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The Application of Non-Profit Marketing in the International Higher Education Sector.

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Abstract

This study considers the impact of the university service and learning environments (which we define as non educational factors) on student satisfaction among international postgraduate students from Asia studying in Australian universities. It is based on the expectations/perceptions paradigm and analyses the relationship between key variables and overall satisfaction of student groups in respect of their service and learning environments. The aim of this paper is to consider the importance of non-educational factors in international postgraduate university students, in particular, with regard to information and communication, infrastructure, and university recognition. The data used in this study is derived from a mail survey conducted among international postgraduate students from China, India, Indonesia and Thailand studying in five universities in Victoria. Structural Equation Modelling was used to understand the relationship between the constructs in this study. The results indicate that non-education related factors are very important to international postgraduate students and they are predictors of overall satisfaction.

Introduction

University education, the world over, has undergone significant transformation and reform with respect to higher education systems meeting the growing role of information and communication revolution, and the demand for knowledge, which represent the new challenges of globalisation (Salmi, 2001; Marginson, 1998). These are seen as threats as well as opportunities for higher education systems around the world. The emergence of new types of institutions, patterns of financing and governance, curriculum reforms, and technological innovations reflect (Salmi, 2001) how higher education is marketed.

Australian higher education has moved with the current trends and undergone major reforms that are likely to change the structure of higher education system in the future years (Nelson, 2003 & 2004). The pressure on universities to be increasingly self sufficient with external funding as a result of the cuts on federal government funding for education and to develop new markets to fund their operations are some of the direct effects of the educational reforms initiated by the Australian government.

This has resulted in highly competitive environment and greater expectations being placed on institutions to meet the needs of students (Cheng & Tam, 1997). The major dilemma for the Australian universities in this context appears to be how an effective balance can be struck between competing demands and priorities. One of the key measures of this would be the overall satisfaction of its student population as a basis of market competitiveness.

Many institutions in the sector have approached this challenge by utilising non-profit marketing methodologies. Some of the approaches used to address this issue in higher education include quality assurance schemes (Centre for Education and Development and Support 2004), a marketing orientation in which the student is viewed as a consumer whose expectations require addressing (Browne et al. 1998), and studies of student satisfaction
This study considers the impact of the university service and learning environments (which we define as non educational factors) on student satisfaction among international postgraduate students from Asia studying in Australian universities. It is based on the expectations/perceptions paradigm and the Service Quality instrument SERVQUAL (Parasuraman et al. 1994) and analyses the relationship between key variables and overall satisfaction of student groups in respect of their service and learning environments. It is argued that student satisfaction is a decisive factor in the choice of the study destination as the growing competition requires universities to be highly responsive to the needs and aspirations of the diverse student community in order to sustain their attractiveness as institutions delivering quality service.

**Literature Review**

Service and learning environment is a broader concept that embodies the overall quality of services – social, physical, psychological and pedagogical – that a learning institution offers and which would have a direct influence on student expectations, perceptions, academic achievement, behaviours, and attitudes (Fraser, 2005). A large volume of research studies on learning environments exist in a number of areas involving student and teacher perceptions on classroom interactions, educational innovations including online and virtual teaching, place and space in the design of learning environments, problem based learning and cultural diversity (Nuhuis et al. 2005; Goh & Khine, 2002; Jamieson et al. 2000). The internet has now become a new and potentially powerful teaching medium and the base for new models of teaching with increasing number of studies on the impact of technology on teaching environments. Another area that has attracted attention most is the physical and psychosocial learning environments and their effects on student satisfaction.

Research studies indicate universities are increasing becoming sensitive about the impact of service and learning environments on student learning outcomes in order to sustain a competitive edge in the highly competitive and globalised international education industry (DEST, 2005; Ramsden, 2003; Trigwell et al. 1999). As much as it has offered opportunities for growth, the challenges faced by universities in order to offer a student friendly and a productive learning environment to achieve positive student outcomes have become important with growing competition in new student recruitment, student retention.

Australian higher education policy making during the past two decades have been driven by the globalisation process and the impact of these policy initiatives, particularly with recent Nelson reforms have transformed the role of universities as learning institutions and also redefined the nature and purpose of higher education (Nelson, 2003; Pick, 2005). Pratt & Poole (1999) argue that compared to other national systems in the world, Australian higher education remains fundamentally dominated and controlled by the Federal government central planning and funding mechanism. This has placed the entire university system in a dilemma that will have an impact on the role of the academics as teachers, researchers or as administrators in terms of creating and delivering a suitable learning environment to the most important stakeholder- the students. Pick (2005, p.2) suggests that the outcome of these policy initiatives is the recognition of universities as “key locations for the development of ‘knowledge industries’ of global capitalism” where universities are expected to operate like private corporations. The notion of providing “choice” to students and viewing them as consumers or customers has placed universities in an unenviable position to deliver the expected service with limited resources or self financed resources. This market driven strategy however is being questioned in the academic circles in relation to the concern over trading...
academic excellence and quality for mass consumerism. Some argue that learners do not necessarily know what they need to learn and if they are provided with what they want, the quality and rigour of education will suffer (Ramsden, 2003).

The study uses the expectancy-disconfirmation model, a derivation of the adaptation-level theory, which suggests that customers compare the actual product and service performance with their prior expectations. The 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 comparison standard) and post-purchase (post-choice) performance of the product as perceived by the customer (Tse et al. 1990). When expectations are met or exceeded, the customer is satisfied. If the performance falls short of the expectations, the customer is dissatisfied. This model remains one of the most widely discussed and tested approaches in measuring customer satisfaction (Arambewela, 2003; Spreng et al. 1996; Oliver 1996, 1980).

**Aim**

The aim of this paper is to consider the importance of non-educational factors in international postgraduate university students, in particular, with regard to information and communication, infrastructure, and university recognition.

The following hypotheses have been tested.

Hypothesis 1: Factors that are not specifically educationally related are significant predictors of satisfaction for international postgraduate business students. This hypothesis is associated with a series of further research hypotheses that stem from the review of literature as follows:

(i) H1a: Information and Communication matters are significant predictors of satisfaction for international postgraduate business students.
(ii) H1b: Factors relating to infrastructure are significant predictors of satisfaction for international postgraduate business students.
(iii) H1c: University recognition and prestige are significant predictors of satisfaction for international postgraduate business students.

Hypothesis 2: International postgraduate business students are satisfied with factors that are not specifically educationally related:

(i) H2a: International postgraduate business students are satisfied with matters relating to Information and Communication.
(ii) H2b: International postgraduate business students are satisfied with matters relating to infrastructure.
(iii) H2c: International postgraduate business students are satisfied with matters relating to university recognition and prestige.

**Methodology**

The data used in this study is derived from a mail survey conducted among international postgraduate students from China, India, Indonesia and Thailand studying in five universities in Victoria. The instrument used to collect the data was an adaptation of the SERVQUAL instrument developed by Parasuraman et al. (1994) and was designed to measure the gap between student responses on expectations and perceptions of the university as a study destination on a seven point bi-polar scale. The responses were sought on 36 statements representing aspects of the operations and services of the university under desired (ideal)
expectations of choice and post-choice perceptions. The desired expectations are considered to have a better explanatory power than the predictive expectations used by many researchers (Spreng et al. 1996). The variables associated with these statements were constructed with input from previous studies and focus group interviews.

Sample

The sampling was aimed at reaching every international postgraduate student belonging to the four nationality groups in the universities surveyed. Of the 573 useable responses received, the sample for this study was reduced to an approximate uniform sample size from each country and each university, employing a systematic random sampling approach, which produced 371 respondents. This was to ensure equality of variance across the student groups for the same variables and reliability and validity of predictions (Hair et al., 2006).

Data Analysis and Results

SEM was used as it provides a method of testing relationships among measured variables, that have resulted from the survey items and latent variables by estimating a set of separate multiple regression equations simultaneously, (Hair et al. 2006).

To validate the scales used to measure the constructs, coefficient alpha was used for the independent variables. Reliability was found to be excellent above the 0.70 required by most marketing research literature, (Hair, 2006): namely Information 0.75, Recognition 0.78, and Infrastructure 0.71. The model was tested as a path model using AMOS software. The path model’s fit indices indicate an acceptable fit of the model to the data (CMIN/DF= 3.243, P=.002, GFI= .945, AGFI=.903, NFI=.925, TLI = .922, CFI = .946 RMSEA=.078).

When the regression weights are examined there are significant relationships between Total Satisfaction and Information 0.46 (.017), Total Satisfaction and Image 0.44 (.000) and Total Satisfaction and Infrastructure -0.49 (.048). These results highlight the fact that access to adequate information and support, appropriate infrastructure and well recognised academic
programs are significant predictors of satisfaction for international postgraduate students. Therefore the first hypothesis is accepted.

Table 1 highlights the fact that while international students have experienced moderate levels of satisfaction with these non-educational constructs, the levels of perceptions are falling below expectations and opportunities to improve levels of satisfaction are evident. In this context, our second hypothesis is rejected. For example while the aggregate expectation for infrastructure construct was 5.8 the aggregate perceptions remained at 4.6 resulting in a gap of -1.2. Similarly the gap in the recognition and information constructs were -.9 and -1.0 respectively indicating that student perceptions fell below their expectations.

Table 1 Construct and Variable Mean and Difference scores*

<table>
<thead>
<tr>
<th>Construct and Variables</th>
<th>Expectations</th>
<th>Perceptions</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infrastructure</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of living</td>
<td>5.5</td>
<td>4.0</td>
<td>-1.5</td>
</tr>
<tr>
<td>Transportation services</td>
<td>6.1</td>
<td>5.5</td>
<td>-0.6</td>
</tr>
<tr>
<td>Accommodation at a reasonable cost</td>
<td>5.9</td>
<td>4.2</td>
<td>-0.7</td>
</tr>
<tr>
<td>Total</td>
<td>5.8</td>
<td>4.6</td>
<td>-1.2</td>
</tr>
<tr>
<td><strong>Recognition</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognised academic qualifications</td>
<td>6.4</td>
<td>5.3</td>
<td>-1.1</td>
</tr>
<tr>
<td>High image and prestige within own country</td>
<td>6.1</td>
<td>5.1</td>
<td>-1.0</td>
</tr>
<tr>
<td>Academic courses recognised in own country</td>
<td>6.2</td>
<td>5.5</td>
<td>-0.7</td>
</tr>
<tr>
<td>Total</td>
<td>6.2</td>
<td>5.3</td>
<td>-0.9</td>
</tr>
<tr>
<td><strong>Information</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information through Australian Embassies</td>
<td>5.8</td>
<td>4.4</td>
<td>-1.4</td>
</tr>
<tr>
<td>Information avail compared to other Unis</td>
<td>5.9</td>
<td>5.0</td>
<td>-0.9</td>
</tr>
<tr>
<td>International orientation programs</td>
<td>5.9</td>
<td>5.3</td>
<td>-0.6</td>
</tr>
<tr>
<td>Total</td>
<td>5.9</td>
<td>4.9</td>
<td>-1.0</td>
</tr>
</tbody>
</table>

*A paired means t-test showed that all of the variables were significantly different at the .001 level

Discussion and Conclusions

The results indicate that non-education related factors are very important to international postgraduate students and they are predictors of overall satisfaction. These factors have been identified by a number of researchers as factors influencing choice of study destinations (eg. Harvey, 2001; Guolla, 1999; Duan, 1997; Wilkinson et al. 1996). On the other hand, it is clear that based on the gap between expectations and perceptions, students are not fully satisfied. On the basis of this study we therefore accept the first hypotheses associated with H1 while rejecting the hypotheses associated with H2.

This study suggests that in improving overall satisfaction, universities need to provide emphasis on the non education related factors as much as the education related factors to improve the overall satisfaction of international postgraduate business students. The results of this study indicate that the non education related factors: institutional infrastructure, recognition of the university qualifications and the provision of information are closely linked with the formation of student satisfaction and any neglect in these areas will have a negative impact on student satisfaction. Further research should concentrate on the communication pathways that these potential students use to gather this vital information. Also, the expectations with regard to aspects of infrastructure need to be marketed so that expectations and perceptions are matched. Future research should also be directed to investigating additional environmental factors and their impact on student satisfaction.
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