How Singaporean Students Decide to Study in Australia: towards building a model of their decision-making

TERRY GATFIELD & STEPHEN LARMAR

Griffith University, Brisbane, Australia

ABSTRACT Higher education ranks as Australia’s sixth largest export sector, making a financial contribution of over $9 billion to the economy in 2004-2005. Surveys of potential students and projections by IDP-Education Australia on marketing higher education in 2025 are that the overseas student intake will rise by 14% to 850,000, earning in export trade around $A56 billion annually. Australia currently has 10 per cent of the global market share for international students, being the second largest supplier after the USA. With additional places required, particularly from the Asian nations, primary beneficiaries will be Australia’s universities. Due to the size and growth potential of the industry, this article is designed to better understand the process of decision-making by international students in the Asian region, with a specific focus on Singapore. By examination of relevant theories, the literature and an analysis of the decision-making processes identified for students from Singapore, a model of decision-making is constructed to attempt to explain the behaviour of this student population.

Introduction

Higher education has been a major industry in Australia, with an earning capacity in excess of $9 billion in 2004-2005 (ABS, 2007), $4.2 billion in 2002 and projected growth to $38 billion (using current values) within two decades. The international education sector is now the third highest export earner in terms of value (ABS, 2007). Also, businesses, industries and political relationships between Australia and Asian countries have increasingly benefited (Buckell, 2003) through trade in international student higher education for almost two decades. Australia sits in second position behind the USA as a major higher education provider in the southern hemisphere (Bohm et al, 2002).

Australia has a healthy higher education industry and the literature suggests it is favoured by proximity to Asia, low costs, non-racism, quality of education and similar lifestyle (Ryland & King, 1992; Smart & Ang, 1992; Buckell, 2003). Research by IDP-Education Australia aimed at a comparison of Australia with other favoured providers – the USA, Canada and New Zealand – found that it was quality, employment prospects, price, safety and lifestyle that were the key determinants of choice by potential Asian students (Buckell, 2003). These were affirmed in the literature, but it is the process of decision-making, and the design of a suitable model to allow an explanation of the process in which these variables fit, that is the primary ambition of this article. The article concludes with a constructed model. The model is founded on the reciprocal determinist theory of Bandura (1986) in which personal and environmental factors exist in a dynamic relationship with individual behaviour. While personal and environmental factors are one focus of this article, it is the dynamic variables of behaviour that are addressed in the next section whose focus is, first, finding an appropriate underpinning theory, and then reviewing a number of models with the objective of developing a comprehensive guiding model.
The comprehensive model has been crafted through the examination of Singaporean international students who were intending to study in Australian undergraduate and postgraduate programs. Qualitative data were collected from 35 students from the International Development Program Office in Singapore which is run by the Australian Federal Government in concert with the publicly funded Australian Universities. From the qualitative information, related to decision-making factors and processes, a questionnaire was developed to quantify and examine more directive data. A total of 45 students were surveyed with the instrument. However, due to the small sample, no statistical relationships were examined, only inferences made towards building a comprehensive model.

The rationale for choosing Singaporean students is that they form a large client cohort for Australian students. In addition, there are virtually no language barriers and their education system, like Australia, has been based on the English system. This provides an opportunity for obtaining reasonably valid data for model building. However, the Singaporean students also provide a unique insight into student decision-making with a culture that is essentially Chinese which is collectivist in nature and one dominated by Confucian thought, principles and practices (Slote, 1989; Biggs, 1990).

Background

In conceptualising decision-making, behavioural science is chosen as the appropriate field because its theories underpin the social sciences in which decision-making is located. In this field there is a wide-ranging diversity of theoretical concepts and research themes relevant to decision making, presented in Figure 1.

![Figure 1. A framework of themes representing the psychology of decision-making.](image)

Differences among theory options appear to be extreme. These opposites can be seen in bounded rationality (Simon, 1983) versus optimised decision-making (Affisco & Chanin, 1990), and logical rationalism versus a reasoned approach (Ajzen & Fishbein, 1980). They reinforce the classic divides among decision theorists between the more modern psychological understanding of ‘technologies’ of reason, ‘engineering’ of choice (Crandall, 1994), tracing and understanding decisions through a multidimensional model (Blustein et al, 1994) and between both normative and phenomenological behaviour. Thus approaches appear to fit between extremes of phenomenological understanding –
or human reasonableness, logic (Simon, 1983; March in Bell et al, 1988), orderliness (Tversky, 1972) and trustworthiness – and ‘engineered’ choice (shown in Appendix A).

While classification of theories varies largely between the broad extremes of rationality and irrationality (Slote, 1989), the differences are directed mainly by philosophical, ideological or theoretical emphasis. On a continuum, the decision maximisation–optimisation approach seeks, at one end, the greatest degree of good and is favoured by decision theorists, philosophers and economists supporting maximised rational choice and action. At the other extreme, ‘satisficing’, or satisfaction theory of social and human scientists, applies to ‘common sense’, or intuitive rationality (Tversky, 1972; Coscarelli, 1983; Simon, 1983). Slote (1989) applies this to western inheritors of the Epicurean, Aristotelian and Christian views of moderation; to the eastern inheritors of the Confucian culture, his view is of moderation or subjugation and these attitudes, in applying to social behaviour, are also considered by Biggs (1990) and Slote (1989) to apply to maximising opportunities in education (Slote, 1989; Biggs, 1990).

A Comparison of Eastern and Western Approaches to Decision-Making
The dialectic of Slote (1989) is that westerners emphasise moderation so that the educational choice decisions by students are more likely to be satisfactory-to-good, even when better or best is available. When this is applied to ‘aspirations’ and ‘contentment’ regarding future career choices, decisions reflect a ‘good enough’ attitude rather than seeking a ‘best’ or ‘ideal’ (Resnik, 1987) choice. By comparison, eastern cultures are described as seeking to maximise educational decisions to achieve the greatest good, a philosophy sourced in the time of Confucius (551 BC) and lasting around 2000 years (Buchanan, 1980).

Confucianism led people to believe that academic achievement was the only ground upon which the lower classes could rise above their station while raising the social status of the extended family and of their ancestors (Ching, 1988). It espouses that education is related to the capacity to earn, to advance in society and to be successful (Creel, 1972) and continues today to be a potent motivator within Asian cultures (Chua, 1992; Redding, 1993). Applying human behaviour theory, Confucian followers could be seen to maximise educational opportunities, realised through normative idealisations in decision-making (Resnik, 1987) and undertaken through group action with various underlying power structures rather than through an individual action (Ching, 1988).

To conclude, decision-making is a dynamic process where multiple interactions occur simultaneously and where, in a western culture, the decision maker may opt to maximize their decision potential, but in fact settle for a ‘satisficing’ outcome. Where a not satisficing outcome is sought, heuristics may be used to achieve a moderately rational decision within a reasonably short time period. Where eastern Confucian culture decision makers are involved, the likelihood is that they will strive for maximised outcomes using a normative approach. In the following sections, the work of the theorists who shaped the understanding of contemporary decision-making models is considered.

Early Influencers of Behavioural Understanding of Individuals and their Motivations
The tripartite elements of Bandura’s (1986) model that are fundamental to the building of the decision-making model are: personal; behavioural; and environmental. The first element, or personal factor, is fundamental in consumer buying behaviour and decision-making processes. Thus, in examining the work of early theorists the foundations upon which three contemporary models have been built are analysed.

Adopting a psychoanalytic and socio-psychological approach, individuals make choices according to their needs, wants and desires and outcomes and these may at times be identical, although not consistently so. This apparent inconsistency is explained in consumer behaviour theory as being due to motivations not only of the conscious but also of the subconscious that may overrule conscious thought. This is based on Freud (1856-1939) in his psychoanalytic theory in which the subconscious assists in making instinctive responses and spontaneous decisions that may not be maximised due to physical, emotional or situation-driven impulses aroused in the subconscious mind.
How Singaporean Students Decide to Study in Australia

A post-1950s area of inquiry in behavioural science in motivation research (Engel et al, 1990) suggests that ‘Motives, needs, wants and drives ... merge into “motive” directed towards goals usually located in the external environment’ (Loudon & Bitta, 1988, p. 368). However, these internal motivations, alone, do not explain the behaviour of consumers. The environmental influence of learning experienced in the social and cultural environments was missing. Thus, while Freud’s focus was on instinctual behaviour, the mind entities of id, ego and superego, and conscious versus unconscious, the work of Adler (1870-1937) emphasises learning, the environment and ego defences.

Adler shifted the emphasis on behaviour motivations to the social world and the goals of individuals (Carver & Scheier, 1996). Socially responsive behaviour is not considered to be the result of conscious and unconscious motivations and responses are learned in the external social and cultural environments. A stronger emphasis was given by the neo-Freudians, particularly Horney (1885-1952) and Fromm (1900-1980), who recognised that continuous socio-cultural influences were more important than biological instincts (Engel et al, 1990).

From Horney’s perspective, forces operating on the individual are instrumental in determining behaviour, as he attributes human behaviour primarily to interpersonal orientations (Aiken, 1996). Applied in marketing research, the measurement of consumers’ interpersonal orientations demonstrates widely differing personality types, different decision processes and strong links between personality and social influences (Engel et al, 1990).

What Fromm saw as important ‘orientations’ help in understanding why people make the decisions they do. He believed that choices depended on the social environment, acceptance by others and the usefulness of achievement as perceived by the individual (Feshbach & Weimer, 1991). The concept of belonging (Feshbach & Weimer, 1991) within the Chinese communal culture is also interwoven with the individual need for academic effort and achievement, or being productive in society (Redding, 1993).

The work of consumer behaviourists allows the concept of the ‘consumer’ to be understood in terms of motivations, social-environment influences, interpersonal activity and socially learned responses that influence decision-making abilities. Consumers are seen as being influenced by unconscious motivations as well as life experiences, where groups of people with similar upbringing and social experiences make parallel responses to stimuli. Consumers are often characterised by similarities in personality type, interpersonal interactions and environmental responses and it can be observed that they apply similar decision-making processes (Kotler et al, 1998). Behaviourists recognise a connection between learned behaviour and consumer behaviour within specific environments and situations.

The motivation and lifestyle theories of Freud, Horney, Fromm and Erikson often overlooked the overt behavioural and situational conditions associated with the decisions and actions people take (Carver & Scheier, 1996). To redress this, behaviour theorists focused on what people do and how learning takes place, showing how context and learned behaviour affects decision-making (Carver & Scheier, 1996).

This notion is supported by learning theorists, such as Watson (1878-1958) and Skinner (1904-1990), who viewed personality as being expressed through habitual responses to specific and generalised cues (Phares & Chaplin, 1997). Complex behaviour patterns, attitudes and personal responses are learned from stimulus–response situations and personality is created and changed by positive or negative reinforcement (Loudon & Bitta, 1988). Responses result not from free-will choices, mind divisions or traits but from events in the environment that are central to understanding and controlling human behaviour (Feshbach & Weimer, 1991; Phares & Chaplin, 1997). Recent developments among behaviour theorists, however, show adoption of a more cognitive emphasis that includes insight and understanding (Phares & Chaplin, 1997).

To conclude, behaviourism, together with personality theory, environment and life study theory, provides a more complete, yet more complex, understanding of consumer decision-making. Further understanding of human behaviour is now directed to analysis of three significant western models of applied marketing. This analysis is described by Loudon & Bitta (1988) as a ‘black-box’ approach involving mental and physical activities that emerge over time, as well as non-observable cognitive activity and overt actions, and is represented in Figure 2.
In this model, intervening variables are obscured and, therefore, observation of the stimulus inputs to the ‘box’ and visible response outputs from it allow inference to be made about the nature and type of the intervening variables involved. These may be the subjectivity of an individual, or the motives, attitudes and preferences that vary between people (Loudon & Bitta, 1988). They may take the form of stimuli from the external environment, or they could refer to psychological components of attitude formation, information processing, subjective knowledge to values and beliefs.

First Model of Consumer Behaviour by Engel et al, 1990

This model is used in the study of consumer behaviour and has an extensive structure that incorporates the generic processes of cognition, behaviour, environment and relationships found in the three models examined here. It is non-linear and illustrates greater possibilities for creative or functional processing in the individual and more acknowledgement of reciprocal determinism. Activation is through ‘environment influences’ and has the possibility of external searching and marketplace inputs while the individual’s memory trawls through learned experiences. This model is represented in Figure 3.

The process can begin with a stimulus, either from the social ‘environment’ or within the ‘individual’, triggering an action of ‘need recognition’, or from information stored in memory activated by a self-concept motivator. The influence of bundles of environmental influences is strong in Singapore and represents culture, subculture, social class, social group and family – influences that are transferred through the intergenerational transmission of core values, particularly through Confucianism. How the transference of cultural values and norms occurs through social institutions is represented by Engel et al, 1990, in Figure 4.
Values and norms shape and are shaped by society. These filter down to individuals through life experiences and through the social institutions whose values and norms act on individuals. Social interactions among networks of family members and peers spread mainly Confucianist core values.
that complement institutional learning. Thus, throughout the decision process these value systems affect the way decisions are made.

A low-involvement decision may simply depend on whether enough there is sufficient information about available options for an immediate decision. However, in the selection of a university degree where the individual needs to be well informed, the time and effort involvement will be high and the external search extensive. Further, where the risks are perceived to be high, processing may continue through the stimulation of a constant flow of detailed information.

The second part of the model, ‘information processing’, is either a peripheral or a central response stimulated by some form of sensory stimulus. It encompasses five basic stages and commences with attention being drawn to – in this case a service – assessment and information gathering. Where from experience a student from Singapore knows the process of applying for an Australian university place, the retrieval of information stored in memory could be swift. Alternatively the high-involvement search stage may be long and protracted. At the acceptance stage the experience would be placed in long-term memory for future reference. The high-involvement central route gives weight and credibility to the ‘maximised’ decision, although the peripheral route of low involvement requiring low levels of information results in a ‘satisficed’ outcome.

The third stage of ‘alternative evaluations’ involves the intentions, beliefs and attitudes of individuals as they set standards and specifications for comparison of products. Degree selection would require extensive problem-solving and a high degree of rationality and rigour to fit criteria to purchase motives. Thus, alternatives are compared and options weighed to achieve a good outcome and, if expectations are met and if the judgement is satisfactory, cognitive dissonance will not occur.

While the model is more complex than this overview allows, it opens a limited understanding of the decision processing undertaken by Singaporean students in arriving at an acceptable decision outcome. The second model offers a different interpretation of the decision-making process and is examined below.

**The Second Model of Decision-Making Designed by Peter & Olson, 1987**

This model organises the process of decision-making into combinations of consumer involvement, product knowledge that is either low or high and the processes and motivations that occur during decision processing. As the levels of involvement and product knowledge alter, so the decision outcomes vary as represented in Figure 5.

This model lacks a means of illustrating the diversity of functions and the cognitive and physical capabilities that characterise the first model. The model is a linear construct that focuses on five stages of decision-making and the different levels of involvement and knowledge required. To this, theory is added involving the role of memory and of external environmental influences in decision-making. However, the compact, sequential design is also restrictive and places limits on decision-making behaviour. Also, motivations, goals and actions restrict the display of more complex interactive behaviour and do not include the range of environmental influences and individual differences included in the other two models examined here.

It is the premise of Peter & Olson (1987, pp. 18-21) that there are relationships among behaviours or actions; between rational, emotional or subconscious cognitive processes; and between physical and social stimuli. Second, there are pathways for multiple problems that achieve manifold decisions. Third, cognition is derived from the integration of memory, environmental information and attitudes. The model is confined to illustrating the decision process of choices, evaluation of alternatives and resolving each sub-goal in the ‘goal hierarchy’, despite these elements being interrelated sub-problems with sub-goal sets that add density and complexity to the decision process.
Figure 5. A model of the levels of consumer involvement in the selection of products (Peter & Olson, 1987).

'Problem Representation' subsumes psychological states, processes and actions that encompass motivations, end goals, product knowledge activated from memory and the immediate environment, and generalised rules affecting decision heuristics. It embraces the 'end goal', around which sub-goals are established, and overall objectives, needs or values that may be tangible, as in product ownership, or intangible, as in psychosocial motives of happiness or self-esteem. Positive outcomes of 'end goals' may optimise satisfaction or resolve conflict, while negative outcomes may result in no decision being made to avoid adverse consequences.

The stage of 'choice criteria' involves criteria of knowledge, meanings and beliefs. When activating highly repetitive decisions, the choice criteria are referred to long-term memory although it is the means–end linkage between knowledge and the currently active goal that determines the relevance of information to the current choice. This linkage allows decision-makers to arrive at new knowledge, meanings and beliefs. However, as consumers rarely evaluate all possibilities of the 'choice criteria', they often settle for a subset of possible alternatives.

Simple heuristics assist in the 'evaluation' process, as consumers rarely have one strategy for choosing among alternatives, evaluating criteria or storing rules in memory. Heuristics are frequently used automatically as a simplified problem-solving process due to limited scope for cognitive capacity, information or adaptability. 'Search heuristics' apply when searching for information about a predetermined goal, 'evaluation heuristics' in presenting beliefs about current
goals, and ‘choice heuristics’ in comparing alternative actions. This sequence transforms consumer intentions into a plan and then a possible purchase decision.

Theoretically, social and physical stimuli activate reciprocal interaction that is constantly changing, and being changed between ‘cognition’, ‘behaviour’ and ‘environment’. Effort applied may be habitual, extensive or limited, each differing in the level of cognitive processing and search and evaluation effort. Motivations may be ‘effortful’, identifying choice alternatives and the appropriate evaluation criteria, or limited, relying on automatically activating memory depending on the need, the social and personal relevance, and the risk.

Peter & Olson’s (1987) significant contribution is their use of involvement, knowledge and the use of heuristics in decision-making. In applying their understanding to the Singaporean context, many decision makers will hold a strong position on ‘high involvement, high knowledge’ and require little research involvement. Others with less stored knowledge will position as ‘high involvement, low knowledge’ and require an extensive problem-solving period.

Those with ‘high involvement, low knowledge’ will typically search websites, attend trade shows, contact educational agents and the Australian International Education, as well as opinion leaders in their social network to reduce risk and increase self importance. Those with ‘high involvement, high knowledge’ may rely on previous experience, learning and knowledge of price and service, which will also bring awareness of the social visibility and the need for risk reduction related to performance and academic acquittal for self and family.

The Third Model of Decision-Making by Loudon & Bitta, 1988

The third model of decision-making examined is undergirded by the premise that characteristics of the individual interact with physical activity (London & Bitta, 1988). These involve attitudes, beliefs and perceptions as well as habits and typical behaviour patterns, as reflected in Figure 6.

![Figure 6. A model of decision processing in consumer behaviour (Loudon & Bitta, 1988).](image)

The model incorporates a generic base of four cognitive activities and physical actions that are consistent with the personal and external influences of the individual’s life. As with previous models, each decision-making stage is extensive and time-consuming when stakes are high, and
unobservable variables such as the energy involved in the decision process need to be inferred. New or modified influences consistent with the individual’s external environment shape reason and the physical actions of the individual, while ‘individual determinants’ are drivers of motivation and involvement, information processing, learning and memory. The range of ‘external environment’ influences includes tangible factors of family, social groups and personal characteristics as well as the less tangible factors of culture, sub-culture and social class. Feedback may be applied through all four stages of the decision process. Thus, purchasing behaviour forms patterns, some being ‘hit and miss’ or ‘automatic’ as individuals apply whatever strategies will work, while others are complex and time-consuming, with processes varying in complexity and range of difficulty.

Differences expressed by Loudon & Bitta are that consumers do not consistently engage in a pre-purchase process because of a lack of stored information, and that they may not search externally. Differences are also found because of directives from ‘culturally mandated’ lifestyles, ‘purchase preferences acquired in early childhood’, ‘conformity to group norms or imitation of others’ or ‘personal sources or surrogates (that) reflect a more superficial basis’ (Loudon & Bitta, 1988, p. 590).

While the model is largely generic, the driving theory is perceptibly different. ‘Problem recognition’ occurs through significant differences in magnitude between desires and what actually exists, or ‘congruity between the positive or negative valence values of some perceptual stimulus and the respective positivity and negativity values for some evoked referent’ (Loudon & Bitta, 1988, p. 581). Activities are directed at a ‘goal-object in the marketplace’ (Loudon & Bitta, 1988, p. 604) and are informed by comments, attitudes, information or past experiences held in the memory of purchase behaviour or using a ‘shopper’s strategies’ (Loudon & Bitta, 1988, p. 604) that are immediate, experiential and internal and require no external searching.

Search activities include involvement with the product, situational factors and the market environment, the latter needing to be need-satisfying. The extent of a search for information would depend on the following six determinants, all of which may apply to educational decision-making in the Singapore context:

- market environment of information availability, number of alternatives;
- situational variables, including time, social and financial pressures;
- potential payoff/product importance, including social visibility and status of decision-making activity;
- knowledge and experience, including previous choices and degree of satisfaction;
- individual differences;
- conflict and conflict resolution strategies.

‘Evaluation’ for Singaporean students might mean comparing the attributes of institutions and, where a purchase may take a number of directions, situational factors such as physical or social surroundings, task situation, buying purpose, time and prior states impact on the outcome. ‘Post-purchase’ concerns could relate to finance or delivery of education with possible satisfaction or cognitively dissonant outcomes.

**Comparison of the Three Models and the Theory of Decision-Making**

The factor of common influence in the three models, which appears endemic in the Chinese culture, is the influence of the social environment on individuals from a Confucian culture. Referring to personal influence and diffusion of product knowledge, Engel et al (1990) show that personal verbal communication initiated by either influencer or influencee is reciprocal and brings changes in attitudes or behaviour. The potency of word-of-mouth communication in all theories is shown as both a reliable and trustworthy influence and a pressure on individuals to comply with social group norms.

A significant concept embedded in the model of Engel et al (1990) is that opinion leaders influence group coercion, and Loudon & Bitta (1988) point to the concept of the ‘mavens’ and their effectiveness as neighbourhood experts in street-marketing. Their role is to offer advice, engage in marketplace activities, respond to requests for information, possess generalised knowledge and exhibit an expertise that may be more useful than that of innovators or early purchasers of products. Such ‘mavens’, innovators and early purchasers have parallel positions in Chinese
networks where information may be disseminated speedily and with precision, the networks spreading transnationally. Rapid adoption of new course knowledge and diffusion through social networks is evident in Singapore.

Engel et al (1990) apply the concept of environmental factors to learning 'cultural and ethnic group values' (p. 65) inculcated in intergenerational transmission of values through family, religion and school. Missing from this western model is the significant role that the authoritarian Singaporean government has in as strongly influencing the populace as religion and schools in the context of Singapore.

Further, in applying the theory to a Chinese context, the role of 'gatekeepers', 'influencers' or 'advisors' in educational choices would primarily be family, clan and social network members, and would be relative to family confidence, educational experience and contacts. In representing situational properties in the physical and social surroundings of Singapore, universities worldwide are represented. Thus, intelligence that is available at the information environment level that may be accessed through government and private agencies, in print form or online, by direct or indirect means is influential. In such a time-conscious society, time spent accessing information is a situational property affecting decisions.

Final Model and Conclusions

The final model is shown in Figure 7.

![Figure 7. The final decision model.](image)

The primary cultural factors for inclusion in the model proposed by this study are those of Engel et al (1990). Yet there is also a need to reflect the instrumental nature of Singaporean government control in 'individual internalised values'. Thus, a fourth influence is included as a 'government' variable, including quasi-government intrusion, which the literature affirms (Redding, 1993) is interwoven into the culture and is embedded to some degree in 'problem recognition' and
decision-making by students of Singapore. Of importance also is that the model is adaptive and may fit equally with eastern cultural and social contexts. It allows the changing cultural values of young Singaporeans who bring to their decision-making more materialistic, egalitarian, democratic and entrepreneurial (Redding, 1993) influences than past generations.

Second, the model incorporates the reciprocal involvement of personal factors, particularly motivations, traits and behavioural patterns. It includes information processing and the emotional responses evoked among consumers and the relationship between enduring, inner psychological characteristics so that responses to environmental stimuli are consistent. These emanate from the theories briefly examined of psychoanalytic theory, socio-psychological theory (particularly the Horney paradigm), and trait-factor theory. Individual differences, then, encompass intellectual capacities, information-processing activities and the varying degrees of attention allocated to a task, and these provide important constructs in decision-making.

Third, due to the value in a Confucian culture placed on education, the available options, and alternatives, opinions and advice may simultaneously simplify and complicate the decision. Also, in a culture that places high status on education, high standards would apply in evaluating each option. Further, the high relevance of the product to future job prospects is sufficient motivation to acquire and skilfully process information. Extended problem-solving is also likely. The model also requires a feedback loop to allow for reconsideration to take place before making a purchase decision.

Fourth, historically in Singapore the major influence of the home is traditional and founded on Confucian principles. Yet young people with more liberated attitudes are showing a low level of dissent against the government and institutional control seeping into the fabric of society. Already there is a disruption to beliefs and values transmitted through these traditional forms and there is a distrust of the governing system probably not felt previously. Even such low-level discontent will impact on many individuals in the way they make a choice for, or against, education overseas.

In conclusion, based on the above analysis, as well as examination of other factors identified in the literature (Appendix A), some of which are beyond the scope of this article to present, the final model was devised to describe the probable process of decision-making in the Singaporean context, although it cannot fully represent the internal psychological interactions that occur in the processing activities.

This developed model incorporates relevant features identified by Engel et al (1990), Loudon & Bitta (1988) and Peter & Olson (1987), other features identified in the literature, and the work of both authors in a wider study conducted to better explain the decision-making of prospective Singaporean higher education students as they make their higher education choices (as described in Lindgren-Gatfield & Hyde, 2005). A better understanding of the decision heuristics used by Singaporean students in selecting their higher education institution and program may well assist Australian universities and government authorities operating in the Singaporean environment to provide appropriate forms of information, effective decision support processes and marketing plans.

References

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Terry Gatfield & Stephen Larmar


TERRY GATFIELD is a senior lecturer in Marketing at Griffith University, Nathan Campus, Brisbane 4111, Queensland, Australia (t.gatfield@griffith.edu.au).

STEPHEN LARMAR is a lecturer in the School of Human Services at Griffith University, Logan Campus, Logan, Brisbane, Queensland, Australia (s.larmor@griffith.edu.au).
### APPENDIX A

#### Decision Theorists and their Foci

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<th>Theorists</th>
<th>General Area of Investigation</th>
<th>Methodology Adopted</th>
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<tr>
<td>O. Svenson (1992)</td>
<td>Differentiation &amp; consolidation</td>
<td>Stage decision making and pre and post decision processes</td>
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<tr>
<td>P.D. Wason &amp; P.N. Johnson-Laird (1968)</td>
<td>Cognitive processes</td>
<td>Thinking and reasoning</td>
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<td>B. Mesquita &amp; N.H. Frijda (1992)</td>
<td>Cross culture in decision-making</td>
<td>Cross-cultural differences depend to an important degree upon the level of description as in emotional phenomena</td>
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<tr>
<td>M.A. Boatwright, M. Ching &amp; A. Parr (1979)</td>
<td>Racial factors in decision-making</td>
<td>Comparison of racial factors influencing decision</td>
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<td>J.H. Steckel, D.R. Lehmann &amp; K.P. Corfman (1988)</td>
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<td>Probabilistic choice for individuals or groups when information available is sparse</td>
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<td>Reasoning</td>
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<td>Decision models</td>
<td>Mathematical and behavioural concepts in group decision models</td>
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<td>Decision models</td>
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<td>M.A. Hitt &amp; S.H. Barr</td>
<td>Decision process</td>
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<td>E.S. Martin (1989)</td>
<td>Decision process</td>
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<td>D.M. Holding (1989)</td>
<td>Choice</td>
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</table>

- Correlation between characteristics and choice in systematic decision-making model with cost-benefit processing, managers’ demographic characteristics
- Decision making within a phenomenologically moral framework for decision-making
- The effects of social interaction in the framing of buying decisions
- Relation between choice, preference in the process of decision-making
- Relation between choice and preference in the progress of decision-making
- Individual styles of gathering and analysing information
- Behavioural decision process under unfavourable circumstances
- Motivation to be decisive and to be right
- Inaccurate decisions due to missing information
- Compromise and preferences in decision-making: typical and atypical career decisions; meaningfulness of quantifying human desires; strength of individual’s desires and values
- The family influence over the decision–making process by family members
- Decision making as a journey into four discernible stages
- Three components of a model of evaluation – measurement, judgement, decision-making
- Effects of using formal decision-making strategies on the quality of students’ decisions regarding choice
- Using a paradigm of prediction to evaluate proficiency in decision-making
- Determining how decision makers can improve their decisions based on outcome feedback
- The role of subordinates in establishing a participant environment, and participative decision-making as a social phenomenon
- Motivational factors influencing decisions
- Problem solving between alternatives using decision tree and human use of ‘minimaxing’
### How Singaporean Students Decide to Study in Australia

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
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<tbody>
<tr>
<td>J.S. Russell, D.L. Persing, J.A. Dunn &amp; R.J. Rankin (1990)</td>
<td>Decisions using Lisrel</td>
<td>Examination of the measures used in the employing Lisrel structural analysis to assess the importance of measures assumed in determining outcomes</td>
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