

Recruiting Higher Education Students: Information Sources and Choice Factors

Ana Maria Soares⁽¹⁾ and Cláudia Simões⁽²⁾

⁽¹⁾ School of Economics and Management
University of Minho
4710-057 Braga
Portugal
Tel: +351 253 604565
Fax: +351 253 601380
Email: amsoares@eeg.uminho.pt

⁽²⁾ School of Economics and Management
University of Minho
4710-057 Braga
Portugal
Tel: +351 253 604562
Fax: +351 253 601380
Email: csimoes@eeg.uminho.pt

Recruiting Higher Education Students: Information Sources and Choice Factors

Abstract

Higher Education Institutions (HEI) face increasingly complex challenges (e.g., changing demand patterns, intensifying global competition and declining in funding). Such context demands a deeper understanding of which sources prospective students resort to when applying to a HEI. This research centres on students' decision making process for HEIs focusing on the pre-purchase stage. The study aims at contributing to a deeper understanding of the information sources and choice factors that students resort to when applying to HEIs. An exploratory study was carried out in a Portuguese University focusing on the sources and determinants used when selecting a HEI. A survey was applied to students enrolling for the 1st time, yielding a sample of 1641 cases. Findings revealed that the 'university website' is considered the most important source of information. 'Former/current University students' are the second most important source of information. Findings also show that 'geographical proximity' is the most important choice factor for a HEI. An additional relevant factor relates to the 'academic reputation' for both the university and the degree. Finally, conclusions, implications and avenues for future research are presented.

Introduction

Higher Education Institutions (HEI) face increasingly complex challenges. In particular, their operating environment is undergoing major transformations, such as, changing demand patterns, intensifying global competition and declining in funding. Consequently, institutional attention is increasingly focused on attracting high quality (human) resources and students. Such context demands a deeper understanding of which sources prospective students resort to when applying to a HEI. This research centres on students' decision making process for HEIs focusing on the pre-purchase stage. The importance of effective and focused student recruitment practices is paramount and such an understanding may greatly enhance HEIs' marketing policies. Additionally, from an applicant's perspective, it is crucial that adequate

information is available so that a well-informed decision is made. Only by relying on the right information, prospective students are able to make better decisions/judgements (Briggs and Wilson 2007).

Studies in Higher Education are founded in several backgrounds such as economics and social policy. This research follows a marketing perspective building on consumer behaviour and services marketing literatures. Consumer behaviour research, contributes to enhance our understanding of information sources and choice factors underlying decision making. Previous studies looked at pre-purchase of information seeking for a variety of products, such as women shoes (Newman and Lockeman 1975), new automobiles (Punj and Staelin 1983; Moorthy et al. 1997). Research has also focused in pre-purchase information seeking for services such as professionals (Frieden and Goldsmith 1989); restaurant and financial services (Mitra et al. 1999).

Nonetheless, there is the need for a deeper understanding of search behaviour, in particular in services. It has been acknowledged that consumers' information search is distinct between goods and services. As McColl-Kennedy and Fetter (1999: 242/243) contend “[g]iven the generally risky nature of services, and the basic tenet that consumers engage in search activities as a means to reduce risk, it seems that understanding consumer search behaviour may be especially important in a services marketing context”. Indeed, when faced with a service buying decision consumers will tend to seek for more information (Murray, 1991; McColl-Kennedy and Fetter, 1999).

In what concerns HEI choice behaviour, a parallel line of inquiry has focused on generic student-choice models (e.g. Vrontis et al, 2007, Punj & Staelin, 1978). Yet, specific aspects of HEI decision making process are open to a deeper investigation.

This paper attempts to shed some light on the pre-purchase information search and choice factors for the Higher Education services. As Murray states (1991: 10) “(...) of particular importance to managers is an understanding of the pre-purchase information acquisition process used by service consumers. Knowledge of information acquisition strategies is vital to both marketing managers and scholars because information search is an early influential stage in the purchase decision process”. Theoretical and empirical issues surrounding information sources and choice factors, when applying to a HEI, are discussed.

An exploratory study was carried out in a Portuguese University focusing on the sources and determinants used when selecting a HEI. This paper is organised as follows. First a review of extant literature is presented in order to better describe the matters underlying the decision making process for a HEI. Then the research design is presented. The next section portrays the findings from the empirical study. Finally conclusions, implications and avenues for future research are presented.

Choice of Higher Education Institutions

This section addresses the main theoretical concepts that underpin this research, in particular, it briefly introduces the decision models for HEIs. Subsequently the pre-purchase stage is described in more detail. Since HEIs are service organisations, we broadly present the service buying process in order to better understand its dynamics and stages.

The choice of which university to attend has been characterized as a highly complex decision as it is subject to multiple influences (Briggs and Wilson, 2007). Understanding how students make decisions regarding college selection has attracted the attention of a number of authors. Vrontis et al. (2007) contend that student behaviour models arising from the literature can be classified into economic models, status attainment models and combined models. *Economic models* assume consumers are highly rational and suggest choices result from a calculation of the costs and perceived benefits for each institution. Choice would, thus, fall on the institution offering the highest value. Punj and Staelin (1978), for example, propose a stochastic model which allows estimating how specific variables related to the school or student affect the university choice process. This model does not entail the cognitive process that the student goes through when deciding which university to attend (Punj & Staelin, 1978). *Status attainment* models consider that students' choice of a HEI is influenced by the interaction between behavioural and background variables (Sewell and Shah, 1978). *Combined models* draw simultaneously on the rational approach of economic models and on the sociological perspective, thus providing a more comprehensive explanation for choice (Hossler et al., 1999). Vrontis et al. (2007) consider the contributions by Jackson (1982), Chapman (1984) and Hanson and Litten (1982) to be the most representative combined models.

Building on these approaches, Vrontis *et al.* (2007) develop a *contemporary higher education student-choice model for developed countries*. The model represents a holistic view of the process considering both the sequence of the decision steps and the various influences. These determinants include: (1) individual (customer and personal attributes); (2) environment (general public policy and influences/media); (3) high-school characteristics (e.g., social composition, quality); and, (4) HEIs (characteristics and actions).

Having these models as a background, this study focuses on information search and choice factors for HEIs. We take a simplified view of the decision-process steps building on service literature. According to Lovelock (2001), the general buying stages for purchasing a service are: pre-purchase stage, service encounter stage and post-purchase stage. The pre-purchase stage embraces the awareness of a need, information search and evaluation of alternative suppliers. The service encounter phase involves the actual service purchase from a chosen supplier and its delivery. The post-purchase stage implies the assessment of the performance and future intentions. It is at this phase that clients evaluate the service quality and satisfaction (this is important as loyalty emerges at this stage). We will now consider the pre-purchase stage as it is the main focus of this research.

The pre-purchase stage

The relevance of the pre-purchase stage derives from the fact that it leads to the final decision to service purchase/consumption. Actions at this stage will vary depending on the specific needs or expectations to be fulfilled. An important aspect to consider at this point is the perceived risk associated with the purchase (Lovelock 2001). The notion of risk in buying decision is related to the fact that consumers make decisions under a certain degree of uncertainty regarding a specific product or service; it, thus, refers to the chance of negative outcomes and the possibility of loss (Taylor, 1974; Murray 1991).

Consumers face uncertainty since choices' outcomes can only be fully known in the future. Bauer (1960: 389) argued that “[c]onsumer behaviour involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty, and some of which at least are likely to be unpleasant”. In this line of thought, Cunningham (1967: 84) distinguished risk and perceived risk since “the consumer

can only react to the amount of risk she actually perceived and only to her subjective interpretation of that risk”¹.

There are several types of risks/consumers’ perceived losses associated with the purchase. Several typologies of losses have been proposed (Roselius, 1971; Jacoby and Kaplan 1972; Taylor, 1974). Measures of risk perceptions have converged to financial (the risk that the product/service purchased will not worth its cost); performance/functional (the risk that the product/service will not perform as expected); physical (the risk that the product/service may cause an health hazard to the consumer or others); psychological (the risk that a poor choice will bruise the consumer’s ego), social (the risk that a poor product/service choice affects negatively the perception of other individuals about the purchaser) or time /convenience (the risk that the consumer’s time/effort and/or convenience have been wasted if the product/service does not perform as expected) (Stone and Gronhaug, 1993; Stone and Mason, 1995; Mitchell, 1992; Schiffman and Kanuk, 2000). For example, when defining which University to attend, prospective students may face functional risks (whether the University and chosen degree will fulfil the requirements to get a proper job); financial risk (the investment related to the tuition and living expenses); social risks (what others will think regarding the decision to attend a certain University course) and, psychological risk (the ego consequences caused by a bad choice).

Perceived risk has been conceptualised as product-specific (Cunningham, 1967). Due to their nature and basic features (simultaneity, intangibility, variability), service purchases are

¹ The notion of perceived risk has been widely accepted both considering its two-dimensional (importance and probability of loss) and multi-facet (performance, social, physical, financial, time and psychological losses) approaches. Yet the construct could benefit from clearer specification as it has been conceptualised and operationalised at different levels of abstraction (Dowling (1986): low-level (single product’s perceived risk); medium-level (across product-categories); and high-level (resembling a personality trait). Moreover, risk research has focused on specific products (e.g., Hoover, Green, and Saegert, 1978; Mitchell and Boustani, 1994; Stone and Gronhaug, 1993); services (e.g., Mitchell and Vassos, 1997; Mitra, Reiss and Capella, 1999), or buying situations (e.g., Akaah and Korgaonkar, 1988; Jasper and Ouellette, 1994; Choi and Lee, 2003). This diversity of research in the area warrants a clearer specification of the construct’s boundaries. A profound discussion of the notion of (perceived) risk goes beyond the scope of this research, however more detailed insights may be obtained in Dowling, 1986). For the purpose of this work, we take on the insights described in this section.

considered to be riskier than product purchases. In fact, it is not possible to experience services before the consumption (Murray 1991). Consistent with this idea, for example, Frieden and Goldsmith (1989) contend that the purchase of professional services is higher in perceived risk than that of products. In these type of services, assessment is hampered by service intangibility and variability, the lack of warranties and guarantees, and their technical nature.

In order to deal with perceived risk, consumers resort to risk reducers such as information search. The following section will focus on this aspect.

Information search

Risk is particularly relevant in the alternative evaluation stage of decision-making, being an aspect consumers try to reduce to acceptable levels (Blackwell et al., 2006). In general, research has shown that the higher the level of perceived risk, the more complicated is the buying situation for the consumer. Similarly, the higher the involvement with the purchase, the higher the product's perceived risk (Dowling, 1986; Dowling & Staelin, 1994; Mitchell, 1999).

In order to reduce risk perception, consumers employ strategies such as information search, service provider reputation, visit service facilities, talk to employees, check internet to compare service settings, etc... (Lovelock 2001). Consequently, information search is considered as a means used by consumers to reduce uncertainty and perceived risk (Urbany et al. 1989; Cox 1967). In general, the higher the degree of perceived risk, the higher the tendency to look for information about a service (Murray 1991).

Therefore, consumer's information search constitutes a key element of consumer decision models (Beatty and Smith, 1987). It is the process undertaken by consumers to acquire information and identify possible solutions for their problem. Information search can be internal or external (Blackwell et al. 2006). *Internal search* is based on retrieving existing information in memory or knowledge from previous related experiences. *External search* is information search beyond one's memory and refers to collecting new information from a number of personal and non-personal sources. External search occurs when internal search is not perceived as sufficient for a confident decision and whenever the benefits of the additional

information prevail over its costs (Bloch et al, 1986; Schmitt and Spreng, 1996). In particular, 1st-time buyers may frequently be uncertain about available alternatives. After the process of information search, the consumer should be able to identify a set of possible alternatives (the evoked set) for satisfying his/her need. Consumers also collect product-related information even when they are not planning to buy a product immediately (ongoing search) (Bloch et al. 1996).

There are 3 types of attributes that affect services' search behaviour: search attributes, experience attributes and credence attributes. *Search attributes* are the most tangible attributes and include those aspects that consumers can easily evaluate before the consumption/service delivery (e.g., tangible and physical dimensions). Credence attributes are the most intangible attributes which consumers may only assess long after the service has been delivered. Essentially, consumers rely on the trust they have on service performers (e.g., a medical surgery). For example, the search for a HEI, may be quite high in credence attributes as, only long after the service delivery, students are able to assess their education and whether it has positively contributed to their lives/careers. In between the two types of attributes are the *experience attributes*. Experience attributes are essentially assessed during service delivery and/or immediately after. It is difficult to evaluate experience attributes prior to service delivery. Experience and credence attributes tend to be more people- than equipment-dependent (Kasper, 2006). In credence/experience-based services consumers tend to engage in more information acquisition activities (Mitra et al., 1999).

The information search process depends on the importance of satisfying the need, familiarity with available solutions and the amount of time available for the search. Kiel and Layton (1981) refer to 3 aspects for information seeking: (1) sources of information; (2) number of brands and (3) time. The next section addresses issues related to sources of information.

Sources of information

Consumers resort to different types of information sources, which can be broadly classified as internal and external (Murray, 1991). Beatty and Smith (1987) propose the following typology of external information sources: media, retailer, interpersonal and neutral. Olshavsky and Wymer (1995) classify sources as marketer controlled (e.g., advertising);

reseller information (e.g., catalogues); third-party independent (e.g., consumer reports); interpersonal sources (e.g., relations); by direct inspection of the good by the consumer.

Information search effort is related to perceived risk levels (Murray, 1991). In fact, consumers tend to collect more information when faced with higher priced, more visible and more complex product purchases (Beatty and Smith, 1987). Thus, as perceived risk levels increase, consumers' trial ability and direct observation tend to be privileged by consumers (Lutz and Reilly, 1973).

The preference for information sources varies according to factors such as perceived risk, purchase involvement and type of product. In general, the greater the perceived risk, the greater the importance of interpersonal influences (Locander and Hermann 1979; Price and Feick, 1984). Consumers appear to use interpersonal sources primarily in situations in which perceived risk and uncertainty have not been sufficiently reduced by formal sources, and in which uncertainty and involvement justify seeking further information through informal sources (Cox, 1963; Murray 1991). Indeed word-of-mouth has been considered as the most relevant source for risk reduction since it allows elucidation and feedback. Furthermore, it has been argued that information from interpersonal sources plays a key role in decision making for products dominant in social aspects (Midgley, 1983).

Choice factors

Choice factors play a relevant role in the decision-making process as they constitute basic determinants for the final decision. Student choice of a higher education institution is influenced by a wide variety of choice factors: academic reputation, teaching quality, distance from home/proximity and location, influence of others (e.g., friends, parents), costs, potential marketability of the degree, employability/job prospects, quality of education, facilities; degree supply variety, (etc.) (Hoyt and Brown 1999; Briggs and Wilson 2007; Murphy, 1981; Webb, 1993; Kallio, 1995; Lin, 1997; Donnellan, 2002; Soutar and Turner, 2002; Shanka *et al.* 2005; Holdsworth and Nind 2005; Briggs and Wilson 2007).

Research design

This research followed a quantitative design. In order to identify student's perceptions about choice factors and information sources when applying to a HEI, a questionnaire was developed. The research instrument was pre-tested and refined in the previous 2 academic years. Data was collected in a Public University located in the Minho Province in the North of Portugal, hereafter referred to as the ABC University. The questionnaire was applied as a computer survey to students enrolling for the 1st time. Questionnaires were filled-in during registration. This allowed capturing students' perceptions shortly after the decision-making (similarly to Briggs and Wilson, 2007). The yielded sample includes 1641 respondents, corresponding to a 78% response rate.

The research instrument included 3 sections: (1) individual background information; (2) information sources; and, (3) choice factors. The first part covered demographics, academic aptitude, type of secondary school attended and field of study.

In what concerns the information sources' section, Olshavsky and Wymer's (1995) typology was followed. Thus the following groups were considered: (1) Marketer controlled – University brochures and leaflets; University website; University official guides; visits to secondary schools; (2) Third-party independent – secondary school counsellors; media/publicity; (3) Interpersonal – teachers; former/current university students; (4) By direct inspection of the good by the consumer – organised campus visits.

Based on previous research, the 3rd section included the following choice-factors: geographical proximity, academic reputation, guidance from vocational advisors/teachers; personal influences (family members and current university students) (Hoyt and Brown 1999; Briggs and Wilson 2007; Murphy, 1981; Webb, 1993; Kallio, 1995; Lin, 1997; Donnellan, 2002; Soutar and Turner, 2002; Shanka *et al.* 2005; Holdsworth and Nind 2005).

Data analysis at this exploratory stage consisted essentially of descriptive statistics using SPSS (Statistical Package for Social Sciences).

Findings

In Portugal, admissions to 1st degrees in HEIs are managed centrally by the Ministry of Science, Technology and Higher Education (MSTHE). Enrolment in the public higher education system is limited by government pre-specified vacancies for each institution (14 universities and 26 polytechnics). Candidates apply to up to six institutions and/or academic program by order of preference. Admissions are then allocated based on the applicants' relative performance and the number of available vacancies for each program. As referred earlier, data was collected in a Public University located in the Minho Province (North of Portugal).

The majority of respondents are female (54,8%) and the age range is mainly 17-19 years old (86,3%). The student's distribute across the following areas of study (n=1641): Arts and Humanities (10,7%); Health Studies (3,9%); Sciences (12,6%); Social Studies (29,6%); and, Engineering & Computer Sciences (33,3%). The great majority of students come from the Northern area of Portugal (91,7%) among which 71,4% are from the Minho Province.

Respondents, predominantly, chose this University as their first choice (76,3%). Moreover, the majority selected the degree for which they applied to as their 1st choice as well (53,5%). These results constitute an important indicator of the ABC University's reputation.

Sources of information

One of the main drivers of this research is to outline some of the sources of information that students use when evaluating which HEI to attend. Information sources' relevance and individual factors are now considered in more detail.

Respondents were inquired about their overall assessment of the available information. The great majority of the respondents reported a positive opinion (85%) regarding the quantity and the quality of the information about the ABC University and its offers. Moreover, 92,8% of respondents stated no difficulty in obtaining information about this institution.

Additionally, respondents were asked to indicate the 3 most important information sources they used. Table 1 summarises the results. 'University website' is considered the most important source by 41% of the respondents and is highlighted as one of the three most

significant sources by 81% of respondents. Students seem to resort less to other marketer-controlled sources namely ‘University brochures and leaflets’ (6% ranked as most relevant; 23% selected one of the three most important); ‘University official guides’ (6% and 24% respectively); ‘promotional visits to secondary schools’ (4% and 12% respectively).

Interpersonal sources also play a significant role. ‘Former/current ABC University students’ are the second most important source of information. It was rated as the number one source by 19% of respondents and considered among the three most important by 59%. In addition ‘Teachers’ were selected as the most important source by 11% of responses and a total of 30% included this source among the three most relevant.

The third-party independent information sources incorporated in the study were ‘secondary school counsellors’ and ‘media/publicity’. These were ranked as the most important source by 6% of respondents and as one of the three most important sources by 23%.

Finally, the direct inspection of the goods through ‘organised campus visits’ was considered most important by only 2% of respondents. This may be explained by the fact that not all prospective students have the opportunity to participate in tours to the university facilities.

Table 1: Relevance of information sources

Importance ranking	1st		2nd		3rd		Total	
Secondary school counsellors	65	4,0%	61	3,7%	66	4,0%	192	11,7%
Teachers	173	10,5%	161	9,8%	164	10,0%	498	30,3%
University brochures and leaflets	101	6,2%	134	8,2%	138	8,4%	373	22,7%
University website	678	41,3%	395	24,1%	255	15,5%	1328	80,9%
Promotional visits to secondary schools	58	3,5%	80	4,9%	58	3,5%	196	11,9%
Organised campus visits	38	2,3%	67	4,1%	58	3,5%	163	9,9%
University official guides;	99	6,0%	162	9,9%	127	7,7%	388	23,6%
Former/current ABC Univ. students	309	18,8%	373	22,7%	280	17,1%	962	58,6%
Media/publicity	32	2,0%	56	3,4%	99	6,0%	187	11,3%
Others	36	2,2%	29	1,8%	46	2,8%	111	6,7%
Non-response	52	3,2%	123	7,5%	350	21,3%	525	31,9%

Choice factors

This research also aimed at identifying the choice factors which underpin applicants' decision for a HEI. The following choice-factors were highlighted: geographical proximity, academic reputation – university; academic reputation – degree, guidance from vocational advisors/teachers; personal influences - family influences; and personal influences – current university students. Table 1 summarises the results obtained for these factors.

Table 1: HEI Choice Factors

Importance ranking	1st		2nd		3rd		Total	
Geographical proximity	747	45,5%	218	13,3%	265	16,1%	1230	74,9%
Academic reputation – University	402	24,5%	653	39,8%	258	15,7%	1313	80,0%
Academic reputation – Degree	255	15,5%	327	19,9%	286	17,4%	868	52,8%
Guidance from vocational advisors	13	0,8%	18	1,1%	26	1,6%	57	3,4%
Guidance from teachers	31	1,9%	58	3,5%	77	4,7%	166	10,1%
Current ABC Univ. students' influence	79	4,8%	143	8,7%	223	13,6%	445	27,1%
Family influences	48	2,9%	96	5,9%	217	13,2%	361	21,9%
Other	24	1,5%	22	1,3%	30	1,8%	76	4,6%
Non-response	42	2,6%	106	6,5%	259	15,8%	407	24,8%

Findings show that 'geographical proximity' is the most important choice factor for a HEI. Indeed, nearly half of the respondents consider this as the utmost important factor. An additional relevant factor relates to the 'academic reputation' for both the university and the degree, which is highlighted by 41% of the respondents. Interestingly when analysing the total percentages for the three most important choice factors described, a slightly different rank order comes forward. 'Academic reputation' emerges as the most indicated factor (80%) followed by 'geographical proximity' (75%).

The influence of others is an additional choice-factor identified in the literature (Briggs and Wilson 2007). This research uncovers personal influences (family/current ABC University students) as the most important choice factor for 8% of the respondents. In addition guidance, from vocational advisors/teachers is the most relevant factor for 2,7% of the applicants. This corroborates the relevance of opinion leaders underlined in the marketing literature.

Finally, also highlighted on the ‘other’ choice factors were expected employability and programme availability. The latter aspect is included in Vrontis *et al.*’s (2007) model as a HEI characteristic that ought to be considered for understanding students’ choice.

Discussion and Conclusions

This research attempted to contribute to a deeper understanding of the information sources and choice factors that enlighten decision making for HEIs. Regarding the information sources, results show the importance of internet as a key source of information for prospective students. Previous studies have evidenced this fact. Briggs and Wilson (2007) reported the growing importance of website as an information source for University applicants. In general, the impact of internet in information search is a consumer behaviour phenomenon that warrants further inquiry (Peterson and Merino 2003).

Choosing which HEI is a high perceived risk decision, given the long-term implications it has in students’ lives and careers. As stated by Briggs and Wilson (2007:61) “Decisions are based on a combination of information available, word of mouth, perceptions and reputation”. Prospective students actively engage in information search. In addition to formal sources they seek advice from social networks (e.g., friends/acquaintances, teachers) and from counsellors (Briggs and Wilson 2007). The importance of interpersonal sources has been previously acknowledged for high perceived risk decisions, as a complement for formal sources (Murray 1991). This is corroborated by this study’s findings as ‘former/current ABC University students’ and ‘teachers’ constituted respectively the second and third most relevant choice factor.

When addressing the choice factors, ‘geographical proximity’ is the most important aspect. This is in line with previous research that identified proximity a relevant choice factor (Webb 1993; Kallio 1995; Shanka *et al.* 2005; Holdsworth and Nind 2005; Briggs and Wilson 2007; Christie, 2007; Roszkowski & Reilly, 2005; Hoyt & Brown 1999; Raposo *et al.* 2007). This is also corroborated by the fact that most respondents are originally from the northern region, where the University is located. A possible explanation for this finding, is the tendency for HEI applicants to privilege close to home locations mainly for economic reasons (Hoyt & Brown 1999; Christie, 2007; Roszkowski & Reilly, 2005). Education costs have risen

considerably during the last decade. In addition, more young people borne their own education costs. Consequently, they try to cut down expenses (tuition and living expensed) by staying at home. Research also showed that students' emotional attachment to family and friends increases their fondness to study close to home (Christie, 2007).

Academic reputation, for both the university and the degree, is the second most relevant choice factor. Briggs and Wilson's (2007) investigation rated academic reputation as the most relevant student-choice factor in two consecutive academic years. Conversely, in Hoyt and Brown's study (1999) academic reputation was not included in the top-ten choice factors.

Implications, limitations and future research

For a long time, especially for a handful of degrees, students competed for vacancies in Universities. As the number of 1st degree students declines (for demographical reasons) and public sources for higher education funding decreases, universities face the challenge for cutting down costs and filling in the vacancies. Recently, the system has been undergoing major transformation and rationalisation due to the Bolonha process. These changes intensified the competition among HEIs. In fact, this re-organization implied a reduction in the length of degrees and an extension of postgraduate programmes' portfolios. These programmes compete for recently graduated students as well as students who have ended their graduation under the former system. In such context, understanding how students collect and use information is of extreme importance for HEIs.

The information search stage of decision making stands for a noteworthy opportunity to influence consumers' choices. From a marketing management point of view, implications from this research may contribute to designing more effective marketing communication campaigns. For example, when scheming the promotional mix, HEIs' managers need to consider the internet as a key information source.

The fact that applicants tend to recur to current/former students for guidance has also important implications. A number of measures may improve students' satisfaction and, consequently, their role as communication channels. For example, in what concerns current students, internal marketing activities may enhance their identification with the institution. In

addition, reinforcing the liaison between the institution and former students through alumni associations and/or other instruments may also prove beneficial to this end.

The relevance of academic reputation as an elected choice factor, highlights the need for the development of value added pillars. These should guide the definition of adequate positioning and differentiation strategies. Branding may play a key role in such process. Effective communications (e.g., through Public Relations) should follow.

This study is not without limitations. The exploratory nature of the study consists in a descriptive approach to the data. Future research may explore determinants and outcomes of the information sources and choice factors. For example, explore the impact that individual factors (e.g., academic aptitude, field of study) may have on information search

This study was mainly concerned with the final stages of the university selection decision. Further insights are needed into an understanding of the framing of such decision. In fact, information search is an on-going process (Bloch et al. 1986). Very often deciding which HEI to apply to starts being considered by prospective students and families early in advance. Therefore, the longer-term perspective of on-going search may be a relevant issue in this particular buying decision.

References

- Bauer, Raymond A. (1960) Consumer behavior as risk taking. *Dynamic Marketing for a Changing World - Proceedings of the 43rd Conference of the American Marketing Association*. R. S. Hancock. Chicago: American Marketing Association: 389-98.
- Beatty, S.E. and Smith, S.M. (1987) External search effort: an investigation across several product categories. *Journal of Consumer Research* 14 (June):83-95.
- Blackwell, R.D. Miniard, P.W. and Engel, J.F. (2006). *Consumer Behaviour*, Thomson Learning 10th edition.
- Bloch, P.H., Sherrell, D.L. and Ridgway, N.M.R. (1986) Consumer search: an extended framework. *Journal of Consumer Research* 13 (June):119-126.

- Briggs, S. and Wilson, A. (2007) Which university? A study of the influence of cost and information factors on scottish undergraduate choice. *Journal of Higher Education Policy and Management* 29 (1):57-72.
- Chapman, R. (1984) *Toward a theory of college search and choice behaviour*, University of Alberta Press, Canada.
- Cox, D. (1963), The audience as communicators, in *Towards Scientific Marketing, Proceedings of the Winter Conference of the American Marketing Association*, Greyser, S. ed. Chicago: American Marketing Association: 58-72.
- Cox, D. (1967) *Risk taking and information handling in consumer behavior*. Boston: Graduate School of Business administration, Harvard University Press.
- Christie, H. (2007), Higher education and spatial (im)mobility: non traditional students and living at home, *Higher Education* 39: 2445 – 2463
- Cunningham, S.M. (1967) The major dimensions of perceived risk. Cox, D., Ed. Boston: Graduate School of Business Administration, Harvard University: 82-108
- Donnellan, J. (2002) The impact of marketer controlled factors on college-choice decisions by students at a public research university. University of Massachusetts Amherst.
- Dowling, G.R. (1986) Perceived risk: The concept and its measurement. *Psychology and marketing* 3, 193-210.
- Dowling, G.R. and Staelin, R. (1994) A model of perceived risk and intended risk-handling activity. *Journal of Consumer Research* 21, 119-131.
- Frieden, J. B. and Goldsmith, R. E. (1989) Pre-purchase information-seeking for professional services, *Journal of Services Marketing* 3 (1) 45-55.
- Hanson, K. H., Litten, L. H. (1989) Mapping the road to academe: A review of research on women, men, and the college-selection process, *The undergraduate woman: issues in educational equity*, Perun, P. ed. Lexington Books, 73-98.
- Holdsworth, D. and Nind, D. (2005) Choice Modeling New Zealand High School Seniors Preferences for University Education . *Journal of Marketing for Higher Education* 15 (2):81-104.
- Hoover, R.J., Green, R.T. and Saegert, J. (1978) A cross-national study of perceived risk . *Journal of marketing* july, 102-108.

- Hossler, D., Schmit, J. and Vesper, N. (1999), *Going to college: how social, economic, and educational factors influence the decisions students make*, Johns Hopkins, Baltimore
- Hoyt, J. and Brown, A. (1999), *Marketing UVSC: How prospective students view the college*. Retrieved 9 October 15, 2008, from <http://www.uvsc.edu/ir/research/collegechoice5.pdf>
- Jackson, G. A. (1982), Public efficiency and private choice in higher education, *Education Evaluation Policy Analysis* 4 (2): 37-47.
- Jacoby, J., and L. Kaplan. (1972) The components of perceived risk. *Third Annual Convention of the Association for Consumer Research*. Ed. M. Venkatsen,. Ann Arbor, MI: Association for Consumer Research: 382-291.
- Kallio, R. (1995) Factors influencing the college choice decisions of graduate students. *Research in Higher Education* 36 (1):109-125.
- Kasper, H., Helsdingen, P., and Gabbott, M. (2006) *Services Marketing Management: A Strategic Perspective*, 2nd Edition, John Wiley & Sons Ltd, West Sussex.
- Kiel, G. and Layton, R. (1981) Dimensions of Consumer Information Seeking Behaviour, *Journal of Marketing Research*, 18 (May) 233-239.
- Lin, L. (1997) What are student education and educational related needs? *Marketing and Research Today* 25 (3):199-212.
- Locander, W. B. and Hermann, P. W. (1979) The effects of self-confidence and anxiety on information seeking in consumer risk reduction, *Journal of Marketing Research* 13 (May), 268-274.
- Lovelock, C., (2001) *Services Marketing - People, Technology, Strategy*, Prentice Hall, London.
- Lutz, R. and Reilly, P. (1973) An exploration of the effects of perceived social and performance risk on consumer information acquisition, in *Advances in Consumer Research*, 1, Ward, S and Wright, P., eds. Urbana, IL: Association for Consumer Research, 393-405.
- McColl-Kennedy, J.R. and Fetter Jr, R.E. (1999) Dimensions of consumer search behavior in services. *Journal of Services Marketing* 13 (3):242-265.
- Midgley, D. (1983) Patterns of Interpersonal information seeking for the purchase of a symbolic product, *Journal of Marketing Research*, 20 (Feb): 74-83.
- Mitchell, V.-W. (1992) Understanding consumers's behavior: Can perceived risk theory help?

Management decision 30: 26-31.

Mitchell, V.-W. (1999) Consumer perceived risk: conceptualisations and models. *European journal of marketing* 33: 163-195.

Mitra, K., Reiss, M.C. and Capella, L.M. (1999) An examination of perceived risk, information search and behavioral intentions in search, experience and credence services. *The journal of services marketing* 13: 208-228.

Moorthy, S., Ratchford, B. and Talukdar, D. (1997) Consumer Informations Search Revisited: Theory and Empirical Analysis, *Journal of Consumer Research*, 23 (March): 263-277.

Mourali, M., Laroche, M. and Pons, F. (2005) Antecedents of consumer relative preference for interpersonal information sources in pre-purchase search. *Journal of Consumer Behaviour* 4 (5):307-318.

Murphy, P. (1981) Consumer buying roles in college choice: parents' and students' perceptions. *College and University* 56 (2):140-150.

Murray, K.B. (1991) A test of services marketing theory: consumer information acquisition activities. *Journal of Marketing* 55 (Jan):10-25.

Newman, J. W. and Lockeman, B. D. (1975) Measuring prepurchase information seeking, *Journal of Consumer Research* 9 (August): 216-222.

Olshavsky. R. W. and Wymer, W. (1995) The desire for new information from external sources, *Proceedings of the Society for Consumer Psychology*:17-27.

Peterson, R. and Merino, M. (2003) Consumer information search behavior and the internet, *Psychology and Marketing*, 20 (2): 99-121.

Price, L. and Feick, L. (1984), The role of interpersonal sources in external search: An informational perspective, in *Advances in Consumer Research*, vol 11, Kinnear, T. ed. , Provo, UT, Association for Consumer Research: 250-255.

Punj, G. and Staelin, R. (1983) A model of consumer information search behavior for new automobiles. *Journal of Consumer Research* 9 366-380.

Punj, G.N. and Staelin, R. (1978) The choice process for graduate business schools. *Journal of Marketing Research* 615 (4):588-598.

Raposo, Mário; Aves, Helena; Duarte, Paulo (2007) A study of Higher Education Choice Factors: The case of University of Beira Interior. In *Proceedings of the 6th International*

Congress on Public and Non Profit Marketing, 14-15 June 2007, Braga, Portugal

Roselius, T. (1971) Consumer rankings of risk reduction methods. *Journal of Marketing* 35, 56-61.

Ross, I. (1975) Perceived risk and consumer behavior: A critical review. *Advances in Consumer Research* 2, 1-20.

Schaninger, C.M. (1976) Perceived risk and personality. *Journal of Consumer Research* 3, 95-100.

Schiffman, L. G. and Kanuk, L. L. (2000) *Consumer behavior*. Upper Saddle River, New Jersey: Prentice Hall.

Schmitt, J. B. and Spreng, R. A. (1996) A proposed model of external consumer information search, *Journal of the Academy of Marketing Science*, 24: 246-256.

Sewell, W. and Shah, V. (1978), Social class, parental encouragement, and educational aspirations, *American Journal of Sociology*, 73, 559-572.

Shanka, T., Quintal, V. and Taylor, R. (2005) Factors Influencing International Students' Choice of an Education Destination - A Correspondence Analysis. *Journal of Marketing for Higher Education* 15 (2):31-46.

Soutar, G. (2002) Students' preferences for university: a conjoint analysis . *The International Journal of Educational Management* 16 (1):40-45.

Stone, R.N. and Gronhaug, K. (1993) Perceived risk: further considerations for the marketing discipline. *European journal of marketing* 27, 39-50.

Stone, R.N. and Mason, J.B. (1995) Attitude and risk: Exploring the relationship. *Psychology and Marketing* 12, 135-153.

Taylor, J.W. (1974) The role of risk in consumer behavior. *Journal of marketing* 38, 54-60.

Urbany, J. E., Dickinson, P. R. and Wilkie, W. L. (1989) Buyer uncertainty and information search. *Journal of Consumer Research* 16: 208-15.

Vrontis, D., Thrassou, A. and Melanthiou (2007) A contemporary higher education student-choice model for develop countries. *Journal of Business Research* 60 (9):879-989.

Webb, M. (1992) Variables influencing graduate business students' college selections. *C & U Feature* (Fall 1992/1993):38-46.

West, J., Newell, S. and Titus, P. (2001) Comparing marketing and non-business students'

choice of academic field of study. *Marketing Education Review* 11 (2):76-82.