is a significant factor that influences students' experience and student satisfaction, and accordingly, students' intention to persist, and retention.

Students who possessed a positive college experience were more likely to be satisfied with the college than those who did not have a positive college experience. This concept is analogous to, and consistent with, the organizations that have placed more efforts in satisfying their customers' expectations and needs. Indeed, a longer trusting relationship can be built with customers (DeShields et al., 2005).

From an assessment perspective, Babin and Griffin (1998) found that high student grades were highly correlated with high levels of student satisfaction in higher education. However, Kotler and Fox (2002) reported that the majority of students were often more satisfied with the quality of academic programmes but were much less satisfied with other forms of support and administrative services such as the provision of career advice. This means that students perceived their overall satisfaction in terms of the quality of overall services they received, may not merely be based on their academic educational experiences.

Regarding physical and infrastructural facilities for example, Borden (1995) found that student's satisfaction was related to the match between the individual student's priorities and the campus environment in terms of its aesthetic beauty and quality of physical facilities and infrastructure such as computers and lecture theatres. Similarly, Fraser (1994) cited by Elliott and Shin (2002) found that student satisfaction may be related to how well the classroom environment matched students' preferences.

In summary, the literature has shown that student satisfaction is influenced by a range of variables. To gauge student satisfaction most accurately, it is very likely that students will make subjective assessments of a range of factors such as their assessment grades, the quality of faculty teaching and academic performance, physical infrastructure such as the quality of classrooms, as well as support services such as the quality and effectiveness of academic advice, job placement, advisory and counselling services. This aligns with Tinto (1975) and Astin (1985) who argued that amongst other variables, academic factors, institutional factors and even student demographic features were highly important for measuring student satisfaction. These are some of the major factors influencing student satisfaction in higher education which are likely predictors of student intention to persist and, accordingly, student retention by the institution.

2.2.1 Customer satisfaction and student satisfaction

Based on the literature, this research argues that there is a logical link between the concept of customer satisfaction and student satisfaction and retention. Similar to customers in commercial contexts and transactions, student retention has been shown to be linked to student satisfaction. Indeed, a link between student satisfaction and student retention is established at the point of students' enrolment at the university (Douglas, Douglas, &

Barnes, 2006). Therefore, to increase student enrolment, persistence and retention, institutions must increase student satisfaction from the point of initial contact with students until the time of graduation.

This argument is based on Keaveney and Young's (1997) Student Satisfaction and Retention Model. Their model incorporates a comprehensive set of independent variables from self-reported experiential questionnaire assessments to predict behavioural intentions of students from the students' own learning experiences and individual social and economic conditions in response to student satisfaction and retention. It can be included that Keaveney and Young (1997) incorporate a comprehensive set of independent variables that are hypothesized to predict student satisfaction and retention.

Further, Keaveney and Young's model used attitude to predict the students' behavioural intention and, accordingly, to predict students' actual behaviour. Their model is different from previous models in that the work incorporates a set of self-reported outcome assessment variables to provide information regarding students' evaluation of the programs offered by the institution beyond satisfaction and retention. As a result, it is argued that Keaveney and Young's student satisfaction and retention model is a more conclusive retention model as it considers the impact of a unique set of variables in explaining the findings of student retention research in higher educational institutions. Hence, their model is the basis for the development and selection of variables in this study and as discussed in Section 2.4.1 and tested in Chapter 4.

2.3 Models of student retention in higher education

This section defines student retention, student attrition and student persistence. The section also defines higher education and self-financing continuing education, and provides an overview of different retention models.

2.3.1 Defining student retention, student attrition and student persistence

There are different perspectives and measures defining student retention. From the universities' perspective, student retention refers to students who study following a normal progression, that is, enrol in each semester until graduation, studying full time, and graduating after about three to four years. For the purpose of this study, student retention is defined as a continued student participation in a higher education institution or university, engaged in a programme or a course for learning until completion.

Student attrition is defined as the cessation of individual student membership in a higher education institution. Attrition is also defined as a decline in the number of students from the beginning until the end of the course, programme, institution or an education system. The contemporary idea of student attrition was developed by Bean (1982) wherein he argued that student attrition is similar to turnover in work organizations. Bean emphasized that the intention to stay or leave was the best predictor of students' enrolment behaviour.

Student persistence is the result of students' decision to continue their participation in any university or institution. Student persistence is not purely focussed on students' experiences in universities, but also concentrates on their initial learning objectives and their intention to stay or leave their current university. The earliest conceptualization of

student persistence was formulated by Tinto (1975). Tinto contended that students' persistence was largely contributed by students' academic and social integration. It was also the key contributor affecting whether students' stay or leave the university.

2.3.2 Defining higher education and self-financed continuing education

Higher education and self-financed continuing education are both regarded as a service. Students are required to have more interpersonal communications with faculty members. Generally, students are required to fund their own educational expenses. Higher education is making a shift from a product-oriented approach, i.e. academic programs to a customer-oriented, i.e. student-oriented approach (Angell, Heffernan, & Megicks, 2008).

In Hong Kong, higher education institutions are funded in two ways: government-funded and self-financed. For the purposes of this research, we call the former 'university grants committee higher education', and the latter 'self-financed continuing education'. For example, full-time bachelor degrees offered in universities are largely funded by the government. Conversely, associate degrees offered in continuing education institutions are self-financed. However, it is noted that the government provides interest-free loans to self-financing educational programmes to aid students' studies. Running a self-financed education institution is different from running a higher education institution as self-financed institutions receive little or no government funding, and, as such, institutions need to earn revenue to sustain themselves. Moreover, student enrolment is the primary source of income for such institutions to cover teachers' remuneration and infrastructure costs, etc (Wong, 2011). In other words, self-financed continuing education students have to pay higher tuition fees than higher education students. The government is enabling

60% of the younger generation to gain access to tertiary education (Wong, 2011). Significant progress has been made by self-financed tertiary education institutions to offer a wide range of educational opportunities meeting the interests and abilities of the students (Wong, 2011). As students who are studying part-time programs are usually older than higher education students on average, self-financed continuing education institutions adopt an ease of access and open-door policy for such students, encouraging them in personal enrichment, or enhancing job skills and basic qualifications.

Higher education and continuing education institutions also provide distance learning programmes for part-time students, especially at the Open University of Hong Kong (OUHK, 2012). One aspect of distance learning is characterized by its open access learning materials for its students. Another aspect is tutoring via multimedia tools, online or the telephone. Distance learning is an appropriate tool for adult learners such as those who are unable or unwilling to take advantage of the existing post-secondary education system, or are unable to enrol in full-time studies, reside on campus, or have family burdens and responsibilities which mean they are unable to participate in full-time study.

2.3.3 Defining traditional students and non-traditional students

Traditional students are defined as those who study on campus, are between 18 and 24 years old, and attending full-time programmes. Non-traditional students come from any part of the country, urban or rural, are 18 years old or above, working full or part-time, enrolled in the college for a full program or a single course. The main characteristics for non-traditional students are those who study part-time, commute to the higher education institution, and are older than 24 years old. In addition, traditional and non-traditional

students are differentiated by age, residence, full-time or part-time attendance (other characteristics such as ethnicity, gender and socioeconomic status are excluded).

Student retention has been a long-term concern for educational managers, educators and researchers (Raby, Rhodes, & Biscarra, 2014; Thammasiri, Delen, Meesad, & Kasap, 2014; Tinto, 2006-2007, 2010), and one reason for this is that student completion of their programme has increasingly been seen as synonymous with, and a key indicator of, “student satisfaction” and “student success”. However, in order for students to complete their programme, they must first be ‘retained’. As such, it is not surprising that increased retention has become a key goal of many institutions’ quality assessment and improvement systems (Tinto, 2006-2007).

Student retention models have been developed by many scholars and there are many studies on students retention models (e.g. Bean, 1980; Kember, 1989; Spady, 1970; Tinto, 1975, 1993). One of the early student retention models was developed by Durkheim (1951) upon which other authors built. Early models of student retention grounded in theories of academic engagement relied on quantitative studies in universities that mainly involved elements of a student’s first year of study (Chickering & Kuh, 2005). Key elements in such early models based on academic engagement suggest that when planned in-class academic and co-curricular (out-of-class) activities intersect, students are motivated and this was found to be positively correlated with intention to persist and in retention (Chickering & Kuh, 2005).

Likewise, student relationship with faculty members and activities outside classrooms also encourage intention to persist and retention (Booth et al., 2013; Kuh, Kinzie, Schuh, &

Whitt, 2005; Tinto, 1993). However, early works on retention seem to lack complexity and detail, and this is in agreement with the observations of Tinto (2006-2007). Nonetheless, since the 1980s, scholars have argued that student experiences on campus as well as other social and environmental variables combine in a number of ways to shape student intention to persist and retention (i.e. courses, programmes, faculty members, peer groups, etc).

Sections 2.3.4 to 2.4.8, together with Tables 2.1 to 2.5, review five important models of student retention.

Retention Model	Summary
Spady (1970)	Longitudinal data were collected from 683 first-year accounting students in the College of University of Chicago. Multiple regression analysis was used to assess each independent variable. Results found formal academic performance was the dominant factor affecting students' stay and dropout decision.
Tinto (1975, 1987)	Built on Spady's (1970) work and based on Durkheim's theory of suicide. Tinto's models and theories explored 2-year and 4-year degree students. Results found academic and social integration, goal and institutional commitments were persistent predictors of students' dropout behaviour.
Bean (1980)	Investigated the determinants of student attrition. Multiple regression and path analysis were adopted to assess each independent variable. Results found institutional commitment was the primary variable affecting dropout.
Bean and Metzner (1985)	Developed a student attrition model for non-traditional undergraduate students, i.e. mature, part-time, commuter students. Results found academic and environment variables were most important to influence non-traditional students to dropout.
Kember (1989a) and (1989b)	Expanded upon Tinto's (1982) study. Kember's proposed model of drop-out from distance education addressed different study situation. His model included components related to background characteristics, goal commitment, the academic environment, and the social and work environment. The model also considered the degree to which students were able to integrate the demands of their academic course with those of their families, employers and friends.

Table 2.1 Empirical Models of Retention

2.3.4 The Spady Model (1970)

One of the earliest models proposed was by Spady (1970). The model was developed based on Durkheim's theory of suicide. He argued that students withdraw from university for the same reasons that people withdraw from a society through suicide. According to Spady (1970), he explained that each student enters university with a pattern of dispositions, interests, expectation, goals and values which are shaped by his or her family, background and high school experiences. He believed that the student's entire range of experience will affect his or her overall attitude and ability to accommodate suitably in the new environment.

The Spady model was used to test the utility of theoretical model in explaining the undergraduate dropout process in the College of The University of Chicago. Spady (1970) investigated a complex social process that includes the variables of family, previous educational background, academic potential, normative congruence, friendship support, intellectual development, grade performance, satisfaction and institutional commitment to influence social integration, such as the quality of students' relationships built with faculty and other students. These variables were directly related to the persistence of students in higher education and thus their retention by the institution.

As a result, Spady (1970) concluded the four preliminary variables were: formal academic performance; structural relations; friendship support; and institutional commitment largely influenced students' intention to stay and dropout decision. Table 2.2 summarizes the key variables in Spady's (1970) model.

Model	Spady's (1970) model of student attrition
Purpose	Empirical model in explaining undergraduate dropout process
Country	U.S
University for Research	College of the University of Chicago
No. of students for research	683
Year of study	1 st year students
Mode of Study	Full time
Programme	Accounting (degree)
Result	Formal academic performance was the dominant factor in business students for attrition among both sexes

Table 2.2 Spady's Model of Student Attrition

2.3.5 The Tinto Model (1975)

Tinto (1975) also developed a theoretical retention model based on Durkheim (1951) and Spady (1970). Tinto's (1975) model of student retention in higher education argued that two important categories of factors influenced student retention:

- (1) Academic factors, such as first semester grades, grade-point averages, class rank and scholastic aptitude; and
- (2) Social factors, such as students' participation with peers in extra-curricular activities and campus life.

These two categories were important input variables in Tinto's (1975) model of student retention. He emphasized students' intention to stay or withdrawal behaviours, which are

different from retention in the university as being largely related to (i) student academic abilities, and (ii) student social status.

Tinto's (1975) model has been applied to both levels of education setting, i.e. the two-year or four-year degree, and the expectation based on the academic factors, i.e. GPA, high school rank, scholastic aptitudes all have higher retention effect than social factors, i.e. parental or peer group influence. Further the model suggested and supported by Pascarella and Chapman (1983) and Pascarella and Wolfe (1985) that social status, such as interaction with peers and academic faculty has more direct effect on student retention than academic factors, such as high grade in performance, higher levels of intellectual development than other students. This has been cited by Pascarella and Chapman (1983) and Pascarella and Wolfe (1985). Tinto (1975) contended that academic factors such as students' academic backgrounds, their commitment to study and their social status such as their level of interaction with peers and faculty members are all critical factors contributing to the social and academic integration of the student.

In another study, Tinto (1982) recognized limitations of theories and practice in student retention. He addressed some of the important issues in the 2-year degree sector by examining the determinants of student persistence in the universities. However, no recent research has explored the determinants of dropout in the 4-year degree sector (Tinto, 1982). Tinto (1982) stated:

- (i) Finance can be critically important to influence students' dropout in the short term (2-year) degree but may not have an effect in the long term (4-year degree);
- (ii) Specific groups produce different dropout behaviours in which can be vary by gender, age, race, social status background;

(iii) Students exhibit differing voluntary withdrawal behaviour in the 2-year degree sector, i.e. forms of social organization, modes of informal organization.

Tinto (1982) concluded that four issues were yet to be explored: (i) determinants of persistence in the two-year degree sector; (ii) the role of finance implication (iii) dropout among different group of students; and (iv) determinants of different voluntary dropout behaviours. It is noted that Tinto's (1982) work has significant limitations such as the factors affecting student dropout.

Tinto's (1987) theory of university student dropout further explains the process that motivates students to leave universities before graduating. He concluded that the four preliminary variables that influenced students' intention to stay or drop out include formal academic performance, structural relations, friendship support, and institutional commitment.

He suggested that a student's tendency to stay in the university is related to how the student feels in being integrated into the academic and social life of the university. Therefore, Tinto's (1975) model argues that personal attributes and background characteristics form an initial commitment to stay at the university, while Tinto (1987) argued that academic and social integration, goal and institutional commitment have more direct effect in predicting students' dropout behaviour. Table 2.3 following summarizes Tinto's (1975, 1982, 1987) theories and models.

Model	Tinto (1975)	Tinto (1982)	Tinto (1987)
Purpose	Explaining the process that motivates students to leave universities before graduating		
Type of Institution	Residential Institution		
Year of study	Two- or four-year degree		
Mode of Study	Full Time, 18-24 years old		
Result	Academic performance, social integration affected students' withdrawal decision from higher education.	<p>Areas explored:</p> <ul style="list-style-type: none"> - Finances may influence dropout in 2-year sector but not in the long term, i.e. 4-year sector - Specific group dropout reason, i.e. gender, race, age, social status. - Different voluntary withdrawal behaviour occurred in 2-year sector, i.e. forms of social organization, modes of informal organization, financial aid pattern. 	Academic integration, which includes student academic performance and interaction with faculty and staff, social integration, goal and institutional commitment were consistent predictors in explaining dropout.

		<p>Four areas were not adequately explored:</p> <ul style="list-style-type: none"> - determinants in the 2-year degree sector - role of finance in persistence - group specific differences between institutional persistence vs. voluntary departure - determinants of voluntary withdrawal behaviour 	
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Table 2.3 Tinto's Models of Student Attrition

Pantages and Creedon (1978) reviewed previous retention literature from 1970 to 1975 with the purpose of developing a comprehensive picture of student retention. They reviewed relevant variables and summarized important findings as follows:

- (a) Academic factors, i.e. first semester grades, high school grade-point average and class rank. They concluded that scholastic aptitude and it is one of the best indicators of predicting retention and student persistence; and
- (b) Motivational factors, i.e. study commitment, educational interest, parental and peer group influence as well as the process of interaction between student and the

institutional members can be significant but cannot serve as an indicator of the likelihood of student drop-out.

They identified the following as important and significant factors which may not serve as indicators of the likelihood of drop-out:

- (i) Personal factors such as personality differences between dropout and non-dropout students including personality dispositions, moral values, and personal attitudes;
- (ii) College environment including college size, housing;
- (iii) Financial factors;
- (iv) Health factors;
- (v) Age and sex.

They argued that these are primary factors but not variables for predicting student retention.

Pantages and Creedon (1978) suggested that one of the best theoretical frameworks for understanding student attrition is the 'college-fit' model. The 'college-fit' model refers to students who possess skills, attitudes and expectations which meet the college demands, and in turn the college rewards the students, with grades or qualification. Students whose expectations are satisfied would consider staying at the university. They suggested that the application of the 'college-fit' model endows students with a positive learning attitude and high learning expectations, thus bringing certain skills with them to the institution. It creates satisfaction, and reinforces their study behaviour in the university. In other words, they argued that innate attributes or attributes that the student already possessed before enrolling at the university is the best predictor of retention and persistence. Pantages and

Creedon (1978) argued limited consensus with Spady (1970) and Tinto (1975) as their work also explains single variable or major determinant on affecting student retention which cannot serve as indicators of the likelihood of drop-out.

2.3.6 The Bean Model (1980)

Bean (1980) suggested the model of attrition which is useful in analyzing the process of student attrition. He argued that institutional commitment is the most important indicator of drop-out, as well as the most significant influencing variable affecting student retention. This finding is consistent with Spady (1970) and Tinto (1975) on the test of background variables. Other variables in Bean's model include students' background variables such as students' pre-matriculation experience, high school performance and educational goals; organizational variables such as students' academic performance measured by their satisfaction on their GPA; and intervening variables including students' positive view in satisfaction and institutional commitment.

Bean's (1980) model of attrition was administered to a freshmen composition programme at a major Midwestern university in 1997. The test was targeted at full-time undergraduate programmes. However, the model be tested in vocational educational institutions, low-prestige community colleges, small schools or part-time studies, the results may be totally different in assumption. Consequently, further assumptions and associated methodologies should be adopted and these effects need further testing.

He further indicated that some key limitations of the model may lie in the intervening variables including satisfaction and institutional commitment. He defined satisfaction as

the degree to which students view the institution positively, and institutional commitment is seen as the likelihood a student will dropout from the institution.

In a subsequent study, Bean (1983) further incorporated environmental variables (factors outside the institution) into his model and argued that larger environmental factors affect students' dropout decisions such as job opportunities, family problems, health and bereavement. The environmental variables such as financial concerns of the student, family responsibilities, outside employment, and opportunity to transfer were not included in Bean's (1983) model. This was found as one of the limitations in his study. Table 2.4 below summarizes the key context in Bean's (1980) model.

Model	Bean (1980) model of attrition
Purpose	Investigate the determinants of student attrition in institutions or higher education
Country	U.S.
University for Research	Major Midwestern university
No. of students for research	1171 university freshmen
Year of study	1977
Students' mode of Study	Full time
Programme	Freshmen composition programme
Characteristics	This model contains 4 categories of variables: dropout, satisfaction, institutional commitment and background variables. Multiple regression and path analysis were used to analyze the process of student attrition.
Result	Institutional commitment is defined as the degree of loyalty towards membership in an organization, the primary variable influencing dropout for both sexes. Findings are consistent with Spady (1970) and Tinto (1975) on background characteristics of students.

Table 2.4 Bean's Model of Student Attrition

2.3.7 The Bean and Metzner Model (1985)

Earlier models such as those developed by Spady (1970), Tinto (1975) and Bean (1980) were developed for 'traditional' students in that they were aged 18 to 24, primarily full-time university students, residing on campus studying two-year or four-year higher education programmes. However, Bean and Metzner's (1985) model was built on

non-traditional students studying in community colleges. A non-traditional student was identified as being 25 or older, did not live in university residence, studying on a part-time basis. These three factors were considered in the definition of non-traditional students.

Bean and Metzner's (1985) model was developed based on Bean's (1980) model of attrition. The purpose of their model was used to accommodate non-traditional students, aged 25 or older, who enrolled in vocational school or studied a single course in a part-time degree or certificate programme.

They suggested that students' dropout decision was based on four sets of variables, including: academic performance measured by students' school performance, i.e. grade point average; intention to leave as influenced by academic variables such as study habits, academic advising, academic major; and psychological outcomes such as satisfaction, goal commitment; background and defining variables as measured by age, gender residence, high school performance; environmental variables such as finances, outside employment, hours of work, family responsibilities.

Bean and Metzner (1985) contended that the environmental variables were sufficiently critical to influence a non-traditional student to persist or drop-out from an institution. Environment variables, like lack of finance and encouragement to study, long outside working hours, family responsibilities were presumed to have direct influence on students' dropout. Students have high expectations and values for academic variables, but low values for environmental variables. This also contributed to non-traditional student dropout. The situation can be explained as environmental support compensating their low values of academic variables. For example, despite good academic support, students

could pay college fees, make proper child care arrangements, manage outside employment, non-traditional students were more prone to dropout.

Bean and Metzner (1985) also considered psychological factors, such as utility, goal commitment, satisfaction and stress. These were important factors affecting a non-traditional student to reduce their intention to dropout. Psychological outcomes can encourage non-traditional students to enjoy the role of being a student, set up educational goals, and gain knowledge in the university environment. However, psychological outcome was only the second predictor on affecting dropout.

The earlier retention models were used to identify and analyze a range of variables that impacted students' willingness to persist and stay in university or insist on drop-out. For example, Tinto (1997) found team work among students could enhance more communication between students and faculty members, and as such, influence student persistence. Students' interaction are mediated by variables such as environmental factors, such as financial burden on the non-traditional student's family, the role of academic staff and social integration had less effect on retention for non-traditional students. Bean and Metzner's (1985) model provided a more practical and flexibility for vocational, distance learning and continuing educational institutions especially when applied to non-traditional students for future empirical studies.

Table 2.5 following summarizes the key context in Bean and Metzner's (1985) model.

Model	Bean and Metzner (1985) non-traditional model of student attrition
Purpose	Develop a conceptual model describing the dropout process for non-traditional students.
Characteristics	Non-traditional students' dropout decision based on four variables including academic performance, academic variables, background and defining variables, environmental variables, expected to have substantial effect on dropout.
Findings	Traditional students were influenced by social variables. Non-traditional students are affected by external environment variables, i.e. financial burden of the non-traditional student's family. Results found that even in situations when academic support was poor but environmental support was good, non-traditional students still remained enrolled.

Table 2.5 Bean and Metzner's Non-traditional Model of Student Attrition

2.3.8 Kember's Model (1989a) and (1989b)

Previous student retention models discussed above were developed based on campus residence, mainly higher education for traditional students, who lived in university residence and attended face-to-face classes (Spady, 1970; Tinto, 1975, 1987; Bean, 1980). However, distance learning is presumed to be non-traditional, focussing on mature students aged 25 and above, studying part time away from campus, and using multimedia tools to support their study (Bean and Metzner, 1985).

There are three distance education theorists Peters (1994), Holmberg (1986) and Sewart (1978), who relate process to theory for drop-out from distance learning. (Holmberg, 1986; Peters, 1994; Robert, 1984; Sewart, 1978). Theories proposed by Peters (1984) and Holmberg (1986) contain theoretical and descriptive studies, and mainly refer to the general operation of distance learning and the context is not relevant to any retention theories and reason affecting dropout from distance learning. Sewart (1978)'s theory is related to pre-matriculation and high school characteristics when admitting students, narrowing down intention to persist and retention to the relationship between the character of the student and the prerequisite of playing the role of a student in an institution (Kember, 1989a). Unfortunately, none of these studies presents a comprehensive model that explains student intention to persist, student retention, or drop-out in distance learning education.

Kember's (1989a) conceptual model drew upon Tinto's (1975) model applied this to distance learning education and proposed that the social integration component included the home, social, and work environments of the students. The model considered the degree to which students are able to integrate the demands of their academic course with those of their families, employers and friends. Kember (1989b) has subsequently been illustrated qualitatively with interview quotations from case studies collected in three countries, including Australia, Papua New Guinea and the Open University of the United Kingdom.

Kember's (1989a) model is linear in nature and offers insights into the processes that influence students through a distance learning course from entry to exit or completion. Kember's model demonstrates that there is a significant relationship between student age

and student persistence in distance learning education. Kember (1989b) also found that there is a significant relationship between students' financial status, housing condition, number of children, age, gender, sponsorship program (if any), region of residence and student persistence (Kember, 1989b).

Kember (1989b) concluded that social integration construct should take into account the background characteristics, i.e. work, family, and social life, employers of the students support students' studies and as such found it easier to cope with their academic demands. Secondly, goal commitments, such as career advancement, provide incentives to motivate students. Finally, cost/benefit analysis is another component before a drop-out decision is made.

However, Kember (1989b) recognized the components included in his model would change over time and students will have different reasons to drop-out during the duration of their studies especially in lengthy distance learning courses. Therefore, a wider range of variables such as educational experiences, time frame and duration of study might also be associated with university drop-outs (Kember, 1989b). The following table summarizes the key context in Kember's (1989) model of drop-out from distance education:

Model	Kember (1989a) and (1989b) drop-out model for distance education
Purpose	Develop a conceptual model describing the drop-out process for distance learning students.
Universities for Research	Case studies of students from 3 countries: Australia, Papua New Guinea and the United Kingdom.
Result	This model addressed the different situations of distance education students by proposing that the social integration component included the home, social, and work environments of the students. The model considered the degree to which students were able to integrate the demands of their academic courses with those of their families, employers and friends.

Table 2.6 Kember's Drop-out model for Distance Education

2.3.9 Summary of published retention models

In sections 2.3.4 to 2.4.8 above, five important models by Spady, Tinto, Bean, Bean and Metzner, and Kember were reviewed. Overall, Tinto suggested that student retention is affected by a student's personal goal and institutional commitment, and that it is important to incorporate the student's personal academic and motivational abilities. Bonham and Luckie (1993) agreed with Tinto (1987) that personal student factors such as study habits, peer influence, and ethnicity affect students' intention to persist and complete their studies at the institution. However, there are limited studies about how ethnicity and culture influence student intention and retention.

Bean (1980, 1983), in agreement with Tinto (1975), also incorporated personal and organizational/institutional variables. In addition to these, Bean also included environmental variables as shaping students' intention to persist and stay at the institution, especially in relation to non-traditional students. Astin (1993) agreed with Tinto (1975) and Bean (1980), and further identified institutional characteristics, such as institutional policies and the quality and availability of other student support services, as affecting students' intention to stay or leave the institution.

Indeed, there appears to be a consensus in the literature on retention models on higher education in that students' retention behaviour is based on several variables classified as follows:

- Academic variables, such as prior academic experiences and quality of academic programmes and teaching;
- Other forms of student support and administrative services provided by the institution;
- The level of social integration of students, such as a feeling of belonging and social relationships formed with teaching and other staff members;
- Individual student attitudes and individual psychological processes, such as innate motivation and personal goals;
- Student background variables including individual factors, such as age, gender and financial status;
- Student psychological factors, such as intrinsic motivation;
- Physical variables, such as infrastructure, computers and aesthetic buildings;
- Environmental factors, such as variables outside the institution; and
- Demographic factors, such as gender and age.

These are considered as essential factors affecting student satisfaction, their intention to persist and student retention (Fike & Fike, 2008).

2.4 Research gaps, research aims and identification of variables for testing

Several studies have examined the reasons for students' satisfaction or dissatisfaction with their higher education experiences and drop-out decision (DeShields et al., 2005; Gibson, 2010). However, most of the studies in the published literature have been undertaken in the western world context, particularly the U.S. and in Western Europe. As a result, much of the literature and theory development is skewed towards western students and western viewpoints. Not much is known about the practices in Asia and in the Chinese context in particular.

Generally, based on this literature, there appears to be a consensus that in the U.S. and the broader western higher education systems with mostly western students, factors such as teaching quality, academic advisory services and others already discussed above can effectively influence student satisfaction and students' intention to stay and continue their studies, and as a result affect student retention or drop-out.

Generally, based on this literature, there appears to be a consensus that in the U.S. and the broader western higher education systems with mostly western students, factors such as teaching quality, academic advisory services and others already discussed above can effectively influence student satisfaction and students' intention to stay and continue their studies, and as a result affect student retention or drop-out.

In spite of rapid modernization, economic growth and development, as well as the rapid expansion of universities in Asia and in the East, there is surprisingly limited academic research and publications investigating how to attract, satisfy and retain students at institutions of higher learning in Asia (Mok, 2003).

Hameed and Amjad (2011) tested a modified version of Keaveney and Young's model (1997) in Pakistan, where more than 1.3 million students were enrolled in higher education institutions in 2010 (Hameed & Amjad, 2011; Sedgwick, 2005). Hameed and Amjad showed that (i) the quality of faculty members' teaching and quality of relationships between students and faculty members are positively correlated to student satisfaction; (ii) advisory staff and classes have a positive and significant impact on influencing students' experiences in institutions; and (iii) these experiences together positively correlated to satisfaction. This is quite similar to results indicated from the literature in the western context (Kara & DeShields, 2004).

However, Ng (2010) conducted a study at the Open University of Malaysia with a random sample of 450 distance learning students, and showed that goal commitment, family support, service quality affected student satisfaction and students' experiences in the university and these had a positive impact on retention. It is noteworthy that family support is not often mentioned as impacting student satisfaction, intention to persist, or student retention in western-focused literature.

Lastly, Farahmandian, Minavand, and Afshadost (2013) conducted a study involving 225 post-graduate students at the International Business School University of Technology Kuala Lumpur, and demonstrated, like Hameed and Amjad (2011), that factors impacting

student satisfaction, their intention to persist and their retention in the institution include (i) advisory staff, teaching quality, facilities, tuition fee and financial assistance. These factors affect the respondents' drop-out decision. However, this study showed surprisingly that tuition fees and financial assistance impact student satisfaction and retention in Malaysia. Such factors were also not often discussed in the available western-based empirical literature. Hence, there is an urgent need to build Asian specific knowledge by undertaking research in the Asian context in order to build theory and, more practically, develop an excellent educational environment that would meet the needs and expectations of Asian students as well as the growing numbers of international students in Asian institutions of higher learning.

2.4.1 Identification of key variables for testing

As discussed in section 2.2.1, this research adopted key variables from Keaveney and Young (1997). The study borrowed the model by selecting published dependent and independent variables tested in the Hong Kong context, as discussed in Chapter 4. The research adopted six critical variables from Keaveney and Young (1997), classified into 2 categories, independent and dependent variables listed below:

[A] Independent Variables

- Faculty member performance;
- Advisory staff; and
- Classes

[B] Dependent Variables

- Student's partial college experience
- Student's satisfaction
- Intentions to stay at or leave the college

2.4.2 Rationale for the six variables selected from Keaveney and Young (1997)

Although numerous studies have been conducted on student satisfaction and retention at university level, no study has confirmed the variables that are most influential predictors affecting student satisfaction, intention and retention. For instance, Deshield et al. (2005) used Keaveney and Young's (1997) student satisfaction and retention model and Herzberg's two factor theory to examine the determinants of student satisfaction, intention and retention with education. Herzberg's two factor theory explained that job motivation and satisfaction is also commonly used in academic organizations to explain students' motivation for learning (Cheng, 2007; Herzberg, 1969; Jones, George & Hill, 2000). Cheng (2007) used Herzberg's two factor theory suggested that continuing education learners are motivated by two distinct factors: motivators and hygiene factors. He argued that hygiene factors cannot bring true happiness to people at the continuing education or vocational level. Hygiene factors included organizational policy, salary and package of remuneration, relationship with peers or faculty members, distance travelled to study or work, etc. On the contrary, motivators included personal growth, passion for the job or study, career advancement, social esteem and self achievement, etc.

According to Herzberg's theory, two distinct sets of factors explained job satisfaction and job performance in an organization. One set was labelled 'satisfiers' or 'motivators', resulting in satisfaction when adequately applied. The other set was termed 'dissatisfiers' or 'hygiene factors', causing dissatisfaction during the process. However, we asked if Herzberg's theory can also apply to students at the OUHK. In applying Herzberg's two factor theory to this study, faculty performance and classes are directly related to the outcome from a student's college experience, and they are, as such, classified as satisfiers or motivators. The performance of advisory staff is considered as hygiene factors or

‘dissatisfiers’ that may cause dissatisfaction. There may be other variables, such as the university’s reputation, admission and enrolment services, facilities, etc that may affect a student’s perceived performance and expectation, and thus affect their decision. However, such variables of influence begin from the recruitment process, from attracting and admitting students, to teaching, providing academic advice towards their completion and graduation and involve a personal relationship with students. As such, we argued that faculty performance, advisory staff performance and classes are three of the most important variables influencing students’ college experience. As satisfaction level is determined by customers, viewed from customers’ expectations, students who have positive university experiences would be more satisfied than those who do not. As a result, satisfaction levels would influence students’ intention to stay or leave the institution (DeShields et al., 2005; Kotler & Fox, 1995).

In this study, we attempted to use Keaveney and Young’s (1997) student satisfaction and retention model to argue that the aforementioned six variables will influence students’ experiences in college which in turn impacts student satisfaction and intention to stay or leave the higher educational institution.

The Keaveney and Young’s (1997) student satisfaction and retention model incorporated a comprehensive set of independent variables and self-reported experiential assessments to predict behavioural intentions from students’ learning experiences, individual, social and economic reasons to predict students’ actual behaviour in response to student satisfaction and retention. Keaveney and Young (1997) used attitude to predict the students’ behavioural intention, and thus to predict their actual behaviour. Keaveney and Young’s (1997) student satisfaction and retention model is different from the aforementioned

models, because it incorporates a comprehensive set of independent variables that are hypothesized to predict student satisfaction and retention. They also incorporate a set of self-reported outcome assessment variables to provide information regarding students' evaluation of the programmes offered by the institution beyond satisfaction and retention. Therefore, it is argued that their student satisfaction and retention model is a more conclusive retention model, which also considers the impact of a unique set of variables to explain the findings of student retention for higher educational institutions (DeShields et al., 2005).

Applying the modified version of the student satisfaction and retention model developed by Keaveney and Young (1997) to this current study, we consider three critical factors including faculty, advisory staff and classes, all of which influence students' experience in college and impact student satisfaction and intention to stay or leave the higher educational institution. Keaveney and Young's (1997) student satisfaction and retention model is illustrated as follows:

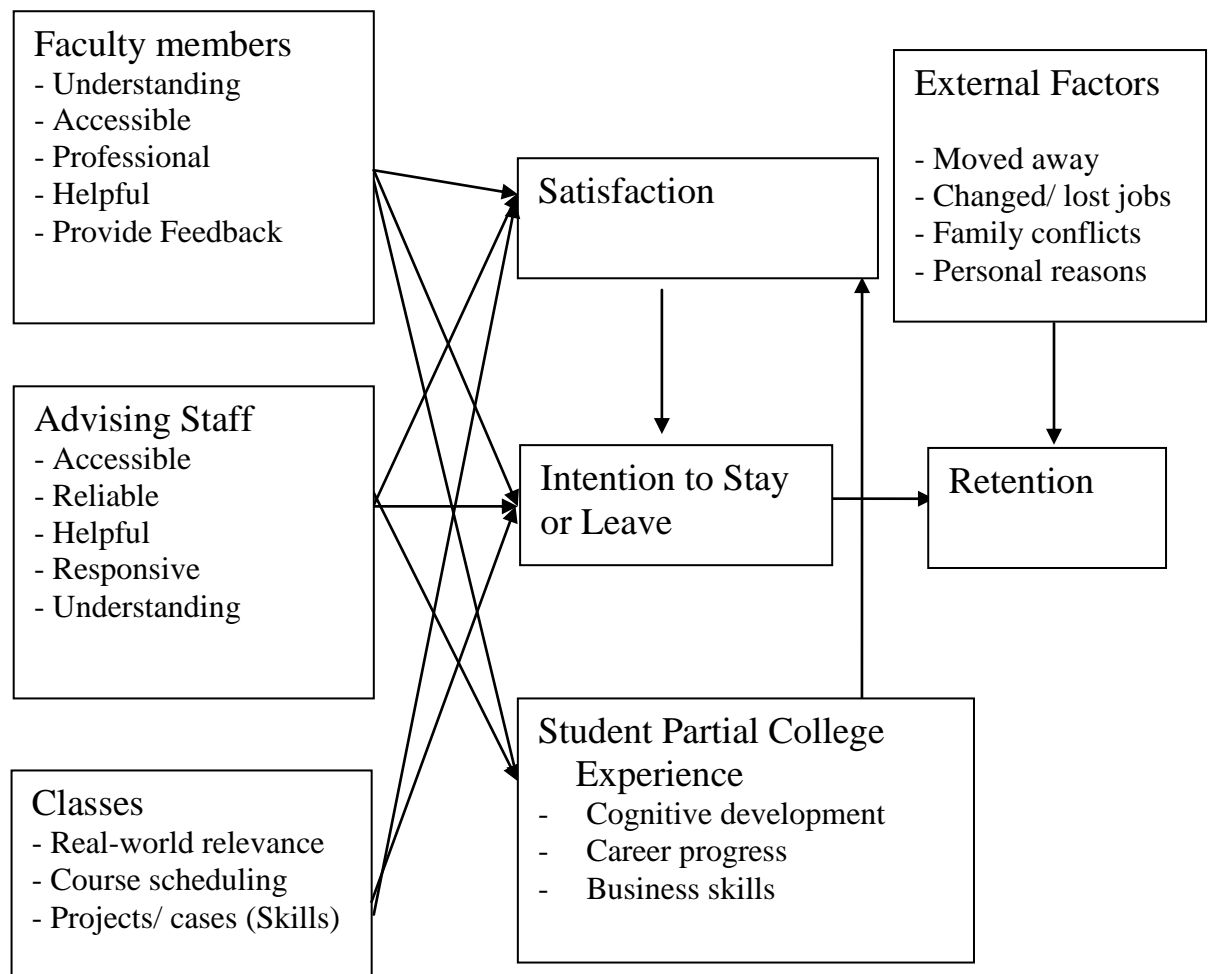


Figure 2.1 Adopted from Keaveney and Young's Student Satisfaction and Retention Model

2.4.2.1 Faculty member's performance

Student satisfaction and retention has been shown to be correlated to the quality of academic programmes, faculty member teaching performance and their expertise in the subject, as well as supporting services including academic advising and career counseling (Borden, 1995; Browne et al., 1998; Delaney, 2010; DeShields et al., 2005; Elliott, 2002; 2003; Elliott & Shin, 2002; LeBlanc & Nguyen, 1997; Sohail & Shaikh, 2004; Thomas & Galambos, 2004).

Students' satisfaction is reflected in two dimensions: whether or not students have formed clear goals during their period of studies. Such goals include what students expect from their college education in terms of skill development, and their primary goal in obtaining a college education for satisfactory employment in the future. Hartman and Schmidt (1995) suggested when students have clear goals, their focus tends to be on outcomes. On the contrary, students with less than clear goals rely more on their perception of satisfaction, especially as regards their interaction with the faculty and academic staff. This critically affects students' overall satisfaction and dissatisfaction (Alves & Raposo, 2007; Elliott & Healy, 2001).

Many studies have shown that student relationships with teaching faculty reflect the overall nature of the relationship between students and their academic institutions (Delaney, 2010; Elliott, 2002; 2003; Elliott & Healy, 2001; Elliott & Shin, 2002; Frost, Shrom, Downey, Schultz, & Holland, 2010; LeBlanc & Nguyen, 1997; Sohail & Shaikh, 2004). The above researchers reported that their studies showed a positive relationship with faculty members who help students attain desirable academic performance and achievements which in turn results in student satisfaction and improved student retention.

Thomas and Galambos (2004) further explained that teaching is the principal product in higher education, and students' teaching and learning appear to have more effect on their general satisfaction than other academic experiences. Similarly, a few researchers have argued that key variables such as faculty members' teaching quality, educational programme quality and school reputation also influence student satisfaction (Helgesen, 2008; Hennig-Thurau, Langer, & Hansen, 2001).

From the students' point of view, a good quality education that results in satisfaction, intention to persist and retention should be measured along eight dimensions. These are: faculty members' excellence in teaching, availability of advisory staff, library services, (iv) computing facilities, recreational facilities, class size and logistics arrangement, level of difficulty in course content and students' workload. From these eight dimensions measuring the quality of education, faculty members' teaching and delivery aspects are confirmed as the most important determinants in perceiving quality education and students' satisfaction (Mai, 2010).

As a result, the student's perception of the institution's teaching quality and teaching personnel largely reflect the student's willingness to persist and continue in their studies, thus building relationships with people at the institution. However, faculty members' teaching performance only accounts for some of the variables affecting drop-out rates. For example, time-consuming student enrolment and registration processes is an important reason for students' dissatisfaction, as well as inflexible class scheduling (Elliott, 2002; 2003).

2.4.2.2 Academic advising, administrative support services/ social services, student satisfaction and retention

As previously stated, Tinto (1975) and Astin (1985) suggested that success in students' satisfaction was positively related to the quality of faculty members, psychologically and behaviourally. However, prior educational experiences with faculty members and other support services such as academic advisory services, advising on student learning progress and the administrative performance of the institutions also impacts student satisfaction. Mai (2010) found that the availability of advisory staff, the subject expertise of teachers,

and the overall impression of the quality of the education are the most influential predictors on student satisfaction. Academic advising services are more influential than teaching and learning. It directs students' behaviour, sets expectations on their studies, provides support, offers feedback, facilitates student involvement with faculty members, and shapes a meaningful learning experience for them towards educational, career, goal and life achievements. Academic advisory services is an institution-based responsibility in which every member of the institution, including faculty members, programme advisers, and administrators work together to build on student success (Campbell, 2008; Hunter & White, 2004; Tinto, 1993).

From student's perspectives, Borden (1995) argued that student satisfaction is also related to students' priorities in their programme of study, student learning attitude, student interests, and the quality of campus life.

Browne et al. (1998) reported that the quality of the programme content and other academic related factors, such as course content, breadth of curriculum, exposure to practical work, preparation towards career, affect students' overall satisfaction and intention to persist at the institution. Browne et al. (1998) further explained that the likelihood of a student recommending the programme to friends or relatives is heavily influenced by the relationship between the student and the university personnel. Although many previous studies have proven that faculty performance is regarded as the major attribute that influences students' satisfaction, a growing body of researches suggest social integration of students may be another important variable in predicting students' persistence to stay at the university (Delaney, 2010; DeShields et al., 2005; Elliott, 2002;

2003; Elliott & Healy, 2001; Elliott & Shin, 2002; Frost et al., 2010; LeBlanc & Nguyen, 1997; Sohail & Shaikh, 2004)

From social services perspective, the social integration of students in their institutions has been shown to be another important variable in predicting students' persistence to stay at the college (DeShields et al., 2005). Tinto's (1982) theory of student retention further explained that the likelihood of a student persisting and even recommending the programme to friends or relatives was heavily influenced by the relationship between the student and university personnel. Similarly, Thomas and Galambos (2004) found that social factors involving peer relationships, student-faculty relationships, and student development programmes may have a greater effect on encouraging the intention to persist and retention for less academically-inclined students because such students were integrated into the campus life.

In a similar vein, Sevier (1996) argued that the institution should emphasize its social, physical and spiritual experiences as much as the quality of its academic programmes. Kotler and Fox (1995) however argued that students are often satisfied with the quality of their academic programmes and faculty members' teaching performance, but that students often feel less satisfied about support services such as academic advising, career counseling and job placement services.

Overall, to attain student's intention to persist, and retention, institutions cannot merely focus on the quality of teaching, the quality of academic and social relationships formed between faculty members and students, or quality of campus life. Institutions have also to consider the quality of student interactions with student support services such as

academic advice services, and administrative staff, all of which affect overall student satisfaction with the institution, and hence, their intention to persist at the university.

2.4.2.3 Classes

“Classes” in relation to student satisfaction include real-world relevance, course usefulness, course scheduling, overall design and delivery, class size, and level of difficulty. Fraser (1994) suggested that student satisfaction may relate to how well the logistics and classroom management matched with the preferences of students. Browne et al. (1998) found that the global satisfaction with a university was driven by the quality of the course and other curriculum-related factors, such as course content, breadth of the curriculum, the overall design and delivery, exposure to practical work, level of difficulty, the usefulness of the course, class scheduling, etc. Elliott (2002; 2003) added that class scheduling has been increasingly important in affecting the overall student satisfaction. That is, students want flexibility in class scheduling and time options in their class schedules.

Classes may be considered as ‘satisfiers’. It is also a process involving people-to-people relationship such as administrative staff to students. The provision by the university to provide real-world relevant courses, relevant project experiences, and convenient course scheduling, are important variables that will influence students’ college experience and their overall satisfaction. In this, we maintain that satisfaction will influence students’ intention to stay or leave the institution.

From the perception of quality and satisfaction, Oliver (1997)’s work formed the foundation for much of the recent research by establishing that consumer expectations and

disconfirmation beliefs are important antecedents to satisfaction judgments. More student retention studies have shown that the teaching and academic staff aspects of education are important determinants affecting students' perception of a quality education (Delaney, 2010; Elliott, 2002; 2003; Elliott & Healy, 2001; Elliott & Shin, 2002; Frost et al., 2010; LeBlanc & Nguyen, 1997; Mai, 2010; Sohail & Shaikh, 2004)

Past studies on the management aspects of education emphasized that the role of administrative and other support staff had become more important (Borden, 1995; Elliott & Shin, 2002; Keaveney & Young, 1997; Thomas & Galambos, 2004). Students are more critical and focused more on the services they receive. As higher education involves much human interaction, in order to achieve and deliver high quality services, universities are encouraging contact personnel, included both faculty members and administrative staff to set goals and quality standards in gaining a more competitive advantage, through quality enhancement, to achieve excellence in education (Sohail & Shaikh, 2004)

In summary, student intention to persist at the university primarily depends on what happens after their admission, from students' interaction with their faculty, relationships with their peers, and support services such as career advice, affect their intention to persist and student retention at the university.

As a result, institutions can design an appropriate environment to support student learning and satisfaction, such as delivering the range of factors and support services as discussed above. For example, students who spend a significant amount of time on campus require caring and supportive administrative and teaching staff, as well as quality career and

academic advisory services that valuably connect with students. All these influence and drive student satisfaction and, hence, student retention can be achieved by the institution.

Based on the literature review above, six variables were tested empirically, and will be discussed in the following chapter. The variables include the quality of faculty members teaching performance, quality of advisory services and support staff and flexibility of class scheduling. These are important variables that influence students' satisfaction and affect their intention to persist and their retention at the institution.

2.5 Summary

This chapter reviewed the academic literature on customer satisfaction, student satisfaction and student retention in higher education. Chapter 2 also identified and discussed resulting research gaps and emerging research aims, and, based on the literature, identified variables to be empirically tested in a university setting in Hong Kong.

Chapter 2 attempted to demonstrate an understanding of the literature, theories, studies, concepts, models and ideas relating to the focus of the dissertation - student enrolment, satisfaction and retention. The chapter clarified definitions and terminology, and identified an important research issue and specific research aims as well as identified three independent variables, that of faculty performance, advisory staff performance and classes as key factors in influencing students' college experience and thus retention at the university. Higher education institutions help students focus on their entire education process by developing expectations and career goals to build up their "partial college experience". Firstly, programmes that introduce students to the institution's intellectual world and support services, such as placement programs and advisory services, will

increase the students' likelihood to remain at the institution as well as the performance of the service providers. Secondly, institutions can make good use of these opportunities to enhance student-faculty interaction as faculty members help students achieve a cognitive learning outcome in their university experience. A positive and cognitive learning experience includes better writing and verbal communication skills, critical thinking and analysis skills and higher self-esteem, etc. Finally, institutions help develop students' business skills and help them to succeed in business. As a result, this approach assumes that students who possess positive college experiences with satisfaction will influence students' intention to stay at or leave the college.

CHAPTER 3

METHODOLOGY

3.0 Introduction

Chapter 3 explains the methodological approach; research design implemented; and the rationale behind the adopted approach. It also outlines the data collection and analytical strategies, and the techniques utilised for the research based on the methodological fit with the research aims and variables identified in Chapter 2. Further, Chapter 3 addresses issues of sample selection, ethical approval and administration of questionnaires. This chapter is structured into seven sections: Section 3.1 briefly reiterates the research questions, aims and variables to be tested; Section 3.2 discusses alternative research approaches, the selected research approach and rationale; Section 3.3 explains the approach taken to the questionnaire design; Section 3.4 explains issues of sampling, selection criteria and the administration of the questionnaires at the OUHK; Section 3.5 discusses the analytical techniques implemented in the research; Section 3.6 comprises discussions on human ethics approval for this research, confidentiality, privacy and the voluntary nature of the research; Section 3.7 concludes Chapter 3 with a summary.

3.1 Research questions, aims and identified variables

The research aim is to survey the perception of students enrolled at the continuing education institution of OUHK, and stated the variables affect student intention to persist and thus remain at the institution. The identified research questions are:

- (1) What factors impact students' satisfaction, intention to stay, leading to retention?
- (2) Do support strategies improve satisfaction, intention and retention?

As briefly outlined in Chapter 2, this research utilised Keaveney and Young's (1997) student satisfaction and retention model as the literature base to test the relationship between faculty members, advisory staff and classes. Accordingly, these three variables were identified for testing. The variables appear critical in influencing students' partial experience in their institution, which in turn impact student satisfaction and student retention.

3.1.1 Variables and hypotheses testing

This researcher took the view that the three variables, namely, faculty performance, classes and advisory staff performance, are the key factors that influence students' satisfaction or dissatisfaction, which leads to student retention or drop-out. The first three hypotheses tested the relationship between faculty, class, advisory staff and students' partial college experience (as defined in Chapter 2) were formulated as follows:

Stewart (2003) defined a group as two or more entities interacting in some way and sharing some similarities. Forming a group based on interaction among members, and members in the same group are more closely bound to observation of other members' behavior. Lickel et al. (2000) found a positive correlation between perceived interaction and perceived similarity. In this case, we presumed Group 1 students who are studying year two of higher diploma in OUHK have positive impact on college experience, satisfaction and intention to stay than Group 2 students who are studying their first year in OUHK.

Hypothesis 1: Faculty performance has more positive impact on college experience in Group 1 than in Group 2.

Hypothesis 2: Academic advising has more positive impact on college experience in Group 1 than in Group 2.

Hypothesis 3: Classes has more positive impact on college experience in Group 1 than in Group 2.

Next, the researcher hypothesized the relationship between the “partial college experience” which was influenced by the three variables including faculty, advisory staff and classes, and students’ satisfaction with the institution. Also, the researcher proposed that students who had positive college experiences would be more satisfied than those who did not have positive college experiences. Accordingly, satisfaction would influence a student’s intention to stay or leave the institution. Four more hypotheses were formulated as follows:

Hypothesis 4: There is a positive relationship between college experience and student satisfaction.

Hypothesis 4a: There is no significant difference on college experience to influence student satisfaction between Group 1 and Group 2

Hypothesis 5: There is a positive relationship between student satisfaction and intention to stay.

Hypothesis 5a: There is no significant difference on student satisfaction and intention to stay between Group 1 and Group 2

3.2 Alternative research approaches, selected research approaches and rationale

According to Robson (1993) and Yin (2003), generic social science research strategies include experiments, surveys, histories, archival analysis, and case studies. These are, however, not mutually exclusive as there are also several variations, combinations and hybrids of these strategies. Each of these generic strategies also has a range of sub-sets, sub-strategies and overlaps.

After considering a range of research approaches as well as relevant literature, it was decided that a quantitative approach testing the independent and dependent variables identified in Chapter 2 was optimal given the aims of this research. The rationale for this selection is that the majority of student retention studies adopted questionnaire administration (a type of survey) in order to reach a critical mass of the student population for their opinion (Gibbs & Knapp, 2002). Numerous past empirical studies have been conducted about student satisfaction and retention using quantitative approaches. For example, Bennett (2003) investigated a group of undergraduate students on drop-out rates in the business department of a university in U.K. Similarly, Douglas et al. (2006) measured student satisfaction at a British University, while AlKandari (2008) surveyed the influential factors on student retention at Kuwait University.

Furthermore, Gibbs and Knapp (2002) also suggested that when conducting market research for higher education, the research method should match the research aims and purpose for conducting such research. Qualitative research, such as focus group discussions and case studies, can serve diagnostic purposes but cannot generate statistically valid responses (Cheung, Yuen, Yuen, & Cheng, 2010). Such responses can best be

achieved through quantitative research such as questionnaire surveys. To adopt a 'structured' questionnaire for this study, the researcher determined the questions to be asked and decided a range of possible answers to be given for respondents to choose. As such, respondents were given the choices: Yes/No, Agree/Disagree, ticking one answer from five. Structured questionnaire is where the questions asked are precisely decided in advance. When using this method, questions are asked exactly as they are written, in the same sequence, using the same style, for all interviews. This makes the research very tidy and easy for the researcher to analyse (Gillham, 2000). DeShields et al. (2005) used such structured questionnaire in their student satisfaction research. Therefore, the researcher applied the use of structured questionnaire and obtained DeShields et al. (2005)'s questionnaire for this study (see Appendix 1).

3.3 Questionnaire design

The questionnaire was based on Keaveney and Young's (1997) conceptual model of student satisfaction and retention. The questionnaire sought to elicit student opinion of the services offered by OUHK, and it was used to fit the aims of this research (see Appendix 2).

The questionnaire comprised 48 questions modified from Keaveney and Young (1997). The questionnaire was subdivided into seven categories pertaining to:

[A] The demographic category of each respondent: name, age, gender, mode of study, programme of study, availability and parents' comprehensive support, including both financial and mental support, especially on inspiring their children to study, tuition fee and

financial aid; all of which appeared to influence student study decisions. In addition, such demographic questions would allow the respondents to be easily segmented and analysed.

[B] Another category of questions pertained to the core issues of the research, the relationship between student intention to persist thus retention and the following variables defined in Chapter 2:

- (1) faculty member's academic performance (questions 1-9)
- (2) academic advisory (questions 15-21)
- (3) classes (questions 22-31)

3.4 Sampling, selection criteria and questionnaire administration

Selecting an appropriate sample is a critical step in research because the quality of the sample would determine the generalizability of the results. Therefore, a primary characteristic of a good sample is the degree to which it can represent the population from what is selected (Sekaran & Bougie, 2010).

The sample was selected from a large number of higher education institutions and self-financed continuing education institutions in the Hong Kong higher education market (JUPAS, 2012). The number attending such institutions was estimated at approximately 17,000 students. Among all sampling methods, the most commonly used "convenience sampling research method" was adopted in this study. The entire sample consisted of 512 full-time students. Assuming an adequate sample was selected, the result of this study would be directly generalizable to all OUHK students excepted all full-time students in Hong Kong.

The continuing education institution of the Open University of Hong Kong (OUHK) was selected for this research as the source of respondents. The main reason for selecting OUHK was that the institution is one of the largest local post secondary education providers specializing in flexible, professional and continuing education courses in a 'face-to-face' setting in Hong Kong. The OUHK offers a wide range of innovative programmes to meet the needs of a dynamic society. It is also a committed 'life-long learning partner' in Hong Kong. Therefore, the researcher decided to explore the relationship between student satisfaction, intention and student retention at the OUHK.

The OUHK has 512 full-time students studying the Higher Diploma, Associate Degree and Diploma programmes in the areas of Business and Administration, Health and Sciences, Education, Art and Languages in 2012. There were two main groups of students studying in full-time, day-time programmes. The first group was classified as higher diploma students studying over a two-year period. The second group was classified as diploma or in the same qualification framework programme, where students can complete the whole programme in one year. These two main groups have the highest population of students at the institution and all students in these groups were invited for research in the study. Other minority groups such as part-time, night time, distance learning, and 'top-up' degree programmes were excluded as these did not constitute the main group of students at the OUHK. Moreover, students who were studying part time or in distance learning were purposely different from those in day time programmes. As such, to avoid confusion in results, the groups were together. The convenience sampling research method recruited all student participants (n=512) who were currently studying the "higher diploma, associate degree" and "diploma" at the OUHK. Male and female students from different programmes including Business and Administration, Health and Sciences, Education, Art

and Languages were selected to complete a questionnaire in order to measure student perception of “faculty performance”, “academic advising” and “classes” in relation to student satisfaction and intention to stay at the OUHK.

The participants were drawn from 2 subpopulations: Group 1 (n=93) were existing higher diploma students, who had completed at least 1-year of the full-time programme, assigned with a subject coordinator as their mentor or had close interaction with their faculty members and attended 6 life-long learning seminars or workshops; Group 2 (n=88) students did not have any assigned subject coordinators as mentors, nor did they attend any life-long learning seminars. Table 3.1 shows the two groups of respondents, where 181 out of 512 students provided valid responses to the questionnaire.

	Group 1, (n=93)* Higher Diploma	Group 2 (n=88)** Diploma
Total Students	260	252
Responded	93	88
Did not respond	167	164
Overall response rate	35.8%	34.9%

Table 3.1 Sample distribution

*Group 1 = Higher Diploma

**Group 2 = Diploma

The above selection criteria of the two groups were designed to obtain an appropriate mix of students who studied in a full-time programme at the institution for at least 1 year or more. This criterion was to maintain fairness and enable students to have a better understanding and experience of the institution’s philosophy, internal and external

operations in order to be able to confidently comment about student perception and intention to persist at the institution.

The Head of full-time programmes assigned subject coordinators or teaching faculty members to all Group 1 students as mentors before commencement of the semester in 2012. The coordinators and faculties became ‘career friends’ sharing their personal experiences and empathized with the students. They provided advisory and counselling opportunities in confidence for students to think about their career options and progress, set milestones, provide guidance and encouragement in order to assist students solve career issues. The aim was to develop a helpful relationship, mutual trust and respect with the students, with the hope of getting their full cooperation in completing the questionnaires.

For questionnaire administration, to ensure that responses were voluntary, private and confidential, an explanatory participation letter inviting each participant was enclosed together with the permission granted by the OUHK to conduct a research study within the premise of the OUHK (see Appendix 3). There was also a stamped self-addressed reply envelope and a sample letter of invitation to students showing the voluntary, private and confidential nature of the data collection exercise (see Appendix 4).

Recruitment to complete the questionnaire was entirely voluntary. In the questionnaire, the researcher requested each participant to complete a questionnaire that would take 10-15 minutes to complete. The questionnaire asked about student perceptions of (1) “Faculty Performance”, (2) “Academic Advising” and (3) “Classes” at the institution (OUHK).

Each questionnaire was distributed by the institution's administration staff during lesson breaks and was completed in the classroom setting. Upon completion of the questionnaire, it was submitted by each respondent either by hand or by post.

A modified version of the structured questionnaire developed by Keaveney and Young (1997) was administered to 512 full-time programme students in OUHK. A total of 181 usable questionnaires were obtained from participants within three months. In the Hong Kong higher education environment, institutions encourage students to participate in an evaluation of course, programme or teaching survey at the end of each semester.

3.5 Analytical techniques implemented

The sample of student data was analysed by using the Statistical Package for Social Sciences (SPSS) software version 17.0. The value codes and labels for all demographic variables in the questionnaire used alphanumeric codes (see appendix 5). For example, gender is assigned a code of 1 for male and 2 for female; and all independent and dependent variables were measured on Likert scale from 1 to 5 where: 1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree.

Firstly, Cronbach's alpha was used to examine the relationship between two sets of data. The Cronbach's alpha for the overall scale showed a result closer to 1, implying high reliability of data, and also reflected the test was reliable and a valid measure. Second, for Hypothesis 1 to Hypothesis 3, a paired sample t-test was used to determine any statistical difference on faculty performance, academic advising, and classes between Group 1 and Group 2 students. Following this, the correlation coefficient was used to measure any positive relationship between "college experience" and "student satisfaction" in Hypothesis

4. Also, a one-way analysis of variance (ANOVA) was conducted to determine any significant difference in students' college experiences contributed to student satisfaction in Hypothesis 4a. The ANOVA was also used to determine whether "student satisfaction" affected "intention to stay" between the two groups in Hypothesis 5a, and correlation coefficient to measure any positive relationship between "student satisfaction" and "intention to stay" in Hypothesis 5. Finally, the regression analysis indicated how these three independent variables joined together to interpret the students' college experience.

3.6 Human ethics approval, data storage, access and disposal

The researcher obtained human ethics approval from the University of Newcastle, Australia's Human Research Ethics Committee (H-2012-0367, date approval on 27 Nov 2012) under the guidelines for research involving humans.

Data will be retained by the researcher for 5 years according to the policy of University of Newcastle, Australia. Hard copies will be kept in a safe and locked area while soft copies will be kept with securities in password locked. Access to data will only be available to the supervisor and the student researcher. Hard copies will be disposed after 5 years upon completion of the study and all soft copy records will be deleted.

3.7 Summary

Chapter 3 discussed the methodology, research approach and research design implemented in the research and associated justification for the adopted approach. It also discussed the data collection instrument (questionnaire) and analytical strategy and technique utilised for the research based on the research aims. Finally, the chapter discussed issues of sample selection, ethical approval, and data handling storage and disposal, and the administration of the questionnaires.

CHAPTER 4

RESULTS

4.0 Introduction

Chapter 4 presents the results of the statistical analysis of the variables used to investigate the relationships between student satisfaction, intention to persist and retention. The variables are faculty performance, academic advising and classes. These variables may have influence on students' partial college experience, satisfaction, intention to persist, and retention.

Chapter 4 has three parts. Section 4.1 begins with student demographics and background information such as gender, age, programme of study, tuition fees, and family support. Section 4.2 measures the reliability of the collected data. Section 4.3 discusses and explains the results from Hypothesis 1 to Hypothesis 5. Section 4.4 summarizes the chapter.

4.1 Demographic and Background

Data was collected and analyzed to determine any significance between Group 1 and Group 2 students. Chi-square test was used where the groups were not significantly different (Bryman & Emma, 2007). The chi-square test compared their homogeneity, with a predetermined α level of 0.05. Where the α level was greater than 0.05, we accepted the null hypothesis.

Table 4.1 shows the demographic results of both groups of respondents appear similar. First, the results reflected that the number of female students exceeded the number of males in both groups where Group 1 comprised 38% male and 62% female respondents, and Group 2 comprised 33% male respondents and 55% female respondents. Second, the largest age groups of respondents were consistent across both groups: the majority was between 18 and 21 years old with 69% and 66% in Group 1 and Group 2 respectively. This shows that most of the students were young students, and mature students only constituted about 1 to 2% of the cohort. Third, 75% and 73% of the respondents' parents in Groups 1 and 2 supported their children's studies. Indeed, parent support is important and can make students feel comfortable in their position and influence their intention to persist in their study courses (Fike & Fike, 2008). Results also reflected that 51% students' tuition fees are sponsored by their parents. These variables were listed to compare the two groups of respondents, and results have shown no significant difference between the groups.

As a result, the demographic data generated from the two groups of respondents were similar and only minor differences were found. Indeed, the chi-square analysis demonstrated that there was no significant difference between Group 1 and Group 2. As such, it may be concluded that there is no significant difference found in relation to the demographic characters of both groups.

Variable	Group 1 (n=93)	Group 2 (n=88)	X^2	<i>Df</i>	<i>p</i> (Sig.)
Gender			12.204	1	0.004
Male	38%	33%			
Female	62%	55%			
Age			115.831	2	0.026
18-21yrs (Young students)	69%	66%			
22-25	29%	33%			
>25 (Mature students)	2%	1%			
Parent Support					
Yes	75%	73%	39.553	1	0.004
No	25%	27%			
Source of Aid (tuition fees)			28.203	2	0.043
Parents/relatives	51%	51%			
Financial aid (grant/loan)	29%	29%			
Scholarships	0%	0%			
Self	20%	20%			

Table 4.1 Comparison of Gender, Age, Parent support, Source of aid (tuition fees), Study decision

4.2 Reliability Analysis

In the reliability analysis, 181 students completed a 12-item ‘attitudes-to-help-seeking’ instrument. The questionnaire applied to both groups of students has overall 0.95 reliability and uses a 5-point Likert Scale to measure students’ responses on faculty performance, academic advising and classes. Table 4.2 shows the results on the reliability coefficients indicating our confidence on the following test is reliable and valid.

Factors affecting faculty performance		Reliability
1.	Faculty understands what student needs.	0.60
2.	Faculty is accessible to students.	0.71
3.	Faculty presented themselves professionally.	0.67
4.	Faculty is helpful and responds promptly to student needs.	0.76
5.	Faculty provides feedback to improve students’ work.	0.67
Factors affecting academic advising		Reliability
1.	Academic adviser is approachable and helpful.	0.82
2.	Academic adviser is reliable for students.	0.63
3.	Academic adviser is responsive to student needs.	0.73
4.	Academic adviser understands student needs.	0.66
Factors affecting classes		Reliability
1.	Classes provide relevant “real world” experience.	0.57
2.	Class scheduling has a broad spectrum for selection.	0.57
3.	Classes involved projects/case study skills.	0.76

Table 4.2 Reliability of faculty performance, advising staff performance and classes

Reliability of faculty, advising staff and classes on Cronbach's Alpha has $\alpha = 0.5$ as acceptable, $\alpha = 0.7$ as good, $\alpha = 0.8$ or over as excellent. As such, the closer to 1.00 the coefficient of reliability, the more reliable the scores from an instrument or the more consistent the scores obtained from an instrument. The reliability coefficients ranged from 0.60 to 0.82, indicating our confidence that the test was a reliable and valid measure.

4.3 RESULTS

Hypothesis 1: Faculty performance has more positive impact on college experience in Group 1 than in Group 2.

A multivariate test process was used to measure the differences between faculty performances between the two groups. The one-way analysis of variance (ANOVA) was adopted to measure the statistical difference of means and standard deviation for each of the factors contributing to faculty member performance. The mean scores for each factor for Group 1 was slightly greater than for Group 2. The significance can be determined by looking at the F-probability, given that $p < .05$, a null hypothesis was accepted. The result has showed that faculty member performance has a positive impact on college experience: Faculty's understanding of students' study needs, $F(7,36) = 0.98$, $p = .408$; Accessibility to Faculty, $F(3,36) = 2.68$, $p = .33$; Faculty's Professionalism, $F(6,36) = 7.23$, $p = 0.25$; Faculty's helpfulness and courtesy, $F(8, 36) = 6.21$, $p = 0.02$; and Faculty's Feedback to students, $F(2,36) = 0.99$, $p = 0.41$.

Table 4.3 shows results of a t-test conducted to measure the differences in faculty performance between Group 1 and Group 2 students.

Outcome variables Faculty Performance	Group 1 (n = 91)		Group 2 (n = 88)		Combined Group	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	F value	P value
Understanding of students	3.38	0.66	3.23	0.69	0.98	0.408
Accessibility	3.49	0.66	3.27	0.77	2.68	0.33
Professionalism	3.37	0.67	3.41	0.75	7.23	0.25
Helpfulness and courtesy	3.43	0.62	3.43	0.66	6.21	0.02
Feedback to students	3.47	0.65	3.34	0.75	0.99	0.41

Table 4.3 Difference in Means for Faculty Performance between Group 1 and Group 2 students.

Table 4.4 demonstrates that the means and standard deviation is higher in faculty performance for Group 1 ($M = 3.80$, $SD = 0.62$) than Group 2 ($M = 3.73$, $SD = 0.63$); $t(181) = -.07$, $p = 0.78$. The hypothesis is therefore accepted.

Group	Group 1		Group 2		<i>t</i>	<i>p</i>
Variable	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	-.07	0.78
Faculty performance	3.80	0.62	3.73	0.63		

Table 4.4 T-test Results for Faculty Performance between Group 1 and Group 2 students.

Hypothesis 2: Academic advising has a more positive impact on college experience in Group 1 than in Group 2.

The research measured the difference between academic advisory staff performances between groups 1 and 2. The ANOVA model was used to measure the statistical difference of means and standard deviation for each of the factors contributing to advisory staff performance. According to Table 4.5, the mean scores for each factor for Group 1 is greater than for Group 2. The significance can be determined by looking at the F-probability. Given that $p < .05$, the null hypothesis is accepted, and the result shows that academic advising has a positive impact on students' college experience: Accessibility to Academic Adviser, $F(15,36) = 4.24$, $p = .408$; Reliability of the Academic Adviser, $F(19,36) = 14.71$, $p = .01$; Academic Adviser's willingness to help, $F(21,36) = 8.42$, $p = .01$; Academic Adviser's understanding of students; $F(17, 36) = 6.841$, $p = .012$; and knowledge of the Academic Adviser, $F(16,36) = 9.38$, $p = .83$.

Table 4.5 shows the results of a t-test conducted to measure the differences in advisory staff performance between Group 1 and Group 2 students.

Outcome variables Academic Advising	Group 1 (n = 91)		Group 2 (n = 88)		Combined Group	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	F value	P value
Accessibility	3.32	0.65	3.01	0.65	4.24	0.408
Reliability	3.33	0.65	3.11	0.52	14.71	0.01
Willingness to help	3.34	0.70	3.05	0.64	8.42	0.01
Understanding of students	3.25	0.70	3.08	0.57	6.841	0.012
Knowledge	3.52	0.67	3.17	0.72	9.38	0.83

Table 4.5 Difference in Means for Academic Adviser performance between Group 1 and Group 2 students.

Table 4.6 shows that the mean and standard deviation of Group 1 is higher than that of Group 2 on advising staff performance: Group 1 ($M = 3.78$, $SD = 0.61$) and Group 2 ($M = 2.73$, $SD = 0.56$); $t(181) = -.11$, $p = 0.94$. Therefore the hypothesis is accepted.

Variable	Group 1		Group 2		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Academic adviser performance	3.78	0.61	2.73	0.56	-.11	0.94

Table 4.6 T-test Results for Academic Adviser performance between Group 1 and Group 2 students.

Hypothesis 3: Class has a more positive impact on college experience in Group 1 than in Group 2.

Classes are important to students' cognitive development, providing relevant business experience for their future career (DeShields et al., 2005). The class difference between Groups 1 and 2 was measured. The ANOVA model was used to measure the statistical difference of means and standard deviation for each factor contributing in class, i.e. real world experience, class scheduling, project skills such as critical thinking and problem solving. The mean scores and the standard deviation for each factor for Group 1 were greater than Group 2. The significance can be determined by looking at the F-probability, given that $p < .05$, the null hypothesis state that there is no significance difference between two groups was rejected. Classes provide 'real world experience', $F(24,36) = 6.54$, $p = .03$; Class Scheduling, $F(23,36) = 10.77$, $p = .01$; Project Skills, $F(21,36) = 10.15$, $p = .01$. More importantly, based on the assumption of hypothesis 2, classes would not be considered as motivators or satisfiers, since students may not see them as directly

involved in the expected outcomes of a college experience. On the other hand, students were not involved in class scheduling matters nor had an opportunity to select their course-relevant ‘real world’ experience. In the absence of fairness that may cause an insignificant coefficient from classes to college experience, it may be interpreted that students are dissatisfied with classes at the institution.

Table 4.7 shows the results of t-test conducted to measure the differences in advisory staff performance between Group 1 and Group 2 students.

Outcome variables	Group 1 (n = 91)		Group 2 (n = 88)		Combined Group	
	<i>M</i>	<i>SD</i>	P value	<i>SD</i>	F value	P value
Academic Advising						
Real world experience	3.27	0.66	3.02	0.66	6.54	0.03
Class scheduling	3.32	0.59	3.06	0.53	10.77	0.01
Project skills (i.e. critical thinking, problem solving)	3.35	0.62	3.08	0.62	10.15	0.01

Table 4.7 Difference in Means for Classes between Group 1 and Group 2 students.

Table 4.8 shows no statistical difference in classes between students of Group 1 ($M = 3.37$, $SD = 0.64$) and Group 2 ($M = 3.02$, $SD = 0.61$); $t(181) = 3.70$, $p = .002$.

Variable	Group 1		Group 2		t	p
	M	SD	M	SD		
Classes	3.37	0.64	3.02	0.61	3.70	.002

Table 4.8 T-test Results for Classes between Group 1 and Group 2 students.

Based on hypotheses 1, 2 and 3, further linear regression analysis was adopted as the equation represents the best prediction of a dependent variable from several independent variables. Regression analysis is used when wanting to examine whether the independent variables are correlated with one another and with the dependent variable (Sekaran & Bougie, 2010). Therefore, a linear regression analysis was conducted to assess the factors of faculty performance, academic advising and classes on affecting college experience, student satisfaction, intention and retention.

The linear regression analysis provides two separate sets of data, shown in Table 4.9. In the first set, the multiple R columns present faculty performance, academic advising and classes. The R square presents the portion of the variance of college experience affected by of the performance of faculty, academic adviser and classes. The model indicates that faculty performance, academic adviser and classes join together to explain 45.8 %, 30.9% and 43% of students' college experiences in Group 1, Group 2 and the Combined Group. The F-values for Group 1, Group 2 and the Combined Group are 25.31, 12.51 and 44.57 respectively.

Groups	R	R Square	Adjusted R square	Standard Error
Group 1	.677	.458	.439	2.084
Group 2	.556	.309	.284	2.226
Combined	.656	.430	.421	2.17

Table 4.9 Regression Results for Group 1, Group 2 and Combined Group participants

Table 4.10 shows the ANOVA results. The F-value column indicates the division of the mean square regression by the mean square residual for the model. The significance (Sig.) column indicates the significance level of the variables included in the model. The result of the regression analysis indicates that the three independent variables in the analysis were significant, $p < .05$ level.

Model		Sum of Squares	df	Mean Square	F	Sig.
Group 1	Regression	326.231	3	108.744	25.036	.000 ^a
	Residual	386.565	89	4.343		
	Total	712.796	92			
Model		Sum of Squares	df	Mean Square	F	Sig.
Group 2	Regression	185.891	3	61.964	12.509	.000 ^a
	Residual	416.098	84	4.954		
	Total	601.989	87			
Model		Sum of Squares	df	Mean Square	F	Sig.
Combined Group	Regression	629.444	3	209.815	44.570	.000 ^a
	Residual	833.230	177	4.708		
	Total	1462.674	180			

a. Predictors: (Constant), Faculty, academic advising, classes

b. Dependent Variable: College experience

Table 4.10 ANOVA^b Results for Regression Model for Group 1, Group 2 and Combined Group participants

Figure 4.1 shows the appropriate scatter diagram where with no clear relationship between residuals and the predicted values consistent with the assumption of linearity. This shows that there is no correlation, either positive or negative, between faculty performance, academic advising, and classes to students' college experience. As there is no clear relationship between the residuals and the predicted values, consistent with the assumption of linearity, it shows respondents' choices are homogeneous.

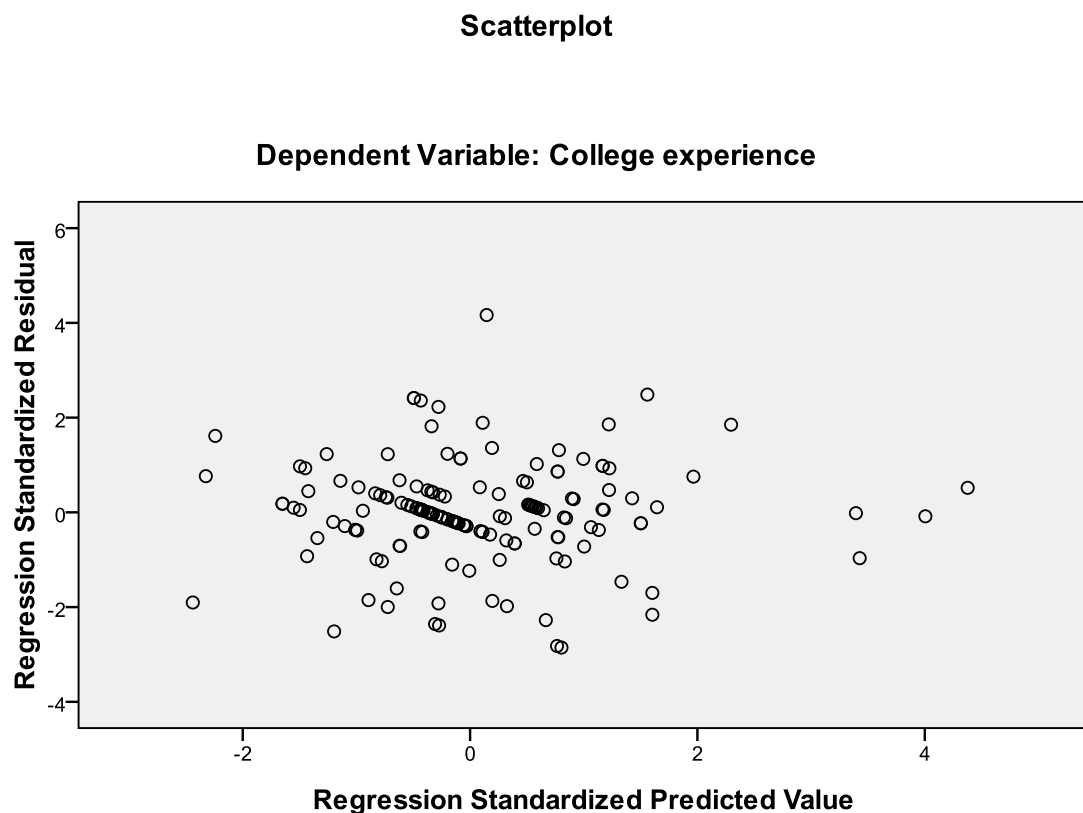


Figure 4.1 Scatterplot for Regression Model of Combined Group participants in faculty, academic advising, classes to students' college experience

Figure 4.2 shows the normal plot of regression standardized residuals for students' college experience. It also indicates a relatively normal distribution, not deviating beyond our assumptions. There are no multivariate outliers among the independent variables. This shows a goodness of fit between faculty performance, academic advising and classes to students' college experience.

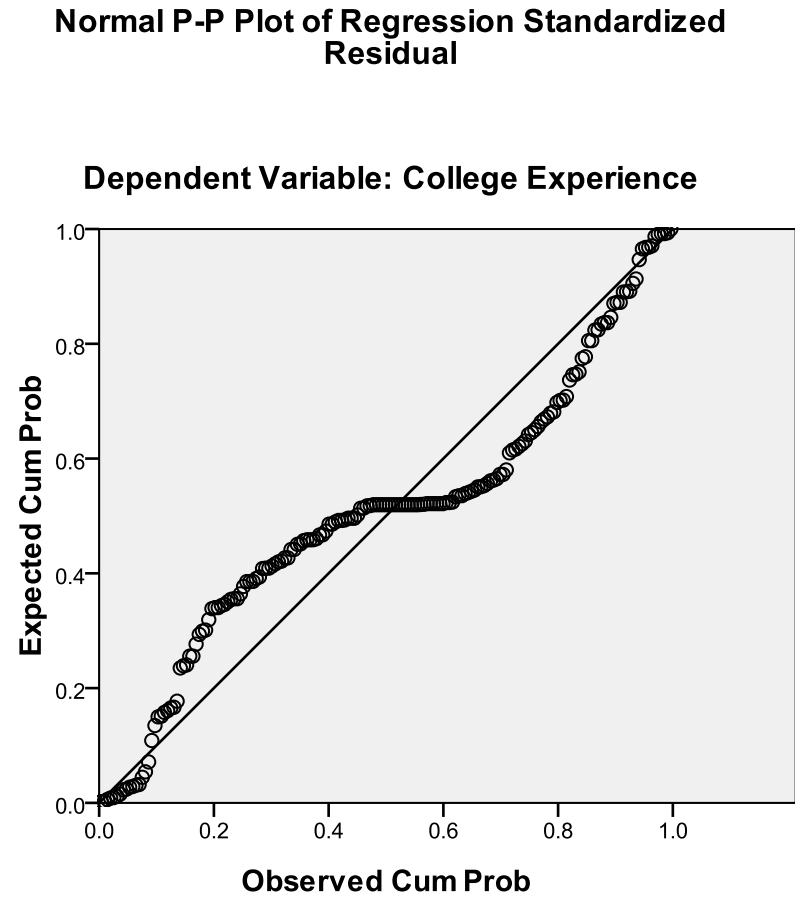


Figure 4.2 Regression standardized residuals for Combined Group participants in faculty performance, academic advising and classes to students' college experience

Hypothesis 4: There is a positive relationship between “college experience” and “student satisfaction”

A product-moment correlation coefficient is used to measure if college experience and student satisfaction are correlated. A bivariate correlation was undertaken between students’ partial college experiences and their satisfaction. The output confirms the result in figure 4.3 scatterplot shows there was a significant positive correlation between college experience and student satisfaction ($r = .191$, $p < .05$). It was hypothesized that a positive relationship would exist between these two variables. Results of the correlation indicate a positive college experience is associated with higher satisfaction.

Correlations			
		Camp5	Overall
Student college experience	Pearson Correlation	1	.191**
	Sig. (1-tailed)		.005
	N	181	181
Student satisfaction	Pearson Correlation	.191**	1
	Sig. (1-tailed)	.005	
	N	181	181

Table 4.11 Correlations of student college experience and satisfaction

Furthermore, a linear regression analysis was conducted to assess whether positive college experiences would result in higher student satisfaction. Table 4.12 shows two separate sets of data used in the linear regression analysis. In the first set, the R square presents the portion of the variance of student satisfaction which is affected by students’ college experiences, and the R Square value shows that 24.5% and 30.9% of student satisfaction can be explained from their college experiences for Group 1 and Group 2 respectively.

Based on Herzberg's theory, where faculty performance and classes are directly related to the outcome of a college experience, but advisory staff may not directly affected related to students' college experience (Cheng, 2007; Hameed and Amjad, 2010; Ng, 2010). However, the test result in the Hong Kong context was found not to be exactly the same as that of the States. The results show faculty performance and advisory staff as both hygiene factors, and classes as motivators which students may not see as directly related to the expected outcomes from college experiences. The result shows that whether or not these variables constitute hygiene factors or motivators, they all have positive influences on student satisfaction.

Groups	R	R Square	Adjusted R square	Standard Error
Group 1	.495	.245	.237	1.851
Group 2	.556	.309	.284	2.226
Combined	.434	.188	.184	2.457

Table 4.12 Retention Results Regression Model for Group 1, Group 2 and Combined Group participants

Table 4.13 shows the ANOVA results. The F-value column indicates the division of the mean square regression by the mean square residual for the model. The significance (Sig.) column indicates the significance level of the variables included in the model. The results of the regression analysis indicate that the college experience in the analysis is significant, $p < .05$ level.

Model		Sum of Squares	df	Mean Square	F	Sig.
Group 1	Regression	101.168	1	101.168	29.543	.000 ^a
	Residual	311.627	91	3.424		
	Total	412.796	92			
Model		Sum of Squares	df	Mean Square	F	Sig.
Group 2	Regression	.828	1	.828	.285	.000 ^a
	Residual	249.615	86	2.902		
	Total	250.443	87			
Model		Sum of Squares	df	Mean Square	F	Sig.
Combined Group	Regression	250.344	1	250.344	41.467	.000 ^a
	Residual	1080.661	179	6.037		
	Total	1331.006	180			

a. Predictors: (Constant), College experiences

b. Dependent Variable: Student satisfaction

Table 4.13 ANOVA^b Results for Regression Model for Group 1, Group 2 and Combined Group participants

Figure 4.3 shows the regression model for Group 1 and 2 participants' college experience and student satisfaction. It shows no clear relationship between residuals and the predicted values consistent with the assumption of linearity. This indicates that there is no correlation between college experience and student satisfaction, suggesting that the respondents' choices may be homogeneous.

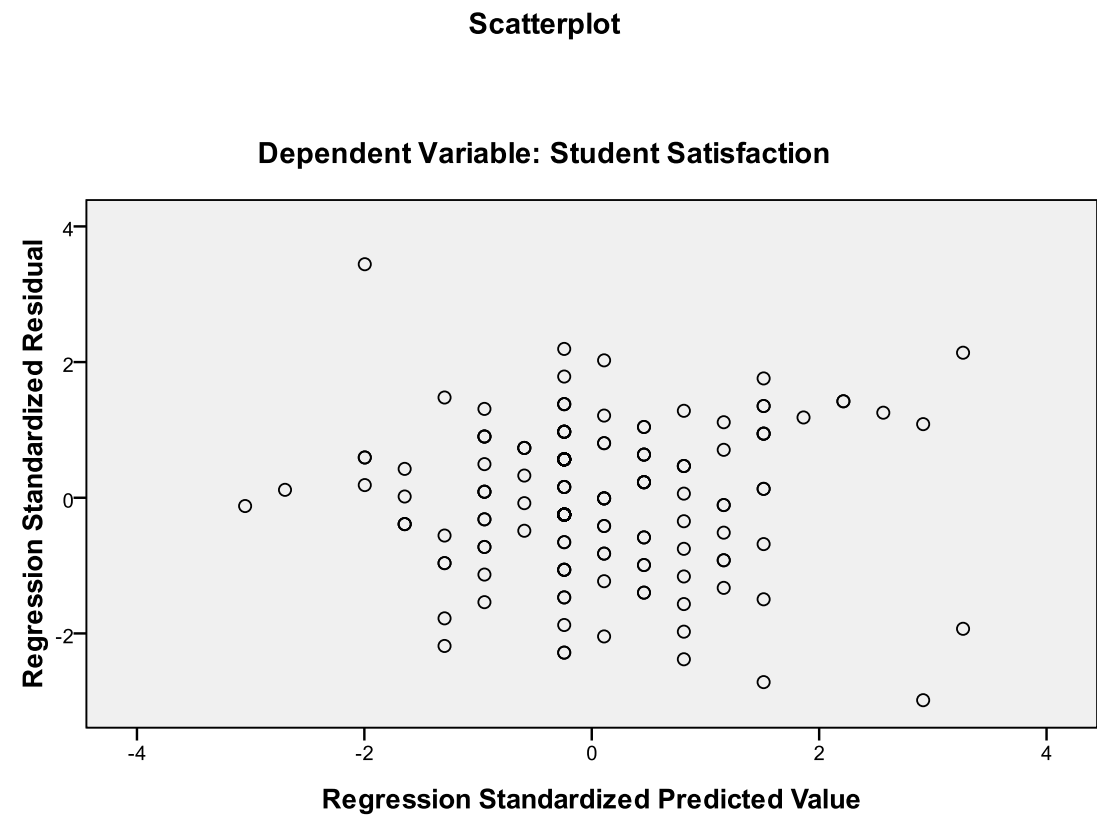


Figure 4.3 Scatterplot for Regression Model for Group 1 and 2 participants' college experience and student satisfaction.

In Figure 4.4, the normal plot of regression standardized residuals for student satisfaction also indicates a relatively normal distribution, without deviating beyond assumptions. As no multivariate outliers were shown, this indicates a goodness of fit between college experience and student satisfaction.

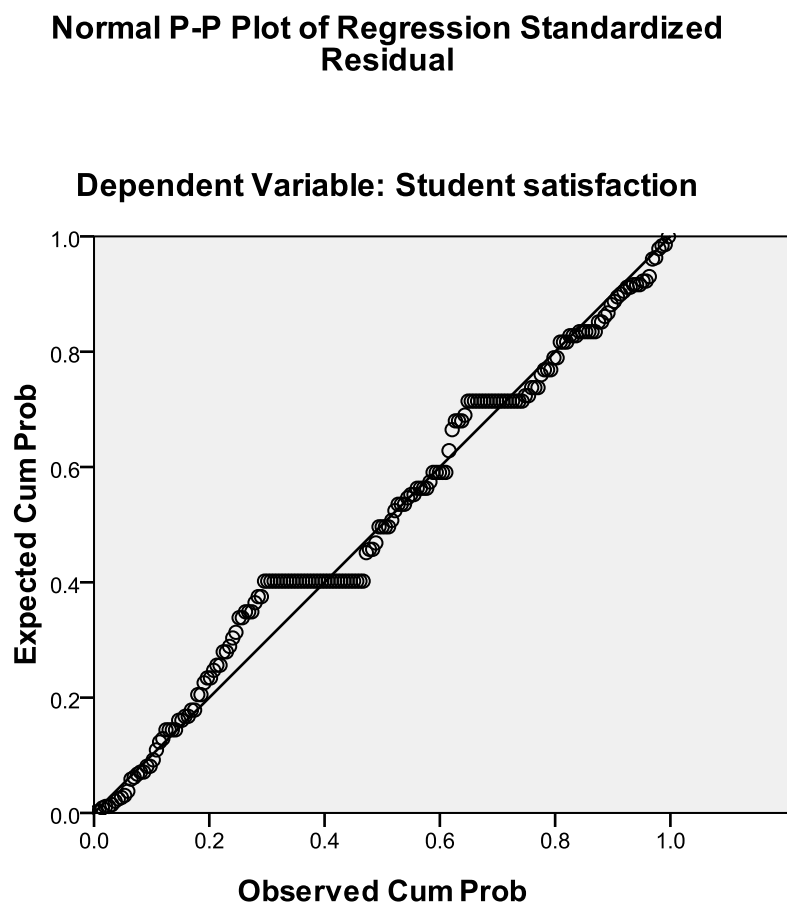


Figure 4.4 Regression standardized residuals for Combined Group participants' college experience and student satisfaction.

Hypothesis 4a: There is no significant difference in “college experience” to influence “student satisfaction” between Group 1 and Group 2

The ANOVA model was used to measure the statistical difference of means and standard deviation for the ‘college experience’ factor which contributed to student satisfaction. The significance can be determined by looking at the F-probability, where $p < .05$, the null hypothesis was accepted and there is no significance difference between Group 1 and 2: This suggests that college experience can positively influence students’ satisfaction, where $F(24,36) = 2.46$, $p = .313$. The test conducted in Hong Kong has indicated that there is no significant difference between Group 1 and Group 2. This suggests that students who have had positive college experiences would be more satisfied than those who did not have positive college experiences. It was assumed that Group 1 students, having more “support strategies” than Group 2 students, would be more satisfied with their college experiences as a result. However, the results did not indicate that satisfaction was increased and retention was promoted. It appears that “support strategies” is still a new variable and does not affecting student satisfaction in the college setting at this phase.

Tables 4.14 and 4.15 both demonstrate no significant difference on classes between students of Group 1 ($M = 2.88$, $SD = 0.59$) and Group 2 ($M = 2.90$, $SD = 0.59$); $t(181) = -.183$, $p = .883$. The two groups come from the same student population.

Outcome variables	Group 1 (n = 91)		Group 2 (n = 88)	
Satisfaction	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Student college experience	2.88	0.59	2.90	0.59

Table 4.14 Student college experiences influence student satisfaction in Group 1 and Group 2

Variable	Group 1		Group 2		<i>t</i>	<i>P</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	-.183	.883
Student college experience	2.88	0.59	2.90	0.59		

Table 4.15 T-test Results for college experiences between Group 1 and Group 2

Hypothesis 5: There is a positive relationship between “student satisfaction” and “intention to stay”

We have adopted a product-moment correlation coefficient, a bivariate correlation model was used to determine whether student satisfaction and intention to stay are correlated. The output as shown in Table 4.16 confirms the result of the Figure 4.5 scatterplot shows that there is a significant positive relationship between student satisfaction and intention to persist ($r = .337$, $p < .05$). It was hypothesized that a positive relationship would exist between student satisfaction and intention to stay. Results of the correlation indicate that higher intention to stay is associated with higher satisfaction.

Correlations			
		Overall	Decision
Student satisfaction	Pearson Correlation	1	.337**
	Sig. (1-tailed)		.000
	N	181	175
Intention to stay	Pearson Correlation	.337**	1
	Sig. (1-tailed)	.000	
	N	175	175

Table 4.16 Correlations of student satisfaction and intention to stay

In the final phase, a linear regression was conducted to assess whether student satisfaction has an influence on their intention to stay at the institution. In the following linear regression analysis, there are two separate sets of data as shown in Table 4.17.

Groups	R	R Square	Adjusted R square	Standard Error
Group 1	.207	.043	.032	.935
Group 2	.122	.015	.003	.709
Combined	.370	.137	.0132	1.112

Table 4.17 Retention Results Regression Model for Group 1, Group 2 and Combined Group participants

Based on hypotheses 4 and 4a, positive college experiences would obtain higher student satisfaction. It is hypothesised (hypothesis 5) that student satisfaction would influence students' intention to stay at or leave the institution. However, student satisfaction in the Combined Group only showed 13.7%, which is not very significant. The result is not consistent with previous studies conducted in the U.S., where it showed that positive satisfaction affected higher intention to stay. An explanation may be that Hong Kong students may have other reasons affecting their intention to stay, such as family support and social lives of the students. Another reason may be the preferences of self-financed students having to pay high tuition fees, and students who stayed at the institution may be affected by some influential benefits, such as education quality, placements, networking options, internship opportunities, professional seminars and talks, company visits, location of the institution, and tuition fees, etc., (Wong & Wong, 2011). Therefore, it can be expressed that student satisfaction affected students' intention to stay to a certain degree.

The ANOVA results are presented in Table 4.18. The F-value column indicates the division of the mean square regression by the mean square residual for the model. The significance (Sig.) column indicates the significance level of the variables included in the model. The result of the regression analysis indicates that the students' intention to stay is not significant, where $p < .05$ level.

Model		Sum of Squares	df	Mean Square	F	Sig.
Group 1	Regression	3.456	1	3.456	3.953	.050 ^a
	Residual	76.944	88	.874		
	Total	80.400	89			
Model		Sum of Squares	df	Mean Square	F	Sig.
Group 2	Regression	.631	1	.631	1.255	.266 ^a
	Residual	47.722	83	.503		
	Total	42.353	84			
Model		Sum of Squares	df	Mean Square	F	Sig.
Combined Group	Regression	33.839	1	33.839	27.382	.000 ^a
	Residual	213.795	173	1.236		
	Total	247.634	174			

a. Predictors: (Constant), Student satisfaction

b. Dependent Variable: Intention to stay

Table 4.18 ANOVA^b Results for Regression Model for Group 1, Group 2 and Combined Group participants

Figure 4.5 above demonstrates the scatterplot of residuals against predicted values. It shows that there is no clear relationship between residuals and the predicted values consistent with the assumption of linearity. As there is no correlation, it suggests that the respondents' choices are homogeneous on student satisfaction in relation to their intention to stay.

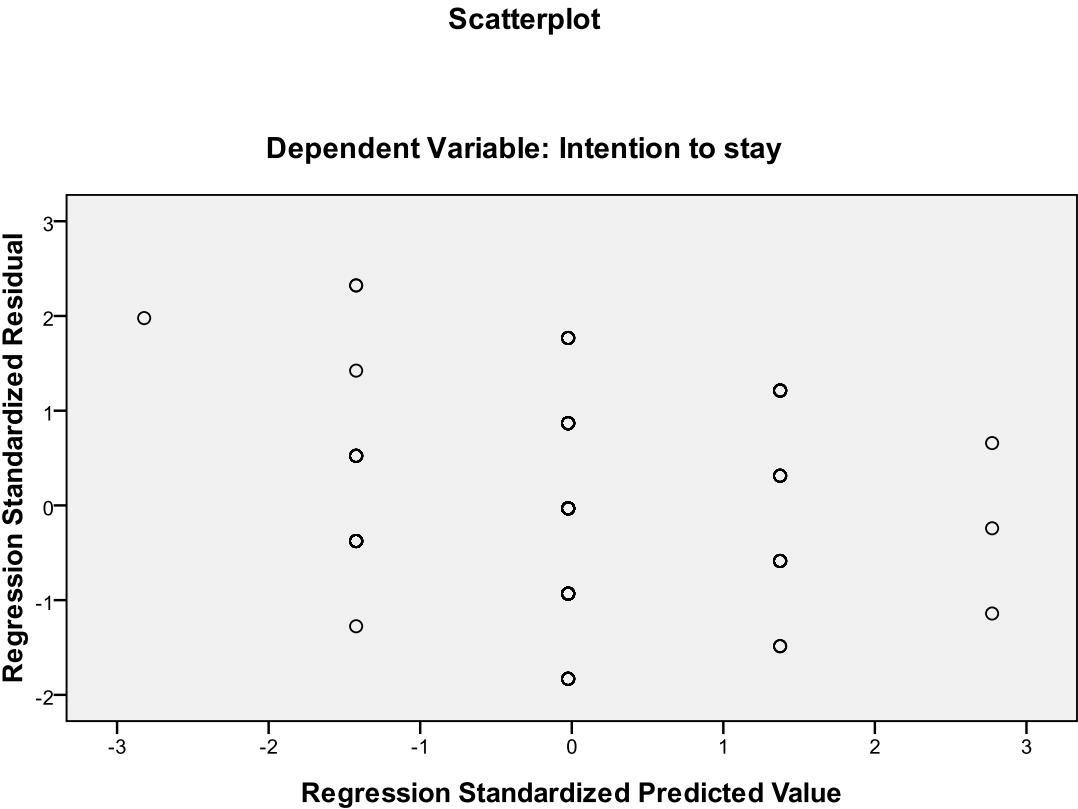
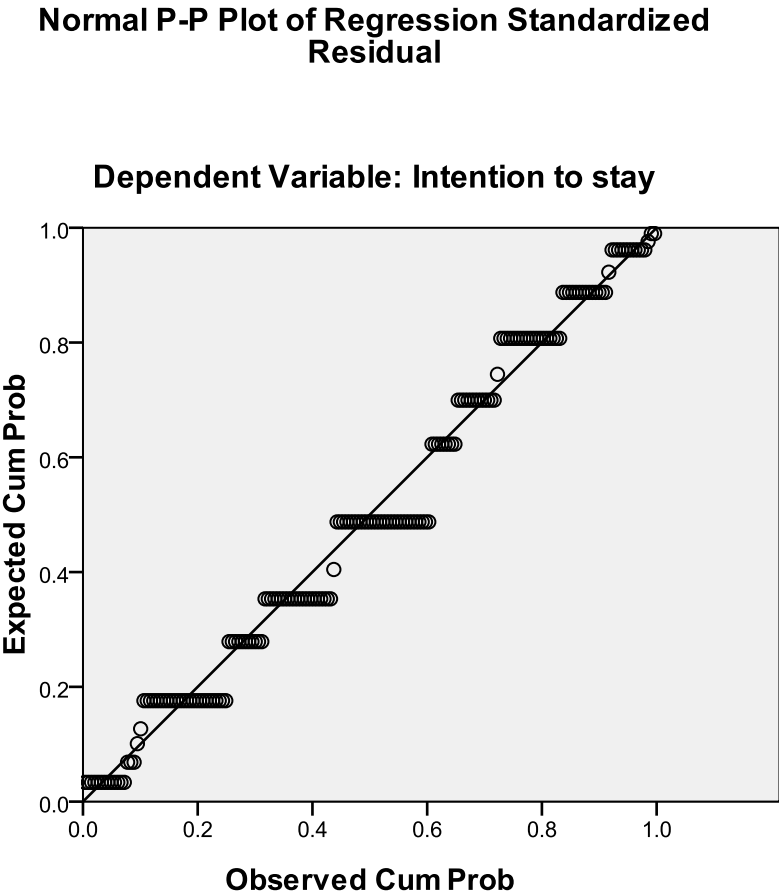


Figure 4.5 Scatterplot for Regression Model for Combined Group participants' student satisfaction to intention to stay

Figure 4.6 above shows the normal plot of regression standardized residuals for students' satisfaction and intention to stay. Some plots reinforce each other lying on the normal distribution slope.



Hypothesis 5a: There is no significant difference on “student satisfaction” and “intention to stay” between Group 1 and Group 2

The ANOVA model was used to measure the statistical difference of means and standard deviation for the factor of student satisfaction contributing to students’ intention to stay. The mean scores and the standard deviation for each factor for Group 2 are greater than Group 1. The significance can be determined by looking at the F-probability, given that $p < .05$, then we can accept the null hypothesis, that there is no significant difference between the two groups: college experience can positively influence students’ satisfaction, $F(46,48) = 7.89$, $p = .347$. This supports the results of hypothesis 4a that the test conducted in Hong Kong has indicated no significant difference between Group 1 and Group 2, and student satisfaction will influence students’ intention to stay or leave the institution. This supports the view that Group 1 students, with more “support strategies” than Group 2 students, would have more satisfying college experiences, positively influencing their intention to stay, and thereby promoting retention at the institution.

The following Tables 4.19 and 4.20 demonstrate no statistical difference on classes between students of Group 1 ($M = 3.76$, $SD = 2.17$) and Group 2 ($M = 3.74$, $SD = 2.15$); $t(181) = .044$, $p = .842$. The two groups were from the same population and results showed that significance differences existed.

Outcome variables	Group 1		Group 2	
Satisfaction	(n = 91)		(n = 88)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Student college experience	3.76	2.17	3.74	2.15

Table 4.19 Comparison on student satisfaction influencing intention to stay between Group 1 and Group 2

Group	Group 1		Group 2		<i>t</i>	<i>p</i>
Variable	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Student college experience	3.76	2.17	3.74	2.15	.044	.842

Table 4.20 T-test Results for students' intention to stay between Group 1 and Group 2

4.4 Summary

Chapter 4 has presented the results of the statistical analysis undertaken to investigate student intention to persist and retention at the institution. It also investigated the relationships between faculty performance, academic advising, and classes, all of which have had positive influences on students' partial college experience, satisfaction, intention and retention. It is observed that there was no significant difference when comparing the demographic characters.

The t-test analysis revealed that the mean scores of Group 1 were greater than Group 2, while the ANOVA analysis results showed a significant difference in faculty performance, academic advising and classes between the two groups, resulting in the null hypothesis being accepted in hypotheses 1, 2 and 3. The result of linear regression analysis indicated that the three independent variables together explained 43% of the students' college experiences. A normal plot of regression standardized residuals for college experience presented a relatively normal distribution, where no univariate outliers were found, and no clear relationship existed between the residuals and predicted values, consistent with the assumption of linearity.

Test of hypothesis 4 shows a positive relationship existed between students' college experiences and satisfaction in the correlation measurement. The result of the regression analysis showed college experiences only affected 18.8% of student satisfaction, which was not very significant, indicated by the F-value of 41.47. However, a normal plot of regression standardized residuals for student satisfaction presented a relatively normal distribution, where no univariate outliers were found, and no clear relationship existed between the residuals and predicted values, consistent with the assumption of linearity.

Test of hypothesis 5 shows a positive relationship between student satisfaction and students' intention to stay in the correlation measurement. The result was similar to hypothesis 4, where the regression analysis showed student satisfaction only affected 13.7% of students' intention to stay at the institution, which is not very significant, as indicated by the F-value of 27.38. The normal plot of regression standardized residuals for intention to stay also indicated a relatively normal distribution.

The quantitative analysis revealed no significant difference in faculty performance, academic advising and classes between Group 1 and Group 2. However, the result of the regression showed faculty performance, academic advising and classes only had moderate influences on students' college experience, but did not largely influence student satisfaction and intention to stay.

According to the three objectives of the research, hypothesis 1 to hypothesis 3 showed that faculty performance, advisory staff performance positively influenced student satisfaction, however classes were not a significant influence. The hypothesis 4 and 4a showed that student satisfaction did not have much impact on student retention, and hypothesis 5 and 5a also showed that other factors such as economic and environment issues did not affect student retention in OUHK.

Chapter 5 will provide an interpretation and discussion of the research results, implications for theory and practice, similarity and differences with previous research studies, recommendations for future research, and a summary and conclusion of the research.

CHAPTER 5

SUMMARY AND CONCLUSION

5.0 Introduction

Chapter 5 presents the summary and conclusions to the findings of this research. It is structured as follows: Section 5.1 discusses the findings, presents a summary, conclusion and general implications arising from the findings in Chapter 4. The initial research aims that triggered this research and how these aims have been addressed and answered are also briefly summarised. Section 5.2 discusses the limitations of the research; Section 5.3 presents a discussion of the resulting implications for theory and practice; and finally, Section 5.4 concludes with a summary of the dissertation and suggestions for future research.

5.1 Findings, summary, conclusion and implications

The research aims to fill literature gaps as most of the retention studies in the published literature have been undertaken in the western world context, particularly in the U.S. and in Western Europe. This has made much of the literature and theory development is skewed towards western students and western viewpoints, and not much is known about the situation in Asia, and in particular the Chinese context. In applying a satisfaction model and Herzberg's two factor theory in this study, it is argued that faculty performance, advisory staff performance and classes are three of the most important and core variables that influence students' college experiences, student satisfaction, intention and retention at the institution.

5.1.1 Effect of faculty performance on students' partial college experience

In testing of hypothesis 1, the results show that the path coefficients from faculty to students' partial college experience are consistent with the assumption that Group 1 students who had "support strategies" influencing students' partial college experience were higher than those in Group 2 on which students had no "support strategies". Faculty performance was identified as the most significant variable and has the highest beta coefficients in the regression models in predicting students' college experience and also accounted for a significant portion in rating students' overall satisfaction (Gibson, 2010).

The result shows that the faculty's instructional effectiveness was a significant factor in predicting student satisfaction. Students who had enjoyable college experiences, met with caring and helpful staff, and faculties' caring attitudes giving a sense of belonging to students were all key determinants impacting student satisfaction. Nevertheless, the level of student satisfaction with their college experience was enhanced where students felt their college experience was enjoyable. Whether they enjoyed lectures or their social life on campus, these experiences altogether lead to a higher level of student satisfaction.

The result of the analysis of hypothesis is consistent with findings by DeShields et al. (2005) who conducted a large and extensive study in a state university in South Central Pennsylvania. DeShields used path analysis and the hypothesized effects to show faculty performance has positive and significant influence on affecting students' college experience.

Further, the results in hypothesis 1 show the differences between Group 1, "those who had "support strategies" compared to Group 2, "those who had no "support strategy".

Accordingly, the results show a higher mean for Group 1 on faculty performance on students' college experience for most of the relevant factors. The study assumed that Group 1 students with more "support strategies" than Group 2 students would present as being more satisfied and thereby positively influence their college experience.

5.1.2 Effect of academic advising on students' partial college experience

In the testing of hypothesis 2, the result indicates the path coefficients from academic advising to students' partial college experience was consistent with the assumption that Group 1 students who had "support strategies" that influenced students' partial college experience were higher than those in Group 2 without "support strategies". This supports the view that academic advising has a positive impact on students' college experience at the institution.

The finding of this study is inconsistent with the findings of DeShields et al. (2005), where the non-significant path coefficient indicated that advising staff performance does not influence students' college experience. Based on Herzberg's two factor theory, advisory staff performance is not directly related to students' college experience, since students may not view advisory staff as directly related to the outcome of their college experience. However, the situation in Hong Kong is different from that in the U.S. This is because mentoring is embedded in the Chinese culture and appears effective in helping to improve students' academic achievements as well as to increase student retention (Bozionelos & Wang, 2006). Advisory staff performance was considered as a hygiene factor at the institution. From the perspective of Group 2 students, the programme / course coordinator acted as a resource person who cared about students' 'whole person' development at the institution.

A comparison of the group having “support strategies” with the group who did not receive any “support strategies” shows a higher mean in most of the relevant factors, and a significant difference was found between the two groups. Academic advisory staff therefore significantly influenced students at the institution.

5.1.3 Effect of classes on student partial college experience

As before the result from hypothesis 3 indicates that the path coefficients from classes to students’ partial experience were higher in Group 1 students who had “support strategies” than those in Group 2 without “support strategies”. This is consistent with the assumption that “support strategies” positively influence students’ college experiences. There was no difference in the classes between those having “support strategies” and those without. However, the difference in mean was found to be statistically insignificant. The result was shown as $p < .05$, where classes with partial college experience were not consistent with the assumption and not a key factor influencing students’ partial college experience. More importantly, classes would not be considered as a motivator or satisfier, since students may not see classes as directly related to their expected outcomes from a college experience. At the OUHK, students were not involved in class scheduling matters nor had the opportunity to choose courses with ‘real world’ experiences. In the absence of fairness that may cause an insignificant coefficient from classes to college experience, it is assumed in this study that students are generally dissatisfied with classes at the institution.

The result of this study is not consistent with the findings of DeShields et al. (2005) research. Unlike DeShields, the non-significant path coefficient in our study indicated that advisory staff performance did not have any significant influence on students’ college experience. A possible reason for this is that students may not view classes as being

significantly related to their expected outcome from a college experience. Although classes and the curriculum component were important to students' college experience, this factor was found to have a low reliability. Therefore, the researcher suggested that the quality of classes should be continuously improved. The institution should liaise with the business community, such as offering more co-operative business and practical opportunities to students, providing more hands-on experience, thereby building a stronger reputation for the institution.

Similarly, no difference was found between the group who had "support strategies" and the group without any "support strategies".

5.1.4 Effect of the student partial college experience on student satisfaction

As earlier, the results of Hypotheses 4 and 4a revealed that only 24.5% of student satisfaction can be explained from their college experiences, which was not largely significant. As $p = .313, >.05$, we can accept the null hypothesis. There was no significant difference between the two groups on college experience positively influencing student satisfaction. As before, this phenomenon exactly explained that what students reported as important to them in their overall educational experience did not necessarily translate to their overall satisfaction with their college experience. The result also indicated that it did not matter if the variables were hygiene factors or motivators. They all positively affected students' college experience and overall satisfaction.

5.1.5 Effect of student satisfaction on intention to stay or leave the institution

The findings from Hypotheses 5 and 5a revealed that only 13.7% of students' intention to stay was influenced by their satisfaction, which is not significant. As $p = .313, >.05$, we

can accept the null hypothesis. There is no significance difference between the two groups on their college experience positively influencing student satisfaction.

In conclusion, the research findings can be summarized as follows:

First, the result is quite consistent with Tinto (1993) and Bean's (1980) suggestions that student retention is influenced by both academic and social integration; both factors work together to impact students' decision to stay or leave the institution. Further, Bean and Mertzer (1985) and Kember (1989b) added environmental factors such as family support and social life as influencing students' college experience and student affecting drop-out. Students look towards faculty and academic advising support in their pursuit of good academic grades. This affects students' intention to stay at the institution. The study by DeShields et al. (2005) used Keaveney and Young's student satisfaction and retention model to support the view that faculty and classes are the most influential factors in student retention. However, our study shows that faculty and academic advising are directly related to the outcome from a college experience and positively influence student satisfaction. As explained above, students may not view classes as a factor directly affecting the expected outcome from their college experience.

Second, "support strategies" support students' learning. However, this factor only affected part of student retention rate. The institution encouraged students to enrol at different seminars, providing mentoring support to facilitate students' learning and retention. Patterson, Johnson, and Spreng (1997) suggested there is a strong relationship between customer satisfactions and repurchase intentions. Bolton, Kannan, and Bramlett (2000) added that repurchase intentions are highly dependent on how students evaluate the dimensions of services. Our findings show that "support strategies" resulted in a more

enjoyable college experience and further enhanced students' overall satisfaction and thus their intention to stay. As a result, students would be more likely to recommend the college to their friends and family. Indeed, scholars have suggested that the most effective and efficient way to recruit and retain students is through word-of-mouth which would come from existing satisfied students (Browne et al., 1998).

5.2 Limitations of the research

There are some limitations to this research. The literature review delimits the number of models and articles of retention. For example, in this field of research, there are approximately two dozen scholars with years of research which suggested additions and modifications based on successes, failures, and discoveries using Tinto's student persistence model. In our study, we have only presented a few remarkable theories and models based on the scope, findings, focus, data and results relevant for comparison.

As for the methodology adopted in this study, the selection of sample size involved only one faculty within one university. The study is based on respondents' past experiences at the institution and it is assumed that there was no bias in their answers and data provided in their questionnaires were accurate. In relation to the forms of data collection, we assumed the respondents themselves completed the questionnaire. Indeed, there was little flexibility for respondents to present their own perspectives on issues especially as all the questions posed were closed-end questions.

In order to overcome these limitations, the researcher focused on a few critical elements:

The literature review in Chapter 2 demarcated the articles reviewed. Reviewed articles were delimited to the context of student satisfaction, student retention, higher education,

and continuing education literature. The researcher focused exclusively on literature in the English language on satisfaction and retention applied in both Asian and Western countries.

Finally, the research was conducted in Hong Kong's unique contextual environment, and this study selected a single continuing education institution for data collection. The purpose was to generate valuable insights from students which can be used as an empirical basis. However, future research should also examine the generalisability of the measures and the model in a wider context of the higher education sector with a larger sample size, or a cross-country study, i.e. students at universities in the People's Republic of China may also provide interesting results. Further research would shed light on this issue.

5.3 Resulting implications for practice

This study investigated the critical factors influencing student satisfaction and their willingness to stay and remain at the institution. The researcher examined the literature and several theories that explain current knowledge relating to student intention and retention at the OUHK.

Questionnaires were administered to a sample of students and 5 hypotheses were tested at the OUHK. The findings showed that faculty and advisory staff performance were very important to students, and these two factors were directly related to students' expected outcomes of college experience, and positively influenced student satisfaction and their intention to stay at the institution. However, classes were not considered to be a very important factor relating to students' college experience as students had no opportunities to

participate in class scheduling matters or in choosing electives which had relevant 'real world' experience.

Another interesting result showed that "support strategies" facilitated students' education and personal growth in their college life. However, results showed no significant difference between the group with such support and the group without. This indicates that "support strategies" is a new concept and not widely accepted as a factor of influence in the university setting.

As a result, this study contributes to practice by providing evidence between student college experience, student satisfaction and their intention to stay, and by pointing out some of the potential implications of choices in forming students' satisfaction, intention to retention. Results of this research could help the education practitioners to look beyond metrics like faculty performance, advisory staff performance which are critical as their attitudes in lectures, a good relationship with the students may influence students' perception and beliefs and affect their retention decision.

The lessons I have learnt during the research process:

- (1) The findings to this study give suggestions to the researcher that a necessity of faculties/ subject advisory programs can be further developed. Possible assistances such as additional tutorial classes, guidance on their study skills, English enhancement programs, and other basic academic skills training can be organized from the beginning to the end of the semester. The researcher asserted that the use of faculties/ academic staff sheds light on every year's student recruitment exercise and academic intervention

programs. As a Programme Leader, the research inspires me an insight on the direction on programme development, coordination and restructuring. The results and findings help to improve my decision on how to develop a programme according to the needs and expectation of students. It can therefore boost the possibilities of student retention at OUHK.

- (2) The researcher found she has experienced a practical and constructive research from the process of setting the questionnaire to data analyzing phase. The research process included a few phases, e.g. phase 1 included the initial introduction of an investigational concept to the management of the university; phase 2 included questionnaire setting and counting the total number of students and their areas of studies in the university. Phase 3 included questionnaire distribution, data collection and data analysis from the respondents. The whole process consisted of thorough planning, organizing and monitoring the quality students' response and feedback. As an academic staff in OUHK, this high valued experience enhanced the researcher's education by providing more insights on how academic research is conducted and how the process of a research is engaged. Further, through the preliminary stage of this research, the researcher learnt to prepare and write proposals which she has to submit to the university research committee to conduct an academic research in her future. This experience helped her to become more well rounded and to be a potential and passionate researcher in her academic career.

5.4 Summary of the dissertation and suggestions for future research

We suggest a few recommendations following the findings of this study. First, the effectiveness of reserving seminar courses for upper level students can help develop

students' cognitive and critical thinking skills, heighten their academic interest in various areas through greater use of active learning skills to bring greater student engagement, satisfaction and thus increase their persistence at the institution. In addition, mentoring programmes can enhance student-faculty interactions, i.e. academic advising, career advising, socializing and counselling all contributed to social integration and satisfaction to students. Tinto's student integration model (1993) has proven that both academic and social variables, working together, affect the student's decision to stay or leave the university. As a result, supporting systems were essential to increase student satisfaction, intention and retention.

The following recommendations are suggested and can influence the persistence of students in the upper years.

"Support strategies" were essential for upper level students, especially for those seeking academic advice, more interaction with the faculty and staff, and wanting more campus involvement. Senior management should realise the importance of such "support strategies" and give full support and ample time to execute these strategies and give students a sense of belonging and welfare at the university. Thomas and Galambos (2004) indicated that 'the sense of belonging' was the most important predictor for general satisfaction measures.

Nora and Crisp (2008) compared students who received formal mentoring programmes with those non-mentored students. The results indicated that those who participated in formal mentoring programmes were less likely to drop-out. Therefore, mentoring programmes can provide more faculty-student interaction, and students with this

opportunity can seek career counselling and academic advising from their subject coordinators. Mentors are role models for students, helping them develop their professional potential, giving them career direction and setting goals. In this, it is believed that the most important aspect is to build up trust and foster good relationships with students.

Craig and Ward (2007) indicated that student retention is related to students' academic performance, especially measured by their grade point average. The course content for year 2 students would presumably be more challenging and require more academic subject and knowledge support. As such, mentors in the same subject area can provide students with tutoring support and improve their academic performance as students achieving satisfying grades are highly related to student success and retention.

The results of this study indicated that classes and scheduling provided by the institution were inconsistent with real-life relevancy. In Herzberg's two factor theory, faculty performance and classes were directly related to the outcome from students' partial university experience. Accordingly, these factors may be considered motivators and satisfiers, resulting in student satisfaction where both factors are substantially fulfilled (DeShields et al., 2005). In a similar vein, it is suggested that more practical classes can be arranged in the community setting to stimulate student learning. In addition, projects and case studies can enrich students' critical thinking and integration of ideas across courses, students' intellectual growth and satisfaction would as such be achieved through satisfying classes and lead to improved overall student satisfaction and retention.

Financial aid is another aspect of this study. Zhai and Monzon (2001) have shown that financial aid is a significant predictor in student retention. Community college students have claimed that financial difficulties were critical factors to their intention to stay or drop-out. Therefore, if the institution can provide some financial assistance, such as scholarship programmes, this may encourage students to persist to graduate.

Finally, this study clearly indicated faculty and academic advising were both related to students' expected outcomes from a college experience. However, classes set by the institution may lead to students' dissatisfaction as they may not view this variable as directly related to their expected college outcomes. It is suggested that the institution should continue to promote faculties to schedule more hours for student support services, especially during the peak enrolment period, to establish an ongoing relationship with students. Good relationships and closer interaction builds trust and increases student satisfaction, thus contributing to student retention.

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 主旨: RE: Enquiry about questionnaire in your "Business Student Satisfaction, Intentions and Retention in Higher Education" paper
 附件: Student Retention Survey.doc

Here is the instrument we have used in that manuscript. If you used it, a citation is appreciated.
 Good luck to you.

Ali

Dr. Ali Kara
 Professor of Marketing &
 Discipline Coordinator, Business and Economics Division
 Penn State University York Campus
 1031 Edgecomb Ave
 York, PA 17403 USA
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 Fax: 717-771-8404
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From: Irene SZETO Ho Chin [mailto:iszeto@ouhk.edu.hk]
Sent: Monday, June 04, 2012 5:29 AM
To: axk19@psu.edu; oscar.deshields@csun.edu
Subject: Enquiry about questionnaire in your "Business Student Satisfaction, Intentions and Retention in Higher Education" paper

Dear Professor Kara and Professor DeShields,

My name is Irene and currently a DBA candidate at University of Newcastle, Australia. I am writing my research paper on "Factors affecting students retention in Hong Kong", which I have read your paper "*Business Student Satisfaction, Intentions and Retention in Higher Education: An Empirical Investigation*" which have some similar ideas for my dissertation. Would you mind to share the questionnaire developed by Keaveney and Young (1997) or the modified version of questionnaire which appears in your paper to me?

Many thanks and appreciate for your great help and assistance.

Regards,
 Irene Szeto
 The Open University of Hong Kong
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 Fax: (852) 2381 8456
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Penn State York — Student Survey

Faculty Performance

Please take a moment to evaluate the quality of services offered by the faculty (instructors) at Penn State York. Indicate your level of agreement or disagreement by circling the appropriate number.

- | | → | Strongly Agree → → Strongly Disagree |
|--|---|--------------------------------------|
| 1. → Faculty often seem concerned about my learning..... | → | 1 → 2 → 3 → 4 → 5 |
| 2. → Faculty usually have been accessible to me..... | → | 1 → 2 → 3 → 4 → 5 |
| 3. → Faculty usually gives me adequate feedback about my performance..... | → | 1 → 2 → 3 → 4 → 5 |
| 4. → Faculty usually provide services at the time they promise to do so..... | → | 1 → 2 → 3 → 4 → 5 |
| 5. → Faculty rarely respond promptly to students' needs..... | → | 1 → 2 → 3 → 4 → 5 |
| 6. → Faculty usually have been easy to contact..... | → | 1 → 2 → 3 → 4 → 5 |
| 7. → Faculty seldom act as if they have your best interest at heart..... | → | 1 → 2 → 3 → 4 → 5 |
| 8. → I usually feel comfortable in my transactions with faculty..... | → | 1 → 2 → 3 → 4 → 5 |
| 9. → Faculty usually have the knowledge to answer student questions effectively..... | → | 1 → 2 → 3 → 4 → 5 |
| 10. → Faculty usually provide written or verbal comments to help me improve my work..... | → | 1 → 2 → 3 → 4 → 5 |
| 11. → Faculty usually present a professional appearance..... | → | 1 → 2 → 3 → 4 → 5 |
| 12. → When faculty promise to do something by a certain time, they usually do it..... | → | 1 → 2 → 3 → 4 → 5 |
| 13. → Faculty usually present themselves professionally during class..... | → | 1 → 2 → 3 → 4 → 5 |
| 14. → Faculty usually do things right the first time..... | → | 1 → 2 → 3 → 4 → 5 |
| 15. → Faculty seldom understand what student needs are..... | → | 1 → 2 → 3 → 4 → 5 |
| 16. → The behavior of faculty usually instills confidence in me..... | → | 1 → 2 → 3 → 4 → 5 |
| 17. → Faculty are usually knowledgeable with regard to current issues in his/her discipline..... | → | 1 → 2 → 3 → 4 → 5 |
| 18. → Faculty seldom act as though they understand my specific needs..... | → | 1 → 2 → 3 → 4 → 5 |
| 19. → Faculty are usually courteous with students..... | → | 1 → 2 → 3 → 4 → 5 |
| 20. → I am satisfied with the fairness of grading at PSY..... | → | 1 → 2 → 3 → 4 → 5 |

Staff Performance

Next, we would like you to evaluate the Staff of Penn State York (all employees other than Professors/Instructors)

- | | → | Strongly Agree → → Strongly Disagree |
|---|---|--------------------------------------|
| 21. → The staff at PSY does a good job communicating with students about issues that concern them..... | → | 1 → 2 → 3 → 4 → 5 |
| 22. → PSY staff usually maintain accurate records..... | → | 1 → 2 → 3 → 4 → 5 |
| 23. → Staff usually provides services at the time they promise to do so..... | → | 1 → 2 → 3 → 4 → 5 |
| 24. → PSY appears to be responsive to student comments on SRTE's (Student Rating of Teaching Effectiveness — filled out for each class at end of semester)..... | → | 1 → 2 → 3 → 4 → 5 |
| 25. → Materials (such as brochures and syllabi) are professional in their appearance..... | → | 1 → 2 → 3 → 4 → 5 |
| 26. → When staff promise to do something by a certain time, they usually do it..... | → | 1 → 2 → 3 → 4 → 5 |
| 27. → PSY staff present a professional appearance..... | → | 1 → 2 → 3 → 4 → 5 |
| 28. → Staff usually tell you exactly when they can provide their services..... | → | 1 → 2 → 3 → 4 → 5 |

	→	Strongly→ → → Strongly, Disagree→ → → Agree.
29.→ I usually feel comfortable in my interactions with staff.	1→2→3→4→5	1
30.→ Staff usually have the knowledge to answer student questions effectively.	1→2→3→4→5	1
31.→ When I have a problem, staff usually show a sincere interest in solving it.	1→2→3→4→5	1
32.→ Staff usually present a professional appearance.	1→2→3→4→5	1
33.→ Staff usually do things right the first time.	1→2→3→4→5	1
34.→ Staff seldom understand what student needs are.	1→2→3→4→5	1
35.→ Penn State York responds to student raised concerns.	1→2→3→4→5	1
36.→ Staff seldom act like they understand your specific needs.	1→2→3→4→5	1
37.→ Staff are usually willing to help you.	1→2→3→4→5	1
38.→ Staff rarely respond promptly to students' needs.	1→2→3→4→5	1
39.→ The behavior of staff usually instills confidence in me.	1→2→3→4→5	1
40.→ Staff are usually courteous with students.	1→2→3→4→5	1

Academic Advising

When answering these questions, please think about the faculty advisor that has been assigned to you:

	→	Strongly→ → → Strongly, Disagree→ → → Agree.
41.→ My faculty advisor is usually available during convenient hours.	1→2→3→4→5	1
42.→ My faculty advisor is knowledgeable about the requirements of my curriculum.	1→2→3→4→5	1
43.→ Faculty advisors are an important part of a student's academic success.	1→2→3→4→5	1
44.→ I understand the services that a faculty advisor can provide.	1→2→3→4→5	1
45.→ I have utilized the services of my advisor.	1→2→3→4→5	1
46.→ My faculty advisor is approachable and helpful.	1→2→3→4→5	1
47.→ My faculty advisor has helped me find solutions to questions or problem.	1→2→3→4→5	1

Classes

- The following statements refer to the Courses and Classes offered at Penn State York:

	→	Strongly→ → → Strongly, Disagree→ → → Agree.
48.→ Classes seldom require contact with business and/or the community.	1→2→3→4→5	1
49.→ PSY usually has a sufficient variety of <u>evening</u> courses.	1→2→3→4→5	1
50.→ PSY usually has a sufficient variety of <u>day time</u> courses.	1→2→3→4→5	1
51.→ Classes usually provide "real world" experience.	1→2→3→4→5	1
52.→ Classes often require solving actual problems to supplement the learning process.	1→2→3→4→5	1
53.→ PSY usually provides an adequate variety of courses for my needs.	1→2→3→4→5	1
54.→ PSY has given me the education that I need.	1→2→3→4→5	1
55.→ Most of my courses have been intellectually stimulating.	1→2→3→4→5	1
56.→ Classes get me involved in the learning process.	1→2→3→4→5	1
57.→ Courses usually provide a broad spectrum of knowledge.	1→2→3→4→5	1
58.→ I usually learn a lot when I take classes.	1→2→3→4→5	1
59.→ PSY usually provides sufficient electives for my major.	1→2→3→4→5	1
60.→ PSY usually provides sufficient summer class offerings.	1→2→3→4→5	1

	→	Strongly→ → → Strongly
		Disagree→ → → Agree
61.→ I can apply the information I receive from classes to my career choice/major.	.....	1→2→3→4→5
62.→ Overall, I am satisfied with the classes and courses offered at PSY.	.....	1→2→3→4→5

Yourself

	→	Strongly→ → → Strongly
		Disagree→ → → Agree
63.→ I expect to have a harder time academically than most students.	.....	1→2→3→4→5
64.→ School has always been easy for me.	.....	1→2→3→4→5
65.→ I take the initiative in consulting with my professors.	.....	1→2→3→4→5
66.→ It is easy for me to perform well in school.	.....	1→2→3→4→5
67.→ I make the most of my educational opportunities here at PSY.	.....	1→2→3→4→5
68.→ I take the initiative in obtaining all the information I can from my classes.	.....	1→2→3→4→5
Attending Penn State York has helped me to:		
69.→ Gain a better general education.	.....	1→2→3→4→5
70.→ Develop my skills in expressing myself both verbally and in writing.	.....	1→2→3→4→5
71.→ Develop the skills needed to get a better job.	.....	1→2→3→4→5
72.→ Learn to integrate new ideas.	.....	1→2→3→4→5
73.→ Improve the skills I need for my career.	.....	1→2→3→4→5
74.→ Increase my overall knowledge of my major.	.....	1→2→3→4→5
75.→ Develop a clearer idea of my future career plans.	.....	1→2→3→4→5
76.→ Develop a sense of self-reliance.	.....	1→2→3→4→5
77.→ Strengthen my basic academic skills.	.....	1→2→3→4→5
78.→ Develop new frameworks for solving problems.	.....	1→2→3→4→5

Campus Life

	→	Strongly→ → → Strongly
		Disagree→ → → Agree
79.→ I am happy with the variety of extracurricular activities offered at PSY.	.....	1→2→3→4→5
80.→ Student dormitory housing would appeal to me.	.....	1→2→3→4→5
81.→ I feel there are plenty of opportunities to socialize at PSY.	.....	1→2→3→4→5
82.→ The parking is conveniently located near my classes.	.....	1→2→3→4→5
83.→ I take advantage of the Learning Center when necessary.	.....	1→2→3→4→5
84.→ There is a good variety of food and beverages offered on campus.	.....	1→2→3→4→5
85.→ I feel tutoring is available when I need it.	.....	1→2→3→4→5
86.→ Overall the physical facilities at PSY are clean and comfortable.	.....	1→2→3→4→5
87.→ Tutors are readily available.	.....	1→2→3→4→5
88.→ Tutors are knowledgeable.	.....	1→2→3→4→5
89.→ Tutors are friendly and helpful.	.....	1→2→3→4→5
90.→ The Learning Center is an important aid for me.	.....	1→2→3→4→5
91.→ The Learning Center is helpful for those who need it.	.....	1→2→3→4→5
92.→ The Library at PSY is open during convenient hours.	.....	1→2→3→4→5
93.→ The Library almost always has the resource materials I need.	.....	1→2→3→4→5
94.→ I use the Library on a regular basis.	.....	1→2→3→4→5
95.→ Overall, I am satisfied with the library.	.....	1→2→3→4→5

Final Opinions

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
96. A college education will increase my future earning potential.	1	2	3	4	5
97. I would use the Career Planning Services if offered at PSY.	1	2	3	4	5
98. The needs of my family conflict with the demands of school.	1	2	3	4	5
99. PSY's degrees compare favorably to other institutions around the country.	1	2	3	4	5
100. I feel I am getting my money's worth from PSY.	1	2	3	4	5
101. Penn State is well-known in the York community.	1	2	3	4	5
102. A degree is vital in achieving my career goals.	1	2	3	4	5
103. PSY has promoted itself well in the area business community.	1	2	3	4	5
104. The demands of my job conflict with the demands of school.	1	2	3	4	5
105. I intend to complete my degree at PSU (any campus).	1	2	3	4	5
106. Overall, the quality of programs offered by PSY is excellent.	1	2	3	4	5
107. Overall, I am very satisfied with the staff at PSY.	1	2	3	4	5
108. I have a hard time balancing the demands of school, work, and family.	1	2	3	4	5
109. I doubt if I will complete my degree at PSU (any campus).	1	2	3	4	5
110. Overall, I am satisfied with the faculty/instructors at PSY.	1	2	3	4	5

Background Information

111. Current GPA: _____ 112. What was your High School GPA upon graduation: _____
113. Major and Degree you are seeking? _____ 114. Gender: M _____ F _____
115. Age _____ 116. Marital Status: Single _____ Married _____ Divorced _____
116. No of Children (if applicable): _____
117. Which of the following best describes your status (check as many as apply).
- Student: _____ Full-Time _____ Part-Time _____
- Employment: Full time _____ Parttime _____
118. What is your race/ethnic group? _____
- White/Caucasian _____ Black/African _____ Asian _____ Hispanic _____ Other _____
119. Did your parents support your decision to attend Penn State York? Yes _____ No _____
120. Where are you living while attending classes? _____
- With parents/relatives _____ With friends/fellow students _____
- By self or with spouse/significant other _____ Other _____
121. What influenced your decision to attend Penn State York? (check all that apply).
- High school guidance counselor _____ Visit from University representative _____
- Friends attending PSY _____ Reputation of Penn State _____ Parents graduated from Penn State _____
- Boyfriend/girlfriend at PSY _____ Convenience of campus location _____ Other _____
122. Are you involved in any student organizations, extracurricular activities or committees at Penn State York? _____
- Yes _____ No _____ If yes, what? _____
123. How is the majority of your tuition paid? Parents/Relatives _____ Financial aid (grants and/or loans) _____
- Scholarships _____ Self _____
124. Lastly, but most importantly: Thinking about your experience at Penn State York, how would you rate your overall satisfaction? _____
- ☐ Very Satisfied ☐ Somewhat Satisfied ☐ Neutral ☐ Somewhat Dissatisfied ☐ Very Dissatisfied

FACULTY OF BUSINESS AND LAW



The Continuing Education Institute of Open University of Hong Kong (OUHK) – Student Survey

Faculty Performance

Please take a moment to evaluate the quality of services offered by the faculty instructors at OUHK. Indicate your level of agreement or disagreement by circling the appropriate number

	Strongly Disagree	1	2	3	4	5	Strongly Agree
1. Faculty instructors often seem concerned about my learning		1	2	3	4	5	
2. Faculty instructors usually gives me adequate feedback about my performance.....		1	2	3	4	5	
3. Faculty instructors rarely respond promptly to students' needs.....		1	2	3	4	5	
4. Faculty instructors usually have the knowledge to answer student questions effectively		1	2	3	4	5	
5. Faculty instructors usually provide written or verbal comments to help me improve my work.....		1	2	3	4	5	
6. Faculty instructors usually present themselves professionally during class.....		1	2	3	4	5	
7. Faculty instructors seldom understand what student needs are.....		1	2	3	4	5	
8. Faculty instructors are usually courteous with students.....		1	2	3	4	5	
9. I am satisfied with the fairness of grading at OUHK.....		1	2	3	4	5	

Staff Performance

Next, we would like you to evaluate the Staff of OUHK (all employees other than Academic staffs/Faculty instructors)

	Strongly Disagree	1	2	3	4	5	Strongly Agree
10. The staff at OUHK does a good job communicating with students about issues that concern them		1	2	3	4	5	
11. I usually feel comfortable in my interactions with staff.....		1	2	3	4	5	
12. Staff usually have the knowledge to answer student questions effectively.....		1	2	3	4	5	
13. Staff are usually willing to help you.....		1	2	3	4	5	
14. I am satisfied with their service provided by OUHK staff.....		1	2	3	4	5	

Academic Advising

When answering these questions, please think about the faculty advisor that has been assigned to you:

	Strongly Disagree	1	2	3	4	5	Strongly Agree
15. My faculty advisor is usually available during convenient hours.....		1	2	3	4	5	
16. My faculty advisor is knowledgeable about the requirements of my curriculum.....		1	2	3	4	5	
17. Faculty advisors are an important part of a student's academic success.....		1	2	3	4	5	
18. I understand the services that a faculty advisor can provide.....		1	2	3	4	5	
19. I have utilized the services of my advisor.....		1	2	3	4	5	
20. My faculty advisor is approachable and helpful.....		1	2	3	4	5	
21. My faculty advisor has helped me find solutions to questions or problem.....		1	2	3	4	5	

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The University of Newcastle enquirycentre@newcastle.edu.au T +61 2 4921 5000
Callaghan NSW 2308 Australia CRICOS Provider Number: 00108J www.newcastle.edu.au

Classes

	Strongly Disagree				Strongly Agree
22. Classes seldom require contact with business and/or the community.....	1	2	3	4	5
23. OUHK usually has a sufficient variety of <u>day time</u> courses.....	1	2	3	4	5
24. Classes usually provide "real world" experience.....	1	2	3	4	5
25. Classes often require solving actual problems to supplement the learning process.....	1	2	3	4	5
26. OUHK has given the education that I need.....	1	2	3	4	5
27. Classes get me involved in the learning process.....	1	2	3	4	5
28. Courses usually provide a broad spectrum of knowledge.....	1	2	3	4	5
29. I usually learn a lot when I take classes.....	1	2	3	4	5
30. I can apply the information I receive from classes to my career.....	1	2	3	4	5
31. Overall, I am satisfied with the classes and courses offered at OUHK.....	1	2	3	4	5

Campus Life

	Strongly Disagree				Strongly Agree
32. I am happy with the variety of extracurricular activities offered at OUHK.....	1	2	3	4	5
33. I feel there are plenty of opportunities to socialize at OUHK.....	1	2	3	4	5
34. I take advantage of using the Resources Learning Center when necessary.....	1	2	3	4	5
35. Overall the physical facilities at OUHK are clean and comfortable.....	1	2	3	4	5
36. Overall, I am satisfied with my overall learning experiences in OUHK.....	1	2	3	4	5

Final Opinions

	Strongly Disagree				Strongly Agree
37. A college education will increase my future earning potential.....	1	2	3	4	5
38. A diploma/higher diploma/degree is vital in achieving my career.....	1	2	3	4	5
39. OUHK has promoted itself well in the area business community.....	1	2	3	4	5
40. Overall, the quality of programs offered by OUHK is excellent.....	1	2	3	4	5
41. Overall, I am satisfied with staff, faculty/instructors at OUHK.....	1	2	3	4	5

Background Information

42. Gender: ☐ M ☐ F
43. Age _____
44. Which program are you studying at OUHK?
☐ Higher Diploma/ PAD Programme ☐ Diploma / YJD programme
45. Did your parents support your decision to study at OUHK? ☐ Yes ☐ No
46. Will you stay in OUHK for your further study after completing your current programme?
☐ Absolutely Not Stay ☐ Not Stay ☐ Neutral ☐ Will Stay ☐ Absolutely Stay
47. How is the majority of your tuition paid? ☐ Parents/Relatives ☐ Financial aid (grants and/or loans)
☐ Scholarships ☐ Self
48. Lastly, but most importantly: Thinking about your experience at OUHK, how would you rate your overall satisfaction:
☐ Very Dissatisfied ☐ Somewhat Dissatisfied ☐ Neutral ☐ Somewhat Satisfied ☐ Very Satisfied



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Prof. Y H Lui
Director
Li Ka Shing Institute of Professional and Continuing Education
The Open University of Hong Kong
201-203, Lai King Hill Road, Kwai Chung
Kowloon, Hong Kong

30 Jan 2012

Re: Seeking Permission to Conduct a Research Study

Dear Prof. Lui

My name is Irene Szeto and I am a Doctor of Business Administration (DBA) candidate in the Faculty of Business and Law at the University of Newcastle, Australia. I am currently conducting a research under the supervision of Dr. David Clark-Murphy on the topic of "Factors affecting student's retention in the Hong Kong Continuing Education Institute".

I would like to seek your permission to allow me to conduct a research study with your full time programme students in cohort 2011/2012. If you allow me to do the questionnaire with your full time programme students, it will be conducted during the year 2011/2012. I will select about 512 students from the full programmes (including non-local programme, advanced diploma, diploma and pre-associate degree), I will ask them about what factors are important in attracting them to study a higher level of programme in the institute, what values are significant important to them in order to increase the student satisfaction and their loyalty in the Hong Kong professional and continuing education institutes.

Participation in the survey is entirely voluntary and there are no known or anticipated risks to participation in this study. Students may decline to answer any of the questions they do not wish to answer. Further, they may decide to withdraw from this study at any time, without any negative consequences, simply by not completing the survey. All information provided by the participants will be considered confidential unless otherwise agreed to, and the data collected will be kept in a secure location and confidentially disposed of in five years time.

The name of the respondents and **the name of the university will not appear in any thesis** or publication resulting from this study. After the data have been analyzed, you will receive a copy of the research findings that can be made available to you.

If you would like further information, please contact me at 852 9107 0312 or by email hochinirene.szeto@studentmail.newcastle.edu.au. You can also contact my supervisor Dr. David Clark-Murphy, Newcastle Business School by phone +61 418944223 or by email d.clarkmurphy@westnet.com.au

If you have questions about the rights of participants in research, please contact the Human Research Ethics Officer, Research Office, The Chancellery, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 49216333, email Human-Ethics@newcastle.edu.au.

I assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Newcastle.

If you understand the contents described above and allow me to conduct this research with your students, please sign below. Your help is very much appreciated.

Thank you for considering this invitation and assistance with this research.

Yours sincerely,

Irene H C Szeto
DBA Candidate

Reply Slip

Name: Prof. Y H Lui
Position: Director
Organisation: Li Ka Shing Institute of Professional and Continuing Education
The Open University of Hong Kong

I ~~** will~~ / ~~will~~ not allow Ms Irene Szeto to conduct this research study with the
Schools' full time programme students. (** Please delete as inappropriate.)

as indicated in the letter dated 20 Jan. 2012

Signature: _____



Date: _____

2012.1.30

Participant's Content Form



For further information:
Ms Irene Szeto
University of Newcastle
SRS11, Social Sciences Building
Callaghan NSW 2308
hochinirene.szeto@studentmail.newcastle.edu.au

Information Statement for the Research Project:

Research Title: Factors affecting student's retention in the Continuing Education Institute of OUHK

I agree to participate in the above research project and give my consent freely.

I understand that the project will be conducted as described in the Information Statement, a copy of which I have retained.

I understand I can withdraw from the project at any time and do not have to give any reason for withdrawing.

I consent to

- Fill in the Questionnaire, which will be recorded and transcribed.

I understand that my personal information will remain confidential to the researchers involved in this project.

I have had the opportunity to have questions answered to my satisfaction.

Date: 10/12/2012

Variable name	Label
Gender	1 = male 2 = female
Age	1 = less than 18 2 = 18 - 25 3 = Over 25less than 18 4 = Missing field
Program	1 = Group 1 (Higher Diploma) 2 = Group 2 (Diploma)
Parent's financial support	1 = Yes 2 = No
Tuition paid	1 = Parent 2 = Financial Aid 3 = Scholarships 4 = Self
Faculty performance (Question 1-9)	1 = Strongly Disagree 2 = Disagree 3 = Neutral 4 = Agree 5 = Strongly Agree
Academic advising (Question 15-21)	
Classes (Question 22-31)	
College Experience (Question 36)	
Student satisfaction (Question 48)	1 = Very dissatisfied 2 = Satisfied 3 = Neutral 4 = Dissatisfied 5 = Strongly Agree
Intention to stay (Question 46)	1 = Absolutely Not Stay 2 = Not Stay 3 = Neutral 4 = Will Stay 5 = Absolutely Stay