

Post-choice satisfaction of international postgraduate students from Asia studying in Victorian Universities



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ABSTRACT

This research examines the relative customer satisfaction or dissatisfaction (CS/D) of international post-graduate students from Asia with the university as a study destination. The investigation is guided by the main research question: *Are there differences in the level of customer satisfaction and dissatisfaction between international postgraduate students from Asia studying in Victorian universities?* A conceptual model of post-choice satisfaction is developed and tested to support the analysis of four groups of students from China, India, Indonesia and Thailand studying in five universities in Victoria: Deakin University, La Trobe University, Swinburne University of Technology, The University of Melbourne and Victoria University of Technology.

The research comprised two interrelated studies: a qualitative investigation, and a quantitative study. The qualitative study included a literature review and an exploratory study, which consisted of focus groups and depth interviews, and the development of the preliminary model of post-choice satisfaction. The analysis of this stage resulted in the identification of 36 variables influencing post-choice satisfaction of students, which were operationalised in a survey questionnaire based on the seminal expectancy disconfirmation paradigm and the SERVQUAL instrument. A final model of post-choice satisfaction was developed following the preliminary analysis of the qualitative data, and tested at the quantitative stage of the study. During this stage, the total variables included in the model were reduced to 26 variables within four composite constructs that were used to measure CS/D supplemented by the testing of eleven hypotheses using multiple techniques.

The results showed that there were differences in the level of satisfaction between student groups and universities. In terms of the overall satisfaction, there were significant differences in the number of satisfied students, with students from India recording the lowest satisfaction levels followed by students from Thailand, Indonesia and China. The tests of significance indicated that *education standards and facilities (UNISAT1)*,

customer value and study outcomes (UNISAT3), and image, prestige and recognition (UNISAT4), were the most dominant factors in influencing post-choice satisfaction among student groups. Among the classificatory variables, age and semester were the most significant in explaining the variances in the satisfaction levels of students. High student expectations, the strength of student-lecturer relationship, the perceived role of lecturers, university bureaucracy, lack of student friendly policies, passive complaining behaviour and the lack of opportunities for industry experience were among the key findings of the study, which were directly related to the student satisfaction formation process.

The thesis makes a contribution to knowledge by developing a conceptual model of post-choice satisfaction, cross national comparison of post-choice decision making behaviour of international postgraduate students, the use of triangulation methodology to ensure rigour in research and particularly the use of ratio scores in addition to weighted average gap scores to measure satisfaction.

At a practical level, the major findings of this research provide greater insight into the post-choice decision-making process of postgraduate international students, which would enable Australian universities to devise appropriate strategies to enhance their attractiveness and competitiveness in a highly globalised industry. Several limitations of the research are identified and suggestions for future research including more longitudinal studies to improve the validity of the research and the findings are presented.

Table of Contents

Abstract	ii	
List of tables	xii	
List of figures	xiv	
List of abbreviations	xv	
Declaration of originality	xvi	
Publications associated with this thesis	xvii	
Acknowledgements	xviii	
Chapter 1	Introduction and Background	1
1.1.	Introduction	1
1.2.	Background	1
	1.2.1 Postgraduate students as customers	2
	1.2.2 Internationalisation of Higher Education	4
1.3	Research question	9
1.4	The rationale for the study	10
	1.4.1 Filling a gap in the knowledge	10
	1.4.2 Economic potential of the international education Market	11
	1.4.3 Implications for management policy and practice	13
1.5	The method	14
1.6	Thesis structure	15
1.7	Definitions	16
1.8	Delimitations of scope	18
1.9	Summary	18
Chapter 2	Literature Review	19
2.1	Introduction	19
2.2	International Education	20

2.2.1	Choice of study destinations	20
2.3	Customer satisfaction and dissatisfaction (CS/D)	25
2.3.1	Customer satisfaction and international education	27
2.4	Service quality	30
2.5	Customer value	33
2.6	Culture	39
2.7	Theory of cognitive dissonance	45
2.8	Summary	47
Chapter 3	Theoretical and Conceptual Framework	48
3.1	Introduction	48
3.2	Expectations	48
3.3	Perceptions	52
3.4	Consumer decisions making process	53
3.4.1	Pre-choice (pre-purchase) stage	53
3.4.2	Post-choice (post purchase)	57
3.5	Expectations and perception paradigm	59
3.6	SERVQUAL	62
3.7	Model of post choice satisfaction among international postgraduate students from Asia	66
3.8	Hypotheses	68
3.9	Summary	71
Chapter 4	Methods and Preliminary Analysis	72
4.1	Introduction	72
4.2	Ethical considerations	74
4.3	Research paradigm	75
4.4	Research design	76

Part A	78
4.5 Qualitative research methods and preliminary analysis	78
4.5.1 Exploratory research	78
4.5.2 Focus group discussions	79
4.5.2.1 Why focus groups?	79
4.5.2.2 Number and composition of groups	81
4.5.2.3 The approach	82
4.5.2.4 Focus groups findings	83
4.5.3 Depth interviews	85
4.5.3.1 The approach	86
4.5.3.2 Depth interview findings	87
4.6 Description of variables	88
4.6.1 Efficient enrolment processing system	90
4.6.2 Efficient system to assist student visas	90
4.6.3 Recognition of prior learning	91
4.6.4 Presence of students of own nationality	91
4.6.5 Opportunities for interaction with other student groups	92
4.6.6 High image and prestige as a university in Australia	92
4.6.7 High image and prestige as a university internationally	92
4.6.8 High image and prestige as a university in the home country	93
4.6.9 Academic courses and content appropriate to needs and aspirations	93
4.6.10 Appropriate academic courses and content recognised in home country	93
4.6.11 Course completion time appropriate to needs and aspirations	94
4.6.12 Academic courses and training relevant to future job and career prospects	94
4.6.13 Flexible time tables	94

4.6.14	Competitive fees compared to other universities	95
4.6.15	Fees that offer good value for money for services provided	95
4.6.16	High standard of teaching with quality lecturers	95
4.6.17	Good access to lecturers	96
4.6.18	Lecturers providing valuable feedback	96
4.6.19	Availability of high standard lecture material to students	96
4.6.20	Appropriate and manageable class sizes	96
4.6.21	Modern and adequate library facilities	97
4.6.22	Good operating hours for library access	97
4.6.23	Modern and adequate computer facilities	97
4.6.24	Good access to computer labs	98
4.6.25	Campus well located with easy access	98
4.6.26	Good standard of student accommodation	99
4.6.27	Student accommodation at reasonable cost	99
4.6.28	Provision of information and guidance by Overseas agents and consultants	99
4.6.29	Adequate information and guidance through Australian diplomatic and other official representatives (IDP)	100
4.6.30	Availability of adequate information via the Internet	100
4.6.31	Availability of adequate information on the Internet Compared to other Australian universities	101
4.6.32	Availability of international student orientation Programs as part of student support services	101
4.6.33	Availability of counseling services as part of student support services	102
4.6.34	Availability of other social services as part of student support	102
4.6.35	Encourage close working relationship between	

	students and international student advisers to ensure appropriate solutions to student problems	102
4.6.36	Availability of a process to deal with complaints about adequacy of services and facilities	103
4.7	Questionnaire design	103
4.8	Response format	106
4.9	Pre-testing of the questionnaire	108
4.10	Revision of the questionnaire	109
4.11	Reliability of the instrument	110
4.12	Sampling issues	110
	4.12.1 Sampling strategy	111
	4.12.2 Sample frame	111
	4.12.3 Sampling method	112
	4.12.4 Sampling size	112
4.13	Questionnaire administration	113
	Part B	115
4.14	Quantitative research methods and analysis	115
	4.14.1 Data analysis strategy	115
	4.14.2 Factor analysis	117
	4.14.3 Satisfaction scores	118
	4.14.4 ANOVA	120
	4.14.5 Regression analysis	121
	4.14.5.1. Logistic regression	122
	4.14.5.2 Linear regression	123
4.15	Summary	124
Chapter 5	Data Analysis and Results	127
5.1	Introduction	127
5.2	Sample characteristics	128

5.2.1	Response rates and transformation of data	128
5.2.2	Non-response issues	129
5.2.3	Sample profile analysis and cross tabulation of data	130
5.2.3.1	Gender	131
5.2.3.2	Age	132
5.2.3.3	Marital Status	133
5.2.3.4	Field of study	134
5.2.3.5	Degree program	135
5.2.3.6	Course level (Semesters completed)	136
5.2.3.7	Source of funding	138
5.3	Factor analysis	139
5.3.1	Description of factors	139
5.3.2	Criteria for determining the number of factors	142
5.3.3	Reliability analysis	143
5.4	Satisfaction scores	144
5.5	Hypotheses testing	144
5.5.1	First hypothesis	144
5.5.2	Second hypothesis	150
5.5.2.1	Variables related to UNISAT1	152
5.5.2.2	Variables related to UNISAT3	155
5.5.2.3	Variables related to UNISAT4	157
5.5.3	Third hypothesis	162
5.5.4	Fourth hypothesis	164
5.5.5	Hypothesis five to eleven	166
5.5.5.1	Age	169
5.5.5.2	Gender	170
5.5.5.3	Marital status	171
5.5.5.4	Field of study	171
5.5.5.5	Degree	172
5.5.5.6	Course level (Semesters completed)	173
5.5.5.7	Source of funding	174

5.6	Summary	175
Chapter 6	Summary and Conclusions	177
6.1	Introduction	177
6.2	Summary of stages of the research	177
6.3	Conclusions on the main research problem	180
6.3.1	Conclusions regarding hypotheses	181
6.3.1.1	First hypothesis	183
6.3.1.2	Second hypothesis	183
6.3.1.3	Third hypothesis	186
6.3.1.4	Fourth hypothesis	186
6.3.1.5	Hypotheses five to eleven	187
6.4	Implications for marketing theory and practice	189
6.4.1	Implications for theory	189
6.4.1.1	Filling gap of knowledge	190
6.4.1.2	Development of conceptual model of post-choice satisfaction	190
6.4.1.3	Cross national comparison of post-choice decisions making behaviour	191
6.4.1.4	Use of triangulation methodology	191
6.4.2	Implications for marketing practice	192
6.4.2.1	High expectations of international postgraduate students	192
6.4.2.2	Factors of importance in student satisfaction	193
6.4.2.3	Student-teacher relationship	193
6.4.2.4	Non academic support	194
6.4.2.5	Complaining behaviour and student feedback	195
6.4.2.6	Industry experience	196

6.5	Limitations of the study	196
	6.5.1 Timing of the measurement of expectations	197
	6.5.2 Use of cross sectional data	198
	6.5.3 Focus on four student groups and five universities	
	In Victoria	198
	6.5.4 Cultural impact on satisfaction	198
	6.5.5 Imbalance in the sample on discipline area of study	199
6.6	Implications for future research	199
6.7	Summary	202
References		204
Appendices		
Appendix 1	International comparison of student enrolments	227
Appendix 2	The use of comparison standards in consumer satisfaction	228
Appendix 3	Summary of studies covering factors influencing choice of destination	232
Appendix 4	Summary of studies covering factors influencing Post-choice behaviour of students	238
Appendix 5	Exploratory study: interview guide – May 2000	240
Appendix 6	Questionnaire	241
Appendix 7	Satisfaction scores	247

List of Tables

Chapter 1

Table 1.1	Asian students undertaking higher education in Australia	12
Table 1.2	Structure of the thesis	16

Chapter 2

Table 2.1	Overview of approaches to more environmental influences on international education	21
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Chapter 3

Table 3.1	Major applications of SERVQUAL	65
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Chapter 4

Table 4.1	Composition of focus groups	82
Table 4.2	Multiple statements related to student issues	84
Table 4.3	Composition and timing of depth interviews	86

Chapter 5

Table 5.1a	Distribution of respondents by country of origin	131
Table 5.1.b	Distribution of respondents by university	131
Table 5.2	Gender profile	132
Table 5.3	Age profile	133
Table 5.4	Marital status	133
Table 5.5	Major fields of study	134
Table 5.6	Degree program	135

Table 5.7	Course level (Semesters completed)	137
Table 5.8	Source of funding	138
Table 5.9	Factor 1 - Variables and Loadings (UNISAT1)	140
Table 5.10	Factor 2 - Variables and Loadings (UNISAT2)	140
Table 5.11	Factor 3 - Variables and Loadings (UNISAT3)	141
Table 5.12	Factor 4 - Variables and Loadings (UNISAT4)	141
Table 5.13	Eigenvalues, Variance of factors and reliability alpha	143
Table 5.14	UNISAT1 - Estimated marginal means	145
Table 5.15	UNISAT2 - Estimated marginal means	146
Table 5.16	UNISAT3 - Estimated marginal means	146
Table 5.17	UNISAT4 - Estimated marginal means	147
Table 5.18	Satisfaction by student groups	150
Table 5.19	Student comments - Teaching standards and staff	153
Table 5.20	Student comments - Computer and Library facilities	154
Table 5.21	Students' comments - Customer value and study outcomes	155
Table 5.22	Students' comments - Industry work experience	158
Table 5.23	Average means scores	162
Table 5.24	ANOVA test of the differences in satisfaction - Country	163
Table 5.25	ANOVA test of the differences in satisfaction – University	164
Table 5.26	Results of Logistic regression and General Linear Modelling tests	168

Chapter 6

Table 6.1	Summary of results of hypotheses testing	182
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List of Figures

Chapter 3

Figure 3.1	University selection process	55
Figure 3.2	Model of university choice by international students	56
Figure 3.3	Post choice decision making	58
Figure 3.4	Choice criteria versus satisfaction drivers	59
Figure 3.5	Preliminary model of post-choice satisfaction among international post graduate students from Asia	67

Chapter 4

Figure 4.1	Chapter outline	73
Figure 4.2	Diagrammatic presentation of data analysis procedure	117
Figure 4.3	Final model of post-choice satisfaction	126

Chapter 5

Figure 5.1	Outline of the chapter	127
Figure 5.2	Scree Plot of the results	142
Figure 5.3	Group-wise satisfaction means analysis – Country	164
Figure 5.4	Group-wise satisfaction means analysis – University	166
Figure 5.5	Group-wise satisfaction means analysis – Age	170
Figure 5.6	Group-wise satisfaction means analysis – Gender	170
Figure 5.7	Group-wise satisfaction means analysis – Marital status	171
Figure 5.8	Group-wise satisfaction means analysis - Field of study	172
Figure 5.9	Group-wise satisfaction means analysis - Type of degree	173
Figure 5.10	Group-wise satisfaction means analysis - Semester	174
Figure 5.11	Group-wise satisfaction means analysis – Source of funding	175

List of abbreviations

AEI	Australian Education International
ANOVA	Analysis of variance
CS/D	Customer Satisfaction and Dissatisfaction
DETYA	Department of Employment, Education, Training and Youth Affairs
EBM Model	The Consumer behaviour model developed by Engel, Blackwell and Miniard
ELICOS	English Language Instruction Courses for Overseas Students
IDP	EDP Education Australia Pty Ltd
SERVQUAL	An instrument developed by Parasuraman et al (1988) to measure service quality
UNESCO	United Nations Educational Scientific and Cultural Organisation
UNISAT	University Satisfaction. Used to identify four composite constructs resulting from factor analysis.

Declaration of originality

The work presented in this thesis is original and it contains no material previously written or published, except where due credits are given. To the best of my knowledge, none of the material has been submitted for a degree at any other university.

Rodney Arambewela

Publications associated with this thesis

Arambewela, R., and Hall, J., 2001. Post-choice satisfaction of postgraduate students from Asia., Refereed Paper, Conference proceedings, **ANZMAC, Auckland**, 1-5 December.

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international students were enrolled in Australian educational institutions, 7.3% higher than 1998 (AEI, 2000). The above comparative analysis is further detailed in Appendix 1.

Australia, at present, has approximately a 5% share of the global market for international students in higher education and, it is estimated that by 2010 Australia will increase its share of this market to 7.5%. Based on these trends, the total number of students is expected to increase from 89,000 in the year 2000 to 206,000 in 2010, in terms of university admissions (Blight, 1995). In 2000, the higher education enrolments increased by 19% to 107,622 with strong growth registered from major source countries such as China - increased by 69% to 14,948, Thailand - increased by 22% to 8,179, South Korea - increased by 19% to 11,485, Malaysia - increased by 18% to 19,602, India – increased by 10% to 10,572 (Kemp 2001). During the year 2000, even though student enrolments from Indonesia decreased by nearly 7%, largely attributable to the economic crisis in the country, it still represented one of the major sources of international students to Australia. All countries of origin included in this study featured within the top 10 sources of international students to Australia.

Despite the continual growth in overall student enrolment numbers in Australian tertiary institutions as outlined above, the rate of growth over the past three decades suggests a decline in worldwide markets for international students (Kemp, 1990). This trend is associated with the saturation of some markets (Mazzarol and Hosie, 1996). Moreover, global competition and changing demands in the higher education market, particularly as a result of changing student expectations, has also presented Australia with many challenges. With reductions in government funding for higher education, Australian universities became aware of the need to gain a reasonable market share to ensure a steady flow of funds from international student sources (Mazzarol and Hosie, 1996). To increase market share, service quality has become a major strategic variable for universities as service providers (Donaldson and Runciman, 1995). Addressing relevant service quality elements attractive to international students enables universities to improve student satisfaction, a key factor contributing to benefits such as student retention, positive word of mouth communication, and competitive advantage (Townley, 2001; McDougall and Levesque, 2000; Guolla, 1999).

1.3. Research question

The central research question investigated in this thesis is:

"Are there differences in the level of customer satisfaction and dissatisfaction (CS/D) between international postgraduate students from Asia studying in Australian universities?"

The student groups selected for the study are postgraduate students from China, India, Indonesia and Thailand. These countries are ranked highly among the potential sources of international postgraduate students to Australia. The study focuses on five universities in Victoria: Deakin University, La Trobe University, Swinburne University of Technology, The University of Melbourne and Victoria University of Technology. According to AEI (2000), postgraduate students represent 25% of all international students studying in higher education institutions in Australia and nearly a third of them study in universities in Victoria.

The changing demands and expectations of students (Coaldrake, 2001) and the university's response to such changes lead to variances in student satisfaction between Australian universities. It is imperative for universities to understand the reasons and the differing levels of satisfaction among students and, therefore to address their concerns more appropriately. The competitive nature of the industry and the importance of customer satisfaction to the success of the higher education industry in Australia therefore make this research question highly relevant.

This research will be guided by the following supplementary questions:

- (i) *What are the major factors responsible for creating customer satisfaction and dissatisfaction among target student groups?*
- (ii) *Are there national differences in the rating of these factors?*
- (iii) *Are there any differences in the levels of CS/D between the student groups?*
- (iv) *What should be the strategic marketing response of universities to minimise the dissatisfaction levels of students?*

The major research objectives that will be pursued in this thesis are as follows.

1. Determine the key factors relating to choice of study destination by the target groups of international postgraduate students, which directly impact on CS/D.
2. Establish the levels of CS/D of the target groups of international postgraduate students and the differences, if any, between them.
3. Develop a model to explain the process of CS/D in relation to the Australian higher education market for international students based on the consumer behaviour model of Engel, Blackwell and Miniard (1986), and extend the choice model developed by Lawley (1993 and 1998) and Lawley and Blight (1997).
4. Present the implications of the findings of this study with respect to the international marketing of Australian higher education.

Several hypotheses are developed to address the above objectives and provide answers to the research questions. These are discussed in chapter 4.

1.4. The rationale for the study

This section will discuss the rationale for the proposed study under the following headings:

- filling a gap in the knowledge;
- economic potential of the international education market; and
- implications for management policy and practice

1.4.1. Filling a gap in the knowledge

Whilst there is a body of knowledge relating to how and why international students study abroad and choose particular countries and institutions as study destinations, research on the post-choice behaviour of students and, particularly in relation to regard to their satisfaction with study destinations is limited. The available studies are largely focussed on either one institution or undergraduate students and broader issues

related to service quality elements (Le Blanc *et al*, 1997; Pariseau *et al*, 1997; Tomovick *et al*, 1996), student experiences such as cost of living (Smith *et al*, 2002), education support and delivery (Smith *et al*, 2002) facilities and services (Geall, 2000), intellectual climate (DETYA, 2000), teaching staff and methods (Geall, 2000), and academic quality (Smith *et al*, 2002; Townley, 2001; Burke, 1986). More importantly, no studies have been undertaken on CS/D relating to the choice of a university as a study destination involving the post-graduate student groups selected for this study. The present study, therefore, will make a contribution by filling a void in the academic research in this area.

The development of a conceptual model to explain the satisfaction formation process applicable to the target student groups will be central to this study. It will form the basis of a comparative analysis of satisfaction levels of these students. Student satisfaction leads to positive word-of-mouth (WOM) communications, student retention and few complaints, which would help universities to enhance their attractiveness to potential students and to maintain a competitive edge in the international market place (Harvis *et al*, 2000; Yau, 1994; Halstead *et al*, 1994). The study, therefore, makes a substantial contribution to the knowledge of post-choice consumer decision-making process and its implications for the higher education industry.

1.4.2. Economic potential of the international education market

The export of education is an important source of foreign income earnings for Australia. During 1998 and 1999, the total estimated export revenue from international education services was \$3 billion (IDP, 1999). Export revenue is determined on the basis of the total expenditure of international students on all services. According to AEI, 2000, the presence of international students in Australia generated an income of approximately \$3.7 billion to the Australian economy in 2000. A revised estimate for 2001 indicates that the contribution to the Australian economy has been over \$4 billion (Nelson, 2002).

The economic importance of international students can be demonstrated not only by the continuous increase in the number of international students seeking education in

Australia but also by the cultural diversity of the students. It is notable that between 1999 and 2000 the number of international students in the Australian higher education sector increased by 19.1% from 90,395 to 107,622 of which 57.2% of international students study in Australian universities (AEI, 2000). Another significant dimension is that 75% of all international students studying in Australia are from Asia (AEI, 2000). As Table 1.1 below shows, post-graduate students account for 25% of all international students in higher education and it is estimated that around 30% of them are studying at Victorian universities (AEI, 2000). The student groups from China, India, Indonesia and Thailand selected for this study represent 61% of all Asian postgraduate students studying in Australia and have shown a potential for further growth (AEI, 2000).

Table 1.1: Asian students in higher education in Australia

Country	Doctorates	Masters	Other	Total PG	Bachelor	Other Courses	Total UG	Grand Total *
China*	703	4576	519	5798	11124	148	11272	17070
India	140	1498	326	1964	985	108	1093	3057
Indonesia	452	1881	319	2652	5458	75	5533	8185
Thailand	335	1142	253	1730	837	17	884	2584
Total	1630	9097	1417	12144	18404	348	18752	30896
Singapore	224	1864	344	2432	14140	81	14221	16653
Malaysia	145	1220	177	1542	12291	99	12390	13932
Sri Lanka	50	105	29	184	596	13	609	793
Pakistan	39	252	85	376	234	18	252	628
Other Asia	556	2156	635	3347	6387	203	6608	9937
Total Asia	2644	14694	2687	20025	52052	762	52814	72839

*China includes students from Hong Kong; (PG) Postgraduate and (UG) Undergraduates

Source: Australian Education International, 2000 p 46-47.

As discussed in section 1.2.2, Australia remains a popular study destination for Asian students and the data suggests that the market is expanding. However, given the level of competition both within and outside Australia, the attractiveness and competitiveness of Australian universities as study destinations need to be sustained to ensure future success of the industry. Australia faces competition from other countries such as USA, UK, and Canada, and it is imperative, therefore, for Australian universities to remain competitive as attractive study destinations for international students. Apart from international competition, Australian universities compete with each other for a greater share of the overseas student enrolments primarily driven by

the need to supplement their operating revenue in light of the reduction in government subsidies and grants.

1.4.3. Implications for management policy and practice

This study is significant in view of the potential benefits and outcomes for policy and practice in the Australian higher education industry that will emanate as a result of the study.

As mentioned earlier, Australia is increasingly becoming a popular study destination for international students, particularly from the Asian region. By meeting international students' expectations of service quality, Australian universities play a crucial role in building and sustaining Australia's international image as a quality study destination.

Customer satisfaction is the key to any service industry. The knowledge of the processes of CS/D during the post-purchase (post-choice) period is important to many of the stakeholders involved in international education. Educators, policy makers and educational marketing practitioners will benefit from greater insight and information to develop policies, practices and programs that enhance the attractiveness of the respective educational institutions as study destinations. Educators will benefit by a greater understanding of student perceptions on the quality and delivery of educational services, thereby providing opportunities for better outcomes beyond the traditional boundaries of teaching methodologies, curriculum design and assessment criteria. Policy makers will benefit from an understanding of student motivations and aspirations to develop more *student friendly* policies and similarly marketing practitioners will be able to develop programs more responsive to the cultural diversity of the student population.

The implications of the findings of this thesis for marketing practice are discussed in section 6.4.2.

1.5. The method

The study was undertaken in two stages: preliminary study and the main study. The preliminary study comprised exploratory research, which included a review of the literature, focus groups and depth interviews, followed by identification of the explanatory variables, the conceptual framework of the study and the development of the research hypothesis. The main study was focussed on data gathering and analysis. This stage consists of the development and administration of the questionnaire, sampling and data analysis strategies. The ethical considerations were fundamental at each stage of the study.

The study uses a triangulation technique with different research approaches, methods and techniques aimed at overcoming any potential bias and weakness of using a single method approach (Hussey and Hussey, 1997). According to Jick (1979), the triangulation technique has vital strengths, encourages productive research, enhances qualitative methods and allows the complementary use of quantitative methods.

The expectations/perceptions paradigm is used to measure the relative post-choice satisfaction of international students from China, India, Indonesia and Thailand based on an adapted version of the SERVQUAL instrument (Parasuraman *et al*, 1994, 1991, 1988 and 1985). This paradigm postulates that customer satisfaction is related to the size and direction of disconfirmation, which is defined as the difference between an individual's pre-purchase (pre-choice) expectations (or some other comparative standard) and post-purchase (post choice) performance of the product or service as perceived by the customer (Oliver 1980; Anderson, 1973).

The questionnaire design applies the theoretical structure of the SERVQUAL instrument to international education. SERVQUAL is an instrument for assessing customer perceptions of service quality in service and retailing organisations (Parasuraman *et al*, 1988). The construct of *service quality* is defined in terms of *perceived quality* - a customers' judgement about an entity's overall excellence or superiority. "It is a sort of attitude and comes from a comparison of expectations and perceived performance" (Llosa *et al*, 1998, p.17). The questionnaire design is discussed in section 4.4.

Two different approaches are used for the data analysis of this study. First, multivariate analysis of variance is used as a statistical tool to analyse the students' expectations and perceptions regarding four factors relating to a university as a study destination (*education standards and facilities, information support and guidance, customer value and study outcomes, prestige and recognition*).

The second approach is the use of logistic regression analysis to determine the probability of the impact of each independent variable on *satisfaction*, which is the dependent variable. This analysis is considered appropriate for this study because it offers an accurate measurement of the dependent variable, which is non-metric in this case. This approach is to supplement the first approach with a more robust measurement.

1.6. Thesis structure

The thesis consists of six chapters. An outline of the thesis structure is given in table 1.2.

The present chapter introduces the research topic and discusses the background and rationale for the research. **Chapter 2** reviews the existing literature on subject areas relevant to the study. This review will form the foundation for the development of the theoretical framework and the hypotheses used in the study. The review is aimed at investigating the development of international education, highlighting any research themes and different dimensions related to customer satisfaction including the debate on expectations, disconfirmation and performance as a measurement process of CS/D. Furthermore, the relationship between customer satisfaction and international education, customer value, culture, and the theory of cognitive dissonance is examined, followed by a summary of the chapter.

The purpose of **Chapter 3** is to present a theoretical and conceptual framework and a model of post choice satisfaction, which underpins this study. The development of the framework and the model is based on the findings of the literature reviewed in the preceding chapter.

Table 1.2: Structure of the thesis

Chapter	Title	Major Contents
1	Introduction and Background	- Introduces the research background - Presents the research problem, and questions - Justification of research.
2	Literature review	- Review of literature and empirical findings related to the study
3	Theoretical and conceptual framework	- Conceptual framework underpinning the study - Discussion of research hypothesis - Presentation of model of post-choice satisfaction
4	Method	- Presents research and questionnaire design, data analysis procedures
5	Data Analysis and Results	- Discussion of hypothesis testing and results
6	Conclusions and Implications	- Summarises study findings - Discusses implications of the results - Presents recommendations

Chapter 4 discusses how the research was designed and the stages of the research process, including the exploratory research, development of the survey instrument and its purpose, pilot testing of the questionnaire, sampling strategy, data collection strategy, administration of the questionnaire through universities, ethical considerations and the preliminary model of post-choice CS/D. **Chapter 5** is devoted to the data analysis and presentation of results including, response rates, descriptive statistics and other multivariate analysis of data. **Chapter 6** summarises the results and discusses the implications and provides recommendations.

1.7. Definitions

It is acknowledged that certain words and terms are interpreted differently depending on the discipline and the context in which they are used. On many occasions, acronyms and abbreviations are also used to facilitate the flow of expression. Outlined below are the definitions of the terms used in this thesis to provide clarity of meaning

in their application. A list of abbreviations and related explanations appears on page XV of the thesis

International postgraduate student: An overseas student undertaking a postgraduate course in a higher education institution in Australia either as a full fee-paying student or as a scholarship holder. For the purpose of this study all international students who undertake a full time postgraduate degree either by course work or research are included as part of the universe.

Source country: The home country of a postgraduate student or the country of origin of the student, which is considered as the country of permanent residence.

Study destination: An institution where the student undertakes studies. For the purpose of this study, all universities in Victoria are considered *study destinations* given its focus on student satisfaction in respective universities.

Pre-choice decision-making process: The decision-making process prior to making a selection of a study destination. Some texts and studies identify this as the *pre-purchase* stage of the consumer decision-making process. In this study however, the pre-choice process is examined to identify the key factors influencing post-choice satisfaction.

Post-choice decision-making process: The decision making process after making a selection of a study destination, which is also identified as the *post-purchase* phase of the consumer decision making process.

Cross-cultural analysis: The systematic comparison of similarities and differences in the material and behavioural aspects of cultures (Engel, Blackwell and Miniard, 1982). The main theme of this research is analysing the differences in expectations and perceptions and the resulting satisfaction levels of four student groups from Asia. Differences and similarities that exist in cultures that represent these student groups have an impact on their decision-making behaviour.

1.8. Delimitations of scope

Several limitations have been placed on this study. Firstly, the focus of this thesis is the post-graduate university sector, which is a sub sector of the higher education sector in an industry that covers university education, ELICOS, Vocational and School sectors. Nearly 54% or 84,304 international students are enrolled in the higher education sector out of a total of 157,534 international students studying in Australia (AEI 1999). Post-graduates represent 29% of all students enrolled in higher education and represent a niche market that has shown rapid growth.

Secondly, this study focuses on four of the source countries – China, India, Indonesia, and Thailand. Most of the growth in the Australian university post-graduate enrolment has been from these countries.

Thirdly, this study concentrates on students studying only in Victorian universities as onshore students and thus offshore and distance education students are not included. Onshore programs have attracted the largest number of students to Australia and continue to be the growth area, compared with offshore and distant education programs. Victorian universities are study destinations for nearly 32% of overseas post-graduate students in Australia (AEI, 2000).

1.9. Summary

This chapter presented the background to the study outlining the research problem, research questions and the purpose of the study. The research was justified on the basis of its contribution to knowledge and its implications. The outline of the thesis was presented and the broad limitations explained. The following chapters will present the research, its findings and implications.

The next chapter will undertake a review of the literature.