

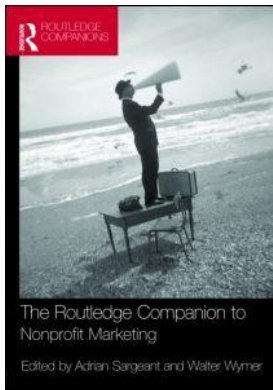
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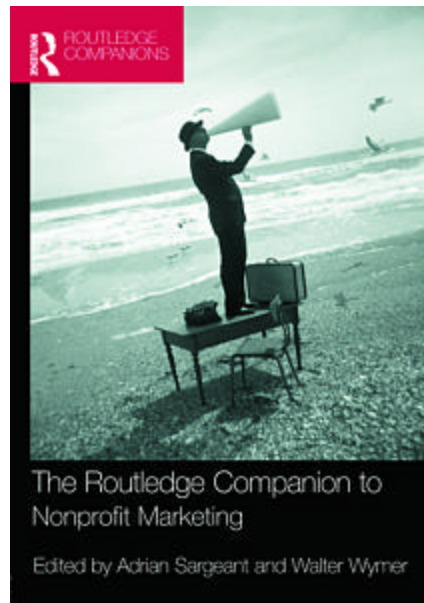
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Decision-making within higher education

Yvonne Moogan

Introduction

As higher education (HE) is rapidly shifting from being product driven to being market driven, it is becoming more crucial to understand the behaviour and actions of potential customers (prospective students). This is because the HE marketplace is operating within an increasingly competitive environment with many institutions all trying to attract the best possible candidates from a decreasing pool of potential students. This is partly due to changes in the structure of government funding, the introduction of tuition fees with a decline in the real value of maintenance grants and a fall in the birth rate.

The university selection (decision-making) process concerns the behaviour of potential students as they absorb, store and make rational decisions concerning the 'best' course to undertake and at the 'best' institution for them. However, with the complexities involved, the time and risk associated with making such choices, one would classify this decision-making as extensive problem-solving (Kotler and Armstrong 2007) or high involvement. By using all the information that is available, they will collect it, assess/analyse it, evaluate it and make the most optimal selection. Like most services, which are associated with higher levels of intangibility, simultaneity of production and consumption (Zeithaml 1981; Zeithaml *et al.* 1985), there is some element of risk but with university decision-making this is elevated even higher. This is because the majority of prospective HE students at undergraduate level are allowed to select a maximum of five institutions approximately a year in advance of the consumption process. This consideration set then has to be reduced to an evoked set of two institutions (firm offer and insurance offer) approximately six months later. As examinations do not take place until after both of these decision-making periods with the results not being known until several months later, there is much uncertainty involved. In addition, students do not have the opportunity to 'test drive' their future HE course, which may last between three and four years, hence the risk of making the wrong choice (with regard to the programme of study or the institution itself) is important, particularly as it can affect the students' lives in the foreseeable future. Consequently, potential HE students are making very important investment decisions which are of a long-term nature. Finally, annual tuition fees (introduced from September 2006) make it a costly experience if the outcome becomes unfavourable and again this increases the level of potential risk.

There is evidence that more pre-purchase information is being acquired by potential students and their parents in order to gain as much information as possible and that an increasing number of potential HE students are choosing a local institution whereby they stay at home and commute daily. Financial considerations are frequently the reason for staying at home to continue one's studies. Further investigation is needed since comprehension of the decisionmaking process by potential HE students is especially important for policy makers, marketers and institutions. For example, which attributes are viewed to be significant in deciding what to study and where to attend needs discussing. Then institutions can offer exactly what their customers are demanding and to a satisfactory level.

As universities are influenced by other factors, such as political decisions, economic conditions, the desirability of a degree and its value or even perceived value, they must be aware of the factors that influence students throughout the whole of the decision-making period so taking notice of the magnitude of change over time. For example, some attributes may become more or less important over time, meaning that some potential HE students may value these differently as they make their decisions. With the aid of conjoint analysis, research has been conducted on measuring the relative importance of the key decision-making variables over a fourteen-month period covering two academic school years. However, once the evoked set had been reached (two offers: the firm and insurance offer) no further research was performed, as the researcher left the participants before their examinations took place. Consequently research is limited to the pre-purchase stages only.

This chapter therefore examines the university selection decision-making process by drawing on and empirically testing ideas from the broader literature on consumer behaviour and service marketing with a discussion of the influential characteristics of HE institutions and the decision-making variables. By tracking potential HE students over the long period and measuring the attributes at different periods in time (from problem recognition to the pre-purchase stage) this piece of research is relatively unique.

The literature

Problem recognition is where a gap exists between the ideal state and the actual state. The ideal state refers to the position consumers would like to be in and the actual state is the consumer's current perception of their present situation. Consumers must therefore decide whether to proceed and consume a product/service in order to fill this gap, or not. The larger the disparity between these two states with the greater the level of enthusiasm, capability and opportunity, then the more likely the consumer will act. With regard to potential HE students, they will first have to decide whether or not they wish to continue studying with HE only being a possible option if it appears to be worthwhile to them. For instance, they may decide to enter a particular profession which demands a university education or to have a career with a decent salary or they may even choose to work instead and not enter the decision-making process at all. If they plan to continue studying, they will then move into the second stage of information search whereby searching for university information will occur.

During this stage, consumers may search for information internally from within their memory (from past experience) and/or externally from outside. However, the majority of potential HE students will have little or no experience of higher education, so in order to make the best possible choice they will research the 'educational market' by whatever means present. As they may not have a well-defined choice criteria nor any knowledge of the brands available they may utilize

marketing literature such as prospectuses, UCAS guidebooks, electronic

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sources of information, or they may consult informative personnel such as subject teachers, careers officers, friends and family (Moogan *et al.* 1999). Parental pressure can exert considerable effect upon potential HE students' awareness and this can be especially lacking within 'deprived' areas (Moogan and Baron 2003) where there can be little supportive guidance or influence in general. With all service decision-making, perfect information is often lacking and education in particular, which is an extremely pure and intangible service, is even more difficult to gain full knowledge on. Word of mouth can therefore be especially useful in such circumstances and, as with most services, personal recommendation is particularly important where the source is trustworthy.

After each 'brand' is searched, the consumer must then decide if he/she is going to continue further. If he/she ceases searching, he/she will choose the brand with the maximum utility (value) to date with the selected brand being viewed as superior. However, should the consumer wish to carry on searching, he/she must select the next brand to be searched, pay the unit cost of doing so and wait for the result (Moorty *et al.* 1997). During this stage potential HE students may consider some options as being suitable, while ignoring others which are deemed to be inappropriate. Evidence does show that consumers can make mistakes, especially if there is information overload or if it is difficult to obtain relevant information in the first place. If perfect knowledge did exist, potential HE students would keep the most suitable institutions in their choice set and disregard those which are unknown or inappropriate to them.

The potential HE student now progresses to evaluate the alternatives present. Through the potential HE student assessing various institutions' characteristics and by visiting them to learn about their environments, the student will learn about the competing sets of brands and their features. This is referred to as the buyer's evoked set. He/she will allocate a level of importance to each alternative which will be affected by individual differences (such as proximity to home) as well as environmental differences. Student characteristics such as socio-economic factors and level of aptitude together with influence from significant personnel (teachers and family) can also impact during this stage (Moogan and Baron 2003).

Previous research by the author showed that selecting a university is a complex procedure due to its high level of involvement and the uncertainty incurred. Nevertheless, potential students did stress that course specifics (content, structure, method of assessment of the degree programme) was the most popularly stated variable, followed by location (distance from home, rural/urban place, atmosphere of the campus, facilities of the city/town of the university) and then reputation (league tables, recognized name or department, 'old' red-brick universities in comparison to 'new' universities) of the institution (Moogan *et al.* 1999). Further research on another and very different sample of potential HE students (containing a variety of ethnic backgrounds) was asked the same question: 'what criteria are you using in deciding which university to consider?', and again they included the same three variables of course content, location and reputation (Moogan *et al.* 2001). Research work may highlight the key university decision-making attributes affecting student choice to be course content, location and reputation, but work performed in this area relates to these in absolute terms only. Consequently potential HE students may trade one attribute for another with some being willing to choose an ideal programme of study (more relevant, interesting or better structure) at a highly reputable institution (well established), in exchange for a less favourable location (too far away from home or too close, too urban or too rural).

Interestingly, student choice environments can be affected by the existing alternative brands, the format and layout of information with the number of attributes which characterize the institution. Decision effectiveness is also affected by the quality of information (usefulness to

the consumer) and the quantity of information (number of items describing the alternative) (Keller and Stealin 1987). Consequently, like most consumers involved in extensive or highinvolvement decision-making, the potential student is faced with a huge amount of data leading to a rather daunting processing task, unless he/she decides to employ simplifying heuristics. Heuristics are what Coupey (1994:83–99) terms ‘as short-cuts retrieved from memory, for acquiring and evaluating information’ and by simplifying the task at hand, (for example, using an elimination procedure) these ‘rules of thumb’ will reduce the information load on memory. This is particularly essential with services. According to Blythe and Buckky (1997) there are three types of heuristics: search heuristics (rules developed for finding information); evaluation heuristics (judging of the product/service); and choice heuristics (comparing the alternatives). In the case of potential HE students searching for information and making those decisions, the Internet is becoming increasingly popular in gathering data efficiently, with parents being more involved throughout the whole process of contrasting and comparing the alternatives due to the complexities (personal risk and financial risk) concerned. As parents increasingly have to support their offspring with the multitude of fees and costs associated with HE, they tend to take a more interactive role.

Purchasing a service can be complicated which is why consumers may be described as ‘cognitive misers’ exerting as little remembering effort as possible and retrieving just enough information to complete the task (Costley and Brucks 1992). Evidence does show that people have restricted limits to the amount of information they process during a given amount of time which if they go beyond, overload will occur (Jacoby 1984; Malhotra *et al.* 1983). This is probably more so with potential HE students who are at relatively young and inexperienced phases of their lives yet making investment decisions from a huge array of possible institutions and other options available to them.

The application of conjoint analysis

By making a trade-off judgement (having more of one characteristic, but less of another) on a hypothetical product/service, consumers will examine the good and the bad features of the product/service in order to construct a preference (Herrmann and Huber 1997; Ostrom and Iacobucci 1995). Much conjoint work has been performed in the area of consumer goods and in particular services but the researcher is not aware of performance in the HE sector. Conjoint analysis allows the assessment of preferences from individual buyers through measuring the relative impact of each of the components contributing to those preferences. They can be employed to stimulate a variety of market scenarios and to make market share predictions across a complete latitude of service characteristics, both at individual and aggregate levels. While conjoint analysis retains a large amount of realism, it allows the researcher to perceive the composition of consumer preferences. The great advantage of this tool is that the respondent is providing very sensitive information which can often uncover many hidden traits such as which attribute is considered to be of prime importance and why. According to Aaker *et al.* (1996), conjoint analysis has two main objectives: the first motivation is that of prediction and the second is that of understanding relationships.

By attempting to measure the relative weightings of key variables or attributes it may be better to understand potential HE students’ decisions, especially as they may move from being ‘novices’ to becoming more informed ‘experts’, and marketers need to recognize that their efforts will have to adapt to the current situation. For example, there are two critical points in time: the initial selection of the five institutions followed by the later choice of the evoked set to

just two institutions. If the relative importance of the choice attributes differs at these points in time, institutions' marketing efforts need to reflect this difference.

It needs to be noted that there are a few problems associated with the practical application of conjoint analysis. First, selecting the relevant attributes which are to be included in the model in the first instance can be difficult, although the investigation of secondary data with subsequent primary research can provide realistic and relevant attributes to be considered. Second, it is essential that the respondents can absorb a large volume of facts/information, so comprehending the various scenarios and yet avoiding any boredom or fatigue. Despite the full-profile procedure requiring complete cooperation and attention from the respondent, with good interviewer techniques, it is possible to administer it successfully. Consequently, the researcher invested much time and effort throughout the fourteen-month period but more so at the onset of the research.

The objectives

The three key variables (course content, location and reputation) selected for the conjoint analysis exercise will create a scenario which will establish trade-offs which potential HE students will exchange when selecting their chosen universities. The researcher met with the potential HE students from a high school (11 to 18 year olds) fortnightly over a period of fourteen months during their free-study periods, as they progressed from lower sixth form (first year of college) into upper sixth form (second and final year of college). Again, focus groups and individual interviews together with the delivery of two separate conjoint questionnaires were the methods of data collection. The researcher was able to follow the pupils throughout the various decision-making processes (from first realizing that HE existed, to deciding which two institutions to keep in their evoked set), so identifying any movements in pupils' intentions and assessing any variations over time.

By performing a conjoint test on a longitudinal basis, differences can be investigated and recommendations given to personnel regarding their recruitment policies and in particular the timing of these programmes. By using a relatively small sample size ($n=37$), not only could the researcher establish a personal relationship with all individuals, but anticipate more easily any problems with regard to pupil participation. Seeing the pupils every two weeks over the fourteen months allowed the researcher to obtain in-depth understandings as to each respondent's current developments. As a starting point, those pupils who were not planning on attending university were immediately eliminated from the sample. The profile of the sample is shown in Table 16.1.

All (thirty-seven) pupils at the high school agreed to participate in the study, but only those (thirty-two) planning to enter HE were eligible, so comprising a high response rate (86 per cent). With the exception of two pupils who left before the end of the study, the researcher maintained direct contact with all of the respondents.

Table 16.1 Profile of the sample group (Project One)

	<i>Male</i>		<i>Female</i>		
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	
(Stages 1 and 2)	10	31	22	69	
(Stage 3)		9	30	21	70

Methodology

The first visit (stage 1) occurred when all the pupils were searching through UCAS guidebooks and prospectuses, as well as having compulsory careers meetings during the summer term. (There is a school policy that all pupils must speak with a careers officer towards the end of the lower sixth form.) At this point in time, none of the pupils had attended any university open days individually, although they had visited some university information sessions, as attended by the sixth form college as a whole. During stage 1, potential HE students were informally interviewed prior to the focus group sessions with an aim to developing an affiliation with them. The focus sessions comprised two to four pupils and conversations were tape-recorded. The researcher tried to build the relationship with each individual so that further visits would be informal and friendly. Although the first questionnaire (general questions) helped to create a structured interview, the questions were open-ended in order to encourage unrestricted discussions. Comments were noted during all sessions and documented immediately afterwards. Subsequent visits incorporated the gathering of conjoint data (conjoint questionnaire) via individual interviews with the researcher. Again, prior to each meeting, an update and informal chat took place. An example of the first page only of the questionnaire can be seen in Table 16.2.

The model

A simple regression model using dummy variables was employed to administer the conjoint procedure. All the pupils were individually asked to rate the key variables of *location*, *reputation* and *course content*, for the three levels of: 'worse/less than what they wanted', 'exactly/equal to what they wanted' and 'greater/better than' what they wanted, with regard to their HE choices. This created twenty-seven possible profiles ($3 \times 3 \times 3$) each varying from a minimum value of 1 (least likely to attend – 'worse than what you wanted') to a maximum value of 7 (definitely likely to attend – 'greater than what you wanted'). Hence the dependent variable is the intention to attend a particular university. The 'conjoint' questionnaire therefore incorporated the full profile method. Using Microsoft Excel, parameters for each beta value (b1 to b6) were totalled and averaged to be obtained in aggregate (Table 16.3). Given the dummy variable coding in which level three is the base rate, these coefficients were related to the

Table 16.2 First page of the questionnaire used

If university location was what you expected (equal) how likely would you be to attend, if ...

	<i>Less</i>						<i>High</i>
	1	2	3	4	5	6	7
Reputation & Course were both less than what you wanted?							
Reputation & Course were both equal ...							
Reputation & Course were both better ...							
Reputation was less but Course was better ...							
Reputation was less but Course was exactly ...							

Reputation was exactly but Course was less ...

Reputation was exactly but Course better ...

Reputation was better but Course exactly ...

Reputation was better but Course was less ...

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part-worths. These were then placed in simultaneous equations and values to be assigned to each attribute's levels were ultimately calculated. These part-worths (Table 16.4) symbolize the utility (level of preference) that respondents will attach to the attribute levels of location, reputation and course specifics/content. The final result of conjoint analysis (Table 16.6) consisted of the relative importance weights in terms of percentages, which have been used to construct the stimuli (course specifics, location and reputation) that the pupils have evaluated in terms of desirability. These importance weights highlighted which attributes were most significant and important in affecting student decision-making.

The second visit, pre-open day (stage 2) took place in the autumn term of the upper sixth form (September to November). With a view to obtaining the current position of each pupil's progress, detailed yet informal meetings were held before the main interviews and remarks were recorded. The majority of pupils were still deciding either what course to study or where to apply to, although a few had already submitted their UCAS forms prior to the college deadline of 21 October. Again pupils had yet to attend university open days individually. The sample size remained the same at thirty-two. Since the questionnaire involved complicated trade-off scenarios with pupils ranking the twenty-seven stimuli (course content, location and reputation) in terms of suitability, it was performed in the presence of the interviewer. Consequently the interviewer related each of the respondents' individual circumstances to the various questions. Introducing some realism into each pupil's scenario helped to accentuate levels of understanding. For verification purposes, each pupil signed their own questionnaire upon completion.

The third visit, post-open day (stage 3) occurred in the final summer term (April to May) prior to the pupils' A-level examinations. Since the last stage, all pupils had attended interviews and/or open days for some or all of their UCAS choices. Two pupils had also left the sixth form college during the last six months. Consequently, the sample size decreased to thirty (81 per cent) pupils. The process from the previous visit was repeated with the same questionnaire being administered, on a one-to-one basis in the presence of the interviewer. Again in order to elevate the level of understanding, a recap discussion occurred with the interviewer relating the respondent's most recent circumstances to the tasks at hand. Pupils were not allowed to see their previously completed questionnaires from stage 2.

Findings

The values from the respondents of both stage 2 (thirty-two pupils) and stage 3 (thirty pupils) were aggregated and then averaged for the pre-open day (autumn 1997) and post-open day (spring/summer 1998) periods respectively. The results were analysed mathematically (Tables 16.3 to 16.6) and are presented graphically (Figures 16.1 and 16.2).

Stage 1

These initial and introductory sessions seemed to highlight that most pupils were uncertain of which university to choose with many showing limited knowledge about the institutions' reputations. Only a few were more concerned in attending an institution with a good reputation and this was often dictated by their parents. Consequently, many viewed reputation according to the necessary entrance grades and whether or not an interview was compulsory. The pupils did, however, have predetermined ideas of what courses to undertake and the subjects that they were generally interested in studying at degree level. The majority (84 per

Table 16.3 Aggregate average beta results

<i>Beta values</i>		
	<i>Stage 2: Pre-open day</i>	<i>Stage 3: Post-open day</i>
b1	- 1.63	- 2.60
b2	- 0.28	- 1.10
b3	- 1.36	- 1.07
b4	- 0.59	- 0.71
b5	- 2.74	- 2.23
b6	- 0.89	- 1.06

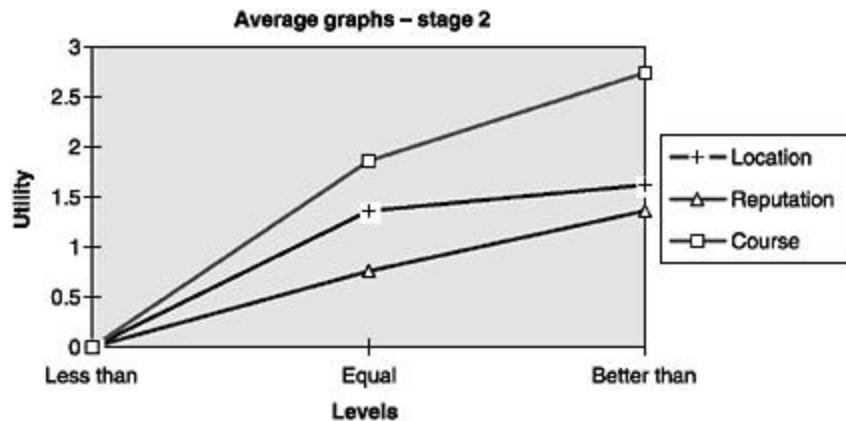


Figure 16.1 Pre-open day (stage 2)

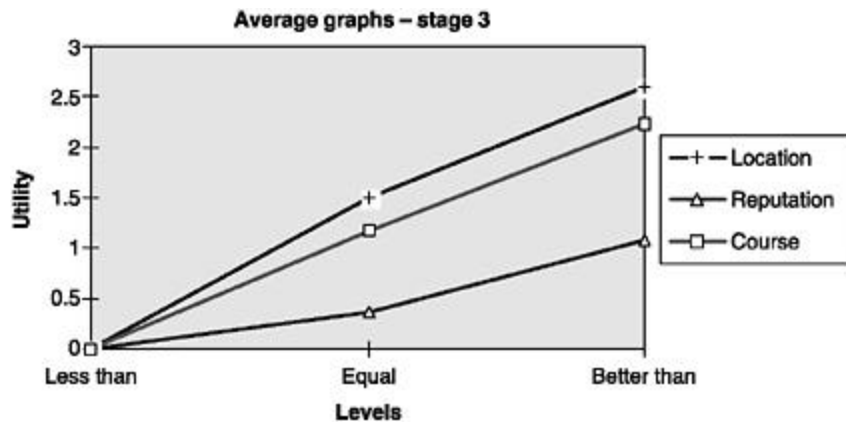


Figure 16.2 Post-open day (stage 3)

cent) wanted to participate on a degree programme similar to that of their current studies. Course content was rated most frequently in terms of the selection criteria being employed. Although social factors (big city, night life, clubs, bars, and so on) were formally recorded from previous research work, prior responses do confirm the present sample's replies in that course specifics was still the most popular variable.

Over two-thirds of the pupils (69 per cent) had made up their minds to leave home, with 31 per cent wishing to stay at home and commute daily. Of the 69 per cent, ten pupils (31 per cent) stated the requirement of remaining fairly close to their parents' house, either within a one-hundred-mile vicinity or less than two hours' drive away, but twelve pupils (38 per cent) did not consider distance from home to be an issue. Many of the respondents holding general views of their interests in programmes of study with possible places to attend, were wholly undecided as to their futures in HE. Despite the pupils finding the university information sessions/days to be useful, none of the thirty-two pupils had definite consideration sets at this stage. Nevertheless, there were still over two months remaining before the pupils would have to start applying through UCAS, upon their return from the summer break.

Stage 2 (pre-open day)

Five months later into the research project, pupils were in the process of selecting their choices via UCAS. The graph in Figure 16.1 shows a rapid increase in utility for the attribute course content at all three levels ('A11 = less than what you want', 'A12 = equal to what you want' or 'A13 = greater than what you want'), a steady rise for the attribute reputation and an initial increase but gradual levelling out for the attribute location. There is little difference between 'equal to' and 'better than' for this latter attribute. Consequently, as long as location is at least 'equal to' in the scenario, pupils are still willing to attend. The level of 'better than' only then becomes marginally more attractive. In contrast, course content and reputation become substantially more preferred, as the curves increase from the level of 'equal to' until the level of 'better than'.

Table 16.4 (part-worths), for example, shows respondents at stage 2 having a greatest preference at 'A13' and 'A23' and 'A33' (better than what one expects) for all of the attributes, location (0.64), reputation (0.65) and course content (1.21) respectively. Therefore pupils wish to obtain entry into the most reputable institution, on to the best programme of study in the most ideal place.

Table 16.4 Aggregate average part-worths for all attributes

<i>Part-worth values</i>	<i>Stage 2 (1997) (pre-open day)</i>	<i>Stage 3 (1998) (post-open day)</i>	<i>% Change</i>
Location:			
A11	- 0.99	- 1.37	38
A12	+0.36	+0.14	62
A13	+0.64	+1.23	94
Reputation:			
A21	- 0.71	- 0.48	32.5
A22	+0.06	- 0.12	101
A23	+0.65	+0.60	8
Course content:			
A31	- 1.53	- 1.13	26
A32	+0.33	+0.03	90
A33	+1.21	+1.10	9

Stage 3 (post-open day)

Eleven months on into the research study, pupils were now in the process of selecting their two conditional offers to retain for UCAS. The majority were currently justifying their two conditional choices via their UCAS form and the minority were still in the process of visiting university departments for interviews and/or attending open days. Figure 16.2 illustrates graphically the difference between the utilities at 'less than' and 'equal to' for each of the attributes being smaller in stage 3, when compared to that of stage 2, with the exception of the attribute location which rises at an accelerating rate above the curves of course content and reputation.

Table 16.4 (part-worths) shows for stage 3, that the greatest preferences are again at 'A13' and 'A23' and 'A33' for all of the attributes location (1.23), reputation (0.60) and course content (1.1). The highest part-worth values in stage 2 belong to course content (1.21), yet in stage 3 it belongs to location (1.23). The final column showing percentage change calculates the movement from stage 2 (pre-open day) to stage 3 (post-open day). Hence the largest change for location is 94 per cent (from A12 to A13), for reputation it is 101 per cent (from A21 to A22) and course content is 90 per cent (from A31 to A32).

Table 16.5 includes the average utility values (levels of satisfaction) in stages 2 and 3 at 'better than' for all the attributes, location (1.63 and 2.60), reputation (1.36 and 1.07) and finally course content (2.74 and 2.23). Hence it shows mathematically, that at a level of 'equal to', the attribute of location has a lower utility value (1.35) in stage 2 (pre-open day), than in stage 3 (1.51) after the open day. However, the difference in utility from 'equal to' until 'greater than' for location, rises substantially from (1.63) stage 2 to (2.6) stage 3. The variable of location seems to have become a more important consideration in these later days prior to leaving school. Pupils, having seen the location (distance from home, the logistics of returning home, type of environment the university is in – conurbation/rural – and so on) aspect of the institution through attending open days or interviews, obtain a 'feel' for what they want. If the place is viewed to be unsuitable, they will prefer to go elsewhere, especially if their chosen degree programme is similar at an alternative institution. Although course content remains predominantly essential throughout stage 2, it is overtaken by location in stage 3, as the pupils are approaching the final steps of the decision-making process.

Table 16.6 shows location and course content in stage 2, having a relative importance of 28.4 per cent and 47.9 per cent respectively. In stage 3, location becomes more influential and the relative importance increases to 44.1 per cent, with course content becoming less preferable and decreasing to 37.7 per cent.

Table 16.5 Aggregate average utility values for all attributes

<i>Attribute levels</i>	<i>Stage 2 (pre-open day)</i>	<i>Stage 3 (post-open day)</i>
Location:	'Less than'	0
	'Equal to'	1.35
	'Better than'	1.63
Reputation:	'Less than'	0
	'Equal to'	0.77
	'Better than'	1.36
Course content:	'Less than'	0

'Equal to'	1.85	1.16
'Better than'	2.74	2.23

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Table 16.6 Aggregate average relative importance for all attributes (as percentages)

<i>Attributes</i>	<i>Stage 2 (1997) (pre-open day)</i>	<i>Stage 3 (1998) (post-open day)</i>
Location	28.4	44.1
Reputation	23.7	18.2
Course content	47.9	37.7

Discussion

There seemed to be two main clusters developing: first, those pupils wanting to remain at home and attend an institution locally started to prioritize according to the location (distance from home) of the university, followed by the courses on offer. Second, and in contrast, those wishing to study away from home looked at all the possible courses first and then the location (geographic place, type of campus – city/rural – local attractions, and so on) of where these programmes were available. Location was therefore viewed differently for each cluster. Since the majority of pupils were choosing degree courses similar to their present A-level studies, they carefully analysed the structure of the degree course and the content of the modules, looking at the methods of assessment, and so on. Reputation seemed to be determined by the perception of entry grades or by tutors stating particular institutions ('old' universities) offering certain courses (usually where they attended as a student) as being superior. 'New' universities (established post-1992) were viewed to offer more degrees relevant to industry with modern ideas and updated resources. Reputation was considered to be lower at 'new' universities compared to 'old' universities, but this did not affect the majority of potential HE students from applying.

When in the process of choosing their five options for UCAS (stage 2), pupils viewed the degree programme (course content) as being of prime importance. This was their starting point in the decision-making process. However, eleven months later (stage 3), pupils seemed to be using other variables to justify their strategies of eliminating their alternatives, into their chosen two. During this period, students are corresponding with institutions, discussing matters with teachers and friends, as well as visiting universities to see for themselves what the environment and the location is like. Location therefore becomes more important as time passes with location during the pre-open day being categorized as distance from home with a rural or urban site but during the post-open day it is assessed for its city attractions with night life and shops. Consequently, many pupils valued the importance of attending university open days, particularly with regard to obtaining first impressions such as the campus layout or the general social scene of the university. Matching requests for such information besides communicating knowledge on the content of the degree programme is what potential students want. Therefore open days that were well organized, informative, pleasurable, yet covering such topics of interest, helped students to make their selections more easily. Consequently, upon deciding which two institutions to retain on their UCAS forms, pupils regarded the social atmosphere of the campus, the entry grades and in particular the university's location to be the domineering factors.

Since the potential student decision-making process is complicated and long, it was suggested that the relative weights given to the key attributes may alter over the extended period and this should be reflected in the marketing strategies of the

institutions.

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Conclusion

The conjoint work (Figures 16.1 and 16.2) clearly shows an increase in importance of the variable location over the period of study. Location seemed to be categorized by the pupils into two segments as follows: some pupils were looking for a cosmopolitan city (shops, entertainment attractions), within or outside a certain distance from home, while others clearly wanted to live at home and choosing a local institution was the only option. Although variations in the pupils' decisions were generally caused by changes in family and personal commitments (considerations relative to their partners) the financial pressure of fees was frequently mentioned. Consequently, staying at home and attending a local university was viewed to be a more economical option and a solution for many.

In this article, the focus was on establishing whether the importance weighting, given by potential HE students of key institutional attributes, changes over the long period when decisions are being made. Findings do suggest that these weightings do change for there is a demand for course-specific information during the earlier period of the process which becomes less important later on. The findings provide an impetus for institutions to assess their marketing strategies and examine the level and timing of the information that they are disseminating. For example, is the information readable, informative, appropriate and understandable as students move from being relative novices to becoming experts?

Limitations

In choosing to apply only three variables within the conjoint analysis project, the researcher has attempted to provide a parsimonious set of issues that reasonably reflects choice criteria. However, this may lead to a sacrifice of important distinctions and in particular the interpretation of the construct location may vary according to the timing of the data collection. Although the sample was relatively small ($n = 30$), one-to-one attention could be given to the respondents throughout the study, so that the complex questionnaire could be completed as accurately as possible with maximum understanding and minimum fatigue. However, such a small sample may limit the inferences that can be made.

For instance, the respondents may have understood the conjoint questionnaire and related it to their individual needs as explained by the interviewer, but was the whole project pragmatic and would the pupils reciprocate their replies to the scenarios again? Although this school covers a large catchment area with ethnic minorities present, it failed to capture mature students. Mature students account for a large proportion of university scholars and work needs to be performed on this cohort, as well as pupils who are attending other further education institutions such as colleges, private and public schools. It also included a large percentage (70 per cent) of female pupils (Table 16.1).

Furthermore, although the investigative period was taken over two academic years, comprising a duration of fourteen months, it did not continue into the purchase stage whereby the students actually enrol at their chosen institution. Continuation throughout the whole of Kotler and Armstrong's (2007) model would have been enlightening and research in this area and of a longitudinal nature is also limited. For example, potential students of HE may decide not to take up their firm or insurance offer for whatever reason and either apply somewhere else or not at all.

Validity

The simple model applied in this study provides regression coefficients which indicate the 'goodness of fit' of the evaluations. For instance, if dummy variable regression is employed, the value of r^2 will indicate the extent to which the model fits the data. A low correlation may mean that the model does not fit the data well. Models with poor fit are suspect (Malhotra *et al.* 1982). In stage 2, the average correlation coefficient of the sample of thirty-two pupils was 0.93 and in stage 3 with thirty pupils it had increased to 0.96. Again, such a high correlation does prove statistical reliability.

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