THE INFLUENCE OF UNIVERSITY IMAGE IN STUDENT’S EXPECTATIONS, SATISFACTION AND LOYALTY

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Abstract

THE INFLUENCE OF UNIVERSITY IMAGE IN STUDENT EXPECTATIONS, SATISFACTION AND LOYALTY

In order to understand the influence of image in student expectations, satisfaction and loyalty, this study tests an explanatory model of student satisfaction in higher education. The model was tested through the use of structural equations and showed that image is the construct that most influences student expectations and satisfaction. The influence of image is also relevant in student loyalty.
THE INFLUENCE OF UNIVERSITY IMAGE IN STUDENT EXPECTATIONS, SATISFACTION AND LOYALTY

INTRODUCTION

In the last two decades, the sector of Higher Education in Portugal, similar to what happened in the U.S.A. and in the remaining countries of Europe, has suffered quite profound changes. This way, higher education in Portugal faces more competitive market structures that threaten the survival of some of the existing institutions, for the latter are now forced to compete with scarce resources for a greater number of potential candidates, even more disputed by the several institutions.

In the future, it is expected that this scenario of competition will become even more intensified, in the sequence of the agreement foreseen in the Bologna Convention, for the harmonization of the academic degrees in the European Union. With the harmonization of the different academic degrees, the mobility and employability of students, professors, researchers and technicians will be greater, for which the less competitive universities may come to lose a good part of their students and their human capital. Given the present per capita and per knowledge areas financing system (Santos, 1955), many universities may not survive.

According to Kotler and Fox (1985), an institution’s actual image and reputation is often more important than quality, because is the perceived image that actually influences the choices made by prospective students. Accordingly, higher education institutions’ image becomes an important asset to compete. It influences who will apply (Landrum et all, 1998), student satisfaction (Clow et al., 1997; Eskildsen et all, 1999; Cassel and Eklöf, 2001), and student loyalty (Eskildsen et al., 1999). Appropriate management strategy includes an effort to determine the institution image and how it can be modified.

This study focuses in gaining information about the importance of image held by students, and its influence in expectations, student satisfaction and loyalty and consequently in student word-of-mouth.

IMAGE

To Kotler and Fox (1985) an image is an overall impression that a person has about an object. It may be based on incomplete information, and it may differ for the various publics of an institution. Image assessment reveals to the institution what strengths to emphasize, and what to communicate. In this sense, University Image can be defined as the sum of all the beliefs an individual has towards the university (Landrum et all, 1998; Arpan et all 2003).

To Kennedy (1997) image has two distinguishes components: Functional, related to intangible stimuli and that can be easily measured; and emotional, associated with psychological conditions that become apparent in feeling and attitudes.

In their studies of university image, Yavas and Shemwell (1996), Landrum et all (1998) and Paramewaran and Glowaka (1995) found that higher education institutions need to maintain or develop a distinct image to create a competitive advantage in an increasingly competitive market. To these authors, this image is one of the main influences in student’s willingness to apply for enrolment. Universities image is also important when donors are considering endowment or companies are selecting an institution to do contracted research and development.
EXPECTATIONS

To some researchers (Anderson, 1973; Churchill and Surprenant, 1982; Oliver, 1977; Westbrook and Reilly, 1983) expectations are significant beliefs, before experience, about product global performance, formed by company suggestions or by product information. However, to others (Swan and Martin, 1981), expectations represent the anticipated satisfaction of product consumption. Olson and Dover (1976), Oliver and Linda (1981), Churchill and Surprenant (1982), Bearden and Teel (1983), Westbrook and Reilly (1983), define expectations as beliefs about attributes levels of a product that can be measured as individual beliefs or as those beliefs sum.

Miller (1977) suggest four type of expectations that can be used by consumers in the process of satisfaction formation: ideal or wished-for level, expected or predicted level, minimum or lowest accepted level, and deserved or appropriate level. Parasuraman, Berry and Zeithaml (1991) suggest that expectations can be bounded by adequate and desired level of expectations. The space between these extremes is refereed as zone of tolerance.

SATISFACTION

Satisfaction can be viewed as a process or a result. As a process, satisfaction is analysed in light of its nature: cognitive or emotional (Ex. Howard and Sheth, 1969; Oliver, 1981; Westbrook and Reilly, 1983; Ngobo, 1999). As a result, satisfaction is analysed as the main causes of that satisfaction (Ex. Hunt, 1977; Oliver, 1980; Bearden and Teel, 1983; Day, 1984; Tse and Wilton, 1988; Anderson, 1993).

Table 1 shows how satisfaction has been analysed in higher education and what this concept means for several researchers.

Table 1 – Different views of satisfaction in higher education

<table>
<thead>
<tr>
<th>Researcher</th>
<th>Satisfaction conceptualization</th>
<th>View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aitken (1982)</td>
<td>Represent student feelings about his academic performance</td>
<td>Result</td>
</tr>
<tr>
<td>Chadwick and Ward (1987)</td>
<td>It’s the student post-experience evaluation about educational investment.</td>
<td>Process</td>
</tr>
<tr>
<td>Hampton (1993)</td>
<td>It’s the result of the comparison between educational service perceptions and expectations based on prior experiences and/or in information received through others.</td>
<td>Process</td>
</tr>
<tr>
<td>Halstead, Hartman and Schmidt (1994)</td>
<td>It’s the comparison between what was received and what was expected.</td>
<td>Process</td>
</tr>
<tr>
<td>Franklin (1994)</td>
<td>It’s the comparison between what was received and what was expected.</td>
<td>Process</td>
</tr>
<tr>
<td>Danielson (1998)</td>
<td>Expression of pleasure and pride with the educational experience.</td>
<td>Result</td>
</tr>
<tr>
<td>Elliot and Shin (1999)</td>
<td>It’s the comparison between the experience obtained in the university and expectations to that experience.</td>
<td>Process</td>
</tr>
<tr>
<td>Astin (2001)</td>
<td>Embraces the student subjective experience during university years, as well as, value perceptions about the educational experience.</td>
<td>Process</td>
</tr>
<tr>
<td>Elliot and Healy (2001)</td>
<td>Short run attitude, resulting form student’s evaluation about educational experience.</td>
<td>Process</td>
</tr>
<tr>
<td>Alves and Raposo (2007)</td>
<td>It’s the comparison between the experience obtained in the university and expectations to that experience.</td>
<td>Process</td>
</tr>
</tbody>
</table>
As can be observed in table 1, satisfaction conceptualizations in higher education differ according the kind of view used. For some researchers is viewed as a process (relating to its main causes) or as a result (relating to its nature). However, as can be seen, student satisfaction as a process is the view more used.

LOYALTY

To Oliver (1997), customer loyalty is a “deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behaviour”. (Oliver, 1997:392).

Loyalty is a concept that has been insufficiently used in higher education. For Webb and Jagun (1997), this concept measures student’s willingness to recommend the institution to others students, the wish to tell positive things about the institution and the will to return later to continuing studies.

To Martensen et al (1999), loyalty can be measured through:

- Intention to use continuing education, conferences, etc, at the higher education institution in the future;
- Intention to recommend the higher education institution;
- Intention to recommend study programme at the higher education institution;
- Choosing the higher education institution if student have to choose today;
- Choosing the study programme if student have to choose today

In the same way, for Athiyaman (1997) loyalty is the combination between students willingness to talk positively about the institution and to provide information to new candidates.

THE RELATIONSHIP BETWEEN IMAGE, EXPECTATIONS, SATISFACTION AND LOYALTY

Some studies have found that universities institutional image and reputation strongly affect retention (Nguyen and Leblanc, 2001; Bloemer and De Ruyter, 1998). However these results are not supported by all studies (Bloemer et al, 1998). Andreassen and Lindestad (1998) verified that corporate image influence customer satisfaction, especially if the customer has little knowledge about the service.

Clow et al (1997), suggest that a company image influences customer satisfaction and expectations. The model proposed by these authors is the one in figure 1.

The research of Clow et al. (1997), applied to various service industries showed that the influence of image in expectations appeared to be quite strong and that this influence was only influential to satisfaction in some industries.
In studies carried out using the European Customer Satisfaction Index as a basis (Kristensen, Martensen and Gronholdt, 1999; Cassel and Eklöf, 2001), image always appears as one of the variables with the greatest influence in the formation of satisfaction, seeing that its direct influence through expectations is superior to its indirect influence. According to Eskildsen et al. (1999), this variable is really the one that has the most influence on student loyalty in higher education.

In this way, the following hypotheses have been established with the objective of trying to contribute to knowledge development of this subject in higher education:

*If higher education is an extremely complex service with characteristics of trust and experiences, which make it difficult to be evaluated before and even after being tested, by increasing the importance of image as an information source, then:*

*Hip. 1.a) University’s image has a significant influence in the formation of the student’s expectations in higher education.*

*Hip.1.b) University’s image has a direct and significant influence in the formation process of satisfaction.*

*Hip. 1.c) University’s image has a direct and significant influence in the loyalty of the student.*

**METHODOLOGY**

In order to accomplish the objectives proposed, a model of the antecedents and consequences of student satisfaction was developed and tested. The model (see figure 2) involves more constructs than image, expectations, satisfaction and loyalty, because literature (ex. Fornell (1992), suggest that the constructs present in the model are necessary to make a more reliable analysis of student satisfaction.
Sample’s definition

Given the technical impossibility of including all institutions of higher education in Portugal, an option was made to restrict the study to the public university education. Thus, the target population considered was all the students of the public universities belonging to the CRUP (Conselho de Reitores das Universidades Portuguesas – The Council of Deans of the Portuguese Universities), at the exception of the Universidade Aberta (Open University), due to the particularities of the education provided in it.

The sample was selected at random with the purpose of constituting fixed sub-samples of 250 students that would include students from the different scientific areas taught at the universities. At the end, the sample did not correspond exactly to the 250 students per university, coming to a total of 2687 students.

In what concerns the sample’s composition per gender, the sample is characterized by including 62.6% of female students and only 37.4% male students.

METHOD OF DATA OBTAINMENT

Given the intended objectives expected to be reached with this research, a survey using questionnaires was the chosen way for gathering data. The scales used, result in part, from scales already tested in various studies, despite the verbal context often being adapted to the reality of higher education.

This way, in the whole questionnaire multiple item scales were used, for they allow reducing the standard error and the size of the required sample (Ryan, Buzas and Ramaswamy, 1995), as well as measuring constructs with greater validity (Hayes, 1998; Anderson and Fornell, 2000a). In the scales were used intervals of 1 through 10, for the enlargement of the number of points in the scale allows reducing the skewness of the answers (Fornell, 1992).

To measure the construct image it was used the same type of scales and the attributes used to measure this concept resulted either from the studies conducted by Yavas and Shemwell (1996), Landrum, Turrisi and Harless (1998), and from the attributes used in the National Customer Satisfaction Indexes. To measure the consequences of satisfaction it was used the attributes used by Webb and Jagun (1997) and Martensen and others (1999).

In order to reduce possible errors existing in the questionnaire, and according to the recommended by Lakatos and Marconi (1996), a pre-test of the questionnaire was organized with 25 students of the University of Beira Interior. The result of the pre-test showed that the vocabularies of the
questionnaire, as well as its structure, were easily understood by the students and its filling out time was approximately 10 minutes.

After gathering the questionnaires, which took place between April and June 2002, in order to test the established hypotheses, it became necessary to analyse and interpret the data. Thus, the analysis of data was realised through structural equations using the statistical software AMOS (Analysis of Moment Structures) version 4.0.

**ANALYSIS OF RESULTS**

Following the strategy of modelling in two stages and after confirming the acceptability of the measurement model, there then proceeded an estimation of the structural model. The estimated model is the one presented in figure 3. This figure presents the standardised structural model. The estimated model is the one presented in figure 3. This figure presents the standardised structural model.

![Figure 3 – Final model](image)

Estimated coefficients are all statistically significant to a level of significance of 0.05 (table 2), thus one can say that all the indicators are significantly related to their specific constructs. GFI’s value gives us a percentage of the data variance which is explained by the model (Garcia and Martinez, 2000). Thus, in this study it can be said that the model explains a quite elevated percentage of data variance: about 94% (GFI= 0.941), which indicates that its acceptability can be considered quite good.

**Table 2 - Standardized regression weights of the Measurement Model**

<table>
<thead>
<tr>
<th>Regression weights</th>
<th>Estimate</th>
<th>t Values</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXP1 ← Expectations</td>
<td>0.818</td>
<td>44.605</td>
<td>0.000</td>
</tr>
<tr>
<td>EXP2 ← Expectations</td>
<td>0.887</td>
<td>48.782</td>
<td>0.000</td>
</tr>
<tr>
<td>IM1 ← Image</td>
<td>0.857</td>
<td>54.535</td>
<td>0.000</td>
</tr>
<tr>
<td>IM2 ← Image</td>
<td>0.750</td>
<td>44.621</td>
<td>0.000</td>
</tr>
<tr>
<td>IM4 ← Image</td>
<td>0.869</td>
<td>55.695</td>
<td>0.000</td>
</tr>
<tr>
<td>Q1 ← quality</td>
<td>0.910</td>
<td>59.350</td>
<td>0.000</td>
</tr>
<tr>
<td>Q2 ← quality</td>
<td>0.740</td>
<td>43.594</td>
<td>0.000</td>
</tr>
<tr>
<td>Q5 ← quality</td>
<td>0.754</td>
<td>44.802</td>
<td>0.000</td>
</tr>
<tr>
<td>V1 ← value</td>
<td>0.867</td>
<td>55.045</td>
<td>0.000</td>
</tr>
<tr>
<td>V2 ← value</td>
<td>0.850</td>
<td>53.287</td>
<td>0.000</td>
</tr>
<tr>
<td>V4 ← value</td>
<td>0.821</td>
<td>50.522</td>
<td>0.000</td>
</tr>
<tr>
<td>S1 ← satisfaction</td>
<td>0.911</td>
<td>60.741</td>
<td>0.000</td>
</tr>
<tr>
<td>S2 ← satisfaction</td>
<td>0.903</td>
<td>59.918</td>
<td>0.000</td>
</tr>
<tr>
<td>S3 ← satisfaction</td>
<td>0.896</td>
<td>59.054</td>
<td>0.000</td>
</tr>
<tr>
<td>L1 ← loyalty</td>
<td>0.878</td>
<td>54.752</td>
<td>0.000</td>
</tr>
<tr>
<td>L2 ← loyalty</td>
<td>0.802</td>
<td>48.257</td>
<td>0.000</td>
</tr>
<tr>
<td>P1 ← word of mouth</td>
<td>0.892</td>
<td>53.485</td>
<td>0.000</td>
</tr>
<tr>
<td>P2 ← word of mouth</td>
<td>0.848</td>
<td>57.745</td>
<td>0.000</td>
</tr>
</tbody>
</table>

* For a probability level of 0.05
Table 3 presents the composed reliability of each construct; this is the level of internal consistency of each one of the constructs, as well as the variance explained by each one of the constructs.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Indicator</th>
<th>Reliability</th>
<th>Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations</td>
<td>EXP1</td>
<td>0.843</td>
<td>0.728</td>
</tr>
<tr>
<td></td>
<td>EXP2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>S1</td>
<td>0.930</td>
<td>0.816</td>
</tr>
<tr>
<td></td>
<td>S2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>S3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Image</td>
<td>IM1</td>
<td>0.866</td>
<td>0.685</td>
</tr>
<tr>
<td></td>
<td>IM2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>IM4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loyalty</td>
<td>L1</td>
<td>0.828</td>
<td>0.707</td>
</tr>
<tr>
<td></td>
<td>L2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As can be observed, all the constructs exceed the level of minimum reliability of 0.7 recommended by Hair et al. (1998) and Garcia and Martinez (2000), showing indications that the specified indicators are sufficient in its representation of inherent constructs. One can still see that the construct with the highest internal reliability is the construct of satisfaction (90%, measured by the level of global satisfaction, by the level of correspondence to expectations and by the level of correspondence to student’s current wishes/needs.

With a reliability level of 87%, appears the construct of image, measured through the perception of: a good university to study in; an innovating university and turned to the future; and a university which provides good preparation to its students.

The construct expectations present a reliability of 84%. This construct was measured through the variables: expectations related to the global quality of education and by expectations concerning the university’s capacity to supply good preparation for a career. In what relates to the variance explained by the constructs, it can be seen that the constructs always explain more than 50%, minimum value recommended by Hair et al. (1998) and Garcia and Martinez (2000).

In turn, Table 4 presents the various structural equations, as well as the determination coefficient (R²) for each equation. From the analysis of the determination coefficients of the various structural equations present in Table 2, it was seen that the construct of satisfaction presents a quite elevated level of variance (87%) explained by its antecedents (positively by image, quality perceived and value and negatively by expectations). Image was the greatest direct influence in satisfaction (0.452) and also has a considerable influence in Loyalty (0.233) and Expectations (0.233). By his turn, student expectations have a negative influence in satisfaction (-0.118).
Table 4 – Structural Equations of the model

<table>
<thead>
<tr>
<th></th>
<th>Exogenous</th>
<th>Construct</th>
<th>Endogenous</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Image</td>
<td>Customer Expectations</td>
<td>Quality</td>
<td>Value</td>
<td>Student</td>
<td>Student</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0,578</td>
<td>0,851</td>
<td>0,562</td>
<td>0,452</td>
<td>0,233</td>
<td>0,235</td>
<td>0,655</td>
<td>0,933</td>
</tr>
<tr>
<td></td>
<td>0,334</td>
<td>0,119</td>
<td>0,089</td>
<td>-0,118</td>
<td>0,578</td>
<td>0,158</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0,222</td>
<td>0,153</td>
<td>0,684</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0,856</td>
<td>0,405</td>
<td>0,795</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0,684</td>
<td>0,73</td>
<td>0,933</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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</tr>
</tbody>
</table>

As can be seen in table 5, the influence of image is greater when we analyse the direct and indirect effects of the model. For satisfaction the total effect of image ups to 0.86 and for loyalty to 0.73.

Table 5 – Direct, indirect and total effects of image in student expectations, satisfaction and loyalty

<table>
<thead>
<tr>
<th></th>
<th>Image</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dir</td>
<td>Ind</td>
<td>Tot</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expectations</td>
<td>0,58</td>
<td>0,00</td>
<td>0,58</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0,45</td>
<td>0,40</td>
<td>0,86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loyalty</td>
<td>0,23</td>
<td>0,50</td>
<td>0,73</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**DISCUSSION OF THE RESULTS**

It was proven by this study that the construct which influences the most student satisfaction in higher education is the construct image, as this has a direct effect of 0.45 and still indirect effects through students’ expectations. This way, the total influence of perceived image over student satisfaction is of 0.86, in other words, in terms of total effects, if the image of the institution increases or diminishes a unit in terms of valorisation, the satisfaction will increase or diminish in proportion of 0.86.

Image also influences expectations, having a direct effect of 0.58. Its direct influence is less, but also significant, in the formation of loyalty (0.23), influence that becomes greater trough indirect effects (0.73).

The results encountered illustrate that from all the antecedents, the variable image is the one which has the most influence in the formation process of satisfaction, similar to the results encountered by Kristensen, Martensen and Gronholdt (1999) and Cassel and Eklöf (2001). This influence is also significant in the formation of the student’s expectations in higher education.

Thus, hypotheses 1.a and 1.b are upheld, both suggesting a direct and significant influence of image in expectations and in satisfaction.

In relation to the direct influence of image in student loyalty, it was proven that it was significant, despite its influence not being as important as what was discovered by Eskildsen et al. (1999). This way, evidence was encountered that allow supporting to the validity of Hip. 1.c.
CONCLUSIONS AND IMPLICATIONS

This investigation sheds light on the formation process of student satisfaction in higher education, showing that image and expectations can influence students’ satisfaction, although this influence being negative for expectations. This is, if students’ expectations are too high, satisfaction can be reduced. This way universities need to manage carefully students’ expectations and take care in order to not raise, too much, students’ expectations.

In other way, it is possible to say that to measure and understand university image is very important, because its influence in the formation process of student expectations, satisfaction and loyalty, and consequently in word-of-mouth, is very important. If higher education has to compete through its image, the first step to take is to measure the university image held by his students. The second step should be to know how the construct image is formed and how it can be modified in order to reflect the intended image.

This way, this investigation contributes to the deepening of the knowledge about university image, and its importance for higher education institutions to retain current students and attract new students.

FUTURE RESEARCH

In this study the constructs of image, expectations, satisfaction and loyalty were analysed. However the constructs of image, expectations and loyalty presented a reliability level lower than satisfaction, namely, 0.846, 0.843 and 0.828 respectively. So a future area of research is to repeat this study, trying to find alternative indicators to measure the constructs, namely indicators that present a lower individual reliability, just as for example, the indicator of image “Innovatory university turned to the future” in order to succeed in obtaining scales of reliability above 90% for all constructs.

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