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Title An Analysis of the Decision Making Processes and Criteria Applied by Adolescents Selecting A Level Subjects and Place of Study

Name Michael Bennett Scott

AN ANALYSIS OF THE DECISION MAKING PROCESSES AND CRITERIA APPLIED BY ADOLESCENTS SELECTING A LEVEL SUBJECTS AND PLACE OF STUDY

By

MICHAEL BENNET SCOTT

A thesis submitted for the degree of Doctor of Philosophy
of the University of Luton

Abstract

The research was stimulated by involvement in leading elements of an Education Management programme. Developing part of the teaching material led to the realisation that while pupils' choice of school has been extensively researched it appeared that subject choice, particularly at A level had not. It also became apparent that ideas and models concerning decision making, extensively adopted within the Consumer Behaviour literature had not been applied in this context. Extensive reviews of the literature confirmed this position and indicated that the post sixteen school choice was also under researched and further that it was not possible to apply extant consumer behaviour models directly to the A level or School choice contexts.

The research programme consisted of a mixture of qualitative and quantitative techniques. Building on elements of theory, from the literature, exploratory research employing focus groups was used to develop an initial model of adolescent pupil decision making. Early in the exploratory research it was found that the decision for adolescents choosing where to study their A levels was inextricably linked to choice of subjects. Choice of A level subjects was added to the research programme. Based on the exploratory results a quantitative study, using questionnaires, was developed to test the model on both single (choosing a school) and multiple (choosing A level subjects) choice situations.

The study investigated differences between single-choice and multiple-choice decision making, an area neglected by consumer research, which provides at least a partial explanation of the process used by the pupils when they choose schools/colleges and A level subjects. Findings identify that although some aspects of the choice process are similar, there are important differences between the two types of decision. Evoked set are larger for multiple-choice decisions, and multi-choice decisions are likely to involve more stages in the decision making process than single-choice decisions.

The results also identified that the parents' role has changed from 'decider', when their children were younger, to 'influencer', with the adolescent pupils becoming the decision makers. Concomitantly, choice criteria are shown to have evolved with 'discipline' decreasing markedly in importance and subject range increasing. The pre-eminence of personal sources of information is confirmed but co-orientation emphasised.

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DECLARATION

I declare that this thesis is my own unaided work. It is being submitted for the degree of Doctor of Philosophy at the University of Luton. It has not been submitted before for any degree or examination in any other University.

Michael Bennet Scott

1st day of July, 2002

Chapter 1   Introduction to the Thesis

1.0   Rationale for the Research

This research investigates the decision making process used by adolescent pupils when they choose which A level subjects to take and at which education establishment to study.

During the 1980s two important Education acts changed the relationship between schools and parents in England and Wales. The 1980 Education Act instructed Local Authorities to enable parents, in the area of their authority, to express a preference as to the school at which they wished their children to be educated. The 1988 Education Act provided central funding which gave parents, and the local community, the opportunity to help manage their own schools.

The result of these acts was to give parents more choice in terms of the schools their children attended; the changes had a pronounced effect on the way that schools marketed themselves and recruited pupils. Brown (1990) argues that British Education is moving from the 'second wave'; an 'ideology of meritocracy', an education system based on the child's individual merit and achievement, to the 'third wave'; an education system based on the wealth and wishes of parents.

An important change initiated by the 1988 Act was the introduction of formula funding which linked school budgets, in England and Wales, to pupil numbers. It moved budget responsibility away from Local Authorities to schools; introducing Local Management of Schools (LMS), giving schools greater independence. Formula funding means that the greater the number of pupils the greater the budget; so that once fixed costs have been covered, by existing pupils, every additional pupil means a significant increase in funds (Davies and Ellison, 1991). This has important implications for marketing schools and means that they now compete for pupils, with parents seen as consumers selecting a product (education), and that they must market the school as other organisations market their products (Brunt, 1985; Dennison,

1989). The challenge for schools is to form meaningful relationships between those who work in the school and the people identified as its customers (Hardikes, 1988).

The 1988 Act can be seen as a catalyst that has caused some schools to move away from a traditional 'Product Orientation', described by Marland and Rogers (1991) as the 'Professio-Centric' approach within an educational context, towards a 'Marketing Orientation'. There were some early indications (Woods, 1993) that some schools were moving towards a 'Marketing Orientation'; however, Sargent (1993) found that some state schools were reluctant to adopt such an orientation.

Over the 1990s many researchers have investigated parents' reasons for choice of secondary school (Bastow; 1991; West and Varlaam, 1991; Bradley 1996; Carroll and Walford, 1996; Woods, 1996; Gorard,1998; West et al., 1998). A limitation of all these studies is that they have only asked parents for their reasons for choice of school. There is strong evidence (Elliott, 1982; Stillman 1986; Coldron and Boulton, 1991; Thomas and Dennison, 1991; Yorke and Bakewell, 1991; West, 1992; Hammond and Dennison 1995; West, et al., 1995; Carrol and Walford, 1997) that, in some instances, children make the decision over choice of school; or at least have a strong influence over their parents decision, when they choose a school. Research has suggested that when parents and their children are questioned separately their reporting of a situation is likely to differ (Davis, 1976; Foxman et al., 1989; Carroll and Walford, 1997; Gorard, 1997a), which makes it important to investigate children's reasons for choice of school.

A smaller number of studies have asked children for their reasons for choice (Alston, et al., 1985; West, et al., 1991; Thomas and Dennison 1991). When the results of children's reasons for choice are compared to parents reasons for choice there is some agreement between parents' and children's reasons, but important differences also emerge; for example, friends appear to be more important to children, than discipline which is more important to the parents. These investigations show that is important not to neglect pupils when conducting research in this area (Scott, 1997).

Some studies (Alston, 1985; Hunter, 1991; West, 1992; Hammond and Dennison, 1995; West et al., 1995; Bradley, 1996) have investigated the information sources

used by parents when they choose a school. A major limitation of these studies is that they only examine sources used; it is important to determine the perceived credibility of the various sources by asking parents how useful, or influential, they are thought to be. Researchers, who have overcome the limitation (Elliott, 1882; Hunter, 1991; Bastow; 1991; Yorke and Bakewell, 1991; Bradley 1996), examined the influence various information sources have on parents. Two studies investigated sources of information used by children (Alston et al., 1985; West et al., 1991); the findings showed, in contrast to the parents who use other parents as an information source, a high proportion of children prefer to use other children as an information source. This, again, underlines the importance of including pupils in such investigations.

Attempts have been made to understand the decision making process involved when parents choose a school, but do not, collectively, provide a clear and agreed explanation of it. Choice of secondary school can be divided into a number of stages; problem recognition; a search stage, that produces an evoked set; a final decision made from the evoked set; and post-purchase reaction (Yorke and Bakewell 1991). Coldron and Boulton (1991) developed a representation of relationships between the most commonly cited criteria for choice. This, although attempting to show interrelationships of some of the more common influencing factors, gives little indication of their strength and degree of influence on the parent's decision. By taking a simplistic view of the influences it misses many important variables that influence the parent's decision; it fails to capture the messy, multi-dimensional, intuitive and seemingly irrational, or non-rational, elements of choice; and it excludes luck, social relations, insecurity, doubt and history (Bowe et al, 1994).

Martin (1995) proposed two phases in the choice process; the first that of ' becoming informed'; and a second of 'expressing a preference'. Gorard (1997b) proposed a three step process of choosing a school: step 1- the parents decide, alone, on a type of school; step 2- the parents consider, alone, some alternatives within the chosen type and select a subset of these which he termed a 'stacked deck', which equates, in marketing terms, to an 'evoked set' (Sheth, 1974); and step 3- the parents and child together come to a satisfactory agreement about one of the schools in the 'stacked deck'. He found that the child's role in the process tends to increases as the child grows older. Carroll and Walford (1997) argue that previous research has failed to

stress the complexity of the decision making process. The decision making process is more complicated than the crude concepts of 'parents decided', 'child decided', and 'joint decision making'; it may be better represented as a series of multidimensional continua than by groupings.

In an extensive review of the literature Gorard (1999) found that the majority of UK choice research had involved an examination of school transfer at ten to eleven years of age, and a small number of researchers have investigated choice of a primary school. To date there has been a paucity of research into transfer to sixth form at the end of year eleven. The options for pupils entering year twelve, planning to study A levels, are: to stay at their own school, if it offers sixth form facilities; move to another school which does; move to a Sixth Form College; move to a college of Further Education. This neglected area is of interest to those concerned with marketing sixth form studies. It is important to schools/colleges for two reasons: the higher level of funding sixth form pupils produce (Davies and Ellison, 1991); and to be in a position to attract pupils by, in addition to demonstrating successful examination results, being able to offer an appropriate range of A level subjects to attract potential pupils. To offer a wide range of A level subjects requires a large base of sixth form pupils. The successful schools can spiral upwards attracting more pupils, and associated funding, which enables them to expand the number of subjects offered. The unsuccessful schools get caught in a vicious circle of having to reduce the range of subjects, in order to remain financially viable, and thus becoming less attractive to potential pupils.

During the process of developing, and later delivering, a Marketing Module for the Universities MA in Educational Studies, the author became interested in educational research. While reading educational literature it occurred to the author that Consumer Behaviour Theory could be used to help provide answers to some of the questions posed by Educational Researchers; in particular in the area of helping to explain the decision making process used by parents and pupils when they choose schools. This thesis stems from those early thoughts.

This research aims to add to the knowledge of adolescent pupil decision making, in order to help provide educational establishments with information they need to market their sixth forms more effectively. Many research studies have relied on parental reporting which is unlikely to give an accurate representation of children's views. It was important to determine, at an early stage, who makes the decision over where to study A levels. Early exploratory research indicated that pupils made the decision over choice of subjects and where to study, due to the age they had reached when transferring to sixth form. The parents' role has changed from 'deciders' when they chose secondary schools; to 'influencers' when their child, now an adolescent, chooses where to study A levels. In addition, exploratory research showed that the decision of where to study A levels is more complex than expected; it is inextricably linked to the choice of A level subjects. It was decided to include choice of A level subjects, together with choice of where to study, when examining the pupil decision making process.

There appears to be a dearth of research that has examined 'multiple-choice' decision making; the studies reviewed, in the literature on consumer decision making, focus on 'single-product' decisions. Including choice of A level subjects, a 'multi-choice' decision, in the scope of the study provides the opportunity to investigate this neglected area and, in doing so, add to the body of consumer behaviour knowledge.

1.1   Structure of the Thesis

The chapters in this thesis consist of three main parts: a literature review; the research design and data collection; the analysis and discussion of the results.

The literature review is composed of two chapters; chapter two a review of educational literature, and chapter three a review of consumer behaviour literature.

Chapter two starts by examining parents' reasons for choice of secondary school, and information sources used; then the smaller number of studies, that have asked pupils for their reasons for choice of school and information sources used, are reviewed. The collective results from these studies are then tabulated, compared, and discussed.

The chapter then looks at the following questions: who makes the decision over choice of school; what impact does the socio-economic group, to which the parents belong, have on the decision? Chapter three begins with a broad review of theoretical models of consumer decision making and then, because of the complexity of the subject, looks at research into individual components of the decision making process. It reviews research into: the influence of the external environment; information searching and processing; how information is stored in memory; how consumers use heuristics to reduce the time spent on decision making; evoked set formation; types of non-compensatory and compensatory processing, and multi-stage decision making. In order to complete the thesis, in the time available, a decision was made to close the literature review at the end of 1999.

The central section of the thesis explains the research design. It consists of four chapters detailing different aspects of the research. Chapter four explains the research questions and a hypothetical model of the pupil decision making process; and chapters five, six, and seven describe the overall methodology used for the research programme.

The conclusion drawn at the end of the literature review was that no one model existed that provided a satisfactory explanation of the pupil decision making process used when choosing which A levels subjects to take and where to study. However, elements of theory, from studies into individual aspects of the decision making process, could be employed to explain certain parts of it. To provide an explanation of the overall process it was decided to use a two-stage research programme commencing with qualitative research, followed by a quantitative study which would be used to test and refine the qualitative results.

The inductive approach was used, for the exploratory research, because it is concerned with understanding consumer behaviour at an individual level within the realm of consumers' subjective conscious and meaning systems and can produce more creative and useful theories (Peter and Olson, 1983; Marsden and Littler, 1998). The inductive properties of qualitative research allow the researcher to make decisions and refine the method en route (Krueger, 1994). A deductive approach, using quantitative data, was then used. This approach allows formal logical analysis

of theories and, by means of unbiased observations, the truth of any meaningful proposition can be determined (Petre and Olson, 1983). Triangulation is the use of two or more research methods within one study, to confirm findings and to obtain both breadth and depth of information (Krueger, 1994; Yin, 1994). By using both an inductive approach and a deductive approach, triangulation was employed to strengthen the total research project (Morgan, 1998).

Exploratory research was undertaken, consisting of four focus groups; one group of parents, and three of pupils. Based on a combination of these results, and elements of theory taken from the literature, a hypothetical model was constructed to explain the process used by adolescent pupils choosing A levels and where to study. The model consists of: information, collected and stored in the pupil's memory; an early stage using non-compensatory processing to produce evoked sets of schools and A level subjects; a final stage using compensatory processing to make a final judgement of which A levels to take and where to study.

To test the model, and to answer a number of research questions, a quantitative survey was designed; it consisted of a census of year eleven and year twelve pupils in four schools in Hertfordshire and Bedfordshire. Three questionnaires were designed; one for year eleven pupils, planning to study A levels; one for year eleven pupils, not planning to study A levels; and one for year twelve pupils studying A levels. The survey was completed during March and April to capture the year eleven pupils while they were in the process of making their decision, and the year twelve pupils shortly after they had made theirs. A total of five hundred and eleven usable questionnaires (eighty two per cent of the pupils surveyed) were completed at the four schools. The resultant input was entered into SPSS, which was used to analyse the data.

The final part of the thesis presents and discusses the results and the conclusions drawn.

Chapter eight presents the results from the focus groups detailing the key themes that emerged from the qualitative research. These are: the timing of the decision; the information sources used by pupils; the number of schools/colleges and A level

subjects considered by each pupil; the amount of worry experienced by pupils during the decision; and the type of decision making process used by pupils. Chapter nine starts by explaining the design of the data sets and how the data was coded and entered onto SPSS. The remainder of the chapter presents the results consisting of: when the pupils make their decision; the number of schools/colleges and subjects in their evoked sets; information sources used by pupils, how much influence they have, and when they are used; who makes the decision over choice of school/college and subjects; the amount of worry experienced by pupils; and the type of decision making process used by pupils. Chapter ten uses the literature reviewed in chapters two and three to help interpret and explain the results. It discusses: information searching and processing; perceived risk; how the pupils store the information; one, two, and three-stage decision making; and differences between single-choice and multiple-choice decision making.

The final chapter of the thesis discusses the contribution to knowledge, the conclusions drawn, the limitations of the research and makes recommendations for further research in the area.

Chapter 2 Sixteen Plus choice and Parents' and Children's Choice of Secondary Schools

2.0   Introduction

This chapter reviews educational research into post sixteen choice and choice of secondary school. In order to maintain the focus of the research on the older school pupil choice process a decision was made to omit research undertaken into choice of primary school, at the younger end, and choice of university, at the older end.

The chapter starts by looking at research into post sixteen choice and the because of the paucity of such research it moves on to examine research into parents' of children at secondary school and reasons for choice of secondary school. These latter studies suffer from the limitation that, by the time their children are established at secondary school, parents may have forgotten some of the reasons for their choice. To overcome this limitation a subsequent section reviews studies that have questioned parents while they are in the process of making their decision while the information is still fresh in their minds. These studies suffer from the limitation, outlined in section 2.7, that not all parents make the decision over choice of school. Relying on parental reporting of children's views and preferences may be misleading; research has found (Davis, 1976) that differences occur in the reporting of a situation by parents and their children. To overcome this further limitation section 2.4 reviews the smaller number of studies that have asked children for their reasons for choice of school.

In section 2.5 the reasons for choice of school, from the studies reviewed, are summarised into three tables which are compared and discussed. Section 2.6 collates the sources of information used by parents and children, and found useful by parents, into a further set of tables which are compared and discussed. Section 2.7 examines the composition of the decision making unit; finding that the answer to the question of who makes the decision over choice of school is not clear cut, and that the results

produced by the research covered does not produce a consensus answer. The final section looks at the conclusions that can be drawn from the review of these studies.

2.1   Sixteen plus choice

As noted earlier, only a small number of studies have been carried out into choice and decision making by adolescent pupils. Much of the research has concentrated on factors affecting the decision making process at the expense of examining and explaining the actual decision making process used by adolescent pupils. Earlier work investigated the market value of academic or vocational qualifications, choice of career, and socio-economic factors (Roberts and Parsell, 1988; Gray and Sime, 1989; Roberts et al., 1989). More recently Taylor (1992) investigated the awareness and attitudes towards post sixteen education. The work concentrated on the options open to sixteen year olds, including awareness of youth training schemes, and guidance provided by schools. She found that mothers play an important role in information gathering and that older siblings recent experience of further or higher education could be a more precise source of information than that of parents. Boreham and Arthur, (1993) identified the needs of young people while Fergusson and Unwin, (1996) found that the school pupils attended exerted a powerful influence over their destination at sixteen.

Other work examined choice of A level subjects. Stables and Stables, (1995) used a sample of two hundred and nine first year A level students to look at gender differences in students' approaches to A level subject choices and at their perceptions of A level subjects. They found that female pupils were less inclined to trust their own judgement, spent longer talking to advisors and were less sure whether they had received sufficient advice. They concluded that female pupils lacked confidence relative to male pupils. Whitehead (1996) looked at relationships between perception of subjects as masculine or feminine; other attitudes towards sex roles, sex traits, motivation; and subject choices of male and female pupils. The research concluded that male pupils were much more biased in their subject choice than female pupils; those males choosing exclusively masculine subjects were much more likely to

support traditional sex roles and to conform to traditional ideas of masculinity. Neither of the studies went on to examine the decision making process used by the pupils when choosing A levels.

A smaller number of studies have looked at the decision making process used by pupils choosing post-sixteen pathways. In an investigation into how young people make career decisions Hodkinson and Sparkes (Hodkinson, 1995) interviewed one hundred and fifteen pupils studying at six schools who were considering training credits. They proposed that from childhood pupils amass conceptual structures (termed schemata) which serve as tools for interpreting their experiences. New experiences result in a modification of the schemata and the life history of the pupil both shapes and is shaped by their own schematic repertoire. A repertoire of schemata make up habitus, and what is learned is a result of an interaction between schemata, activity and situation which further develop the habitus. Their personal development and their decision making are not context free. New information is absorbed constantly into the schematic framework modifying the schemata. The schemata filter information and both limit and enable choices that are made. A theory of 'pragmatic' decision making was developed (Hodkinson et al., 1996; Hodkinson and Sparkes, 1997), which blended social and cultural factors with personal choices, it used a sophisticated model of learning, and merged individual preferences with opportunity structures in a method that incorporated serendipity. It was concluded that pupils simultaneously reacted to opportunities and created opportunities, this was described as 'pragmatic' decision making. The work is useful in producing a model of the decision making process used by adolescents but is limited, in terms of this study, to choice of potential careers.

A longitudinal study examining pupil choice was undertaken by Hemsley-Brown, (1999) who interviewed twenty-five students. The findings highlighted the complexity of 'choice' and confirmed the weakness and over-simplification of a rational calculus model identified by Foskett and Hemsley-Brown (1997). Further, the research confirmed the findings of Hodkinson and Sparkes (1997) who found that pupil decision making was only partially rational, being affected by feelings and

emotions and linked to family background, culture, and the life history of the pupils; and was context related. Hemsley-Brown (1999) found evidence of early processing. At an early stage, although only three pupils had made a firm decision all of them had rejected some options. Parental and peer group pressures were more important than the influence of teachers and the range of A levels offered by a college was an important reason for choice. Marketing information provided by colleges was used to reduce cognitive dissonance (Assael, 1997) in the post decision reaction by helping the pupil to convince themselves that he or she had made the right decision. Hemsley-Brown concluded that the decision making of sixteen year olds when choosing colleges fell short of the technical criteria for 'technical rationality' and was better described as 'pragmatic rationality' which consists of a combination of subjective and objective reasoning skills used during a non-linear process. The work is useful in adding to the knowledge of pupil decision making but does not provide a comprehensive explanation of the total process.

As part of a four year longitudinal investigation into post sixteen pathways Ball et al. (2000) interviewed adolescents choosing where to study A levels. They found that the decision making process is enabled in a wider choice of lifestyle and the influence of social context, a process which is part of an ongoing life course which places decision making as part of the interaction with stakeholders; which relates to the 'pragmatic rationality' of Hodkinson et al., (1996). The decisions made are not necessarily technically rational, as much government policy (e.g. DfEE, 1998) would suggest, but are pragmatically rational and based on balancing various options at the time of choosing. Each stage of the decision making process involves negotiating a set of contingencies; they may be structural/academic (passing or failing examinations) or personal, (relating to family, social or sexual relationships). The way that the contingencies are dealt with relate to the cultural, emotional and economic capital of the pupils concerned. The learning environment is a significant part of their response to learning challenges, learning identities can be re-made or underlined by post sixteen experience. Pupils following the path from GCSEs to A levels to university to a professional career often have this pathway well established in advance of the choice point at sixteen and most give little or no considerations to

other possibilities. The A level experience is very different in different places - small or large sixth forms, crammers, FE or tertiary colleges.

Ball et al. found that during the decision making process complex relations of dependence and social obligations within families are played out, which ties in with Foskett and Hesketh's (1996) notion of the 'composite chooser'. The mother tended to be the family member who attended open evenings with pupils, especially female pupils. The mother tended to be a key figure in the process lending both emotional and knowledge support. Pupils with their parents, their mother in particular, collect and sort a variety of information from various sources including brochures, visits, telephone calls, friends experiences, rumours and reputations, and personal responses. Parents seek to interpret the world for their children, these interpretations are either concomitant with or set over and against their friends. Some parents (typically the middle-class) have clear aspirations for their children and are pro-active and interventionary in decision making at sixteen plus and beyond. Others (typically working-class) cede decision making to their child while expressing concerns or giving their backing to their choices. The choreography of decision making within families is complicated with different parents defining their participation and the autonomy of their children in different ways. Middle-class families tend to be 'knowing choosers' and are able to decode and decipher the complexities of post sixteen provision to obtain their goals that best suit their interests.

Ball et al. (2000) concluded that despite the sense of individual choice and personal optimism displayed by the majority of adolescents in their sample in practice the opportunities were stratified and access to different levels depended on the familiar predictors of family and educational background, sex and place of residence. Although not providing a model to explain the decision making process used by pupils when they choose A level subjects and where to study, their work is useful in adding to the richness of the information known about the pupil decision making process and the environment in which it takes place.

In a large national study covering eight administrative regions in England, Foskett and Hesketh (1996) investigated student decision making and the post-sixteen market place. Their sample consisted of 1284 year eleven pupils who completed a questionnaire. Included in the areas investigated were the timing of the decision, the future pathways the pupils intended to take, factors influencing the pupil's choice, and the structure of the market.

Concerning the timing of the decision they found a clear distinction between the start of the decision making process and when pupils came to a final decision; a third of the pupils started the process before year ten and a significant proportion reported starting it before entering secondary school. Although they found no significant differences between the staring points of working class and middle class pupils they did find that those pupils choosing academic pathways tended to start the process earlier than those taking vocational routes.

Regarding the pathways, eighty per cent of the pupils intended to enter full time further education with a further six per cent intending to study part-time further education. Girls and middle class pupils were slightly more likely to enter further education, vocational pathways being more commonly chosen by male working class pupils and were not perceived to be a route into higher education.

Foskett and Hesketh (1996) divided factors affecting choice into general factors, those which pupils considered to have any influence, and specific factors, those identified by each pupil as the single most important influence. The most important specific factor influencing the pupil's choice of post-sixteen institution was academic reputation cited by forty-seven per cent of the pupils. General factors influencing choice were: prospectus, forty per cent; proximity, thirty-eight per cent; visits to the institution, thirty-four per cent; to move with friends, thirty per cent. The institution's prospectus, although important as a general factor, was only a specific influence on choice for six per cent of the pupils. Pupils planning to stay on and enter the sixth form at their existing school cited academic reputation and proximity as the most important influencing factors. They found the role of parents to be a complex factor

and identified a number of features: it being strong as a general factor but not at a specific level. It was strong at a general level for those pupils citing academic reputation or those planning to stay on at their existing school and strongest for female pupils of middle class parents. The most important information sources were: careers teachers, twenty-seven per cent; open evenings, eighteen per cent; other teachers, fifteen per cent; institutional literature eleven per cent.

They divided post sixteen markets into either contiguous markets, characterised by intense competition between a number of competing further education institutions, or parallel markets where there is little competition. Pupil decision making varied between the two types of market; important choice factors in contiguous markets are more strongly linked to academic reputation, whereas location is a key factor in parallel markets (Foskett and Hesketh, 1996; Foskett and Hesketh, 1997).

Based on their own work and the work of Hodkinson et al., (1996) and Maguire, et al. (2000), Foskett and Hemsley-Brown (2001) developed a model of choice and decision making in education and training markets. The model consists of four components context, choice influencers, choosers, and choice. Context consists of the home environment, the lived environment, the institutional environment, and the social environment; each consists of people, processes, culture and values. This explains the environment within which the pupil defines their own existence. Choice influencers may be processes such as media communications or people such as teachers, careers advisers, parents and other pupils. The chooser by the age of sixteen or eighteen is the pupil who plays the dominant role in the process, the parents contribution consists of 'the hidden hand of parental influence' which involves the long-term drip feed of attitudes, values and perceptions into the pupil's psyche. The relative role of family members are different, the mother's role consists of searching and refining and the father's in confirming choices. Peer and friendship groups within which the pupil operates are likely to have come from the social environment in which the parents have placed their children. The choice emerges from the interaction of the other three components and is not fixed as it is still subject to interaction with the other components and may be subject to change. For example

choice may be subject to the pupil achieving certain academic targets such as GCSEs. Their work had indicated that in practice pupils predict that they will achieve substantially better GCSE and A level results than their objective performance would suggest. The instability of choice is not a sign of failure in the process but an integral part of choosing.

Foskett and Hemsley-Brown (2001) state that the choice process may be represented as a journey where choices are made along the way which determine through interaction with other components the final destination to be reached. Their model is useful in explaining the components of choice and environmental factors in which the pupil makes his or her decision and in highlighting that choice is dynamic and may change as a components alter. It does not attempt to provide a detailed explanation of the decision making process used by pupils when they make choices of what to and where to study, for example how they process and store information when they make decisions.

Because of the paucity of research into post sixteen choice of A level subjects and where to study, the review moves on to examine the much larger number of studies that have investigated choice of secondary school.

2.2   Parents' of Children at Secondary School Reasons for Choice of School

At an open evening for new parents Elliott (1982) used a questionnaire, to collect data from a sample of thirty-two parents, to investigate: sources of most influential information; who made the decision; and reasons for choice of school. He found that the open day for new parents was very influential; existing and past parents play a major role in influencing choice, whereas the brochure was not an over-riding influence, and primary heads and staff only influenced a minority of parents. Fifty-six per cent of respondents stated that their choice was a joint decision made by mother, father, and child. Thirty-one per cent of respondents stated that the decision was

made jointly by the mother and father. Six per cent of respondents stated that the decision was made by either the mother alone or by the mother and child, and no respondents stated that the decision was made by the child.

The most commonly cited 'very important', reasons for choice of secondary school were: provides a balanced all round education, our child wanted to go to the school, opportunities for personal and social as well as academic development, children generally happy at the school, parents can easily approach the head/staff about child's progress. See table 2.1 for a comparison of reasons for choice of school.

Limitations of the research include its small sample size of thirty two parents all from the same school which means that, though it may reflect parents views at that particular school, it may not reflect the views of parents at other schools, and its failure to make a clear distinction between influencers and deciders within the family unit.

During a National Foundation for Educational Research project Stillman and Maychell (1986) used questionnaires on a sample of 2740 parents in four Local Education Authorities in different parts of the country. These consisted of an urban area with a two-tier selective system; an urban area with a comprehensive system; a well spaced rural area with a two-tier selective system; and a well spaced rural area with a comprehensive system. They investigated the impact of family and social class on participation in choosing a school, looking at six measures consisting of: the child's sex; the child's position in the family; mother's job; father's job; and the mother's and father's terminal education ages. They found that neither sex of the child nor position in the family had much influence on how parents went about choosing schools. Parents of girls and first children tended to use marginally more information than other parents. Parents of first children appeared slightly more likely to send their child to a school which was not the nearest. The parents' own education and employment were found to be more influential: the longer they were in full time education and the higher their job classification, the more information was used and the more likely they were to choose a more distant school. They concluded that the

indicators of class showed that employment and education affected the parent's participation.

Stillman and Maychell (1986) found that, in terms of 'process' and 'product' reasons (Elliott, et al, 1981), approximately ninety per cent of parents included 'process' reasons in what they considered important and only fifty-four per cent of parents gave any 'product' reasons. Sixty-five per cent of parents reported that their child felt strongly about which school they wanted to go to; of these parents seventy eight per cent felt that their child's opinion was very important in choosing a school, and a further twenty per cent felt it to be fairly important. They found that the five most important reasons for choosing a school were: academic record; good discipline; short distance; good reputation; and a wide subject choice. See table 2.1 for a comparison of reasons for choice. They found that a high proportion (seventy-one per cent) of parents had made their decision at least a year before their child moved school, only four per cent of these changing their minds during the year before their child moved school.

In an investigation into parents' reasons for choice of secondary school, Hunter (1991) interviewed (using a semi - structured interview) a sample of 289 parents from eighteen secondary schools. The interviews took approximately forty-five minutes and the sample was roughly evenly split between parents of boys (fifty-one per cent), and parents of girls (forty-nine per cent). Fifty-one per cent of the sample were from black and ethnic minority backgrounds, and twenty-two per cent of the sample already had at least one older child at the school. Some important reasons for choice, such as school reputation and the wishes or general happiness of the child, were deliberately excluded from the study. The results indicated that the main sources of information used by the parents were: an area information booklet; a school open day or evening; and a school brochure. See table 2.5 for a comparison of sources of information. The open day or evening was found, by the highest proportion of parents, to have been useful in their choice. Well over half the parents had talked to other parents or children when making their choice to help identify good or bad schools.

The results showed that the four main reasons for choice of school, cited by parents, were: good discipline/children well behaved; good exam results; single sex; and proximity to home. Single sex status was particularly important to those parents whose daughters now attended a girls only school. Other important reasons for choice of school were: a well managed school; denominational; friendly teachers; and a good choice of subjects. See table 2.1 for a comparison of reasons for choice.

A limitation of the research is that the stratification process resulted in a deliberate over sampling of parents who send their children to single sex schools; this may explain the high number of parents who gave single sex schooling as a reason for choice of school, which is not found in other similar studies (Alston, 1985; Coldron and Boulton, 1991; West et al, 1991; West, 1992; West et al., 1992, Hammond and Dennison, 1995; West et al., 1995). The inclusion of parents with children already at the school, in the Hunter study, is likely to reduce the proportion of parents who report attending an open day. For example, the figure of seventy-seven per cent of parents who report attending an open day or evening, may be higher if one assumes that parents who have older children at the school have no need to attend an open day.

An important limitation of these three studies is that their samples consisted of parents of children who were already attending secondary school and who had made their decision some time before the research took place. The results may be biased through selective retention and selective distortion (Knox and Inkster, 1968). In order to overcome the latter limitation a number of studies have questioned parents, who are in the process of making the decision, before their children start at secondary school. The following section reviews such research.

2.3 Parents' of Children at Primary and Middle School Reasons for Choice of Secondary or Upper School

Alston (1985) investigated parents' perceptions and experiences of the secondary school transfer process and used questionnaires on a sample of 847 parents of children attending forty-eight primary schools. In terms of information sources he reported that ninety four per cent of parents had received a general booklet about secondary schools in the area and eighty-four per cent had received an individual school booklet. More than a quarter of the sample already possessed a knowledge of the school, through having a son or daughter already attending the school. Just under a quarter of the sample had obtained information from friends or relatives and only a minority, thirteen per cent, had been influenced by information from a primary school teacher. Seventy-three per cent had visited the school.

The six important reasons for choice given more frequently than others were: that their child wanted to go there; proximity of school; school facilities; good reputation for behaviour and discipline; school well organised; and reputation for good exam results. See table 2.2 for a comparison of reasons for choice. A limitation of the study was that it did not ask which information sources were considered to be more reliable or more useful to the parents.

Examining selected areas of three Scottish regions, Petch (1986) reported on the results of a survey which interviewed six hundred parents of children about to enter secondary school. The interviews were generally structured with opportunities for open responses in certain key areas. The overall results for the three areas investigated for the open ended questions were: siblings attend; more convenient location; and child's friend going. For the structured questions the three most frequent reasons for choice were: child happier; child prefers; and better discipline. These results are not included in the tables showing a comparison of reasons for choice because no percentages were reported.

During research for his PhD Bastow (1991) investigated factors affecting parental choice of secondary school. In addition to looking at reasons for choice he examined the impact of the sex of the child and the social status of the parents. In an open ended question parents were asked to list the five most important reasons for choice of secondary school. The reasons given by more than five per-cent of the parents are shown in table 2.2. The sources of information that parents reported 'had a large influence on them' are shown in table 2.7.

Limitations of the research were: that it was undertaken in only one town, so it may be dangerous to generalise the results to other areas; and no children were included in the sample, so it is dangerous to assume that the reasons for choice given apply to all the members of the decision making unit.

Coldron and Boulton (1991) interviewed sixteen families about happiness as a criterion of parents' choice of school and used questionnaires to collect data from an additional sample of 222 families. Regarding who made the decision when choosing schools the results from the interviews indicated that approximately forty-four per cent of parents reported that it was mainly the child's choice; approximately nineteen per cent reported that it was a joint decision between parents and child; and approximately thirty-seven per cent reported that the parents made the decision either against the child's wishes or without taking the child's preferences into account.

The results showed that ninety per cent of children were reported by their parents as expressing a preference, the results also indicated that children chose mainly on the same basis as their parents. The top ten parents' reasons for choice of school were: nearness of school, sibling attends / attended school, child's friend attending, good / happy school/child will be happy; child's preference; best for education; good reputation; caring teachers; sister/brother succeeded there; and good examination results. See table 2.2 for a comparison of reasons for choice. A limitation of the study was that it relied on parental reporting of children's preferences.

During an investigation into parent's reasons for choice of secondary school, West and Varlaam (1991) interviewed seventy-two parents of children attending primary schools. The sample consisted of forty-four per cent parents of boys and fifty-six per cent parents of girls. The mother was interviewed in sixty-seven per cent of the sample, with the father in only three per cent, and both parents in twenty five per cent of the interviews. The results indicated that a greater percentage of parents of girls, twenty-five per cent, wanted their child to attend a single sex school, whereas only eight per cent of parents of boys wanted them to attend a single sex school. Fifty-one per cent of parents wanted their child to attend a mixed sex school. Parents were asked, unprompted, for their reasons for choice of school and then were prompted for responses. The results of the unprompted answers are shown in table 2.2. Children were not interviewed and therefore the results only contain parents' perceptions of children's preferences. The results obtained, in terms of reasons for choice, may vary depending on whether a mother, a father, or both parents are interviewed. The high percentage of mothers interviewed in this sample may have caused a bias, in the results towards the mother's reasons for choice.

Yorke and Bakewell (1991) used self-administered questionnaires to gather data, about their choice of secondary school, from a sample of 278 parents of final year pupils in six primary schools. In answer to the question about the decision makers, sixty-one per cent of parents considered it to be a three way process, eighteen per cent both parents, eight per cent the mother, and thirteen per cent the child. Details of the information sources are given in table 2.7. It is interesting to note that fifty per cent of the respondents stated that they had not been influenced by any of the information sources. The results of the parents most cited reasons for choice are given in table 2.2. The results from this study tend to differ from the other studies reported in tables 2.1 and 2.2, which suggests that it may have suffered from methodological problems. Gaps in the table do not necessarily mean that they are not important reasons for choice. They may result from omissions in the questionnaire; some reasons may not have been provided in the list of choices given to parents to tick. It would be wrong, for example, to assume that parents in Manchester are not concerned about their child's happiness.

West (1992) concentrated on issues specific to marketing schools in an examination of factors affecting middle class parents choice of school. The sources of information used are shown in table 2.5. Two studies were undertaken consisting of interviewing parents, of children in year six of primary school, who had considered sending their child to private school. In the first study twenty-seven parents were interviewed, forty-one per cent were parents of boys and fifty-nine per cent parents of girls. In the second study twenty-nine interviews were conducted with fifty-nine per cent parents of boys and forty-one per cent parents of girls. Seventy per cent of parents said that their child wanted to go to the same school they had chosen. See table 2.2 for a comparison of reasons for choice.

Examining the 'process' involved when parents choose a secondary school for their child West et al., (1995) interviewed seventy parents, fifty-one per cent were parents of boys and forty-nine per cent were parents of girls. The mother was interviewed in seventy per cent of the cases, the father in fourteen per cent, and both parents in nine per cent of the cases. When asked who had the main responsibility for choice of school, forty-six per cent felt that it was the mother, twenty per cent both parents, eleven per cent parents and child, seven per cent the father, and seven per cent the child. Regarding the timing of the decision process, forty-four per cent of parents started thinking seriously about secondary school during the final year (year six) that their child attended junior school, thirty-three per cent the previous year (year five) and twenty-two per cent had started thinking about the decision prior to year five. Ninty-nine per cent of the interviewees reported that the child had talked to the parent about the school they wanted to attend. Eighty-three per cent of parents reported that their child's choice of school concurred with their own. Fifty-three per cent of children were reported to want to go because their friends were going there, thirty-five per cent to have liked the school after visiting it, and twenty-six per cent to have liked the facilities. In terms of information sources, personal sources were reported to be an important factor. Sixty-three per cent of parents said that they had talked to children who went to the school, fifty-one per cent that they knew someone who went there, thirty-four per cent said they talked to friends, twenty-nine per cent that they

knew someone who worked at the school, and twenty-seven per cent that they had other siblings already at the school. Ninety-four per cent of parents had read a school brochure, eighty-seven per cent of parents had visited at least one school, and seventy per cent of parents had seen information about the exam results of the school. See table 2.5 for a comparison of information sources used.

A limitation of the research is that a high proportion of the sample interviewed consisted of mothers. If more equal proportions of mothers, fathers, and children from the same families had been interviewed more useful data regarding the roles of the members and make up of the decision making unit might have resulted. The types of questions asked tended to elicit responses about the factors affecting the school decision, rather than information about the 'process' itself. Information extracted about the 'process' tended to be factors, affecting choice, rather than about the 'process' itself. For example, parents were asked which information sources they had used, but were not asked questions about the 'process' such as: how; when; by whom; and why they were used. Little information was reported regarding the type and degree of influence; and any strategies that may have been employed by families to reduce family friction during the decision making process. The study relied on parental reporting of their children's wishes.

In a research study into school choice in less populated areas, Hammond and Dennison (1995) used questionnaires to collect data from a sample of 755 parents of children attending middle school who were about to transfer, at the age of thirteen, to a high school. The sample consisted of forty-eight per cent parents of boys and fifty-two per cent parents of girls. They followed this with a small number (fourteen) of semi-structured interviews to add some depth to the information collected from the questionnaires. The results indicated that the three main sources of information used were high school visits, high school booklets, and elder children who had attended, or are attending, the high school. Of these sources current or ex-pupils appeared to be perceived to be of the greatest value. School visits were also were also rated as highly useful. Details of important factors influencing choice of high school are shown in table 2.5. Four factors stood out above the others were: teacher quality; good

examination results; discipline; and reputation of the school. Teacher quality may mean different things to different people; the follow up interviews indicated that some parents used word of mouth to help them judge the quality of the teachers, while other parents used exam results to indicate the quality of the teachers. Ten out of fourteen of the families interviewed stated that the child had expressed a preference which they had accepted; which implies that though the child may not be perceived as the decision maker by the parents, children can, however, exert a strong influence on parents.

A limitation, inherent in the design of the research, is the concentration on less populated rural areas, which may mean that it is not representative of other areas.

Parents' of children attending middle school were investigated by Bradley (1996). He used a questionnaire to collect data from a sample 329 parents about their reasons for choice of upper school. The study included two LEA and two GM upper schools. The sample consisted of fifty-four per cent parents of girls and forty-six per cent parents of boys.

Regarding information sources Bradley's results showed personal sources were most favoured. Ninety-three per cent of parents visited the school and eighty-four per cent ranked this in the 'most useful' category. Second in the 'most useful' category, ranked by sixty-five per cent of parents, was personal experience of the school either by the parents themselves or by their children or other pupils. Third in the 'most useful' category was the 'grapevine' which consisted of adults in the neighbourhood, parents of other pupils and teachers in the upper school. Non-personal sources were less popular, with school brochures only forming thirty-eight per cent of the 'most useful' category, published league tables in ten per cent of the 'most useful' category, and newspapers only in one per cent of the 'most useful' category. See tables 2.5 and 2.7 for comparisons of information sources used and found to be useful.

The ten most frequent reasons for choice reported by Bradley were: our child prefers the school; we think our child would be happier there; the school has a reputation for

better discipline; the school has better accommodation and is well equipped; it is easier to get to the school; the school has a better examination record; our child's friends attend the school; the school makes the pupils work harder; the school has a wider range of courses; and, we prefer the attitude of the school towards uniform. See table 2.2 for a comparison of reasons for choice. It is interesting to note that only a minority of the sample, about nine per cent, placed GM status in the top five reasons for choice.

Bradley's findings are supported by the work of Murray (1991) whose own results were consistent with the prediction that consumers have a greater confidence in personal sources of information when choosing between services. Bradley's findings were also consistent with the prediction that source trustworthiness, and the degree of expertise of the source (Murray 1991), influence the consumer in the choice of information source they use. A limitation of Bradley's (1996) research is that he only asked about types, and usefulness, of information sources used, but did not ask parents about perceptions of the quality of sources in terms of 'trustworthiness' and 'expertise'.

During an investigation into Choice, Class and Effectiveness, as a part of the PASCI study's exploratory fieldwork, Woods (1996) questioned a sample of 262 parents who were choosing a secondary school. Using a postal survey parents were asked: in which school they had been offered a place for their child; whether this was their first preference; who decided the preference; what sources of information they had used; and what factors had influenced their decision. To differentiate class, using the UK Register General's Classification of occupations, he split the parents into two groupings; professional and middle class parents (1, 2 and 3N), and working class parents (3M, 4 and 5).

Woods asked parents to tick from a list of sixteen potential information sources, they were able to select more than one. They were also asked to pick and rank the three most important sources. He found that the information sources most frequently cited by parents were visits to schools followed by school brochures and friends.

Regarding the sources preferred by the two classes, he found that professional and middle class parents were significantly more likely to turn to parents of secondary school children, people at work, and to look at school examination results; whereas working class parents were more likely to take account of the views of children at the secondary school, and members of their family. The resulting information sources used by the two classes are shown in table 2.5. For the factors that influenced their decision parents were asked to tick from a list of thirty potential factors, being able to select more than one. In addition they were asked to pick and rank the three most important factors. The school's reputation was influential amongst similar proportions of both classes. The resulting factors influencing the two classes are shown in table 2.2.

For an investigation into choices at primary and secondary school West et al., (1998) used interviews to question eighty-three parents from state schools and thirty-seven from private schools. The factors, in order of priority, that both groups of parents thought were essential, when choosing a secondary school, were: believe child will be happy; discipline; quality of education; atmosphere; suits child's needs; reputation of school; stretches the child academically; easy to get there; and examination results. See table 2.2 for breakdown of state and private school parents. It is clear that for both groups of parents the happiness of the child is a primary consideration. A key finding is that parents in the private sector begin choosing schools earlier than those in the state sector. A limitation of the study was the small sample of parents used from the private sector.

An important limitation of the research reviewed up to this point is that it only asks parents for their children's reasons for choice of school and about their children's involvement in the decision making process. Research into family decision making (Davis, 1976; Pifer and Miller, 1995; Gorard, 1997 a) has indicated that parents may give quite different answers to their children when asked about their child's involvement in the choice process. Scholars investigating school choice need to focus more rigorously on the inter-generational aspects of the choice process; they certainly need to take into account the complexities of family-level negotiations in the

construction of their research designs (Gorard,1997 b). Parental reporting regarding their children's preferences should be treated with some caution. The studies that follow in the next section overcome this weakness by asking children, directly, their reasons for choice of school.

2.4 Children's Reasons for Choice of Secondary or Upper School

Children's reasons for choice of secondary school were investigated by Alston, et al., (1985) as a part of the Secondary Transfer Project. They used questionnaires to collect data from a sample of 1423 children attending forty-eight junior schools in the ILEA. They found that eighty-four per cent of the children had visited their secondary school. Regarding the decision making unit children reported that: their parents had made the decision (approximately twenty-five per cent); the children had made the decision themselves (approximately twenty per cent); and it had been a joint decision made with their parents (approximately forty-five per cent). More boys (approximately twenty-six per cent) than girls (approximately fourteen per cent) said that they had made the decision themselves whereas more girls (approximately fifty-two per cent) than boys (approximately thirty-seven per cent) said that it had been a joint decision. Approximately thirty per cent of the sample already had a brother or sister attending the school and approximately seventy-seven per cent had friends at their new school; in all approximately eighty-five per cent of the sample were transferring to their new school in the company of children from their primary school. Their reasons for choice of school are shown in table 2.4.

West et al., (1991) used two studies to investigated children's perceptions and choice of high school. One was undertaken before choice of high school had been made, and the other took place after choice had been made. Questionnaires were used to collect data from all students attending a random sample of twelve middle schools in an outer London borough. In the first study three hundred and ninety-three questionnaires were completed by children before choice of high school had been made. In the other study, of children after the choice had been made, three hundred

and ninety-nine questionnaires were completed by children after they had been notified of the result of their application.

In the first of the West et al., (1991) studies, concerning the decision making unit, sixty-two per cent of the children said that they agreed with their parents choice of school and thirty-eight per cent said that they disagreed. In the second study sixty per cent reported that the decision had been a joint decision made with their parents, eighteen per cent that they had made the decision themselves, and sixteen per cent that their parents had made the decision. In answer to preference of single or mixed sex schools eighty per cent in the first study, and seventy-six per cent in the second study, reported a preference for mixed sex schools. Only five per cent in the first study, and two per cent in the second study, reported a preference for a single sex school. Regarding sources of information, in the second study sixty-three per cent of children had visited their chosen school, sixty-one per cent said that friends and neighbours went to the school, forty per cent had siblings that went there, and seventy per cent had read the school brochure. See table 2.6 for a comparison of information sources used by the children. Important factors about their new school reported by the children are shown in table 2.4.

A small study in the North of England, with a sample of seventy-two children attending an inner city junior school, was used by Thomas and Dennison (1991) to investigate who in the family made the decision over choice of secondary school, and their reasons for choice between two potential secondary schools. Interviews were also conducted with a sample of twelve parents and eight teachers. Interestingly sixty per cent of the children reported that they had made the decision regarding choice of secondary school, which tended to be confirmed by the parents who said that their children had the 'biggest say' in the decision. Less than fourteen per cent of the children stated that they had no say in the decision. The majority of the children said that the decision had been easy, giving reasons that an older brother, sister, or cousin attended the school or that friends were going to the school. Children's reasons for choice can be seen in table 2.4. Regarding information sources, and their relative influence, parents reported that school visits affected their choice in three ways: they

helped to confirm or reinforce a choice already made; they influenced parents who had yet to decide; and they helped to dispel myths carried on the neighbourhood 'grapevine'. The main function of the school brochure was a tendency to reinforce the decision once it had been made.

In an investigation into the intergenerational aspects of school choice Gorard (1997a) addressed the issue of who in the family makes the choice of a new secondary school; the parents or the children. He contacted 1067 people, from 794 families, who were about to or had just made the decision over choice of school. The survey covered a range of schools including LEA controlled, grant maintained, and fee paying schools and included both parents and children. The overall response rate was seventy-nine per cent. A number of in-depth interviews were conducted with some of the parents to elicit more detailed information.

Gorard proposed a three step process of choosing a school: step one, the parents decide alone on a type of school; step two, the parents alone consider some alternatives within the chosen type and select a subset of these, which he termed a 'stacked deck'; and step three, the parents and child together come to a satisfactory agreement about one of the schools in the 'stacked deck'. He cites Martin (1995), who proposed a similar concept with two phases in the choice process: the first that of 'becoming informed'; and a second of 'expressing a preference'. The first phase corresponding to Gorard's second step and the second phase corresponding to Gorard's third step. Gorard found that the three step process may extend over a period of ten years, with some parents moving house, some years before the final choice is made, to be within the catchment area of a suitable subset of schools, and in this way limiting the potential choice of their child.

Gorard found that over fifty per cent of the respondents claimed that school choice had been a joint one, and that there was disagreement between the children's' responses and parents' responses over who had the major role in choosing a new school; each generation feeling that it had a more important role than the other reported. Two per cent of the parents reported that their child had the main role,

while fourteen per cent of the children reported that they had the main role. He criticises previous research looking at the child's' involvement in the choice of school by indicating that, unless they are prompted for the first step, children may only report that part of the choice process that is visible to them, and parents may only report the most recent part of the process. He notes that not all parents are likely to pass through all three steps in the process and that there may be many in-between positions in the process. He found that despite, class and gender differences, the role of the parents tended to be greater early on in the process and the child's role in the process tended to increase with age. There were differences in the children's responses before and after transfer, with thirty per cent of children reporting before transfer that they were involved in the choice whereas the figure doubled for the children reporting after transfer. He saw no reason *a priori* for a difference between children reporting in year six and year seven and suggested that the only way of explaining it was that the role of the child increases with age. He also found differences between parents' reporting before and after transfer, with parents' reporting that they had read more prospectuses and visited more schools before their child had transferred; he explained this by parents forgetting things or re-evaluating at a later date.

Gorard concluded the sequence of the choice process was a significant factor in examining family decision making, and that parents use sophisticated strategies to make it appear that children are involved in the decision whilst maintaining the parental preference. Parents may decide on the type of school without reference to the child; children, not be aware of the earlier steps, may feel more empowered than they actually are.

Marketing theory may be used to explain some of the findings, it is likely that in step two when parents are choosing a 'stacked deck' that it equates to the concept of an 'evoked set', of schools (Howard and Sheth, 1969).The assumption that children use a 'stacked set' of schools from which to make their choice may not always be the case; children may, by using other information sources, produce their own 'evoked set' of schools from which they make their choice. In the circumstances, given the

close proximity of children and parents and communication between them, it would not be surprising if the two 'evoked sets' are sometimes similar. The differences between parental and children reporting before and after transfer may be better explained by selective distortion and selective retention (Knox and Inkster, 1968), rather than purely the child's influence increasing with age, although this may have some part to play. Parents moving house to be within the catchment area of a desired school has been reported in other studies (Carroll and Walford, 1997); however, they only represent a small minority of parents and it would be misleading to indicate that this is a strategy used by many parents to restrict their child's choice of school, a number of other factors are likely to affect where families live and these impact on both parents' and children's choice of school.

Having reviewed the individual research studies, the next section moves on to look at their collective results and at what inferences can be drawn from the investigations as a whole.

2.5 Discussions of Reasons for Choice of Schools

Before discussing the results in the tables it is useful to look at the potential effect that using different methodologies can have on the results that are given in the tables. If a factor is missing from a study it does not necessarily mean that it was not important to the parents or children in the study, but it may well have been that the question was not asked during the study and that parents or children were not given the opportunity to express their reason for choice. Differences in the size of responses measured in percentages may result from the way that a question was asked: an unprompted open question asking 'reason for choice' may result in a wide range of different responses, each having a relatively low overall percentage; a question offering a choice of, say, five listed reasons will result in a restricted list, each with a higher relative percentage.

The studies reviewed in this chapter produced a wide range of reasons for choice. In order to attempt an analysis of their results it was necessary to reduce reasons for

choice to a manageable number. Gorard (1999) notes that studies usually attempt some form of classification of reasons for choice, and that there are a large number of different ways in which the reasons for choice can be grouped coherently. He identified seventy-three distinct reasons for choice, cited by respondents in prior research, and stressed the need for a systematic procedure to be used for their classification. Gorard proposed five categories: academic; situational; organisational criteria; selective criteria; and security criteria. In this work similar reasons for choice are grouped together, for example: 'We think our child would be happy there' (Bradley, 1996); 'Child wants to go' (West and Varlaam, 1991); 'Child's preference' (Hammond and Dennison, 1995); 'Child wants school' (West et al., 1995); 'Their child wanted to go there' (Alston, 1985); 'Believed Child will be happy' (West et al., 1998); 'Child preferred the school' (Woods,1996); were all placed under the category of 'child happiness'. At the end of this process thirteen categories were produced: child happiness; location; discipline; facilities; organisation; exam results; friends; siblings; curriculum; atmosphere; teachers; school reputation; and uniform; which are used in table 2.1, 2.2 and 2.3.

The methodologies in the studies vary, so it may be dangerous to draw firm conclusions based on the results. It is useful, however, to examine the results looking for common areas of agreement, any implications that impact on the marketing of schools, and any potential implications that may need to be verified by further research. One strength of this approach is that the studies took place at different times and in different places in the UK, from rural areas to large cities, sampling different socio-economic groupings. Areas of agreement across the studies can be seen to be reasonably representative of conditions in the UK.

RESEARCH PLACE DATE	ELLIOTT, J. CAMBRIDGE 1982	STILLMAN, A 1986		HUNTER, J. B. LONDON 1991
SAMPLE SIZE	32	822	735 542	289
TYPE OF RESEARCH	QUESTIONNAIRE	QUESTIONNAIRE		INTERVIEWS
TYPE OF QUESTIONS	OPEN / CLOSED	Area Area Area 1 2 3		SEMI-STRUCTURED
CHILD HAPPINESS	20%			
LOCATION	12%	15% 20% 20%		42%
DISCIPLINE	3%	30% 40%		47%
FACILITIES	3%			
ORGANISATION	10%			21%
EXAM RESULTS	4%	40% 50% 45%		39%
FRIENDS	4%			
SIBLINGS	3%			
CURRICULUM	20%	15% 15% 10%		18%
GOOD / FRIENDLY ATMOSPHERE				
GOOD / CARING TEACHERS				18%
SCHOOL REPUTATION		15% 15% 10%		21%
UNIFORM				

Table 2.1 Parent's of children at secondary school reasons for choice of secondary / high school.

Regarding table 2.1, four reasons for choice appear in all of the studies: location; discipline; exam results; and curriculum. Organisation and reputation of the school each occur in two studies; while child happiness, facilities, friends, siblings, and good caring teachers are only found in one study. All of the latter reasons are child centred and may occur less frequently because the research was undertaken after the decision was taken, and when the child was settled into their new school. This may explain why these results tend to differ from those shown in table 2.2; worries that may have been important before the child started at the new school, such as the child's happiness and the importance of going to a school with friends or siblings, may well have been forgotten about, or given a lower priority, once parents know their child has settled into their new school. This indicates a potential danger of using this type of approach.

RESEARCH PLACE DATE	ALSTON, C LONDON 1985	BASTOW, B.W SOUTH 1991	COLDRON, J BOULTON, P SHEFFIELD 1991	WEST, A ET AL LONDON 1991
SAMPLE SIZE	847	1255	222	72
TYPE OF RESEARCH	QUESTIONNAIRE	QUESTIONNAIRE	QUESTIONNAIRE	INTERVIEW
TYPE OF QUESTIONS	OPEN /CLOSED	OPEN /CLOSED	OPEN	UNPROMPTED
CHILD HAPPINESS	65%	14.0%	5%	71%
LOCATION	53%		32%	95%
DISCIPLINE	48%	8.1%	4%	67%
FACILITIES	48%		4%	26%
ORGANISATION	40%			38%
EXAM RESULTS	38%	10.3%	5%	54%
FRIENDS			15%	39%
SIBLINGS			16%	29%
CURRICULUM		5.9%	3%	33%
ATMOSPHERE		6.5%	8%	31%
TEACHERS		6.5%	8%	60%
SCHOOL REPUTATION			9%	
UNIFORM			1%	

RESEARCH PLACE DATE	YORKE, D. A. BAKEWELL,C.J. MANCHESTER 1991	WEST, A LONDON 1992	WEST, A LONDON 1992	WEST, A ET AL LONDON 1995
SAMPLE SIZE	88	27	29	70
TYPE OF RESEARCH	QUESTIONNAIRE	INTERVIEWS	INTERVIEWS	INTERVIEWS
TYPE OF QUESTIONS	STRUCTURED	Unprompted//Prompted	Unprompted//Prompted	OPEN
CHILD HAPPINESS		22% //	24% //	11%
LOCATION	47%	26% // 85%		26%
DISCIPLINE	52%	48% // 89%	55% // 93%	16%
FACILITIES	59%			19%
ORGANISATION		// 85%	// 93%	
EXAM RESULTS		44% // 89%	48% // 83%	34%
FRIENDS				
SIBLINGS				
CURRICULUM		30% // 85	28% //	23%
ATMOSPHERE	56%	30% // 100	38% // 97%	31%
TEACHERS	62%	22% // 93%	// 97%	14%
SCHOOL REPUTATION	49%		24% // 86%	10%
UNIFORM				

RESEARCH PLACE DATE	HAMMOND, T DENNISON, W NORTHLAND 1995	BRADLEY, H CAMBRIDGE 1996	WOODS, P. ENGLAND 1996	WEST ET AL., LONDON 1998
SAMPLE SIZE	755	329	262 Professional // Working	83 // 37 Sate // Private
TYPE OF RESEARCH	QUESTIONNAIRE	QUESTIONNAIRE	QUESTIONNAIRE	INTERVIEW
TYPE OF QUESTIONS	OPEN / CLOSED	TICK BOX	TICK BOX	OPEN ENDED
CHILD HAPPINESS	50%	53%	18.7% // 33.3%	41% // 46%
LOCATION	39%	25%	26.4% // 31.3%	13% // 8%
DISCIPLINE	76%	41%	8.8% // 19.2%	40% // 30%
FACILITIES	56%	30%	22.0% // 25.3%	
ORGANISATION			4.4% // 7.1%	25% // 51%
EXAM RESULTS	77%	23%	16.5% // 11.1%	10% // 11%
FRIENDS	23%	22%	18.7% // 18.2%	
SIBLINGS			22.0% // 17.2%	
CURRICULUM		21%	2.2% // 13.1%	
ATMOSPHERE			7.7% // 3.0%	25% // 46%
TEACHERS	89%		5.5% // 5.1%	
SCHOOL REPUTATION	74%		30.8% // 18.2%	18% // 11%
UNIFORM	11%	19%	1.1% // 1.0%	

Table 2.2 Parents' of children at primary school reasons for choice of secondary / high school

Regarding table 2. 2, only discipline occurs across all the studies. Child happiness and exam results appear in all of the studies with the exception of the Yorke and Bakewell (1991) study which, as previously discussed, may suffer from some methodological limitations. Location is another important factor which is reported in ten of the studies. In addition to occurring in most of the studies discipline, child happiness, exam results, and location have relatively high percentage responses, which is an indication of their importance to parents. The percentages shown in table 2.2.

The next band of factors are: atmosphere; good teachers; curriculum; and school reputation, which occur in nine, nine, eight, and seven of the studies respectively, and appear to be important to the majority of parents. More child centred factors; including friends, siblings, and uniform; appear to be of less importance to most parents.

There appear to be no obvious visible changes, or trends, that have taking place over the time period covered by the studies shown in table 2.2.

Given the potential problems of the use of different methodologies, it is dangerous to draw any firm conclusions. However, based on the analysis, some factors that appear to be important to most parents emerge. These are: discipline; child happiness; exam results; and location. It is interesting to note that the apparent importance of exam results to parents, shown in table 2.2, appears to conflict with Gorard's (1998) finding that very few families have found the introduction of annual league tables particularly useful in helping them make up their minds.

Reasons for choice can be split into two broad categories, Elliott (1981) suggested two criteria: 'product criteria', such as exam success; and factors concerned with human relationships termed 'process criteria'. Petch (1986), called the latter factors 'humanistic criteria'. Examining the results in table 2.3 the initial impression is that 'process criteria' appear to outnumber 'product criteria', however, taking the eight

most frequently cited criteria, from discipline to curriculum, a different picture emerges; the 'product and process criteria', at four each, are evenly spread.

Frequency	Criteria	Type of Criteria
12	Discipline	Process
11	Exam results	Product
11	Happiness	Process
10	Location	Product
9	Good Teachers	Process
9	Atmosphere	Process
8	Facilities	Product
8	Curriculum	Product
7	Reputation	Product / Process
6	Organisation	Process
5	Friends	Process
4	Uniform	Product
3	Siblings	Process

Table 2.3 Frequency of occurrence of parents reasons for choice.

When parents are choosing a secondary school for their children their important reasons for choice are evenly split between 'product' and 'process' criteria. This contrasts with the findings of Petch (1986) when she investigated parents reasons for choosing a primary school; process reasons were found to be more important to parents. The difference may be explained by parents' priorities changing as their child grows older; parents of younger children may be more concerned with immediate criteria such as happiness, security and safety. By the time parents are choosing a secondary school their priorities may have altered and 'product criteria', such as curriculum and exam results, become more important and are moved up their list of priorities.

RESEARCH PLACE DATE	ALSTON, C. ET AL. LONDON 1985	WEST, A. ET AL. LONDON 1991	THOMAS, A.. DENNISON, W NORTH ENGLAND .1991
SAMPLE SIZE	I423	393	72
TYPE OF RESEARCH	QUESTIONNAIRE	QUESTIONNAIRE	QUESTIONNAIRE
CHILD HAPPINESS			X
LOCATION		78%	X
DISCIPLINE			
FACILITIES	9%	98%	X
ORGANISATION			
EXAM RESULTS		98%	
FRIENDS	5%		X
SIBLINGS			X
CURRICULUM	14%		
GOOD / FRIENDLY ATMOSPHERE	13%		
GOOD / CARING TEACHERS	8%		X
SCHOOL REPUTATION			X
UNIFORM		78%	

Table 2.4 Children's reasons for choice of secondary / high school.

In table 2.4 only one reason, that of facilities, occurs in all of the studies; location, friends, and good caring teachers each appear in two of the studies. Happiness, exam results, siblings, curriculum, atmosphere, reputation, and uniform are all reported in only one of the studies. This implies that facilities, location, friends, and good friendly teachers are important to children; however, given that there are only three studies, it would be dangerous to draw strong conclusions from the limited research data. There is also a danger that children may be reluctant to suggest reasons for choice if they are not directly asked about them; factors such as happiness may not have been included in the questions asked of the children.

Comparing these results with those of parents' reasons for choice there is some agreement, but also potential differences. Factors such as location, facilities, and good friendly teachers appear in both sets of studies, whereas, in contrast to the parents' reasons for choice, friends appear to be more important to children than discipline. There is strong evidence indicating that children may themselves make the decision over choice of school, or have a strong influence over their parents' decision over choice of school (Elliott, 1882; Alston et al., 1985; Stillman and Maychell, 1986; Coldron and Boulton, 1991; Thomas and Dennison, 1991; Yorke and Bakewell, 1991; Walford, 1991; West et al., 1991; West, 1992; Hammond and Dennison, 1995; West et al., 1995). This evidence, when linked to the potential

differences between parents' and children's reasons for choice, indicates that more research is needed into this neglected area of children's reasons for choice of school.

In addition to investigating parents' and children's reasons for choice of school, it is important to gain an understanding of how the reasons are formed, the factors that influence them, and from where information is obtained in order to make their decision. The next section examines both sources of information used by parents and children, and sources of information found to be useful to parents.

2.6   Discussion of Sources of Information

Table 2.5 shows the information sources used by parents, as discussed in the previous section similar caution needs to be taken with its interpretation. Again, as in the previous section, similar information sources are grouped together into the following twelve categories: school brochures; school visits/open days/evenings; children; parent of child at school; friends, neighbours, family; primary/middle teachers; secondary/high school staff; LEA booklet; newspapers; league tables/exam results; parents past experience; son/daughter has or is attending school. It is dangerous to make any assumptions based on gaps in the table as although they may imply that parents are not aware of the information sources, it is just as likely to imply that they were not asked a question regarding the information source, or the answer was not included by the researcher on a pre-prepared list of sources. Copies of questions asked during interviews, or questionnaires used, are often not included in the reports of the research studies, so it is often not possible to state whether or not a particular question has been asked.

RESEARCH / PLACE / DATE	ALSTON LONDON 1985	HUNTER LONDON 1991	WEST LONDON 1992	HAMMOND & DENNISON NORTHLAND 1995
SAMPLE SIZE	847 PARENTS	289 PARENTS	27 // 29 PARENTS	755 PARENTS
TYPE OF RESEARCH	QUESTIONNAIRE	INTERVIEWS	INTERVIEWS	QUESTIONNAIRE
TYPE OF QUESTIONS	OPEN / CLOSED	SEMI-STRUCTURED	PROMPTED // UNPROMPTED	OPEN / CLOSED
INFORMATION SOURCE ONLY OR USEFULNESS OF SOURCE	INFORMATION SOURCE ONLY	INFORMATION SOURCE ONLY	INFORMATION SOURCE ONLY	INFORMATION SOURCE ONLY
SCHOOL BROCHURES	84%	69%	96% // 86%	57%
SCHOOL VISITS/ OPEN DAY / EVE.	73%	77%	100% // 93%	55%
CHILDREN			// 24%	27%
PARENT OF CHILD AT SCHOOL		60%	89% // 86%	
FRIENDS, NEIGHBOURS, FAMILY	24%		26% // 10%	40%
PRIMARY / MIDDLE TEACHERS	13%	55%		27%
SECONDARY / HIGH STAFF		52%		25%
LEA BOOKLET	94%	86%		43%
NEWSPAPERS			19%	18%
LEAGUE TABLES/ EXAM RESULTS				
PARENTS PAST EXPERIENCE			4%	
SON / DAUGHTER HAS OR IS ATTENDING SCHOOL	28%	44%	11% // 41%	53%

RESEARCH / PLACE / DATE	WEST, DAVID, HAILES & RIBBENS LONDON 1995	BRADLEY CAMBRIDGE 1996	WOODS, P. ENGLAND 1996	
SAMPLE SIZE	70 PARENTS	329 PARENTS	262 Professional // Working	
TYPE OF RESEARCH	INTERVIEWS	QUESTIONNAIRE	QUESTIONNAIRE	
TYPE OF QUESTIONS	PROMPTED	PROMPTED	TICK BOX	
INFORMATION SOURCE ONLY OR USEFULNESS OF SOURCE	INFORMATION SOURCE ONLY	INFORMATION SOURCE ONLY	TOP THREE MOST USEFUL	
SCHOOL BROCHURES	94%	82%	22.8% // 27.6%	
SCHOOL VISITS/ OPEN DAY / EVE.	87%	93%	68.5% // 65.3%	
CHILDREN	63%	26%	6.5% // 17.3%	
PARENT OF CHILD AT SCHOOL	54%	57%	33.7% // 22.4%	
FRIENDS, NEIGHBOURS, FAMILY	60%	42%	8.7% // 5.1%	
PRIMARY / MIDDLE TEACHERS	43%	9%	6.5% // 4.1%	
SECONDARY / HIGH STAFF		33%	12.0% // 12.2%	
LEA BOOKLET				
NEWSPAPERS	32%	8%	1.1% // 0%	
LEAGUE TABLES/ EXAM RESULTS		28%	32.6% // 20.4%	
PARENTS PAST EXPERIENCE		36%	22.8% // 23.5%	
SON / DAUGHTER HAS OR IS ATTENDING SCHOOL	27%	39%	33.7% // 22.4%	

Table 2.5 Sources of information used by parents to choose secondary / high schools.

A high proportion of parents in all of the studies in table 2.5 make use of school brochures and school visits, including attending open evenings. Parents tend to use other parents of children attending the school, in favour of the children themselves, as a source of information, though table 2.5 shows that both sources are used. This

implies that parents prefer to receive information from fellow parents rather than their own children. With the exception of one study, where the question may not have been asked, friends, neighbours, and family are an information source used by approximately ten per cent to sixty per cent of parents. A smaller proportion of parents use primary/middle school teachers as a source of information, even fewer reporting secondary school or high school staff as a source of information. This lower number of parents may result from them not reporting talking to these teachers as a separate item but assuming this is covered by questions on school visits, the parents assumption being that they talk to teachers during these visits.

LEA booklets are only shown in table 2.5 to be an information source in three out of the seven studies, used by a much greater proportion of parents in the earlier studies. Hunter (1991), although reporting them as an information source for eighty-six per cent of parents went on to report that twenty-five per cent of these parents did not find LEA booklets to be a useful source of information. Parents reported newspapers as a source of information, these only being reported in five out of the seven studies, and only by up to thirty-two per cent of parents in one study. League tables of exam results only appear in the two most recent studies; publicity given to league tables by governments and media may have increased, over time, parents' awareness of this source of information.

Parents' past experience of a school is only reported in three of the studies. Its absence in the other studies may result from: either the parents not being asked this question; or by their interpretation of the question. The question may refer to direct experience in the case of the West (1992) study four per cent reporting that they had attended the school themselves; or by the more general interpretation of experience in the Bradley (1996) study which included both direct and indirect experience of the school. This including either through having attended the school themselves or having a son/daughter attend the school.

Table 2.6 shows the sources of information used by children. Only two studies reported on this area so it is dangerous to draw firm conclusions from this data, more

research is needed to confirm and expand these findings. School brochures appear to be a source of information to a high proportion of children in the West et al., (1991) study, but are not mentioned in the Alston et al., (1985) study. It may simply be that the children were not asked about them. School visits are shown by a high proportion of children as a source of information in both of the studies; the lower figure, in the first part of the West et al., (1991) study, is probably a factor of timing in that they had not yet had the opportunity to visit the school when asked in the first study, but had visited a school by the time of the second study.

In contrast to table 2.5 which shows that parents use other parents as an information source, table 2.6 shows that a high proportion of children, in both of the studies, prefers to use other children as an information source. About a third of the children in both of the studies had a brother or sister at the school. Secondary school staff are shown to be a source of information in both of the studies, though by a higher proportion in the Alston et al., (1985) study. The lower figure in the first part of the West et al., (1991) study is, again, probably a reflection of timing, in that they had not yet had the opportunity to meet the teachers when the first study was conducted. Primary school teachers not being reported as a source may reflect the assumption that teachers would naturally talk to their children about their next school, so the question was thought to be unnecessary.

RESEARCH PLACE DATE	ALSTON, SAMMONS & MORTIMORE .LONDON 1985	WEST, VARLAAM & SCOTT LONDON 1991
SAMPLE SIZE	1423 CHILDREN	393 // 399 CHILDREN
TYPE OF RESEARCH	QUESTIONNAIRE	QUESTIONNAIRE
TYPE OF QUESTIONS	OPEN / CLOSED	PROMPTED
INFORMATION SOURCE ONLY OR USEFULNESS OF SOURCE	INFORMATION SOURCE ONLY	INFORMATION SOURCE ONLY
SCHOOL BROCHURES		67% // 70%
SCHOOL VISITS / OPEN EVENINGS	92%	29% // 63%
FRIENDS, NEIGHBOUR'S CHILDREN	77%	61% // 75%
BROTHER OR SISTER AT SCHOOL	30%	37% // 40%
SECONDARY / HIGH STAFF	66%	5% // 10%

Table 2.6 Sources of information used by children to choose secondary / high schools.

In comparison to the other two tables table 2.7 shows the most interesting set of results, those sources that are found useful and influential to parents. One important factor that emerges is that personal information sources, such as word of mouth, (Scott, 1998), are found to be more useful than impersonal sources, such as newspapers. Scott shows that school visits and open evenings are generally found to be much more useful to parents than school brochures, despite table 2.5 showing them both to be popular sources of information. This implies that parents find school visits to be a more credible source of information than school brochures, and are more strongly influenced by them. The Yorke and Bakewell (1991) results, which may suffer from methodological problems, tend to disagree in a number of places with the results of the other studies. This may either be due to the lack of questions or the way that questions were asked. For example, over fifty per cent of their sample said that they had not been influenced by friends, primary school teachers, other family members, published school leaflets, and media reports. Parents may not be aware of what factors influences them (Hill, 1993), or may not wish to admit to being influenced by these factors.

RESEARCH PLACE DATE	ELLIOTT. CAMBRIDGE 1982	HUNTER LONDON 1991	YORKE & BAKEWELL MANCHESTER 1991	BASTOW LONDON 1991	BRADLEY CAMBRIDGE 1996
SAMPLE SIZE	32 PARENTS	289 PARENTS	88 PARENTS	1255 PARENTS	329 PARENTS
TYPE OF RESEARCH	QUESTIONNAIRE	INTERVIEWS	QUESTIONNAIRE	QUESTIONNAIRE	QUESTIONNAIRE
TYPE OF QUESTIONS	OPEN / CLOSED	SEMI-STRUCTURED	4 POINT SCALE	PROMPTED	PROMPTED
INFORMATION SOURCE ONLY OR USEFULNESS OF SOURCE	VERY INFLUENTIAL // INFLUENTIAL	VERY USEFUL // USEFUL	INFLUENCED TO ANY DEGREE	INFORMATION LARGE INFLUENCE	INFORMATION MOST USEFUL
SCHOOL BROCHURES	2% // 68%	// 54%	45%	21%	38%
SCHOOL VISITS/ OPEN DAY / EVE	43% // 29%	69% //		75%	78%
CHILDREN	3% //				8%
PARENT OF CHILD AT SCHOOL	// 46%			41%	32%
FRIENDS, NEIGHBOURS	5% // 25%		29%		14%
PRIMARY / MIDDLE TEACHERS	3% // 12%	// 38%	43%	13%	2%
SECONDARY / HIGH STAFF					11%
NEWSPAPERS			32%	10%	1%
LEAGUE TABLES/ EXAM RESULTS				46%	10%
PARENTS PAST EXPERIENCE					23%
MEMBERS OF FAMILY			24%	39%	27%

Table 2.7 Influence of information used by parents about secondary / high schools.

Parents of children at school are shown to be influential, or very useful, in three out of the five studies; this contrasts with the much smaller proportion of parents who find the children themselves to be a useful source of information. This is supported and partially explained by the work of Moschis (1976), who looked at the influence of groups and found that the higher the degree of co-orientation an individual has with a group, the higher the credibility the individual gives to the information supplied by the group. This implies that parents prefer to use other parents as an information source rather than talking directly to children; so schools may wish to consider giving parents the opportunity to meet parents of existing pupils during school visits and open evenings. Friends and neighbours appear to be a useful and influential source to a much smaller proportion of parents.

Primary school staff are found to have some influence on some parents, but are only found to be very influential or very useful to a small minority of parents; similarly, secondary school staff are only found to have a large influence on, or to be most useful to, to a small proportion of parents. Newspapers, with the exception of the

Yorke and Bakewell (1991) study, are not shown to be very useful to many parents. This may be a result of the poor perception people have of the accuracy of information contained in papers. League tables of results are found to be useful by nearly half the parents in the Bastow study, but by only ten per cent of parents in the Bradley study. It is possible that over the years, as league tables have been given more media coverage, parents' awareness of them has increased. Only one study gives parents past experience as a most useful information source, which is surprising given Murray's (1991) findings that consumers' own experience is a preferred source of information when choosing a service. Three of the studies report that in between a quarter and a third of parents find members of the family, including past and present pupils of the school, to have an influence; have a large influence; be most useful.

Table 2.7 shows that children either directly, as a member of the family, or indirectly through their parents talking to friends are a very important source of information to parents about a school. Table 2.6 also shows that children are a source of information to other children.

Once the types and sources of information parents and children use and find useful are known, it is important to determine who the information should be directed at. An important part of the communication process is identifying the target audience, in order that one can choose both an appropriate form of media and the right message. The next section reviews research directed at answering the question of who makes the decision over choice of school?

2.7 The Decision Making Unit

Many of the studies indicate that it is not always the parents who make the decision and often, when they do make the decision, they are strongly influenced by their child. In early investigations Elliott (1982) reported that fifty-six per cent of respondents stated that their choice was a joint decision made by mother, father, and child; thirty-one per cent of respondents stated that the decision was made jointly by the mother and father; six per cent of respondents stated that the decision was made

by either the mother alone or by the mother and child; and no respondents stated that the decision was made by the child. Alston et al., (1985) found that nearly twenty-five per cent of the children said that their parents had made the decision, twenty per cent that they had made it themselves, and forty-five per cent said that it had been a joint decision made with their parents. Stillman and Maychell (1986) found that sixty-five per cent of parents reported that their child felt strongly about which school they wanted to go to, and of these parents seventy-eight per cent felt that their child's opinion was very important in choosing a school, a further twenty per cent felt it to be fairly important.

Later Thomas and Dennison (1991), found that sixty per cent of the children reported that they had made the decision of choice of secondary school, this tended to be confirmed by the parents who said that their children had the 'biggest say' in the decision. Less than fourteen per cent of the children stated that they had no say in the decision. Coldron and Boulton (1991), found that approximately forty-four per cent of parents reported that it was mainly the child's choice; approximately nineteen per cent reported that it was a joint decision between parents and child; and approximately thirty-seven per cent reported that the parents made the decision either against the child's wishes, or without taking the child's preferences into account. Yorke and Bakewell (1991) found that sixty-one per cent of parents considered it to be a three way process; eighteen per cent both parents; eight per cent the mother; and thirteen per cent the child. West et al., (1991) found, in their first study, sixty-two per cent of the children said that they agreed with their parents choice of school and thirty-eight per cent had disagreed; and in the second study sixty per cent reported that the choice had been a joint decision, made by themselves together with their parents; eighteen per cent that they had made the decision themselves; and sixteen per cent that their parents had made the decision. Walford (1991) found that nearly half of the children had made the decision themselves; forty per cent had made the decision jointly with their parents; and in about ten per cent of the cases it was the parents alone. West (1992) reported that seventy per cent of parents said that their child wanted to go to the same school as that which they had chosen.

More recently West et al., (1995) reported that forty-six per cent felt that it was the mother, twenty per cent both parents, eleven per cent parents and child, seven per cent the father, and seven per cent the child; eighty-three per cent of parents indicated that the child wanted to go to the same school as they wanted him or her to go to. Hammond and Dennison (1995) found that ten out of fourteen of the families interviewed stated that the child had expressed a preference which they had accepted. Gorard (1997b) found differences between parental and children's reporting: parents reporting forty-five per cent parents choice, two per cent child's choice and fifty-three per cent joint choice; whereas children reported thirty-six per cent parent's choice, fourteen per cent children's choice and forty-nine per cent joint choice. He explained the discrepancy by proposing that the parents had pre-selected the schools to produce a 'stacked deck' of suitable schools from which the child could make their choice.

Unlike reasons for choice of school, where there is a quite good level of agreement over the reasons for choice from the different studies, in the case of who makes the decision over choice of school the picture is not so clear (Scott, 1996). It is clear that parents and children become involved in the decision, but unclear who makes it. More recent research, particularly from those studies that have questioned children, has produced evidence of children's involvement in the decision, with some studies reporting that a significant number of children claim to have made the decision themselves. Based on the findings of Davis (1976); Pifer and Miller (1995); and Gorard, (1997b), that reporting varies between parents and children, caution needs to be applied to these results.

Caution is also necessary in interpreting the results from the larger number of studies that have relied purely upon parental reporting. A reasonable interpretation of the results would be to say that the answer to the question is not clear and is not always the same, but in the main parents make take the decision, but that children often have an influence on this decision. In some instances, however, children do make the decision themselves. An important point to note for further research is that it must include children in the questioning in order to produce a more reliable result.

One factor that may influence both the reasons for choice of school and the composition of the decision making unit is the socio-economic group to which the parents belong. The next section looks at research that has investigated the impact of this factor.

2.8   The Impact of Different Socio-Economic Groupings

When comparing the results of one study with other studies, examining the impact of social class on school choice, care must be taken when drawing conclusions about differences between the two class groups; social class groups are not monolithic entities. The varying methods used in different studies may make a direct comparison of the research results unreliable (Bastow, 1991).

Semi-skilled, unskilled manual, and junior non-management are more likely to cite child's preference as reasons for choice; professional and semi-professional classifications are more likely to cite academic/educational reasons for choice (Coldron and Boulton 1991). Concerning the decision making unit, in the majority of families the decision about which school to choose involves the child as well as the parents, but professional and middle class parents are twice as likely to make the decision without the child's involvement than are working class parents (Woods 1996). More professional and middle-class parents are influenced by standards of academic education, school atmosphere, examination results, and the external state of the grounds and buildings. More working-class parents are influenced by the child's preference, the nearness of the school, child's friends going there, discipline, subject choices, and standards in non-academic areas (West et al., 1991). Parents choosing private schools start the choice process earlier than parents choosing state schools, and significantly more parents choosing in the private sector consider quality of education as an essential factor. They also have greater aspirations in relation to their child's public examination results and entry into higher education (West et al., 1998). Parents' occupation and education are influential; the longer they have spent in full-

time education and the higher their job classification; the more information they are likely to collect and use when making their decision (Stillman and Maychell, 1986).

The effect of class is strong; middle-class choosers are much more active in the educational market place (Ball et al., 1995). In Sutton Coldfield middle-class families can not only ensure that their children attend a popular school, but can attend one that is relatively homogeneous in its middle-class intake. The affluent and well motivated families are always able to ensure that their children attend popular schools by moving to a home within the appropriate catchment area; selection by academic ability has been replaced by the size of a family's mortgage. Knowledgeable families from 'poorer' areas of Sutton Coldfield dare not risk the possibility of rejection and compromise on choosing their local school (Carroll and Walford, 1996).

Carroll and Walford (1997) used a sample drawn from parents of children attending five primary schools in the Midlands to investigate parents' responses to the school quasi-market. They interviewed, in depth, thirty-two families from two areas; one prosperous suburb; and the other a council owned housing estate. The study used two methods to determine the socio-economic status of each family; in the first the parents were asked their occupation and in the second they determined the council tax band of the family home. Because of the complexity of the decision making process, and the different ways that families undertook it, they had difficulty in categorising the families by the way that they undertook the process. Nevertheless they did split the families into broad categories; active parents, intermediate parents and passive parents. Active families included parents that made applications in more than one education authority, moved house to be within the catchment area of their preferred school, attended a number of open day/evenings, were prepared to send their child to a school some distance from their home, families who knew how the allocation system worked, and were prepared to pay for extra tuition. Passive families included parents who thought that there was no difference between schools, believed that their child would achieve the same results regardless of which school they attended, were unaware of the grammar school application process, relied on public transport, incorrectly completed the parental preference form, had a poor opinion of

the local school but still listed it as their first preference, and attended no open days. Intermediate families displayed a variety of active and passive elements.

Carroll and Walford's results showed the complexity of the choice process; they suggested that the process might better be represented as a series of multi-dimensional continua than by groupings. They found evidence of parents acting strategically over the choice mechanisms and of other parents moving house to be close to their desired school. The results tended to confirm the work of others (Edwards et al., 1989; Echols et al., 1990; Ball et al., 1995), that inequalities exist within the educational marketplace, with middle-class families being more likely to take advantage of the choice available. They did, however, find a significant number of families of lower socio-economic status who had actively engaged in choice mechanisms.

It was concluded that previous research had failed to stress the complexity of the decision making process; that it was not appropriate to use a simple classification of parents such as: choosers and non-choosers (Alder et al., 1989); alert and inert (Willms and Echols, 1992); cosmopolitans and locals (Bowe et al., 1994); and privileged, frustrated, and disconnected (Gewirtz et al., 1994). Higher socio-economic families used choice to secure a number of desirable options, whilst parents in lower socio-economic groupings tended to be motivated by rejection of their local school. The rejection was frequently based on 'process' factors rather than 'product' factors (Elliott, 1981). Carroll and Walford results tended to support Simon's (1988) view that a trend is taking place as a result of the changes in legislation which gives parents a greater choice of school; where popular schools in middle-class areas become even more popular and over subscribed at the expense of schools in working class areas that become under subscribed, this results in reduced funding to these schools to the detriment of the children who attend them.

In another article, covering the same study, Carroll and Walford (1997) wrote about the child's voice in school choice. Their findings supported the work of Alston (1985); Hunter (1991); West et al., (1991); Thomas and Dennison (1991); Walford,

(1991); Woods (1993); and West et al., (1995), which emphasised the importance of the child's influence and role in the decision making process.

Carroll and Walford found a tendency that parents in the higher socio-economic groups were less likely to be influenced by their child's wishes than were parents in lower socio-economic groups. They reported that their results might be seen to support the view that poorer families are more likely than affluent parents to delegate the decision about school choice to their children. Some parents gave their child a wide choice of schools by taking them to visit a range of schools; other parents pre-selected the schools and only took their child to visit schools which were acceptable to them. This process equates to Gorard's (1997a) "stacked deck".

In Carroll and Walford's sample of thirty-two parents, fifteen parents indicated that their child had little or no influence, and sixteen parents said that their child had played a significant role in the process. These findings gave some support to Thomas and Dennison's (1991) conclusions that the main priority in any marketing strategy must be directed towards pupils and their primary schools. They found, however, that those children who had the greatest say in the decision over choice of school ended up attending the nearest comprehensive school, while those children who ended up attending non-local schools were generally there as a result of a process dominated by their parents. The inference being that schools aiming to attract non-local children should direct their communication towards parents.

It was concluded that the decision making process was more complicated than the crude concepts of 'parents decided', 'child decided', and 'joint decision making', and that the complexities may be undetected in questionnaire surveys, particularly ones that rely on the child's response where the child's influence may be exaggerated. The parents' relationship with their child, when choosing a school, is a difficult and delicate area to probe because few parents want to imply that they have treated their child insensitively.

Limitations of the research are that its qualitative nature and small sample size, which although appropriate for delving into the complexities of the decision making process, make it dangerous to generalise the findings and to attach too much weight to significant differences between elements of the sample.

Although (Bastow, 1991) warns of the dangers of comparing studies using different methods of deriving socio-economic grouping, which are seen in the studies reviewed, and Carroll and Walford (1997) warn of the complexity of the subject, all of the studies reviewed appear to agree that there are differences in parental reasons for choice, and in the composition of the decision making unit, resulting from different parental socio-economic groupings. There is general agreement that parents from higher socio-economic groupings are less likely to either involve their child in the decision or to delegate the decision to their child than parents from lower socio-economic groupings. There is also some agreement that parents from higher socio-economic groupings are more likely to be influenced by standards of academic education, school discipline, and examination results than lower socio-economic groupings who are more likely to take their child's own preferences into account. Middle-class parents are more likely to play an active role throughout the process.

The following section examines the conclusions that can be drawn from the research reviewed in this chapter.

2.9   Conclusions

During post sixteen choice mothers play an important role in information gathering (Taylor 1992; Ball el. al., 2000; and Foskett and Hemsley-Brown, 2001). Older siblings recent experience of further or higher education can be a more precise source of information than that of parents (Taylor 1992). Peer and friendship groups within which the pupil operates are likely to have come from the social environment in which the parents have placed their children (Foskett and Hemsley-Brown, 2001). The range of A levels offered by a college was an important reason for choice

(Hemsley-Brown, 1999). From childhood pupils amass conceptual structures (schemata) which serve as tools for interpreting their experiences, new experiences result in a modification of the schemata (Hodkinson, 1995).

The chooser by the age of sixteen is the pupil who plays a dominant role in the process (Hodkinson et al., 1996: Ball el. al., 2000; and Foskett and Hemsley-Brown, 2001). Pupil decision making is only partially rational, being affected by feelings and emotions and linked to family background, culture and the life history of the pupils; and is context related (Hodkinson et al., 1996; Hemsley-Brown, 1999; Ball el. al., 2000; and Foskett and Hemsley-Brown, 2001). Evidence exists of an early processing stage where pupils rejected some options (Hemsley-Brown, 1999). There is a clear distinction between the start of the decision making process and when pupils came to a final decision (Foskett and Hesketh, 1996). Choice is dynamic, it is not fixed and may be subject to change (Foskett and Hemsley-Brown, 2001).

Much of the research undertaken into post sixteen choice has investigated choice of career options and non-A level pathways, only a few investigations (Foskett and Hesketh, 1996; Hemsley-Brown, 1999; Ball el. al., 2000) have examined pupils choosing where to study A level subjects.

Overall there is a remarkable consensus between the results of the choice of secondary school studies (See tables 2.1 to 2.7). Differences in the size of the percentages shown in the tables may be explained by the different methodologies used, rather than by differences in the parent's and children's responses. For example, using prescribed tick boxes, thus limiting the number of different reasons for choice, produces higher percentages than open ended questions, which allow a great variety of different reasons for choice and have a diluting effect on popular choices.

There is a good level of agreement over the reasons for choice of school across the studies reviewed. Reasons important to parents are: child happiness; discipline; exam results; and location, and all occur in most of the studies; with facilities, curriculum,

and good friendly atmosphere occurring in many of the studies. Some differences emerge between those studies which question parents of pupils who have already made the decision and those that question parents who are in the process of making the decision. One important reason for choice is 'happiness of the child' which is reported less frequently in those studies questioning parents who have already made the decision. An explanation is that parents of children, who are attending a school and have settled in and made friends, forget about their old fears, prior to the choice, of their child not settling in and not being happy, and concentrate on reporting more immediate matters.

Another point that emerges is that reasons for choice are not always the same for parents and their children. Factors, such as: location; facilities; and good friendly teachers appear, to be important to both parents and children. Friends appear to be more important to children than discipline, which is more important to parents. Reporting varies between parents and children (Davis, 1976; Pifer and Miller, 1995; Gorard, 1997 a). Parents may give quite different answers, when asked about their child's involvement in the process, than their children would report if asked the same questions.

Personal sources of information, consisting of word of mouth communication from other parents, children, friends, relatives, and neighbours, are found to be more useful by parents and children than impersonal sources of information. Impersonal sources, such as school brochures, LEA booklets, newspaper advertisements and articles, are found to lack credibility and be less useful to parents and children. School visits are found to be a very useful source of information to both parents and children. Parents and children are more likely to be influenced by groups if they consist of individuals similar to themselves.

Differences exist between the information sources preferred by parents and their children. Important sources of information for children are school visits, friends, teachers, and brothers and sisters at the school. Those important for parents are open days/school visits and parents of children at the school. Some parents find friends,

relatives, and neighbours to be useful sources of information. A minority of parents find talking to teachers a useful source of information. The mother is likely to be the main information gatherer and may exert a strong influence on the choice of school. The social status of the parents affects their preferred information sources, with those in higher socio-economic groupings collecting and using more information. Generally parents feel that they are provided with enough information on which to base their decision.

League tables, though not shown to be important in the earlier studies, become more important in the later studies. LEA booklets, although read by some parents, are not found to be a very useful source of information.

The parents education and social status may influence their choice of school. More professional and middle-class parents are influenced by standards of academic education and examination results, and are more likely to make the decision without the child's involvement than are working-class parents. Middle-class parents also have greater aspirations in relation to their child's public examination results and entry into higher education. The decision of choice of school may be made more than a year before the child is due to transfer to their new school.

There is no consistent decision-maker in the choice of school. The decision may be made by the mother, the father, the mother and father, the child, and the mother father and child. When the child does not make the decision, they may exert a strong influence on the decision maker. Future research must question both parents and children if they are to obtain objective results.

The research undertaken into parents' and children's reasons for choice of school has concentrated on choice of secondary school. A smaller number of studies (Petch, 1986; Raab and Alder, 1987; Bussell, 1994), not included in the review, looked at choice of primary school. The review has found that there is a paucity of research into 'older pupils' choice of school or sixth form college, during transfer at year twelve, when pupils decide where they are going to study for their A levels.

Although many studies reviewed have examined reasons for choice of school, sources of information used by parents and children, the impact of socio-economic grouping, and who makes the decision, very little research has examined the decision making process used when parents and children choose a school. Research is needed to investigate, understand, and explain this process (Bowe et al., 1994; Carroll and Walford; 1997; Gorard, 1999). Because of this lack of work in educational research, the next chapter turns to consumer research to look for further explanation of the process, and reviews work into the decision making process used when customers choose between consumer products and services.

Chapter 3.0 The Consumer Decision Making Process.

3.0   Introduction

The previous chapter of the literature review examined research into choice of school. It concluded that, although such research had investigated reasons for choice of school, few researchers have attempted to explain the decision making process involved in the school choice decision. Of those that attempted to explain the process, none have produced a comprehensive and acceptable explanation of it.

The introduction of Marketing into schools has, at times, proved controversial (Glatter et al., 1994). The philosophy of marketing is simple, that of satisfying consumers; but its implementation is complex. It requires an organisation to: identify its customers and define their needs; produce products/services to meet their needs; communicate and deliver the product/service benefits (Assael, 1995). An illustration of school managers who have failed to understand the concept of marketing are those who expanded their promotional activity without attempting to understand what parents want from a school (Woods, 1993). Although Marketing includes communication and persuasion as a part of its activities overall it transcends these to include such qualities as listening and responding (Bagley et al.,1996). The author believes that if school managers understand the fundamentals of marketing, and employ the concept knowledgeably, all can benefit, the pupils, the parents, and the school. Woods provides an example of school management who by listening to parents and by making a small change in the school provision, that of introducing homework timetables, increased parental satisfaction (Woods, 1993).

Because of the paucity of educational research into the decision making process, this chapter examines the marketing literature on consumer choice with a view to providing tentative explanations of the process involved when parents and children choose a school. These possible explanations will then be evaluated by the use of primary research described in later chapters.

At the beginning of the chapter, in Section 3.1, a broad review of theoretical models of consumer decision making is undertaken, and then because of the complexity of the subject and the nature of the research, which tends to examine small parts of the overall process, a more detailed approach is taken. From section 3.2 onwards research is examined, area by area, so that it is hoped by the end of the chapter a total and coherent picture of the overall decision making process emerges. The following sections are arranged in the same order that consumers use when making decisions (Engel, et al., 1968). Section 3.2 examines the external environment and the influence it has on the decision maker; reviewing work on peer pressure, other group influences, parental influences, and the influence of advertising. Section 3.3 looks at the information search stage; at how consumers search for information, process it and then store it. Section 3.4 looks in detail at the decision making process; covering compensatory and non-compensatory processing, multi stage models, the use of heuristics, and the formation of evoked sets which may then used to make a final judgement. The final section discusses the conclusions that can be drawn based on the review.

3.1   Models of Consumer Decision Making

When examining models of consumer choice, a useful starting point is to define what is meant by the word model. Zaltman produced a generally accepted definition of a model: 'a model is a simplified but organised and meaningful representation of an actual system or process' (Zaltman 1977). A model simulates the real world but is not the real world itself, it should define the key elements in the system and how they relate together (Lunn, 1978). Moorthy (1993) identified three broad types of marketing models: theoretical modelling; decision support modelling; and behavioural modelling. Engel et al., (1968), created a model of consumer buyer behaviour which has influenced academics and stimulated research, by using the concept of a number of stages involved in the consumer buying process; in particular they stressed the importance of understanding the decision making process.

A number of researchers have developed and tested multi-attribute models (Rosenberg 1956; Fishbein and Raven, 1962; Fishbein 1967; Hansen 1969; Wilkie and Weinreich 1972; Wilkie and Pessemer 1973; Fishbein and Ajzan, 1975; Fishbein and Ajzen 1980; Ryan and Bonfield 1980; Fletcher and Hastings 1983; Dabholkar 1994). Zeithaml (1988) questioned existing models of consumer decision making and produced, based on the work of others (Dodds and Monroe, 1985; Gutman and Alden, 1985; Reynolds et al, 1984; Reynolds and Jamieson, 1985), a 'means end' model incorporating the concepts of price, quality and value from the customer's perspective. The models are limited in the application to school and A level choice because they focus on a single decision maker making single product decisions. Harlam and Lodish (1995) developed a 'predictive multi-item assortment' model that can be used to make better predictions of consumer assortment choices made during shopping trips. The models' specific design, based on multiple purchases made during shopping trips, limits its use when investigating the choice of school.

Values are used by an individual to reduce conflict and to help make decisions (Kamakura and Mazzon, 1991). They developed a model for the measurement of values and value systems. Their work is limited to individual values and does not cover family values. The concept of values is useful when researching school choice in order to determine the educational values of pupils and to determine the impact these have on school choice.

Jacoby (1971) developed a model of 'multi-brand loyalty', which built on the work of Ehrenberg and Goodhardt (1970), and Howard and Sheth (1969). Because of methodological shortcomings the results of testing the model tended to be inconclusive, and Jacoby's own conclusions were that more work was needed to test the model. Heylen et al., (1995) developed an 'implicit model of consumer behaviour' which synthesised psychological, sociological, and socio-biological theory and provided a measurement of consumers' rational and emotional responses.

The model could be used to increase our understanding of pupils choice of school by increasing our understanding of the bio-genetic and the socio-normative influences.

Chandrashekaran, et al., (1996) used econometric models to test proposed relationships between group process and outcomes. The research is particularly useful because, unlike previous research (Corfman and Lehmann, 1987; Eliashberg et al., 1986; Rao and Stechel, 1991; Wilson et al., 1991; Ronchetto et al., 1989; Webster, 1994; Ward and Reingen, 1990), which has looked at either group outcomes or group process, it attempted to bridge the gap between the two traditional research techniques. Marchant et al., (1990) derived a mathematical model of consumer choice, the 'Marcos model' which added to the knowledge of the Dirichlet model (Goodhardt et al., 1984). Both the Dirichlet model and the Marcos model models are designed to make predictions of individual consumer product purchases. This limits their application to choosing services such as the school that a pupil attends.

No individual the models reviewed provides a satisfactory explanation of pupil decision making. In the main the models focus on the single decision maker making single product decisions and do not examine family decisions and the choice of services. Because no one model has been found that provides a satisfactory explanation of the decision making process used by pupils when they choose A level subjects and where to study, the review moves on to look into individual aspects of the decision making process.

3.2   Factors Influencing the Decision Maker

This section examines the external influences on the decision maker; looking at group influences, parental influences and at the influence of advertising.

3.2.1 Group influences

Informal groups have a definite influence on their members towards conformity behaviour with respect to the purchase of brands. The extent and degree of brand loyalty within a group is closely related to the behaviour of the group leader (Stafford 1966). Ford and Ellis (1980), who repeated Stafford's study, criticised it because of the small sample size and the use of an equal cell ANOVA. They concluded that the family influence on brands was stronger than group influences. Witt and Bruce's (1970) work helped to clear up the confusion over the importance of different influences on brand choice. They found that brand choice decisions vary in their susceptibility to group influence; group brand choice congruence is partially explainable in terms of group structure, and the symbolic involvement of products in the interpersonal situation in which they are purchased and used.

Lessig and Park (1978) introduced the concept of reference group function (RGF). Where the RGF is high (relatively high group influence) targeting communication at groups is effective, and where the RGF is low (relatively low group influence) it is more effective to target communication at the individuals (Lessig and Park 1978; Bearden and Etzel 1982; Childers and Rao 1992). For products consumed at home the influence of parents on brand choice is important. For nuclear families the degree to which an individual is influenced by peers appears to be significantly higher than for extended families; for extended families the relatively larger number and variety of family members generates relatively stronger influences, which then reduces the influences of peers (Childers and Rao 1992).

Where group pressure is applied, subjects tend either to be indifferent or to deliberately make a choice that would negate the effect of group pressure. Peer groups, friends, and acquaintances are a major source of influence and information in the attention directing stage of the buying process for major (Venkatesan 1966).

Information seeking is linked to co-orientation which suggests that consumers are more likely to seek information from friends to whom they are similar on various

attributes than from those with whom they have little in common. The credibility of informal group members as a source of information is related to co-orientation, the more similar they are to their friends the more likely they are to trust them as a source of information. The consumer's product choice is also linked to co-orientation, with consumers being more likely to be influenced by group members with whom they have a high co-orientation (Moschis 1976).

People use the product evaluation of others as a source of information about a product, after observing others evaluating a product favourably, people perceive the product more favourably themselves than they would have in the absence of this observation. They use the evaluations of others as a basis for inferring that the product is, indeed, a better product (Burnkrant and Cousineau 1975).

Students with low interpersonal confidence are more likely to be influenced by the views expressed by others (Berkowitz and Lundy 1957). Significant differences exist between students and housewives in terms of influence of reference groups on brand selection, with students being consistently more susceptible to group influence (Park and Lessig 1977). Susceptibility to interpersonal influence is inversely related to self esteem (Bearden et al., 1989).

The research reviewed in this section helps to explain some of the findings in the previous chapter. Summarising the section, friends are an important source of information and an influence on pupils because of the high co-orientation (Moschis 1976). The impact of group influence depending on the situation and the visibility of the item under consideration (Witt and Bruce 1970). If a group attempts to exert pressure on a pupil it may produce a negative result (Venkatesan 1966). Burnkrant and Cousineau's (1975) work helps to explain the importance of school visits where prospective pupils can effectively see other pupils using the product. Pupils of low self esteem are more susceptible to group influence than others (Berkowitz and Lundy 1957; Bearden et al., 1989), and pupils may be more susceptible than their parents (Park and Lessig 1977). Ford and Ellis (1980) found that in some situations parental influence may be a more important factor than group influence. The next

section goes on to examine the effect of parental influences on children's and adolescents' decision making.

3.2.2 Parental influences

For adolescents, peer conforming choices are more prevalent in the response to certain situations and parent conforming choices in response to others (Brittain 1963). For adolescents, in order of importance, the influences are: mother; father; values; impulses; and peers, all showing significant differences except for mother and father. Girls are generally more receptive to influence whatever its source, and they have significantly more powerful values than boys, while boys show a greater need for independence. Power only has a slight role; it tends to help determine the intensity of the influence exerted rather than whether it is accepted or not (Solomon 1963). Both elementary and secondary school children parents have a much stronger influence than friends or teachers; as the children grow older the parents influence increases at the expense of the teacher's (Epperson 1964).

In two studies, in 1961 and 1971, Gilkison examined what influences the buying decisions of teenagers. In the first study (1961) the main influencer varied across the product categories, with parents being the main influencer across most of the categories, but with friends being the main influencer for items of sports equipment and miscellaneous items. In the follow up study (1971) he examined changes that had taken place over the ten year period between 1961 and 1971. In 1961 the teenagers perceived their parents to be their number one frame of reference when buying personal clothing, whereas in 1971 they found their friends to be the number one frame of reference, and parents had dropped to the number four position. He concluded that generally, over the period 1961-1971, the friends had pushed the parents out of the number one position for frame of reference across the range of products investigated (Gilkison, 1965, 1973)

Adolescents from 'pluralistic families' (where the child is encouraged to explore new ideas, exposed to controversial material, and can make up their own mind without fear of endangering social relations with their parents) use mass media principally for news and entertainment. Adolescents from 'consensual families' (where the child is exposed to controversy but, paradoxically, is not encouraged to develop concepts that disagree with those of their parents, thus in effect they are encouraged to learn from and adopt their parents ideas and values) make similar use of media, but with different results; they have less knowledge of current affairs than adolescents from pluralistic families. The adolescents of consensual homes appear to put more effort into public affairs information seeking, via media and school, but get less out of it (Chaffee et al., 1971).

Adolescents tend to rely more on personal sources for information on products of high socio-economic and performance risk, and on mass media for information on products perceived as low for such risk. Parents and peers tend to have a low level of influence at the product evaluation stage. The more frequently an adolescent interacts with his or her peers about consumption matters, the greater the likelihood of him or her taking peer preferences into account in evaluating products. Socio-economic background and brand preference appear to be related, suggesting that children from higher socio-economic backgrounds have more opportunities for consumption and are more aware of their consumer environment, including the availability of products in the market place. Young people develop clear sex role perceptions by the time they reach adolescence. Changes in the type of information sources preferred varied with age (Moschis and Moore 1979).

Parents play an important role in the consumer socialisation of their offspring, and they are instrumental in teaching them the rational aspects of consumption. Parental influence on the consumer behaviour of their offspring is situation specific; it varies across products, stages in the decision making process, and consumer characteristics. Family mediates the effects of other socialisation agents, and the family communication processes plays an important role in this mediation process (Moschis

1985). Mothers have primary involvement in their children's consumer socialisation (Carlson and Grossbart 1988; Rose, 1999).

Family members disagree on the amount of influence adolescents have in family purchase processes, mothers' and fathers' perceptions, although not in perfect agreement, are much closer to each other than are either of the parents' perceptions to that of the child's own perceptions. Mothers, fathers and children all rate children as having some influence on the purchase of some products; these tend to be the less expensive ones and those for the child's personal use. Children tend to overrate their own influence. Families in greater agreement tend to have older fathers, a concept-orientated family communication style, fewer children, and a mother who works fewer hours outside the home (Foxman et al., 1989).

Adolescents use different information sources for different situations of visibility and social risk (Brittain 1963; Moschis and Moore 1979) and tend to rely more on personal sources for products of high socio-economic and performance risk (Moschis and Moore 1979). Parents have more influence during the information search stage than the later information processing stage (Moschis and Moore 1979). Parental influence tends to increase, at the expense of teachers influence, as the age of their child increases (Epperson 1964). Adolescents see their mother as the strongest family influence (Solomon 1963; Carlson and Grossbart 1988; Rose, 1999). This supports the findings of the previous chapter (West et al., 1995) where the mother was found to be the main information seeker and had the strongest family influence. Family members do not always agree on the relative amounts of influence they have on family decisions, children tend to overrate their influence (Foxman et al., 1989).

The previous sections have highlighted the importance of both group and parental influence on adolescent decision making and the importance of personal sources of information. The following section goes on to examine non-personal sources of information, particularly how advertising influences adolescents.

3.2.3 Influence of advertising

There are significant differences in attitudes over advertising directed at children between consumers and businesses, with the consumers having a more negative view towards advertising directed at children (Hite and Eck 1987).

Children's most frequent requests, for heavily advertised items, are for food products and toys and the mother is most likely to yield to purchase influence attempts on food products. Children who ask for products more often are more likely to receive them. The more restrictions a mother imposes on a child's television viewing the less likely she is to yield to purchase influence attempts. The amount of time a mother spends watching television is positively related both to the purchase influence attempts made by the child, and to the likelihood of her yielding to them. The frequency of children's purchase influence attempts decreases with increasing age, and the mother is more likely to act on them as the children grow older (Ward and Wackman 1972; Isler et al., 1987). The extent of yielding by the mother depends on the type of product requested; this is higher for the less expensive products and services. Mothers do not perceive television advertising as a major source of influence in stimulating purchase requests (Isler et al., 1987).

Television, family, and peers appear to be important sources of consumer information for adolescents, who check family attitudes about consumption with those of their peers as a means of obtaining comparative information. Both the amount of television watched by adolescents, and the amount of family communication about consumption matters, decline with increase in age (Churchill and Moschis 1979). Less affluent and younger adolescents spend a considerable amount of time watching television which leads, to a minor degree, to the acquisition of occupational information from television role models. While a child's exposure to television may increase his or her knowledge about occupational roles on television, it is unlikely that it is used by many adolescents to develop their own specific occupational goals (Christianson 1979).

Parents are concerned over advertising directed at children (Hite and Eck 1987), though mothers do not see television advertising as a major source of influence on their children (Isler et al., 1987). Although older children are less likely to pester their mothers to buy advertised products, they are more likely to be listened to when they do (Ward and Wackman 1972; Isler et al., 1987). Although less affluent adolescents are more likely to spend time watching television (Christianson 1979), adolescents, generally, spend less time watching television than younger children, but do use it as a source of information which they check by discussing it with their parents and peers (Churchill and Moschis 1979).

3.3   Information Searching and Storage

The previous chapter looked at research that covered the 'where, and from whom', pupils and parents obtain the information they need to make their decisions. The next section expands on the 'where and from whom', to examine the searching for and processing of information. It is hoped that this section will help to provide a fuller, and more meaningful, explanation of: the process by which pupils collect and store the information they need to make their decisions about choice of schools and A level subjects; the amount of time that is invested in the process; and how, potentially, they develop and improve their information processing skills.

A puzzling but consistent empirical finding is that consumers exhibit very limited information-search activity, even for expensive durable goods. Consumers weigh the costs and benefits of carrying out a search when making search decisions. The optimality of a consumer's search is reflected in the trade-off between the expected benefits from the search and the cost of the search. The benefits of the search are driven by how the consumer perceives the level of uncertainty involved with the decision environment, the importance of the product category, and their risk aversion (Moorthy et al., 1997). Education is a frequent and strong correlate in studies of the

amount of information search undertaken by consumers; the more education the more information is collected (May, 1979).

3.3.1   Collecting information about services

The decision of choice of school and A level subject is essentially a decision about a service. The availability and type of information is likely to affect information processing. There are three different qualities of product information: those high in search qualities, such as cars, houses, and clothing, where the consumer can easily determine the attributes prior to purchase and are thus easy to evaluate; those high in experience qualities, such as a hair cut, a holiday, and restaurants, where the attributes can only be discerned after purchase or during consumption which are more difficult to evaluate; and those high in credence qualities, such as car repair, legal services, and dental treatment, where the consumer may find it impossible to evaluate even after purchase or consumption. These produce a continuum of evaluation from easy to very difficult with products lying towards the easy end and services lying at the other end, their intangibility, non-standardisation, and inseperatibility of production from consumption making them more difficult to evaluate (Zeithaml (1981).

It is more difficult for consumers to evaluate the quality of a service than to evaluate the quality of a physical product. It is often impossible to sample a service prior to purchase whereas for a product it is often possible to sample prior to purchase, or to purchase a trial sample of it. Three aspects of a service lead to this difficulty: most services are intangible; most services are heterogeneous, their performance often varying from producer to producer, from customer to customer and from day to day; and for most services the production and consumption are inseparable (Parasuraman et al., 1985).

Consumers have a greater need for risk reducing strategies, of information acquisition, when purchasing services and therefore tend to extend the consumer decision making process. Personal sources of information are preferred, and used, by

consumers purchasing services in preference to non-personal sources. Consumers have a greater confidence in personal sources of information, source trustworthiness and expertise are important and these influence the consumer in their choice of information source. Personal experience is an important source of information (Murray, 1991). Murray's work tends to agree with work in the UK, discussed in the last chapter, where personal sources of information (those of children, and parents of children, attending the school) are found to be important information sources to parents and children choosing a school (Thomas and Dennison, 1991; West and Varlaam, 1991; West, 1992; Hammond and Dennison, 1995; West et al, 1995).

The purchase of services presents a number special problems to consumers in that their responses in relation to goods may not be applicable to services. The body of knowledge which explains consumer behaviour in relation to goods may produce problems if used to explain the behaviour of consumers in relation to services. Research is needed either to explore: consumer purchase of services under this general body of knowledge; to examine the personal relationship between purchaser and provider, such as the degree of empathy or sympathy (Gabbott and Hogg 1994). Caution is needed when attempting to apply the body of knowledge, based on consumer purchase of physical products, to choice of school which is a service decision.

3.3.2 Information processing

Individual bits of information can be integrated to form higher order chunks of information which have more meaning and are easier to store in, and retrieve from, long term memory (Jacoby et al., 1977; Bettman, 1979; Hill, 1993). Brand names serve an information chunking function in consumer decision making. Consumers select only limited amounts of information from the available supply of information, tending to place substantial importance on brand name information. When brand name information is available, they tend to be more satisfied with their purchase decision and tend to make less use of other sources of information. (Jacoby et al., 1977). Consumers appear to be very selective in their acquisition of non-durable

package information, seeking to process as little data as is necessary to make rational decisions (Jacoby et al., 1978).

Consumers may use constructive processing to create information displays. Understanding the causes and effects of restructuring is important for marketers who want to develop effective information displays and ensure that consumers will process presented information as intended. The end result of a restructuring process is the creation of a new information display, which may then serve as the basis for evaluation of brands or products. To construct a new information display, a consumer may simplify the initial display by editing out information, or alter it by transforming or rearranging the presented information to make the display more processable. Restructuring may also be done to add new information to an information display. Restructuring may enable the consumer to retrieve and apply a less effortful heuristic than could be done without restructuring (Coupey, 1994).

The information-processing approach endorses bounded reality; the idea that decision makers have limitations on their capacity for processing information; these include limited working memory and limited computational capabilities. Decision makers are characterised by perceptions attuned to changes, rather than absolute magnitudes, and diminishing sensitivity to changes to stimuli. Behaviour is shaped by the interaction between properties of the human information-processing system and the properties of the task environments (Bettman, et al., 1998).

Consumer researchers think in terms of a continuum from habitual decision making to extended problem solving. In the latter case the choice is linked to the self-concept and is likely to carry a fair degree of risk. Consumers collect as much information as possible both from memory and outside sources (Solomon, et al., 1999).

3.3.3 Effect of expertise and experience

Consumers use a variety of ways and sources to acquire information: visits and phone calls to dealers; test drives; magazines; manufacturers' brochures; friends and family;

TV, radio, and print advertisements. As experience increases, the number of attributes on which a consumer compares brands increases, and the number of brands goes down. The consumer becomes more expert-like with experience, and their knowledge of individual brands increases. As experience increases the search cost reduces due to increased search efficiency. Increasing expertise and knowledge are responsible for moving the consumers' perception of the market from that of homogeneous brands to partially differentiated brands to, finally, fully differentiated brands. Relative uncertainty about brands is not the same as uncertainty about individual brands, although the two are related. Relative uncertainty is the uncertainty about which brand is best, whereas individual uncertainty is the uncertainty about what each brand offers. The need for search arises only when relative brand uncertainty is non-zero. Experience increases expertise (complexity of decision making and perceptual activity) and knowledge about specific brands, but whereas the former increases the need for more information, the latter reduces it (Moorthy et al., 1997).

Consumers tend to minimise the time spent on information searching (Jacoby et al., 1978; Moorthy et al., 1997), to reduce the amount of information collected they tend to concentrate on brand name information (Jacoby et al., 1977). Consumers adjust their information processing approach to match the task in hand (Bettman, et al., 1998). They find services more difficult to evaluate than products (Parasuraman et al., 1985), and spend more time collecting information, and have a preference for personal sources of information, when choosing services (Murray, 1991). An information processing stage, prior to making a final decision, is the construction of an information display which is used to make the final judgement (Coupey, 1994). Consumers become more expert-like with experience, and often learn how to reduce their search costs by concentrating on the most important attributes and by differentiating brands (Moorthy et al., 1997).

3.3.4 Memory

The following section examines literature on memory with the objective of obtaining a better understanding of how pupils store information about schools and A level subjects in their minds, and the part that memory plays in the overall decision making process.

There are three theories of memory. These are: (1) The multiple store approach with a set of sensory stores, a short term memory store and a long term memory store. (2) The levels of processing theory; this proposes that individuals have a limited processing capacity, which can yield various levels of processing ranging from simple sensory analysis to more complex semantic and cognitive elaborations of the information. The theory assumes one memory, an overall processing capacity, and the ability to engage in different levels of processing. (3) The activation model, where there is one memory store, but only limited portions of that store can be activated at any one time. Only the activated portion can be used for current processing; the activation is temporary and will die out unless further effort is devoted to maintaining it. The limited capacity for dealing with incoming information led to the postulation of the short term memory store which is handled, in this model, by the limitation on total amount of activation. The multiple store theories do not strictly require that there be physiologically separate stores, it is the function of each store that is important (Bettman, 1979).

Short term memory is of limited capacity with information being stored as "chunks", the likely capacity being four or five chunks. A chunk is defined as a configuration that is familiar to an individual and can be manipulated as a unit, in essence an organised, cognitive structure that can grow as information is integrated into it. A chunk could be a brand name which summarises more detailed information for the consumer familiar with the brand. Information can be transferred from short term memory to long term memory, it is suggested that the transfer time taken to move one chunk of information, for future recall, into long term memory is approximately five to ten seconds, and if only recognition is required the time is two to five seconds.

If information is not rehearsed it is thought to be lost from short term memory after about thirty seconds (Bettman, 1979). It has been suggested that repeated exposure to a stimulus enhances future recall or recognition. Krugman (1972) found that recall and recognition increase as a function of presentation frequency and that there are decreasing increments in memory performance as repetition increases. It is claimed that three repetitions are enough and that low and high involvement learning may be governed by different processes, with low involvement learning being more susceptible to frequent repetition, particularly if recognition rather than recall is involved.

On average, each cell is connected 1,000 times with other neurones, making a total of 100,000 billion connections. A meeting point between two cells is called a 'synapse', the cluster of thin fibres converging on the brain cell are called 'dendrites'; with brain cells, after a few repetitions of firing together, they tend to team up. When two connected neurones have been triggered at the same time, on several occasions, the cells and synapses between them change chemically so that when one now fires it will be a stronger trigger to the other, in other words, they become partners and in the future will fire off in tandem much more readily than before. This is called 'Hebbian learning', after the Canadian psychologist Donald Hebb, and the chemical change in cells and synapses is called 'long-term potentiation' (Robertson, 1999).

Long term memory is thought to be structured as a network of nodes and links between the nodes, with the nodes representing concepts and the links representing relationships between these concepts. New information is integrated by developing a configuration of links between the new concepts and those concepts already in long term memory. Studying what concepts are in a consumer's memory and how these are linked may be extremely important for understanding the consumer's decision making process. The network view of memory provides a framework for systematically exploring the contents of, and interconnections in, a consumer's memory (Bettman, 1979).

Brand names serve an information chunking function in consumer decision making, perhaps facilitating information retrieval from long term memory (Jacoby, et al., 1977). The particular memory structure in which the consumer stores relevant information about the product influences the type of information which the consumer seeks about the product in the process of forming the evoked set. The most appropriate memory structure from which to draw performance specifications is a network structure because it defines the domain (product class) in functional terms. It logically follows that the most appropriate memory structure for the attribute specifications is the matrix, that can be a sub-structure in the network structure (May, 1979). Semantic memory may be represented as an associated network, with concepts which are similar in meaning being clustered closely together at 'knots', or 'nodes', in the network. Commonly associated concepts, such as bread and butter, appear to be close together as are concepts sharing a common purpose, function or value, properties defining class membership, such as bird and eagle, and the same emotional quality, such as fear, cancer and shark (Hill, 1993).

Consumers receive information from many sources including advertisements and word of mouth, an important question is whether this information is stored in memory. The answer may be not only the consumer's interest in the information but factors which effect the ease of processing, such as the organisation of the information, the volume of information, any competing activities or noise, and the modularity of the information presentation - visual, auditory or both (Bettman, 1979). Consumers tend to have positive attitudes and conceptions towards pioneer brands and they are more likely to remember and be able to recall pioneer brands (Alpert and Kamins, 1995).

Brain sculpture generally only happens when attention is paid to a stimulation. Connections are made in the brain, and connections are broken, we learn and we forget; one of the main things that determines which synapses stay and go is learning. The attention circuits of the brain are based largely on the frontal lobes and it is these that are crucial for the remoulding of the web of connections during the learning of new skills, whether they relate to work, sport, or home. Remoulding connections

which the frontal lobes set up is part of the retooling which the brain needs to do in order to perform the new skill fluently. The frontal lobes act like a fussy but expert nanny for the rest of the brain, deciding what information is important for the brain to receive - and what should be suppressed (Robertson, 1999).

Two forms of coding have been suggested as the means of storing objects in memory: that of object or brand coding, where all the attribute values of one object are presented at one time; and dimension or attribute coding, where the values on a particular attribute for the set of objects are presented one at a time. Research in this area has found that recall tends to be faster when object coding is used (Bettman, 1979).

Memory control processes are strategies used by humans to control the flow of information in and out of memory (Bettman, 1979). There are a number of proposed strategies: (1) Rehearsal, which is the processing effort needed after a stimulus has entered short term memory to further analyse it. (2) Coding, which is the way individuals structure information for rehearsal, people may use mnemonics, associations, images and many other strategies of encoding inputs received to facilitate memory. (3) Transfer governs what is stored in memory and the form in which it is stored, with information which is important for attaining goals, or is easily stored being given the highest priority. 4) Placement, which deals with where the information is stored; it refers to the association structure developed when the item was processed rather than the physical location of it. 5) Retrieval refers to how items are accessed from memory and can range from almost immediate access, for familiar items, to involved problem solving search processes for other items. 6) The final control process is response generation, a constructive process where items are reconstructed from memory. Partial recollections are used as a basis for reconstructing what "must have been", which implies that memory may be subject to biases, since the reconstruction will be based partly on what was and partly on the individuals expectations or schemes for what must have been (Bettman, 1979).

It is suggested that recognition is, in some cases, easier than recall; the tasks of recognition and recall differ in the basic type of processing that leads to effective performance (Bettman, 1979). To recognise a stimulus from among a set of distracting stimuli, information allowing one to differentiate or discriminate the previously encountered stimulus is necessary. In recall, however, information allowing one to reconstruct the stimulus is required, since the stimulus is not present. A factor which may differentially affect recognition and recall is the level of arousal at the time the desired information is to be retrieved from memory, arousal being some elevated state of bodily function (Bettman, 1979).

Hill (1993) criticised some forms of market research because they rely on the consumers' conscious memory. Conscious memory may be incorrect because of visual illusions, the contents of the memory may be distorted because of the mood the person was in when they received the information (e.g. depression, happiness); and the contents of the consciousness depend heavily on non-conscious processing. He proposed, as an alternative method of information collection, the use of semantic image profiling using the technique of semantic priming which would help to determine the unconscious emotional and other evaluative associations that a brand name evokes. This method of research could be useful in helping to determine what people mean by the expression 'good' or 'bad' name of a school, to help us determine what are the components of a schools name as a brand. It may also be a useful tool in helping researchers determine what parents and children mean when they use terms such as 'good' and 'happy' so as to give us a deeper understanding of the complex process involved with decision making. Bowe et al (1994) criticises past research into school choice (Hunter, 1991; Coldron and Boulton, 1991) for the use of the list approach or a network of preferences which fail to take into account the messy, multi-dimensional, intuitive and seemingly irrational or non-rational elements of choice. Use of research techniques that examine the non-conscious and automatic processes may help to provide a better understanding of the process involved.

Although there are a number of theories of memory (Bettman, 1979), the theory of a network structure of information (Bettman, 1979; May, 1979; Hill, 1993; and

Robertson, 1999) appears to be the most popular and provides a suitable explanation of how pupils store information in their memories about schools and A level subjects. Each school or A level subject being a node (Hill, 1993) connected to a network of information associated with the school or A level subject. The name of the school or subject corresponding to Jacoby's et al., (1977), 'brand' or 'chunk' of information. It is apparent that the state of mind the pupil is in, when he or she takes in and stores the information, may distort the contents of their memory (Hill, 1993). This links to work (Elliott, 1998), covered in the next section which examines the decision making process.

This section has examined information searching, the construction of information displays, and how the resultant information is stored in the consumer's memory. The following sections go on to examine in more detail how the information collected is processed to result in a final decision.

3.4 The Decision Making Process

The previous section has shown that consumer decisions are heavily reliant on the use of memory. The following sections review literature on how information is processed to make a final decision.

3.4.1 Goal driven choice

When the goal is well defined, consumers are expected to have already stored in their memory specific information as to how to achieve the goal based on previous experiences. The memory is expected to contain: (1) information about the means to achieve the goal; (2) information about inhibiting or facilitating conditions to execute such means. The two types of information may serve as a goal-relevant decision criteria for product choice. The view of memory for goal-relevant decision criteria is consistent with the memory structure of a goal hierarchy, that consists of a sequence

of goal-directed actions constructed on the basis of an 'in order to', relationship (Park and Smith, 1989).

Consumer decisions reflect cognitive, motivational, and affective processes; understanding consumer choice is critical for explaining and predicting consumer behaviour (Dabholkar, 1994). Consumers' choice of a product from among a set of product alternatives is normally goal driven. Goal-driven product-choice is consistent with contingency processing, which holds that consumers often adapt their problem-solving strategies to the demands of specific decision-making tasks and contexts (Park and Smith, 1989). Where two different experiences in each of two episodes involve a trade off between a goal and an experience, consumers prefer highlighting (going for two good experiences in one episode and subsequently for two lesser experiences in a later episode). In trade offs between two goals, they prefer balancing- one good and one lesser experience in each episode (Dhar and Simonson, 1999).

3.4.2 The effect of prior knowledge and experience

The way consumers evaluate products and make choices in the market place is conditioned by knowledge, both about product options and ways to evaluate these options. A complete understanding of the processes that drive consumer decision making, therefore, would seem to require an understanding of how changes in knowledge structures give rise to differing decision making patterns (Meyer, 1987).

Alba and Hutchinson (1987) define expertise as the ability to perform product-related tasks successfully. They also identify the five components of expertise: (1) more refined, more complete, and more vertical cognitive structures; (2) the ability to analyse information, separating the important and relevant from the unimportant and irrelevant; (3) the ability to elaborate and make accurate inferences from limited information; (4) the ability to remember product information; and (5) the lower cognitive effort required to perform product-related tasks. In addition they postulate that expertise increases with product experience (familiarity).

The effect of prior knowledge and experience influences the choice process used in consumer decision making. Consumers with little prior knowledge tend to find the task too difficult and opt for a simple solution. Consumers with some prior knowledge tend to undertake more processing of available information, relying on prior knowledge to a lesser extent than high knowledge consumers who, not being motivated to process more information than they need to, tend to rely on the information in their memory (Bettman and Park 1980). Heuristics may be constructed when consumers have little or no familiarity with the information or when consumers are faced with difficult choices (Bettman and Zins, 1977). Less prior knowledge generally leads to attribute based evaluations (Bettman and Park, 1980).

Prior knowledge enhances a consumer's ability to encode and remember new information, indicating the development of an integrated unit of storage suggesting that this is the brand. Experienced consumers use their knowledge of the product class to limit their search and it appears that, along with their increase in coding ability, experienced consumers develop knowledge of efficient decision procedures allowing them to ignore redundant information. Experienced consumers may be better able to select attributes that are predictive of product performance, which might, in turn, result in better decisions. Choosing one alternative from a set invokes different psychological processes than judging alternatives, which tend to be evaluated one at a time. Choice involves elimination strategies while judgement uses compensatory processing. The implication is that weights estimated using judgements may not have a clear relationship to attributes used in choice (Johnson and Russo (1984).

The impact of inferential beliefs on product evaluations can be significant and may distort the evaluation. When consumers are evaluating alternative choices and information is missing related to product attributes they may infer answers, to fill the gap, based on an evaluation of the other attributes. These inferences may distort results through three mechanisms: (1) attentional shifts; (2) discounting of unlikely combinations; and (3) revision of weights. A second mechanism through which

distortion can occur is the discounting of attributes levels which conflict with prior knowledge or experience. For example, if a car is described simultaneously as uncomfortable and luxurious, a consumer may discount both variables (Huber and McCann, 1982).

The introduction of a comparison object in the context of judging a focal object can cue the recognition that information is missing in the environment. At the time of judgement, if new information is in a comparative format the likelihood of omission detection is greater. If omission detection occurs only at the second or updating stage, consumers may nonetheless detect either that the new information is insufficient or that the earlier information was insufficient. Greater perceived insufficiency of the initial information leads to greater evaluation changes in the direction of the additional information. The format of the initial information, the challenging information, and the comparison brand can all influence the extent of perceived sufficiency, and hence the post challenge brand evaluations. The comparative mode of thinking produces a different pattern of judgement revision relative to an isolated mode of thinking (Muthukrishnan and Ramaswami, 1999).

3.4.3 Quality and quantity of information

One factor that may effect pupils' information processing is the volume of information that they have to deal with when choosing between A level subjects. Some researchers have proposed that the quantity of information will impact both on the quality of the decision making and on the type of decision making strategy used by consumers.

Consumer information processing will be effected by both the quality and the quantity of information they have to process. Consumers provided with too much information may suffer from "information overload", with a corresponding deterioration in the effectiveness of their decision making (Jacoby, 1984). As the quantity of information increases, the decision effectiveness follows an inverted U curve, initially increasing to a peak and then declining with further increases in

information, if the average quality level of the information is held fixed. Decision effectiveness, and consumers' confidence in their decision, is increased as the quality of the information is increased, up to a point, if quantity is held fixed. Information overload can occur on both dimensions; it may occur if there is too great a quantity of information, or if there is too much high quality information (Keller and Staelin 1987).

Choice involves two types of uncertainty: uncertainty about future consequences of current actions; and uncertainty about future preferences regarding those consequences. In a buying context, there is often uncertainty about the true values of alternatives on the different attributes. In addition, consumers may be uncertain about the weights of the attributes and about their preferences for different combinations of attribute values. The relationship between alternatives in choice sets may influence choice by providing reasons for preferring certain alternatives to others. The attraction effect refers to the ability of an asymmetrically dominated or relatively inferior alternative, when added to a set, to increase the attractiveness and choice probability of the dominating alternative. The attraction effect is stronger among those who expect to be evaluated by others, a choice of an asymmetrically dominated alternative is seen as easier to justify and less likely to be criticised. The asymmetric dominance relationship has the most impact on choice when the decision maker has difficulty determining preference. An alternative's choice probability tends to increase when it becomes a compromise choice in the set. The compromise choice reduces the conflict associated with giving up one attribute for another, and can be justified by arguing that it combines both attributes. The negative reason associated with the loss of one attribute will tend to loom larger than the reason associated with the gain on the other attribute. When the consumer is concerned about the evaluations of others, the selection of the compromise is the safest choice (Simonson, 1989). Non-users are more influenced by social norms while heavy users, having a range of beliefs based on their knowledge and experience, are less influenced by social norms (Knox and de Chernatony 1989).

3.4.4 Mood and emotion

It is important to examine the influence of mood and emotion on decision making, at the time of information collection (Meyers-Levy and Tybout, 1997), and its affect on the decision outcome and the type of process used (Elliott, 1998; Pham, 1998). Emotion may result in a non-rational preference being formed holistically, a process which is faster than cognitive processing. Once a non-rational preference is formed it tends to drive out further rational evaluation as the emotional responses overwhelm objective evidence and dominate consumer behaviour (Elliott, 1998).

Although the context may bias the encoding of new product information, whether this information will be retrieved at judgement will be determined by the cognitive resources that consumers are motivated to devote to formatting responses. The encoding effects of context can occur in the absence of any connection between the context and the information. Only accessible contextual cues, that have some substantive connection to the specific judgement requested, appear to affect evaluations at the time a judgement is rendered. When a meaningful connection is absent, little effort is required to determine that the influence is inappropriate. Whether correction for contextual influence is undertaken appears to be determined partially by the amount of resources the individual is prepared to devote to the task, and partially by the complexity of the task. Where the task is simple and the consumer is prepared to expend resources the context at coding has no affect on judgements. Whether correction actually occurs appears to be a function of the resources that the individuals are able to devote to this task. Cognitive resources available at encoding determine the type of contextual influence, and cognitive resources devoted to judgement determine the likelihood that this influence will be evident in subsequent product evaluations (Meyers-Levy and Tybout, 1997).

Decision outcomes can be influenced by feelings experienced during the decision making process. Two types of consumption motives can be identified; consumption that is intrinsically rewarding, and consumption that leads to other goals. The latter consumption decision is less likely to be affected by emotion. People are less likely

to rely on feelings if they have reason to believe that the feelings have not been elicited by the target itself. Reliance on feelings should be more pronounced when it helps to simplify the judgement or decision, as may be necessary when attentional resources are limited or when the judgement or decision is overly complex (Pham, 1998).

3.4.5   Perceived risk

The degree of perceived risk can impact: the type of decision making process that the consumer uses; the amount of information they collect; and from which source they collect it. The following section looks at research into consumers' perceived risk.

When consumers perceive a risk involved with a purchase decision they can employ one of four risk reduction strategies: (1) They can reduce the risk by either decreasing the probability that the purchase will fail, or by reducing the severity of the real or imagined loss if the purchase fails. (2) They can shift from one type of perceived loss to one for which they have more tolerance. (3) They can put off the purchase. (4) They can make the purchase and absorb the perceived risk. A risk reliever, a device or action used by the potential consumer to reduce perceived risk, can be used to execute either of the first two strategies (Roselius, 1971). Perceived risk can be split into two slightly different constructs, that of inherent risk, which is the latent risk a product class holds for a consumer, and handled risk, which is the amount of conflict the product class is able to arouse when the buyer chooses a brand from a product class in his or her usual buying situation (Bettman, 1973).

Buyers generally favour some risk relievers and are unimpressed with others. Potential risk relievers are endorsements, brand loyalty, major brand image, private testing, store image, money-back guarantee, government testing, shopping around, buying the most expensive model, and word of mouth. Brand loyalty is significantly more favoured than any of the other relievers, with major brands being the second most popular reliever. Store image, shopping about, free sample, word of mouth, and

government testing, although viewed positively by consumers, are less frequently used. Endorsements, money-back guarantees, and private testing tend to be less favoured by consumers, with buying the most expensive model being the least popular strategy. Consumers favour different relievers for different situations, particularly for different products and services (Roselius, 1971). This may explain, for example, why word of mouth, which has been found in other research (Zeithaml, 1981; Murray, 1991) to be an important source of information when buying services, figured so low in Roselius's results. When inherent risk is low, price became more important to the consumer during brand choice (Bettman, 1973).

Highly involved decision makers and those who expect to explain their opinions to others are less likely to use shortcuts. Selections of dominating and compromise brands are associated with more elaborate and difficult decisions. Dominance and compromise relationships do not appear to be used as substitutes for thorough information processing; rather they are used as a tie-breaking reason after a trade-off analysis fails to lead to a clear preference (Simonson, 1989).

3.4.6   Family decision making

Despite the many studies that have appeared in the literature on family decision making (egg., Burns and Granbois; Filiatrault and Ritchie, 1980; Munsinger et al.,1975; Olson, 1969; Spiro, 1983), only a few researchers have tested empirical models of the family decision making process (Corfman and Lehmann, 1987). In a study Corfman and Lehmann (1987) found that relative preference intensity is the most important predictor of relative influences. A limitation of the study was that they only examined couples, and did not include the influence of children in their work.

Fodness (1992) included children when he investigated the impact of family life cycle (FLC) on the vacation decision making process. He found that the family information seeker tends to be the wife, with the wife being particularly likely to be the information seeker at those stages of the FLC where there are children. Wives, in

stages of the FLC with children, are more likely to influence the vacation decision than their husbands. The importance of the wife in decision making in families with children is supported by research into choice of secondary school (West et al., 1995), where it was found that forty-six per cent of mothers had the main responsibility for deciding the school as opposed to only seven per cent of fathers.

3.4.7   Compensatory and non-compensatory decision rules

Over the years numerous researchers have carried out studies in order to understand the consumer decision making process. The process has been described as a spectrum of decision making from routine to complex (Assael, 1995); and routine to extended problem solving (Soloman et al., 1999), the latter entailing extensive thought, search, and time given to the problem. This section looks at the different types of decision/strategies that have been proposed and at their potential use in helping to explain and understand pupil decision making.

One way to differentiate among decision rules is to divide them into compensatory and non-compensatory rules. Non-compensatory rules, sometimes termed attribute based strategies (Bettman, 1977; Coupey, 1994) and attribute specific strategies (Assael, 1995), consist of the lexicographic rule, the elimination-by-aspects rule, the conjunctive rule and the cognitive choice rule. The lexicographic rule means that the brand that is best on the most important attribute is selected (Bettman, 1977; Park and Smith, 1989; Assael, 1995; Bettman, et al., 1998; Solomon, et al., 1999). The elimination-by-aspects rule is where brands not possessing a specified attribute are eliminated. It combines elements of both lexicographic and satisficing strategies, it eliminates options that do not meet a minimum cut-off value for the most important attribute, and the process is repeated for the next most important attribute and continues until a single option is left. The strategy is attribute based and non-compensatory (Bettman, 1977; Assael, 1995; Bettman, et al., 1998). The conjunctive rule applies where a number of key attributes are used, and any brand not possessing all of these attributes is eliminated (Bettman, 1977; Grether and Wilde, 1984; Assael, 1995; Bettman, et al., 1998). Consumers use a conjunctive rule at least as an initial

screening device (Grether and Wilde, 1984). The cognitive choice rule requires the decision maker to set up minimum cut-off levels for each dimension. In deciding whether to accept an item, the decision maker inspects the levels of the attributes of the item and accepts it only if the item is above the cut-off levels on all attributes. Failure to meet the present standard for any attribute leads to rejection of the item (Wright, 1975).

The Satisficing strategy is alternative based, selective and non-compensatory; it is a strategy where alternatives are considered sequentially in the order that they appear in the choice set, the value for each attribute is checked against a cut-off value for each attribute, and if any attributes fail to meet the cut-off point they are rejected. The first option to pass the cut-off points is chosen, if all fail the cut off points are reduced and the process is repeated. (Bettman, et al., 1998). The accuracy of attribute-based heuristics, such as lexicographic and elimination-by-aspects, are more robust under time pressure (Bettman, et al., 1998).

Compensatory processing, sometimes referred to as compensatory rules or category based strategies (Assael, 1995; Solomon, et al., 1999), consists of the simple additive rule, weighted additive processing, across attribute processing, within product processing, abstraction strategies, the linear compensatory model, affect referral, category based processing , constructive processing, and brand processing.

Category-based strategies involve the evaluation of a brand as a totality rather than looking at specific attributes; the consumer tends to rely on memory during this process (Assael, 1995). The simple additive rule means that the consumer chooses the option that has the largest number of positive attributes, and the weighted additive where the consumer takes into account the relative importance of the positively rated attributes (Solomon, et al., 1999; Assael, 1995). With the across-attribute strategy, each alternative is evaluated separately by combining across its concrete attributes, the overall evaluations are then directly compared. As alternatives become less comparable, the tendency for consumers to engage in the cognitively demanding abstraction process increases. When product usage contexts differ,

within-attribute processing is not expected to be the natural mode for evaluating alternatives. Rather, the appropriate decision rule in this situation is likely to be the feature based compensatory rule that involves across-attribute processing, sometimes termed within-product-processing (Park and Smith, 1989).

Many standard models of decision making assume alternative based processing, although attribute based processing is easier. A compensatory based strategy is one in which a good value on one attribute can compensate for a poor value on another, attribute; it requires explicit trade-offs among attributes. Making trade-offs is an important aspect of high quality decision making. In a non-compensatory strategy a good value on one attribute cannot be offset against a poor value on another. One classic decision strategy is the weighted adding strategy which is characterised by extensive, consistent alternative based and compensatory processing. It places great demands on the consumers' working memory and computational abilities, it is however the model used by many market researchers to assess preferences. The equal weight strategy considers all of the alternatives and all of the attribute values for each alternative, processing is simplified by ignoring information about attribute weights, a value is obtained for each alternative by summing all of the attribute values for that option and the one with the highest score is chosen. Processing is extensive, consistent, alternative based and compensatory. The majority-of-confirming-dimensions strategy is where alternatives are processed in pairs; with the values of two alternative pairs compared on each attribute, and the alternative with the majority of winning attribute values is retained. This option is then compared to the next alternative, repeating the process until all options have been considered and only one remains. Processing is extensive, consistent, attribute based, and compensatory (Bettman, et al., 1998).

By the age of eleven or twelve, children exhibit the same types of adaptive behaviour as those found in adults. Twelve-year-olds adapt to increasing complexity by simplifying their search for information, and using non-compensatory choice strategies in a manner consistent with adult behaviour. Older children (ten to eleven years old) respond to complex tasks by more drastic reductions in the proportion of

information they gather and by making greater use of satisficing strategies in making choices. They pay attention to the costs, or effort, involved in making decisions and make appropriate trade-offs as they adapt to more complex environments (Gregan-Paxton and John, 1997).

Consumers faced with non-comparable alternatives use one of two general strategies: a within-attribute strategy with abstraction or an across-attribute strategy. As alternatives become non-comparable, consumers retain a within attribute strategy by abstracting product representations to a level where comparisons are possible, while also shifting to an across attribute strategy, where they estimate an overall net value for each choice. One strategy for choosing among non-comparable alternatives is to first compute an overall evaluation of each alternative, then compare the alternatives based on these overall evaluations. There is a tendency for consumers to rely more on price as product alternatives become increasingly non-comparable (Johnson, 1984).

In the area of choice among non-comparables, two strategies that consumers might use to make a clear choice are the abstraction strategy and the across-attribute strategy. With the abstraction strategy, concrete attributes that differ across products are converted to abstract decision criteria to allow meaningful comparisons of alternatives. With the across-attribute strategy, each alternative is evaluated separately by combining across its concrete attributes; the overall evaluations are then directly compared. As alternatives become less comparable, the tendency for consumers to engage in cognitively demanding abstraction process increases. When a choice goal is available, consumers may not follow the data-driven, bottom up process but rather a goal-driven, top-down process, which assumes that decision criteria are developed directly from the goal (Park and Smith, 1989).

Comparable attributes tend to be relatively more important in comparison based tasks (e.g., choice), whereas enriched attributes, that are more difficult to compare but are more meaningful and informative when evaluated on their own, tend to receive relatively greater weight when preferences are formed on the basis of the evaluation of individual options. Options that excel on comparable attributes are expected to be

preferred more in comparison based tasks, and those that excel on enriched attributes are preferred more in tasks that involve separate alternative evaluations. Within attribute comparisons play a key role in choice processes, attributes on which two options are compared directly receive greater weight than non-common attributes. Those attributes that produce precise and unambiguous differences, such as price, tend to be more important than attributes that do not lend themselves to direct comparisons. Direct comparisons are more common with numerical data, and absolute evaluations are more common with verbal data. Attributes that produce clear and unambiguous comparisons tend to be more important in comparison based tasks, whereas enriched and less comparable dimensions tend to be more important in evaluations of individual options. Alternatives that excel on easily compared attributes appear more attractive when they are displayed next to alternatives that are relatively inferior on those dimensions. Products with a main advantage on dimensions that are complex, qualitative, and difficult to compare are likely to perform better if presented in a manner that makes it more difficult for buyers to make comparisons with competing options (Nowlis and Simonson, 1997).

More recent research has criticised the traditional view of decision making and proposed that consumers tend to adapt rules to a particular decision making situation, or construct their own rules during, and as a part of, the decision making process. Although rational choice theory has contributed greatly to the prediction of consumer decisions, it is incomplete and/or flawed as an approach for understanding how consumers actually make decisions (Bettman, et al., 1998). Decision makers select strategies in a situation based on some compromise between the desire to make an accurate decision and the wish to minimise cognitive effort; strategy usage will vary depending on the properties of the decision task. Individuals have a repertoire of strategies for solving decision problems, with different strategies varying in their advantages and disadvantages dependant on the task. In a given choice environment, the strategies will be: more or less accurate; more or less effortful and time consuming; emotionally wrenching or easy to justify. The strategies used will be affected by individual's: differences in computational skills; expertise in the choice domain; and ability to analyse and select the most relevant information. Choice of the

most appropriate strategy improves with expertise. Time pressure has clear effects on choice processes, with consumers preferring a within-attribute strategy when experiencing time pressure (Bettman, et al., 1998). A constructive view, rather than a reproductive view, of choice processing may provide a better description of how many consumers make choices that require extensive information processing (Coupey, 1994). Constructive processing has typically been used to describe the evaluative process that consumers use to make brand choices (Bettman and Park, 1980; Bettman and Zins, 1977). The next section, before examining constructive processing, examines the short cut decision rules generally referred to as heuristics that consumers may use, in order to save lengthy processing time, when they make decisions.

3.4.8   Heuristics

When limited problem-solving occurs prior to making a choice consumers often use 'heuristics', mental rules-of-thumb, that lead to a speedy decision (Solomon, et al., 1999). Bettman and Zins (1997) suggest that heuristics may be constructed when consumers have little or no familiarity with the information or when consumers are faced with difficult choices. Andrews and Manrai (1998) cite Andrews and Srinivasan, 1995; Einhorn, 1971; Gensch, 1987; Huber and Klein, 1991; Lussier and Olshavsky, 1979; Manrai, 1995; and Payne, 1976, as compelling evidence that consumers frequently use some type of simplification heuristic prior to making choices (Andrews and Manrai, 1998). People often rely on heuristics for making choices; these short cuts are retrieved from memory, for acquiring and evaluating information. In the absence of a retrievable heuristic, it has been proposed that decision makers may process information opportunistically to construct a heuristic for choice (Coupey, 1994).

Frequency knowledge is a tally of the number of positive and negative attributes associated with a brand, irrespective of their meaning or importance. The frequency heuristic differs from other decision rules that require the decision maker to evaluate the performance of a brand on at least one substantive dimension. Evidence suggests

that 'frequency counts' of some classes of information may be acquired with very little effort, and perhaps unconsciously. Consumers may be prompted to adopt a frequency heuristic not only because it reduces decision making effort, but also because frequency information may be more available or accessible regarding specific attribute information at the time of choice. Frequency information has a strong effect on decisions made in memory-based conditions. When consumers are motivated to process information a frequency heuristic may be used if processing is constrained by time, particularly if time is required to learn or fully appreciate the significance of particular attributes. When information load is high, consumers may use whatever information they can assimilate. To the extent that frequency information is learned or remembered more completely than other information, it may serve as a basis for judgement. Frequency information can dominate other, more significant, information when the consumer lacks the motivation, opportunity, or ability to process the importance or desirability of particular product attributes. From a decision making perspective it is evident that the frequency heuristic should be classified as a simplifying heuristic. Many consumers' decisions are simplified by eliminating brands and/or attributes from careful consideration and concentrating on the remainder. In contrast, the frequency heuristic involves the consideration of all available information but at a very shallow level (Alba and Marmorstein, 1987).

Consumers evaluate the effort required to make a particular choice and then choose a strategy best suited to the level of effort required. This sequence of events is known as 'constructive processing' (Solomon, et al., 1999). Bounded rationality and limited processing capacity are consistent with the growing belief among decision researchers that preference for options of any complexity or novelty are often constructed, not merely revealed, in making a decision. Consumers appear to utilise a wide variety of approaches, often developed on the spot. The processing approaches may change as consumers learn more about the problem structure during the course of making a decision. One reason why consumers may construct preferences is that they lack cognitive resources to generate well defined preferences for many situations. Another is that they often bring multiple goals to a decision problem. Preferences may be more constructive to the degree that the decision problem is

complex or stressful. Choices are often highly contingent on a variety of factors characterising decision problems, individuals, and the social context. Choice among options depends critically on the goals of the decision maker, on the complexity of the decision task, are context dependent, on how the options are asked, and on how the choice set is presented, or framed. Constructive processing generally implies contingent choices. The difficulty of the choice problem faced by the consumer will increase: with more choice options and attributes; with increased uncertainty about the values of the attributes; if there are more attributes that are difficult to trade off; if the number of shared attributes is smaller, among factors. The same individual may use a variety of different strategies when making decisions. Four aspects that characterise choice strategies are the total amount of information processed, the selectivity in information processing, the pattern of processing whether by brand or attribute, and whether the strategy is compensatory or non-compensatory (Bettman, et al., 1998).

Consumers may use constructive processing to evaluate brands as well as constructive processing to create information displays. Understanding the causes and effects of restructuring is important for marketers who want to develop effective information displays and ensure that consumers will process presented information as intended. Restructuring is a set of processes distinct from processes that might be used to evaluate information in order to make a choice. It may occur at any time in the choice process and may occur more than once. The end result of a restructuring process is the creation of a new information display, which may then serve as the basis for evaluation of brands or products. Consumers may restructure when faced with a difficult choice, such as a choice in which attribute information is not available for all brands or is presented in different units for different brands. Restructuring may also be used to add new, not-presented information to an information display. Restructuring should be included as a component in general models of decision making, which may help to explain observed switches in heuristic use in the course of a decision (Coupey, 1994).

3.4.9   Formation of an evoked set

Since Howard and Sheth (1969) introduced the concept of the evoked set, the concept of a set of considered brands has proved a useful partial explanation in models of consumer decision making. Individuals tend to organise the brands of a given product class into regions (or latitudes) of acceptance, rejection, and neutrality. The acceptance region contains the most preferred brands as well as others that are also acceptable. It should be noted that the region of acceptance is in all essential respects equivalent to the Howard and Sheth (1969) notion of "evoked sets". The rejection region contains those brands considered most undesirable and/or unacceptable. The region of neutrality encompasses those brands which, for one reason or another, are regarded as neither acceptable nor objectionable; those brands about which a consumer is non-committal (Jacoby, 1971).

Choice researchers have largely ignored a vital component of the choice process, that of the stage of 'consideration set' formation prior to evaluation and choice (Nedungadi, 1990). The consideration set is those brands that the consumer considers seriously when making a purchase decision (Hauser and Wernerfelt, 1990). Attempts to fit a single model to a total decision process may be overlooking an important intermediate stage. The concept of the evoked set suggests that choices are made after the consumer has constructed a set of acceptable brands. The implied two-process model, with information first used to form an evoked set, is used to simplify the ultimate choice process, it seems likely that a person would use an "elimination rule" and proceed by "knocking out" brands which failed to meet some acceptable minimum level on one or more evaluative criteria (Belonax and Mittelstaedt, 1978).

The consideration set is an important construct in the study of consumer behaviour (Hauser and Wernerfelt, 1990). Consumers use at least a two-stage process, faced with a large number of brands consumers use a simple heuristic to screen the brands to a relevant set called a consideration set, purchase decisions are made from the brands in the set (Belonax and Mittelstaedt, 1978; Parkinson and Reilly, 1979; Hauser and Wernerfelt, 1990; Nedungadi, 1990; Bettman, et al., 1998). Learning

theory and information processing theory are necessary to explain evoked set formation (May, 1979). The conjunctive model (non-compensatory processing) provides the best explanation for the formation of evoked sets (Brisoux, 1981). The existence of an evoked set for a product category would imply the operation of at least a two-stage decision strategy. In the first stage the individual decides which brands to consider by the application of a processing strategy. Then, when a purchase situation arises, the consumer applies another strategy to the elements of the evoked set to make a decision (Parkinson and Reilly, 1979). The lexicographic and the un-weighted linear compensatory strategies provided the best explanation of the initial formation stage of the evoked set. Using the un-weighted linear compensatory strategy the individual sums the attribute ratings for each available brand and includes those brands, in the evoked set, that exceed a certain cut-off level. Using the lexicographic strategy the individual rank orders the attributes of the brands on the most important dimension, and then ranks the brands based on the most important attribute and only includes brands that exceed a certain cut-off level. In the case of ties the second most important attribute is taken into consideration (Parkinson and Reilly, 1979).

Consumers use a phasing model, by which they establish their evoked set by using one cut-off model (i.e., conjunctive or disjunctive) followed by an evaluation for each brand within this set using a compensatory model (May, 1979). Evidence suggests (Nedungadi, 1990) that consumers could use a variety of decision rules to arrive at a final choice. Most current judgement and decision-making approaches to choice characterise brand evaluation as a function of brand utility; brand evaluation depends on a brand's value on the attributes considered important for choice. Brand consideration can be distinguished from brand evaluation, and the brand consideration stage may be influenced by factors other than those traditionally believed to affect brand choice (Nedungadi, 1990). Consumers may use combination strategies. A typical combined strategy has an initial phase in which some alternatives are eliminated and a second phase where the remaining options are examined in more detail. One frequently observed strategy combination is an initial use of elimination-by-aspects, to reduce the choice set to two or three options,

followed by a compensatory strategy such as weighted adding to select from among those remaining (Bettman, et al., 1998).

Consumers often include a surprisingly small number of alternatives in their evoked set (Solomon, et al., 1999). The size of the consideration set tends to be small relative to the total number of brands that could be evaluated. The consumer balances the benefits between choosing the best product, within the consideration set, versus the decision cost and/or evaluation search cost (Hauser and Wernerfelt, 1990). The evoked set of alternatives is likely to be smaller with services than with goods (Zeithaml, 1981).

The evoked set is composed of those products already in memory. It is stored in the mind as a cognitive structure containing a set of knowledge about products (Solomon, et al., 1999). Any meaningful examination of choice set effects should account for the role of brand memory in determining their composition. The consideration set is defined as the set of brands brought to mind on a particular choice occasion. Memory organisation shapes brand retrieval, determines the nature of the consideration set, and thus influences brand choice. It is in the brand consideration stage that the retrieval and formation of the consideration set occurs, and in the brand evaluation stage that the consumer deliberates about the brands included in the consideration set to arrive at a final choice. A set of alternatives is brought to mind and considered for further processing, consumers are believed to access and then evaluate items prior to a final decision. Activation from the priming of one brand will spread to other related brands in the network. Having brought a consideration set to mind, the consumer is in a position to evaluate these brands for choice (Nedungadi, 1990).

Memory organisation shapes retrieval, and the influence of a brand prime varies as a function of the nature of retrieval within a product category. Activation facilitates the transfer of information from long term memory to working memory. Sufficient levels of activation may exist in some brand nodes or could spread from internally generated or external retrieval cues; the probability of retrieving a brand is thus a

direct function of nodal strengths of activation. Researchers in cognitive psychology have recently used the word-fragmentation completion task to measure the accessibility of concepts in memory, and evidence suggests that this task is particularly sensitive to priming effects. External cues have separate and different effects on brand consideration and evaluation. The probability of brand choice was a function not only of brand evaluation, but also of the accessibility of the brand and its subcategory. Brand choice probabilities depend on the brand's link to any cues used to access brands in purchase situations. Consumer promotions may work through increasing the accessibility of a brand, causing it to be included in the consideration set on a specific occasion (Nedungadi, 1990).

3.4.10   Multiple-stage processing

The sections on constructive processing and evoked set formation introduced the concept of multiple approaches that are often used in consumer decision making. Some researchers have introduced the concept of a decision being broken up into different stages. This section looks at these, together with the postulated final stage of making an overall judgement.

In a two stage process the first stage of the choice process, which typically relies on efficient non-compensatory decision rules, simplifies the decision by reducing the number of brands in the consumer's consideration set. The second stage appears to employ more cognitively demanding, but more accurate, compensatory strategies to evaluate the considered brands and make a final choice (Andrews and Manrai, 1998). Attribute-based heuristics are used early in the phased decision, and alternative-based heuristics are used later, once the information has been winnowed to a manageable amount. Early decision behaviour may not always be evaluative: rather, attribute-based behaviours may often be undertaken to construct a new display to facilitate evaluative processing (Coupey, 1994). Consumers tend to start off by making attribute comparisons in the early stages of a decision, then move to using comparisons against standards in the middle phase, so as to eliminate some of the alternatives, finally shifting to brand comparisons (Bettman and Park 1980). The

specific process of 'fit judgement' may involve a form of holistic matching, instead of the feature based compensatory rule, between the typical usage setting of the product and the goal-relevant usage setting. This mode of evaluation also involves within-product processing, and may apply either to the elimination of unacceptable alternatives or to the evaluation of acceptable alternatives that survive the initial screening stage (Park and Smith, 1989).

Multi-attribute judgement models have often been criticised on the grounds of providing only a static description of the process that underlies product impression formation (Dagsvik, 1983, cited by Meyer, 1987). Changes in judgement strategies, over time, may mirror the changes in knowledge structures that naturally arise during learning. Judgement strategies may evolve as knowledge about a product category matures. During periods of early exposure to a product class consumers' judgements may seem better characterised by a set of conjunctive heuristics. Choices are made by elimination from larger sets to smaller, more preferred, sets; fine grained comparisons will generally arise only among offerings of higher desirability. Consumer preference functions and product knowledge could be better defined over positive ranges of attribute levels. Consumers tend to have a more precise image of what to look for in a product class than what not to look for (Meyer, 1987).

On exposure to alternatives in a choice set two types of processes may be engendered, one affective in nature and the other cognitive in nature. The former process is likely to occur in a relatively automatic manner resulting in the affective reactions that could differ on two dimensions, valence and intensity. The second type of process is likely to occur in a relatively more controlled fashion resulting in cognition's about the consequences of choosing alternatives. The critical variable, that is likely to affect the relative impact of affective reactions and cognition's on choice, is the availability of processing resources. The first process, which occurs almost automatically, is likely to be elicited if processing resources are not allocated to the decision making task. The second process is likely to be relatively deliberative and controlled when compared with the first and is likely to engender cognition's

about alternatives; it is more likely to occur when processing resources are allocated by the consumer (Shiv and Fedorikhin, 1999).

The following section examines, in more detail, the first part of the multi-stage decision making process, that of funnelling down the options to a workable sized choice, or evoked set, from which a final judgement can be made. It is hoped that this will help to provide an explanation of how pupils, at the outset, faced with a potentially large range of A levels sieve the number down to produce a cognitively manageable choice set.

Consumers who strive to be thoughtful and thorough in their evaluations may form their judgements in the manner implied by traditional models of attitude formation; they may retrieve several relevant product features, identify or infer the value associated with each feature, and both weigh and integrate all this information into an overall affective evaluation (Meyers-Levy and Tybout, 1997). Evaluation is the judgement of probability, the judgement of value, and the integration of these two components into an overall assessment of outcome. Prediction judgements consist of decision makers acting as though they are making estimates of the probability of an event occurring or the frequency of its occurrence. Valuation judgements involve the assessment of the 'goodness' or 'badness' of an event independent of its probability of occurrence. In the evaluation stage judgements of probability and value are combined to form an overall assessment of a particular option (Mowen and Gaeth, 1992).

3.5   Conclusions

The impact of group influence depends on the situation and the visibility of the item under consideration (Witt and Bruce 1970). However, if a group attempts to exert pressure on a pupil, it may produce a negative result (Venkatesan 1966). Burnkrant and Cousineau's (1975) findings, that people use others' product evaluations as a source of information about a product, help to explain the importance of school visits

where prospective pupils can effectively see other pupils using the product. Pupils are more susceptible to group influence than their parents (Park and Lessig 1977), and pupils of low self esteem are more susceptible to group influence (Berkowitz and Lundy 1957; Bearden et al., 1989). In some situations parental influence may be a more important factor than group influence (Ford and Ellis's 1980). Friends are an important source of information, and an influence, on pupils because of their high co-orientation (Moschis 1976).

Adolescents use different information sources for different situations of visibility and social risk (Brittain 1963; Moschis and Moore 1979), and tend to rely more on personal sources for products of high socio-economic and performance risk (Moschis and Moore 1979). Parental influence tends to increase, at the expense of teachers influence, as the age of their child increases (Epperson 1964), and parents have more influence during the information search stage than the later information processing stage (Moschis and Moore 1979). Adolescents see their mother as the strongest family influence (Solomon 1963; Carlson and Grossbart 1988; Rose, 1999), which supports decision the findings of the previous chapter (West et al., 1995) where the mother was found to be the main information seeker and had the strongest family influence. Family members do not always agree on the relative amounts of influence they have on family decisions; children tend to overrate their influence (Foxman et al., 1989).

Parents are concerned over advertising directed at children (Hite and Eck 1987), though mothers do not see television advertising as a major source of influence on their children (Isler et al., 1987). Although older children are less likely to pester their mothers to buy advertised products, they are more likely to be listened to when they do (Ward and Wackman 1972; Isler et al., 1987). Less affluent adolescents are more likely to spend time watching television (Christianson 1979). However, adolescents generally spend less time watching television than children, and use it as a source of information which they cross-check through discussions with their parents and peers (Churchill and Moschis 1979).

Consumers tend to minimise the time spent on information searching (Jacoby et al., 1978; Moorthy et al., 1997), and to reduce the amount of information collected they tend to concentrate on brand name information (Jacoby et al., 1977). Consumers adjust their information processing approach to match the task in hand (Bettman, et al., 1998). They find services more difficult to evaluate than products (Parasuraman et al., 1985), spend more time collecting information, and have a preference for personal sources of information when choosing services (Murray, 1991). This both supports, and helps to explain, the findings in the previous chapter that parents and children prefer to use personal sources of information when choosing a school. An information processing stage, prior to making a final decision, is the construction of an information display which is used to make the final judgement (Coupey, 1994). Consumers become more expert-like with experience, and often learn how to reduce their search costs, by concentrating on the most important attributes and by differentiating brands (Moorthy et al., 1997). It is likely that potential A level pupils learn about decision making and develop their skills as they work their way through the process. They may become more attuned to sorting the relevant from the irrelevant subject, and school, attributes, thus becoming more efficient at information collection and processing.

Although there are a number of theories of memory (Betman, 1979), the theory of a network structure of information (Betman, 1979; May, 1979; Hill, 1993; and Robertson, 1999) appears to be the most popular, and provides a plausible explanation of how pupils store information in their memories about schools and A level subjects. Each school or A level subject being a node (Hill, 1993) connected to a network of information associated with the school or A level subject. The name of the school or subject corresponding to Jacoby's (1979) brand or chunk of information. Mood may distort information stored in memory (Hill, 1993); whether correction for contextual influence is undertaken appears to be determined partially by the amount of resources the individual is prepared to devote to the task, and partially by the complexity of the task (Meyers-Levy and Tybout, 1997). Goal-driven product choice is consistent with contingency processing, and Goal-relevant decision

criteria is consistent with the memory structure of a goal hierarchy (Park and Smith, 1989).

Consumers who perceive a risk involved in a purchase decision may use a risk-reliever to reduce the level of perceived risk (Roselius, 1971; Bettman, 1973). When a consumer is concerned about the evaluations of others, selection of a compromise is the safest choice (Simonson, 1989). If information is missing consumers may infer answers to fill in the gaps, which may distort the end result (Huber and McCann, 1982). Consumer information processing is effected by both the quality and the quantity of information, if they are provided with too much information they may suffer from 'information overload' (Jacoby, 1984; Keller and Staelin 1987).

It is important to examine the influence of mood and emotion on decision making, both at the time of information collection (Meyers-Levy and Tybout, 1997), and its effect on the decision outcome and the type of process used (Elliott, 1998; Pham, 1998). Emotion may result in a non-rational preference being formed holistically, which is faster than cognitive processing. Once a non-rational preference is formed it tends to drive out further rational evaluation as the emotional responses overwhelm objective evidence and dominate consumer behaviour (Elliott, 1998). Context may bias encoding of new product information, whether correction occurs during processing appears depends on the amount of resources the individual is prepared to devote to the task (Meyers-Levy and Tybout, 1997).

One strategy for choosing among non-comparable alternatives is to first compute an overall evaluation of each alternative, then compare the alternatives based on these overall evaluations (Johnson, 1984). As alternatives become less comparable, the tendency for consumers to engage in cognitively demanding abstraction process increases (Park and Smith, 1989). Comparable attributes tend to be relatively more important in comparison based tasks (e.g., choice). Enriched attributes, that are more difficult to compare, are more meaningful and informative when evaluated on their own (Nowlis and Simonson, 1997).

Choices are often highly contingent on a variety of factors characterising decision problems, individuals, and the social context (Bettman, et al., 1998). Decision makers select strategies in a situation based on some compromise between the desire to make an accurate decision and the wish to minimise cognitive effort, strategy usage will vary depending on the properties of the decision task. Individuals have a repertoire of strategies for solving decision problems, with different strategies varying in their advantages and disadvantages dependant on the task. (Bettman, et al., 1998). A constructive view, rather than a reproductive view, of choice processing may provide a better description of how many consumers make choices that require extensive information processing (Coupey, 1994).

When limited problem-solving occurs prior to making a choice consumers often use 'heuristics', mental rules-of-thumb, that lead to a speedy decision (Solomon, et al., 1999). Many consumers' decisions are simplified by eliminating brands and/or attributes from careful consideration and concentrating on the remainder (Alba and Marmorstein, 1987). Consumers tend to start off by making attribute comparisons in the early stages of a decision, then move to using comparisons against standards in the middle phase, so as to eliminate some of the alternatives, and then tend to switch to brand comparisons in the final stage (Bettman and Park 1980).

There is general agreement amongst researchers (Belonax and Mittelstaedt, 1978; Parkinson and Reilly, 1979; Hauser and Wernerfelt, 1990; Nedungadi, 1990) that where numerous brands exist, consumers undertake an initial form of processing in order to sift out unwanted brands and form a choice set from which, during later processing, a final choice is made. Many researchers propose at least a two stages in the consumer decision making process (May, 1979; Parkinson and Reilly, 1979; Brisoux, 1981; Nedungadi, 1990; Bettman, et al., 1998) where initially a form of non-compensatory processing is used to form the evoked set, and at a later stage compensatory processing is used to make the final decision.

The evoked set is an important concept in helping to explain how consumers deal with an excess of brands. Use of the concept is made in a later chapter to help explain

how a pupil faced with an excess of schools or A level subjects is able to reduce the number down to a practical consideration set, which they use in their final decision. The use of memory, where the evoked set and accompanying details are stored, is an important aspect of the concept (Nedungadi, 1990; Solomon, et al., 1999), and is examined in greater detail in the following section.

Judgement strategies may evolve as knowledge about a product category matures (Meyer, 1987). Consumers who strive to be thoughtful and thorough in their evaluations may form their judgements in the manner implied by traditional models of attitude formation; they may retrieve several relevant product features, identify or infer the value associated with each feature, and both weigh and integrate all this information into an overall affective evaluation (Meyers-Levy and Tybout, 1997). Reliance on feelings is more pronounced when it helps to simplify the judgement or decision, as may be necessary when attentional resources are limited or when the judgement or decision is overly complex (Pham, 1998).

The review has found that although many research studies have investigated various aspects of the consumer decision making process involved when consumers choose brands and consumer services, there is, however, an apparent a lack of research in two important areas, that of the decision process involved with the choice of educational services and research into multiple choices.

No behavioural literature in marketing exists on the decision process for assortments of multiple items (Harlam and Lodish, 1995). Research has tended to concentrate on the simpler situation of when consumers make a single choice from multiple offerings. Research is lacking that examines the situation of when a consumer has to choose several products or services from multiple offerings; such as when a consumer is choosing decorating products for house improvement, or when choosing a range of flowers for their garden, or pupils choosing three or four A levels from a wide range of potential subjects. Future research is needed to explore multiple choices from multiple offerings (Harlam and Lodish, 1995).

The previous chapter found a lack of research into the mechanisms of the decision making process that parents and children use when they choose between schools. The work in this chapter agrees with Gorard (1997b), that a decision may consist of a number of potential stages, he proposed a three stage process; but it differs in its explanation of the composition and nature of the stages. This leaves doubt about the actual decision making process used when parents and children choose a school. The previous chapter also found a lack of research into older pupils deciding between schools. The work covered in this chapter, although adding to the knowledge of adolescent decision making by providing an explanation of some individual aspects of the process, fails to provide a comprehensive model that explains the overall process used when older pupils choose between schools and A level subjects.

In order to determine the type of decision making process used by pupils when choosing A level subjects and where to study them and add to the body of knowledge about consumer decision making, the next chapter derives research questions aimed at older pupils. Answering these questions should help to achieve both: a better the understanding of adolescent pupil decision making; and add to the understanding of multi-choice decision making.

Chapter 4   The Research Questions

4.0   Introduction

Chapter two concluded that there is a lack of research into the decision making process involved when parents and children choose a school, particularly regarding the process used by elder pupils when they decide, during transfer at year twelve, where they are going to study their A levels. Chapter three reached the conclusion that there is a paucity of research into consumer decision making involving making multiple choices from a range of options. This chapter explains the derivation of the research questions used in the research programme to add to the current knowledge in both of these areas: multiple-choice decision, when pupils choose A level subjects; and single-choice decisions, when they choose where to study them.

The research questions have been developed on the bases of both the findings from the literature review and on the results from the exploratory research discussed in chapter eight. From the results of exploratory research it became clear that the decision over choice of school, for older pupils, was more complicated than had been anticipated. The decision of where to study A levels is inextricably linked to the choice of A level subjects: not all schools and sixth form colleges offer the same range of A level subjects. The decision of where to study involves a trade off between the A level subjects the pupil wants to study and the school or college they want to attend. It is also apparent that the role of parents had changed from 'deciders' to 'influencers'.

Time and other resource constraints prevented the pursuit of many areas of research, and a decision was made to focus on older pupil decision making. The chapter thus concentrates on questions that directly impinge on the area most lacking in research, that of the decision making process involved when older pupils choose A level subjects and where to study them.

Based on the results of the literature review broad question areas were designed for use in the focus groups. These are explained in the first part of the chapter, the answers to these questions, together with the information obtained from literature review, were then used to develop the questions used for the quantitative research, explained in the second section of the chapter.

4.1 The Research Objectives

The aim of the research is to gain a better understanding of the decision making process involved when, upon transfer at year twelve, pupils choose what subjects they are going to study and where to study them. The main objectives of the research are:

- To determine the duration, and composition, of the decision making process.
- To examine the composition of the evoked set of schools that the pupils use.
- To examine the composition of the evoked set of A level subjects.
- To determine the composition of the decision making unit.
- To identify the information sources used by pupils and to establish at what stage of the decision making process they are used.
- To establish the factors that influence the pupils, the degree of influence they have on them, and at what stage of the decision making process they influence them.
- To investigate the level of stress experienced by the pupils during the process.
- To analyse and explain the type of decision making process that is involved with the pupil decision, from this it is intended to refine and develop current decision making models to take account of the decision making process involved when pupils, during transferring at year twelve, decide which subjects they are going to study and where to study them.

4.2   The Qualitative Research Questions used for the Exploratory Research

Because of the exploratory nature of the research the questions in this section are deliberately broad in their nature. Question areas were developed to act as a guide for the administration of the focus groups, to ensure that they all covered similar ground. The questions were divided into a number of areas based on the findings from chapter two and three. These were: timing; information sources; attributes, or reasons for choice; values; quality; attitudes; and the decision making process. Based on the outcomes of the early focus groups further areas were added to the remaining groups to include the choice of A levels and add the question areas: risk; rejection, and the perception of school names as brands. The advantage of qualitative research is that the design can be amended as the research progresses (Krueger, 1994).

Given the flexible nature of focus groups, the questions explained in the following sections were not always used in the order that they are presented in this chapter. Groups were allowed to move at their own pace and in their own direction, subject to remaining within the overall research area. Often a group would spontaneously move into a relevant area without the need for any questioning or direction from the moderator. The following questions were used both as a guide by the researcher and as a check list to ensure that no areas were omitted.

4.2.1   Timing

The objective of these questions was to ascertain when pupils first started to thinking about their choice of A level subjects and where they were going to study them, and what motivated them to start thinking about them. The answers to these questions would give an indication of the length of the overall decision making process. Questions asked were:

- When did you first start thinking about your choice of A level subjects and where you are going to study them?

- Did you start thinking about them both at about the same time?

- What caused you to start to thinking about them?

- Have you made any decisions to date?

- If yes, what have you decided? When did you decide?

- If no, when do you plan to make your decision?

4.2.2   Information

These questions were used to determine what information the pupils collected, how, and who collected the information, and what information sources were used and found to be useful. Questions that were asked were:

- What information did you collect?

- Who collected the information?

- Have you visited any schools or colleges?

- If yes, how many have you visited?

- If no, how many do you plan to visit?

- How did you collect information about different A level subjects?

- Where did this information come from?

- What information proved to be useful to you, and why?

- What information proved not to be useful to you, and why?

- What or who has turned out to be your most useful source of information?

4.2.3 Attributes

These questions were used to determine what the pupils wanted from a school, what different aspects they liked about prospective schools, and what subject attributes would influence their choice of A level subjects. The question areas included were:

- What aspects of schools or colleges (such as the buildings, the teachers, the range of subject choice, the environment, its location) are important to you?
- Are any friends also thinking of attending the same school or college?
- Is it important to you to be accompanied by friends?
- What do you like and dislike about different subjects?
- How many different schools, or colleges, and A level subjects did you initially consider and how many are you currently considering?.

Answers to the questions in addition to indicating what were important attributes of schools, or colleges, and A level subjects, would also be used to indicate the formation of evoked sets.

4.2.4 Values

These questions were asked to determine what the pupils values are concerning schools and A level subjects and of the relative importance of these values. Questions asked were:

- What values are important to you regarding your education?
- What does goodness mean to you?
- How important is happiness to you?
- What are your ethical views of education?
- What part, if any, does religion play for you in education?

4.2.5   Quality

The next area of questions was asked to determine what quality meant to the pupils and how important a factor it was to the pupils. Questions asked were:

- How would you define educational quality?
- Is quality in education important to you?
- If yes, what aspects are important to you?
- What does educational excellence mean to you?

4.2.6   Attitudes

These questions were asked to determine how the pupils built up attitudes about schools, colleges and different A level subjects. Questions asked were:

- What sort of a picture do you have of a particular school or college, and how is this formed?
- What do you think about a particular A level subject? Why?
- Why were some schools, or colleges, and A level subjects rejected from your list?

4.2.7   Risk

These questions were asked to determine whether the pupils were finding the process stressful, and how much worry they were experiencing. Questions asked were:

- What do you worry about in terms of your education?
- What aspects are particularly worrying?
- What consequences do you worry about?
- Are there any ways that you can use to reduce the worry?

4.2.8   Rejection

These questions were asked to find what schools, or colleges, and A level subjects had been rejected to date. They were also asked to determine how easy, or difficult, the decision had been for the pupil. Questions asked were:

- Have you rejected any schools, colleges, or A level subjects yet?
- If yes, was it easy to reject some of your choices?
- If yes, which ones?
- If yes, why was it easy?
- If yes, when were they rejected?
- If yes, was it easier to reject schools and subjects early on?

4.2.9   Schools/colleges as brand names

These questions were asked to determine whether pupils thought about the names of schools, or colleges, in a similar fashion to the way that they think of brand names for some products. It was also used to explore what is meant by a schools reputation in terms of what the pupils considered a good school or a bad school. Questions were asked about a range of different schools. The pupils would be given the name of a school and asked:

- What does the name X bring in to your mind?
- What does the name mean to you?
- What picture comes into your mind?
- Would you explain the picture?
- Do think that a name of a school is similar to the name of a brand, for example a car like Aston Martin?

4.2.10 Deciding

This was the most complicated area in which to ask questions. The objective was to determine what sort of decision making process the pupils had used, or were in the process of using. Questions were asked both about the school, or college, decision and their decision over choice of A level subjects, the tense of the questions asked was modified depending whether they were posed to a group who had made their decision or were in the process of making it. The questions asked were:

- Could you describe how you made your decision.
- Who took part in the decision?
- What information did you use?
- How did you use the information?
- Did the decision gradually emerge?
- Was the decision made quickly?
- Was there any process involved with making the decision?
- When you made the decision, did you rely on information in your memory, or did you go back over information previously collected such as school brochures?
- Was there any conflict involved with the decision?
- Did you attempt to resolve it and, if yes, how?
- Did you feel that your eventual choice was a compromise?
- What would your ideal choice have been?
- Where did your actual choice fall short of this ideal?

The answers obtained from answering these questions were used in conjunction with the literature to develop the specific questions, explained in the following sections, which were used for the quantitative research.

4.3 The Quantitative Research Questions

This section explains the development of the research questions and a hypothetical model of the decision making process, which forms the basis for the quantitative research programme.

4.3.1 Timing of the decision

Previous research, reviewed in chapter two, indicates that the decision making process is likely to extend over a period of years (West et al., 1995; Gorard, 1997b). The results of the exploratory research found that for pupils choosing which A level subjects to study and where to study them the time extended from when they chose their GCSE subjects until they made their final decision shortly before starting their A levels. The objectives of these questions is to confirm that the time period lasts for about three years.

Research Question 1 (a)

When did the pupils first start thinking about possible A level subjects, and when did they first start thinking about where they were going to study them?

These questions will be used to confirm when pupils start off the process of choosing A level subjects and where to study them. It will also be used to help confirm that it is a lengthy and complex process.

Research Question 1 (b)

When did the pupils make their final decision over choice of A level subjects and choice of where to study them?

These questions will be used to: confirm the length of the time taken for the process; to determine the proportion of confident and unconfident pupils; and to determine whether

both decisions, that of choice of A level subject and that of choice of place of study, are taken at the same time or at different times.

4.3.2 Evoked set

Chapter two indicated that parents choosing a school have an evoked set of between one and three schools (Gorard, 1997b). The results from the focus groups found that pupils choosing where to study for their A levels have an evoked set of between one and four schools/colleges and between three and six A level subjects. The objective of this question is to confirm these findings and to determine the proportion of pupils having different sets.

Research Question 2

How many schools do the pupils have in their evoked sets, and how many A level subjects do pupils have in their evoked sets?

In addition to determining the range of evoked sets, the question will be used as a partial conformation that a multi-stage decision making process is being used, and that non-compensatory processing has been used to produce an evoked set.

4.3.3 Who makes the decision?

This section will be used to confirm the findings from the exploratory research, that the role of parents has changed from 'decider', to that of 'influencer', and that in the large majority of cases older pupils are the decision makers.

Research Question 3

Who makes the decision over choice of A level subjects, and who makes the decision over where to study them?

Chapter two identified that in many cases it is the parents who made the decision over choice of secondary school (Bastow, 1991; West and Varlaam, 1991; West, 1992; West et al.1995; Bradley, 1996). Answering this question should confirm that the decision maker has changed over time, as the pupil has grown older. It should also provide a more accurate answer to the question of what proportion of joint decision making, between parents and pupils, takes place.

4.3.4   The influencers

The aim of these questions is to confirm the findings of the exploratory research that parents and elder siblings have a strong influence on the decision.

Research Question 4

What information sources have a strong influence on the pupil making their decision, and when is the influence exerted?

The questions will determine whether the influences of parent and elder sibling are equally strong on both aspects of the decision, that of choice of A level subjects and that of where to study them, or biased towards one aspect of the decision. It should confirm the finding that parental influence is strongest during the final stage of the decision process. It will seek to confirm the findings that friends and peers have little influence over choice of A levels, but do exert some influence over choice of where to study them, by acting as a risk reliever.

4.3.5   Degree of worry

This question will seek to confirm the finding of the exploratory research that, although parents are concerned over the amount of worry that their children suffer from while making the decision, the pupils themselves only suffer minor stress.

Research Question 5

How much do pupils worry, when choosing A level subjects, and when making their decision of where to study them? Is there a difference between the amount of worry experienced by male and female pupils? Is there a link between the amount of worry experienced by pupils and the timing of their decision?

The questions will seek to determine: the degree of worry associated with each of the two elements of the decision; look for links between worry and the sex of the pupil; test for connections between worry and the timing of their decision.

4.3.6   Information sources used by the pupils

These questions, together with research question four, seek to confirm the findings, from the literature review and the exploratory research, that personal information sources are more frequently used and are found to be more useful to pupils than impersonal sources.

Research Question 6

What information sources are used by pupils when they make their decision, and how useful do they find each source, and at what stage of the decision is each source used?

The question will be used to confirm the different types of information sources used by the pupils, at different stages of the decision making process.

4.3.7   Decision making process

The questions in this section together with research questions one, two, four, and six, will be used to test the hypothesis that a multi-stage decision making process is used when pupils choose A level subjects, and where to study them.

Research Question 7 (a)

Do the pupils use non-compensatory processing in order to produce an evoked set of schools/colleges, and an evoked set of A level subjects? Do the pupils use the evoked sets to make a final judgement of the best alternatives?

The questions will be used to test the hypothesis that non-compensatory processing is used, during the early stage, to reduce the subject and school choice sets down to manageable evoked sets. At the final stage compensatory processing is undertaken, using the evoked sets stored in the pupils memory as a 'chunk', or network, of information, to make their final decisions. The first stage taking most of the time period, and the final stage taking a short time.

Research Question 7 (b)

The question will be used to determine the extent to which memory is used for information storage.

When the pupils made their final judgement, was the decision made on the basis of information stored in the memory?

4.4   Conclusions

The chapter has explained the reasoning behind the research questions used for the qualitative research, based on the literature, and how the answers to these were used

together with the literature to develop the questions used for the quantitative research. The next chapter explains the methods used by both the exploratory research, and the quantitative research, to answer the research questions, and test the hypothetical model of older pupil decision making, posed in this chapter.

Answering the questions will add to the body of both educational and consumer knowledge. It will extend knowledge in educational research by examining adolescent pupil decision making and by testing a hypothetical model of the decision making process used by adolescent pupils. It will add to the body of consumer knowledge by answering questions, neglected to date, about choosing educational services, and multiple-choice decision making.

Chapter 5   Development of the Methodology

5.0   Introduction

The previous chapter explained how the research questions used for the programme were derived from a combination of the literature review and the exploratory research. The methodology explains the research methods used to answer the research questions and fulfil the research objectives. For clarity because the methodology consists of three distinct sections, it has been written as three separate chapters. Chapter five explains the general development of the methodology and provides a justification for using the approach outlined. Chapter six explains the qualitative research used for the exploratory research. Chapter seven explains the quantitative research used to test and extends the results obtained from the qualitative research.

5.1   The Research Approach

Two broad schools of thought exist on research design; the positivist approach and the phenomenological approach (Saunders et al., 1997). The following sections examine the different paradigms of research discussing the applications and advantages and disadvantages of each approach, starting with deductive research and contrasting it with inductive research. The sections then explain and justify why the research design consists of a triangulation of procedures, using a mix of both inductive and deductive methodologies; commencing with exploratory research, using a qualitative methodology employing focus groups; and then moves on to a deductive approach using a quantitative methodology, employing a survey using self-completed questionnaires, to test the reliability of the result obtained from the qualitative research.

5.2   Positivism

The positivism approach to research design uses deductive methods and has its origins in traditional science. It consists, broadly, of developing hypotheses, based on theory, and then testing the hypotheses (Saunders et al., 1997). They cite Robson (1993); who gave five sequential stages that positivist research will go through:

1. Deducing a hypothesis.
2. Expressing the hypothesis in operational terms.
3. Testing the operational hypothesis.
4. Examining the specific outcomes of the enquiry.
5. If necessary, modifying the theory in light of the findings.

Positivist research has a number of distinguishing features; it is deductive, in that the starting point consists of deducing a hypothesis; it examines a relationship between two or more variables; it normally uses quantitative data; controls are used during the testing of the hypothesis; and it uses a methodology that facilitates the testing of the findings by other researchers (Jacoby, 1978).

Positivists claim that, through formal logical analysis of theories and by means of unbiased observations, the truth of any meaningful proposition can be determined absolutely. To avoid the induction problem, that no universal proposition can be conclusively verified, logical empiricism was developed which favours the view that although scientific propositions cannot be conclusively verified, they can be increasingly confirmed using careful observations and the rules of formal logic (Peter and Olson, 1983).

A fundamental requirement of using the positivist approach is that sufficient theory exists from which to deduce a hypothesis. (Saunders et al., 1997).

A number of authors have criticised the reliance placed on positivist methodologies, used for market research, at the expense of employing more inductive methodologies

(Deshpande, 1983; Peter and Olson, 1983; Marsden and Littler, 1998; Sheth, 1992). Objective theory testing and the reliance on strict methodological rules, such as falsification, are stifling creative science rather than facilitating it (Peter and Olson, 1983). Marsden and Littler criticise standard quantitative methods because of the restrictive way that respondents are able to describe, and explain, themselves; the methods treat respondents as passive observers. They further criticise the methods because of the reductionistic approach taken by them, which is incapable of exploring the richness of consumer behaviour (Marsden and Littler, 1998). Quantitative research methods concentrate on confirmation rather than discovery, and more toward verification than generation; if we ignore the qualitative paradigm we also by definition exclude the principal systematic means of theory generation (Deshpande, 1983). Sheth wrote that because consumer information is in its infancy in consumer behaviour, it is premature to conduct deductive research; what is needed is a considerable amount of inductive research (Sheth, 1992). Major efforts in marketing are devoted to designing research to test borrowed ideas from other disciplines, rather than creating and developing theoretical ideas about marketing phenomena and problems (Sheth, 1982).

The overall conclusion drawn from the work covered is that in order to employ deductive methods it is necessary to work from a strong theoretical base from which hypotheses can be deduced for testing. In the field of marketing research into consumer behaviour the theoretical base may be weak, or lacking, from which to produce hypotheses. In such cases it may be premature to commence research using deductive methodologies.

5.3   Phenomenology

In many cases there is a lack of adequate theory on which to develop a hypothesis (Lawrence, 1982). In these situations another approach is necessary, that uses inductive methods in which the hypotheses and conclusions follow the data. The production of theory, in which the theory follows the data, is the phenomenologist approach. Phenomenology examines the meanings that research subjects attach to

social phenomena, thus the researcher investigates what is happening and why it is happening. It usually employs much smaller samples and uses qualitative methods, as opposed to the positivist approach that uses larger samples and quantitative methods (Saunders et al., 1997).

Qualitative research has been developed out of the need to understand why consumers behave in the manner that they do (Cooper and Tower, 1992). Cooper and Tower go on to give three key objectives of qualitative research:

1. An in depth understanding of how consumers think and feel about products and brands.
2. What factors, both emotional and rational, will affect consumer choice.
3. To understand the language of consumers, the nuances and emotional sources for creating ideas, and new ways of communicating with consumers.

The adoption of an inductive approach in marketing could produce more creative and useful theories (Peter and Olson, 1983). Phenomonology is concerned with understanding consumer behaviour at an individual level within the realm of consumers' subjective consciousness and meaning systems. Qualitative methods can reveal how individuals describe, explain, or otherwise account for the world in which they live (Marsden and Littler, 1998). Qualitative methodologies assume that there is some value to analysing both inner and outer perspectives of human behaviour; they believe that a complete and ultimately honest analysis can only be achieved by actively participating in the life of the subject of observation, and gaining insights by means of introspection (Deshpande, 1983).

Qualitative research needs to be situationally responsive, the inductive properties of qualitative research requiring the researcher to make decisions and refine the method en route (Krueger, 1994). The theory solidifies as modifications and concepts fall into established categories (Marshall, and Rossman, 1995).

5.4   Triangulation

The approaches discussed do not have to exist in isolation, they can be 'mixed and matched'. This is often beneficial and it is not unusual for a single study to combine quantitative and qualitative methods, and to use both primary and secondary data (Saunders et al., 1997). Arguing for an integrated approach Chakravarti states that preference in methodologies arise from different backgrounds, and that nothing other than interest and training precludes the use of qualitative methods in economic and psychological inquiry in consumer behaviour (Chakravarti, 1992). Using multi-methods in a study allows triangulation to take place. Triangulation refers to the use of two or more research methods within one study, to confirm findings and to obtain both breadth and depth of information (Yin, 1984; Krueger, 1994; Saunders et al., 1997).

Deshpande advocates the use of both paradigms, and states that qualitative methodologies are more suited for theory construction or generation of quantitative methodologies than for theory verification or testing. When attempting to build new theory a marketing scientist would be well advised to study and put into practice qualitative methods. The application of quantitative methods are more appropriate when the theory has been developed and grounded. It is important for marketing researchers to understand the advantages and disadvantages of both paradigms. Triangulation of procedures would then lead to using an appropriate mix of both qualitative and quantitative methods, where the weakness of one is compensated for by the strength of the other and vice versa. Qualitative field work and quantitative survey methods can be interplayed within a research endeavour (Deshpande, 1983).

As each method has its own strengths and weaknesses, there is an inevitable relationship between the methods employed and the results obtained, this is called the 'method effect', where the type of research method used influences the results obtained. It makes sense to use different methods to reduce the 'method effect'. This leads to greater confidence being placed in the conclusions (Saunders et al., 1997).

The goal of triangulation is to strengthen the total research project, regardless of which method is the primary means of data collection (Morgan, 1988).

5.5   Reliability and Validity

This section discusses issues of reliability and validity and the approaches adopted in the design of the methodology to ensure both factors. Deshpande (1983) writes that quantitative methodologies tend to emphasise reliability issues, while the qualitative methodologies tend to emphasise validity. Ideally every research study needs both high reliability and high validity. By using a mixture of qualitative and quantitative methodologies the reliability and validity of the results can be increased (Deshpande, 1983).

Looking at several definitions of reliability: reliability is the agreement between two efforts to measure the same trait through maximally similar methods (Gilbert and Churchill, 1999); reliability is the probability that repeating a research procedure or method will produce identical or similar results (Bush, 2002); reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions (Bell, 1987 cited by Bush, 2002); reliability demonstrates that the operations of a study, such as data collection procedures, can be repeated with the same results (Yin, 1994). Thus, reliability can be seen as a measure on the consistency of a method to produce the same results each time it is used under the same conditions.

The method employed to test the reliability of the quantitative results was to use pairs of questions which should produce equivalent answers if the results are reliable. Pairs of questions were incorporated into the questionnaire (for example in the year eleven questionnaire; Q9 & Q10; Q11 & Q12; Q28 & Q29; Q30 & Q31). The resulting answers were checked for Equivalence (Gilbert and Churchill, 1999). The high level of agreement between the answers, presented in chapter nine, gives confidence in the reliability of the questionnaire and the data it provided.

Definitions of validity are: validity is the agreement between two attempts to measure the same trait through maximally different methods (Gilbert and Churchill, 1999); validity is used to judge whether the research accurately describes the phenomenon which it is intended to describe (Bush, 2002); validity tells us whether an item measures or describes what it is supposed to measure or describe (Bell, 1987 cited by Bush, 2002). Thus, validity is the check of whether the researchers are actually measuring what they are attempting to measure.

Initially pilot testing described in section 7.7 was used to test the content (or face) validity of the quantitative research. The method of using focus type groups for the piloting of the questionnaire worked very well because as well as highlighting potential problems associated with the questionnaire it also produced potential solutions to them. As a result of the pilot study changes were made to the questionnaire discussed in section 7.8 and to its administration discussed in section 7.9 which helped ensure that the questions elicited the information intended and was understandable to the respondents.

Validity can be subdivided into internal validity and external validity. Internal validity relates to the extent that research findings accurately represent the phenomenon under investigation (Bush, 2002); the degree to which findings correctly map the phenomenon under investigation (Denzin and Lincoln, 1998 cited by Bush, 2002); the ability to attribute the observed effect to the experimental variable and not other factors (Gilbert and Churchill, 1999).

Cohen and Manion suggest internal validity can be tested by employing triangulation (Cohen and Manion, 1994 cited by Bush, 2002). Triangulation, discussed in section 5.4, has been used in this research to test the internal validity of the results. Agreement between the results of the qualitative research presented in chapters eight and the quantitative results in chapter nine include the timing of the decision making process, the importance of personal sources of information, the decision maker, the existence and size of the evoked sets of schools and subjects, and the amount of

worry experienced by pupils during their decision. This high level of agreement gives confidence in the internal validity of the results.

External validity relates to the extent that findings may be generalised to the wider population which the sample represents or to other similar settings (Bush, 2002); external validity is the degree to which findings can be generalised to other settings similar to the one in which the study occurred (Denzin and Lincoln, 1998 cited by Bush, 2002); external validity is the test of whether the prediction variables can be expected to occur in other situations (Gilbert and Churchill, 1999). Probably the most effective way to test external validity is to repeat the research using different samples of the population under investigation. Yin (1994) says that the problem of generalisation can be minimised by replicating the study in another similar setting, which should lead to wider acceptance of the external validity of the findings.

Repeating the research with different samples from the overall population was not feasible due to time and financial constraints. The alternative used was to compare the results from this research to the results from other similar studies (i.e. Elliott, 1982; Bradley, 1996; Foskett and Hesketh 1996). Their research was undertaken at different times and in different places. The high level of agreement between these studies and the results of this research, discussed in chapter nine, give confidence in the external validity of the results.

The next section looks at ethical issues that should be considered when undertaking research involving young people.

5.6   Ethics

As the research involved adolescent pupils careful thought was given to the ethical dimension to the design and implementation of the research. The market Research Society 'Code of Conduct' (1999) was the main ethical standard followed in the design and implementation of this research. In particular their 'Guidelines for the Conduct of Research Among Children and Young People' was adhered to. This section, starting with a definition of ethics, discusses the ethical issues involved with the research and steps that were taken to ensure that no harm should come to the pupils taking part in the research.

Gilbert and Churchill (1999) define ethics as:

> 'Ethics are the moral principles and values that govern the way an individual or group conducts its activities. Marketing ethics are the principles, values, and standards of conduct followed by marketers' (p42).

Pring distinguishes between ethics and morals:

> 'Ethics are the philosophical enquiry into the basis of moral judgements, whereas morals are concerned with what is the right or wrong thing to do' (Pring, 2000 cited by Busher, 2002 p.73)

> 'Researching choice generates a number of significant ethical challenges for educational researchers that emerge from researching real people, real lives and their choice processes within competitive situations' (Foskett and Hemsley-Brown, 2001 p.47).

Specific issues that can arise are: the nature of the project; the context of the research; the procedures adopted; the methods of data collection; the nature of the participants; the type of data collected; and what is done with the data.

Researchers have a duty to avoid harm to participants, maintain their privacy, anonymity, and confidence (Busher, 2002).

Research involving school children raises issues about the consent gained from children. Busher (2002) cites Cohen et al., (2000) regarding the grounds on which informed consent may be obtained:

- participants must be in a position, or old enough, to understand the choice that they are making- children need to have parental or guardian consent to participate;
- disclosure of purpose of research;
- disclosure of any risks to participants; and
- a provision allowing participants to withdraw at any time.

(Cohen et al., 2000 cited by Busher, 2002, p.84).

The MRS guidelines define consent as the permission given by the responsible adult to the interviewer which allows the interviewer to <u>approach</u> the young person. It is not permission to <u>interview</u> the young person, as the young person must have their own opportunity to decline to take part in the research. In this context young people are defined as aged between sixteen and seventeen years. The MRS goes on to say that: it is advisable for research carried out in the home of the young person that an adult remains on the premises - though not necessarily in the same room - throughout the interview. When research takes place in schools, the right of individual young people to opt out must be stressed by the researcher.

The pupils involved in the focus groups were sixteen and seventeen year olds. In order to undertake the research in a safe environment the focus groups were held in one of the pupil's houses with at least one parent in attendance. In addition to pupil consent, parental consent was asked for their child to take part in the focus groups. At the start of the focus groups pupils were reassured that neither they nor their school would be identified within the research outputs and it was made clear that any pupil could withdraw, if they did not wish to take part. In order to maintain appropriate

anonymity and confidentiality the pupils in the focus groups are referred to as pupil A, pupil B etc. and their schools or intended colleges are referred to school X, college Y etc. in this thesis.

The questionnaires were completed by the pupils at their schools in a room allocated by the school with a member of staff present. The procedure adopted was to write to the head teachers of the schools requesting their consent to the research stating that the schools involved in the survey would be treated confidentially; and that they would be sent a report containing the main conclusions drawn from the research and copies of any resulting publications. Foskett and Hemsley-Brown draw attention to the ethical dangers of giving advantage to an organisation, in that they may see their participation in the research as a means to gain market advantage from the process (Foskett and Hemsley-Brown, 2001). In the case of this research, three papers have been published (Scott, 1996,1998 and 2000) and it is proposed to publish a further two, so that the information is/will be out in the public domain thus giving no special advantage to the participating organisations.

At the time that the questionnaires were distributed the researcher explained to the pupils the objective of the research, its confidentiality, and its voluntary nature. It was made clear that any pupil could withdraw if they did not wish to take part in the research. As with the data resulting from the focus groups pupils are referred to as pupil A, pupil B etc. and their schools or intended colleges are referred to school X, college Y etc.

5.7   Exploratory Research

Exploratory research is appropriate to any problem about which little is known and can form the basis for a good study (Gilbert and Churchill, 1999). Exploratory research is used when the researcher is seeking insights into the general nature of a problem, the decision alternatives and the variables that need to be considered. It is useful for establishing priorities among research questions and for learning about the practical problems of carrying out the research (Aaker et al., 1995).

Most market research is surely of a kind where there is no adequate framework to deduce why people act in a particular way. Exploratory studies enter new ground, with new and unknown complexities. Researchers will be guided by their own ideas, experiences, and to some extent concepts and theories drawn from the social sciences. They would, however, be unwise to claim to be using a deductive methodology when doing so (Lawrence, 1982).

Research experience has demonstrated that literature surveys and focus groups are particularly productive in exploratory research (Gilbert and Churchill, 1999). Focus groups have proved productive for the generation of hypotheses, that can be further tested quantitatively; for the generation of information used to design questionnaires; and to provide overall background information (Aaker et al., 1995; Gilbert and Churchill, 1999). Focus groups appear best suited for creating an atmosphere conducive to phenomenological and exploratory tasks (Bristol and Fern, 1996).

5.8   Conclusions

In order to use deductive research it is necessary to have a strong theoretical basis from which to produce the hypotheses for testing using this methodology. The conclusions drawn from the literature review were that insufficient theory exists on which to develop a firm hypothesis. Taken together these points indicate that to use a purely deductive approach for the research study would be inappropriate.

Where little is known, and there is a lack of theory, it is wise to commence a research programme with exploratory research (Gilbert and Churchill, 1999). Literature surveys and focus groups have proved to be useful exploratory research tools (Krueger, 1994).

There are potential benefits to adopting a multi-paradigm approach to the research. Triangulation can be employed, using a combination of inductive and deductive research methodologies, to help overcome the inherent weaknesses of each individual

paradigm leading to greater confidence being placed in the conclusions. Using triangulation can increase the reliability and validity of the results (Aaker et al., 1995).

5.9   Research Methods Used

In order to overcome the paucity of theory covering adolescent decision making the research will start with an exploratory investigation utilising focus groups.

Triangulation will be incorporated into the research design by using a multi-paradigm approach consisting of inductive and deductive methodologies. The exploratory research will use a qualitative methodology employing focus groups. The quantitative methodology will consist of a census of year eleven and year twelve school pupils: it will use pre-prepared and coded questionnaires, completed at a sample of four schools. Using triangulation it is hoped to increase both the reliability and validity of the results.

The next chapter goes on to explain the techniques and procedures used in the exploratory research.

Chapter 6 Using Qualitative Techniques for the Exploratory Research

6.0 Introduction

Focus group interviews are a qualitative method in which small samples of respondents discuss selected topics, the sessions usually lasting between one and two hours (Tynan and Drayton, 1988). The focus group is unique amongst qualitative methods of data collection because it allows group interaction and a greater insight into why certain opinions are held. It is a particularly appropriate technique to use when the objective is to understand how people regard an experience, idea, or event. Focus groups work because they tap into human tendencies; people are a product of their environment and are influenced by other people around them. The focus group analyst can discover more about the formation of peoples perceptions and attitudes and the nature of the influencing factors (Krueger, 1994).

The advantages to focus group interviews are that the method is socially orientated, studying the respondents in a natural, real life, atmosphere that allows the analyst the flexibility to explore unanticipated issues as they arise in the discussion. The results are high in face validity because the findings appear believable and the method is easily understood (Marshall and Rossman, 1995). An advantage of group interviewing is that the participants' interactions among themselves replaces their interaction with the interviewer, leading to a greater emphasis on the participants point of view. Focus groups are a good way to observe the process of opinion formation (Morgan, 1988).

Focus groups are useful for generating hypotheses, based on the informant's insights, and for developing interview schedules and questions. Focus groups can be used as preliminary research to prepare for specific issues in a large project. Their independent, self-contained nature is a crucial feature of their ability to contribute to triangulation (Morgan, 1988).

Focus groups were used in the exploratory research both because of their usefulness as an exploratory tool and because the results produced could be used for triangulation. Because of the exploratory nature of the initial research, a wide range of samples was used. Four focus groups were conducted, three consisting of pupils, and one consisting of parents. Although the research concentrates on pupils, parents have been included because of their position and influence. It was important to check the composition of the decision making unit, and to ascertain who made the decision over choice of A level subjects and where to study them. Much of the research reported in the literature into reasons for choice of middle and secondary schools was based on parental reporting.

The chapter starts by explaining the details of the focus groups used, then how they were administered, and finally explains how the resultant data was analysed.

6.1   Size of Focus Groups

The size of focus groups should normally be somewhere between six and ten participants, with four being the smallest practical number (Morgan, 1988; Tynan and Drayton, 1988; Krueger, 1994; Marshall, and Rossman, 1995). Smaller focus groups with four to six participants are becoming increasingly popular because the smaller groups are easier to recruit and host, they are also more comfortable for the participants (Krueger, 1994). Smaller groups may be more productive; in a larger group of up to twelve participants the individual talk time may be cut to only a few minutes, with the occasion becoming more like a group survey than an exploration of experiences, feelings and beliefs. Reducing group size can also make good economic sense (Aaker et al., 1995).

Because three of the focus groups were composed of school pupils, who might be inhibited by a large group, and it was intended to explore feelings and in-depth beliefs, the groups were kept to a small size. One of the pupil groups had four participants, one five participants, and one six participants, and the parent group four

participants. This gave the participants more individual time to talk and created an environment were they should feel freer to discuss their feelings.

6.2   Composition of Focus Groups

There is a need to maintain a reasonable amount of homogeneity within focus groups to foster discussion; the goal is homogeneity in backgrounds not homogeneity in attitudes. The most common variables to consider when running separate groups are sex, race, age, and social class (Morgan, 1988; Krueger, 1994; Aaker et al., 1995; Gilbert and Churchill, 1999). As only one parents focus group was conducted, to obtain a wide a spread of circumstances it contained a mixture of social classes and sexes, with two mothers and two fathers. All the parents shared the common problem, that of advising their children over what they should do after GCSE, which achieved a level of homogeneity. The pupil focus groups consisted of two groups of girls and one group of boys.

To cover different stages in the decision making process, one group consisted of four girls in the process of making their decision; one group consisted of six boys, in the lower sixth, who had made their decision; and one group was mixed, containing two girls in the year before they were to make their decision, two girls in the process of making their decision and one girl studying A levels who had made her decision. An element of homogeneity was achieved by having single sex groups of a similar age.

6.3   Location of Focus groups

The investigatory nature of the research required as wide a samples practical of pupils. To achieve this one of the pupil groups was recruited from the Luton area, as most schools do not have their own sixth form, pupils choose between attending either a Sixth Form College or a College of Further Education. The two other groups of pupils were recruited from Hemel Hempstead and Berkhamsted, schools in Hertfordshire, where the schools have their own sixth form giving the pupils the

choice of staying at their own school, moving to another school, or moving to a College of Further Education. The parent focus group was held at Putteridge Bury Management Centre to provide a neutral location, and the three pupil focus groups were conducted at the home of one pupil in each group.

6.4 The Number of Focus Groups

When considering the number of focus groups to conduct, Morgan suggests that if the moderator can anticipate what will be said in a group then the research has been completed. This usually takes three to four groups, and if the research is of an exploratory nature it should only need a few groups (Morgan 1988). Krueger (1994) suggests that, typically, the first two focus groups provide a considerable amount of new information, and by the third and fourth session a fair amount of work has already been covered. When this stage is reached there is limited value in running further sessions (Krueger, 1994). As a rule, three or four focus group sessions are usually sufficient. The analyst gains a considerable amount of information from the first session, some more from the second, but less which is new, and usually by the third or fourth session much of what is said has been heard before (Aaker et al., 1995). It was planned initially to conduct four pupil focus groups and, as Krueger suggested, when the third pupil focus group was run little new information emerged, much of the output confirming the results from the previous two groups. It was decided at that point that three groups was a sufficient number for the preliminary research and the results would be suitable to be used for triangulation.

6.5 The Duration of the Focus Groups

The length of time for which a focus group should be run for varies between one and two hours (Morgan, 1988; Tynan and Drayton, 1988; Krueger, 1994; Marshall, and Rossman, 1995; Gilbert and Churchill, 1999). The time taken for each of the four groups varied between one and one quarter hours to two hours: the variation depending on the amount of discussion in the groups.

6.6   Administration of the Focus groups

Two broad options are open to the researcher when conducting focus groups; to use a structured approach utilising pre-prepared questions during the session, or to use a less structured approach using a topic guide. The advantages and disadvantages are shown in table 6.1

Questions	Topic Guides
Takes longer to prepare Produces more efficient analysis Is preferred when different moderators are used on the same project Ensures the question is exactly what the sponsor intended	Is more spontaneous Works best when the same moderator conducts all the focus groups Works best with experienced moderators

Table 6.1 Advantages and disadvantages of questions verses topic guides (Krueger, 1994, p. 56)

It was decided not to structure the focus groups too rigidly. Broad question areas with more detailed check lists of questions that should be covered during the sessions were used. This gave greater flexibility over both the detail covered, and the general areas covered in the focus groups. It allowed unthought of areas, that emerged during the focus group, to be pursued and built into future focus groups, if they were of interest to the research programme. The derivation of the questions based on the literature review is explained in chapter four.

The next sections explain how the data resulting from the focus groups was analysed.

6.7   Analysis of Focus Group Data

Yin defines the analysis of data as:

> "Data analysis consists of examining, categorising, tabulating,
> or otherwise recombining the evidence, to address the initial

proposition of a study." (Yin, 1984, p. 99)

With over six hours of recorded conversation resulting from the four focus groups, it was necessary to choose an appropriate form of analysis so as to interpret the results and be able to draw conclusions from them. This chapter discusses different methods that can be used to analyse focus group data, and explains the methods adopted to analyse the data.

6.8   Method of analysis

The inductive properties of qualitative research lead the researcher to make decisions and refine the knowledge as he or she goes along (Krueger, 1994). Krueger goes on to suggest four potential approaches to analysing the data resulting from focus groups:

1. Tape-based analysis, which is less time consuming than producing a transcript of the tape, but produces a shorter and less comprehensive report. It is a more suitable method for the experienced moderator/analyst.

2. Note-based analysis in which notes are taken during the session and, although the session is taped, the recording is only used as confirmation of the points noted. At the conclusion of the session the notes are summarised into a short report. This method has advantages of speed of reporting but, in some situations, note taking may inhibit the participants of a focus group (Marshall and Rossman, 1995,p. 111), and it means that as well as running the session the moderator also has to take notes during it. For this reason it is not a method recommended for an inexperienced moderator/analyst.

3. Memory based analysis, where the moderator usually produces an oral report at the end of the session, based largely on memory and on the notes the moderator has taken during the session. This method has the advantage of speed and is often used in marketing applications where the customer requires speedy reporting, but again this method is not recommended for novice moderator/analysts.

4. Transcription based analysis, where a transcription is made from the recording of the session which forms the basis for the analysis(Krueger, 1994, pp. 143-144). Mathews (1997) recommends that the transcript should then be edited to correct any mis-transcriptions and remove any unnecessary verbal meandering.

The four focus groups produced a total of a little over 30,000 words, amounting to some 75 pages of edited transcript. The data generated by focus groups do not lend themselves to literal interpretation (Templeton, 1976, cited by Tynan and Drayton, 1988): the challenge for the analyst is data reduction (Krueger, 1994). Each phase of data analysis requires data reduction and interpretation, as the researcher brings meanings and insights into the words and actions of the participants of the study (Marshall and Rossman, 1995, p. 113). Morgan (1988) suggests two methods that can be used to analyse the transcripts resulting from focus groups; firstly a qualitative or ethnographic summary, which relies more on direct quotation from the group discussion; and that of systematic coding via content analysis, which typically produces a numerical description of the data. Krueger (1994) suggests a low technology approach to the analysis, using either scissors and string or coloured marker pens. Mathews (1997) suggests three potential approaches: the scissors and sort method; content analysis; and the ethno-methodological approach, which produces a short topline report. While testing the three methods Mathews found that a potential problem with content analysis was that a particularly passionate and verbal participant in a group may distort the resulting count and thus the results of the analysis. She found that the topline report and the scissors and sort method produced comparable results; while, though the topline report is less time consuming, the scissors and sort method, being more structured, produced an analysis with more opportunity to reflect on the key issues. (Mathews, 1997).

The lack of experience, in analysing focus group data, of the author of this report led to the decision to use both the topline method and the scissors and sort method using coloured marker pens: it is a sound principle to use more than one method to see if both methods yield the same results and, if not to, investigate any differences (Morgan, 1988; Mathews, 1997). Krueger's (1994) version of the scissors and sort

method was used because it is less messy and leaves the transcript as a whole so that previous sections can be easily referred to during later stages of the analysis.

Using notes taken during, and immediately after, the sessions, the first step was to review the tapes and produce a topline report for each focus group (See appendix one for an example of one of the topline reports); these were used to modify, where applicable each subsequent focus group agenda. A transcript of each tape was then produced and edited (See appendix two for an example of one of the transcripts). Each transcript was read and key ideas/themes were coded and highlighted on the transcript. This resulted in a list of key ideas/themes and codes with the different coloured highlights indicating their frequency of occurrence. From each highlighted transcript a written report was produced (See appendix three for an example of one of the focus group reports). The four reports were then merged into a final report where common ideas/themes across the four groups were noted, analysed and discussed (See chapter eight for overall results).

6.9   Conclusions

Small focus groups allow more time for each participant to discuss the topic, and prove less intimidating for shyer pupils. It was decided to use small groups not exceeding six pupils.

It was decided that the focus groups should last between one and two hours, which should prove adequate time to capture the data needed without exhausting the respondents.

The focus groups were conducted in the houses of one of the participating pupils, in order to provide a relaxed and friendly environment for the pupils.

Focus groups produce a large volume of raw data which means that a method is needed to reduce the data down to an intelligible form. After examining the different methods available, it was decided that it was a sound practice to use two different

methods (Morgan, 1984; Mathews, 19997) so that a comparison could be made between the results obtained from each method. If the results from the two methods agree, then more confidence can be placed in the conclusions drawn from the research.

The next chapter explains the methods used for the quantitative research which was used to confirm, and add to, the results of the exploratory research.

Chapter 7   The Quantitative Research Programme

7.0   Introduction

Once the quantitative research questions explained in chapter four had been established, a quantitative research framework was designed to provide answers to the questions. A review of the literature was undertaken in order to build on the strengths, and to avoid the weaknesses, of the methodologies used by previous researchers. This, together with the resultant data obtained from the exploratory research, was the basis of the design of the research framework. The research design is explained in this chapter.

The chapter starts by examining the research design and explaining why it was decided to use self-administered questionnaires for this part of the research, it goes on in section 7.2 to describe the type of sample used for the research, and in section 7.3 the timing of the research. It then, in sections 7.4, 7.5 and 7.6, explains the types of questions used, how they were built into the questionnaires, and their relationship to the research questions. Section 7.7 describes how the questionnaire was tested and section 7.8 describes the changes made to arrive at the final questionnaire. Section 7.9 explains how the research programme was administered and the data collected. The final section looks at the conclusions that can be drawn from using the methodology outlined in this chapter.

7.1   Use of Questionnaires

Questionnaires are one of the most widely used survey data collection methods (Dillon et al., 1994; Aaker et al., 1995; Saunders et., al. 1997; Gilbert and Churchill, 1999). They are not best suited to exploratory research or research that requires a large number of open ended questions. They work best with standardised questions that will be interpreted in the same way by all respondents (Robertson, 1993). Consumer researchers have found questionnaires to be both a convenient and a reliable method of collecting data from consumers (Berkowitz and Lundy, 1957; Solomon, 1963; Gilkison, 1965; Gilkison, 1973; Moschis, 1976; Park and Lessig, 1977; Park and Lessig, 1978; Moschis and More, 1979; Parkinson and Reilly, 1979; Brisoux, 1981; Corfman and Lehmann, 1987; Carlson and Grossbart, 1988; Foxman et al., 1989; Simonson, 1989; Childers and Rao, 1992; Dabholkar, 1994;Moorthy et al., 1997;Pham, 1998). Researchers in education have made frequent use of questionnaires to collect information from parents and children about their choice of school (Elliott, 1982; Alston, 1985; Stillman, 1986; Bastow, 1991; Coldron and Boulton, 1991; Yorke and Bakewell, 1991; Hammond and Dennison, 1995; Bradley, 1996; Woods, 1996; West et al., 1998).

A questionnaire provides standardisation and uniformity in the data gathering process; it standardises the wording and sequencing of questions; every respondent should see the same question (Gilbert and Churchill, 1999). The majority of open ended questions had been answered during the exploratory research. A number of questions had been produced that could be put into a standardised format as a series of questions to be answered by a group of respondents. It was decided to use a self completion questionnaire for this purpose. In order to achieve a high response rate the delivery and collection technique (Saunders et., al. 1997) was used for the administration of the questionnaires; this is described in greater detail in section 7.9 of the chapter.

Developing a self-administered questionnaire is one of the most difficult steps in the research process (Jacoby, 1978). Jacoby's work indicated that much care needed to

be taken in the design of the questionnaire and a pilot testing programme would be required to fine tune the final instrument of data collection. Hawkins and Tull (1993) state that questionnaire construction involves seven interrelated decision areas: preliminary considerations; question content; question wording; response format; question sequence; physical characteristics of the questionnaire; and pretexts. Attention to these areas is given in the remainder of the chapter.

Having decided on the use of questionnaires, it is important to select an appropriate sample to use for the research. The next section describes the process of selecting an appropriate sample of schools to be used for the research.

7.2   The Sample

Given the number of secondary schools in the UK it was beyond the scope of this research to attempt to cover all of them. It was necessary to select a sample of schools from which to collect the data. Non-probability sampling provides a range of alternative techniques based on the researchers judgement (Aaker et al., 1995; Saunders et., al. 1997; Gilbert and Churchill, 1999).

Judgement sampling enables the researcher to use his or her judgement to select cases which will best enable them to answer their research questions (Saunders et., al. 1997). Most typically the sample elements are selected because it is believed that they are representative of the population of interest. A key feature is that population elements are purposively selected (Gilbert and Churchill, 1999). Judgement sampling, involving selecting respondents thought to be representative of the population, is frequently used in commercial marketing research studies (Dillon et al., 1994). There are situations in which judgement sampling is useful and may be advisable, and in which probability sampling may not be feasible, or may be prohibitively expensive (Aaker et al., 1995). A judgement sample is one in which there is an attempt to draw a representative sample of the population using judgement selection procedures (Hawkins and Tull, 1993). A judgement sample is applied to any situation in which the researcher is attempting to draw a representative sample

based on judgmental selection criteria. Most test markets and many product tests are essentially judgmental samples (McDaniel and Gates, 1998). This form of sample is often used when working with small samples, when you wish to select cases that are particularly informative (Neuman, 1991, cited by Saunders et., al., 1997). If the sample size is small a judgement sample usually will be more reliable and representative than a probability sample (Aaker, 1995).

Because of time and financial constraints it was only possible to use a small sample of schools. In order to ensure that a spread of different types of schools was included in the sample chosen, a judgement sample was used. This would achieve a more representative sample of schools than a probability sample of similar size was likely to produce.

In order to produce a judgement sample the knowledge and results obtained from the exploratory research, including the literature survey, were used to choose a judgement sample of four schools. A census of all year eleven and year twelve pupils would be taken at these schools, with a target of an overall sample of approximately 400 completed questionnaires. Letters were written to the head teachers of six schools, two in Hertfordshire and four in Bedfordshire, inviting them to take part in the research study. In order to achieve their co-operation the schools were offered fifty p for each completed questionnaire received from their school (See appendix four for an example of one of the letters sent to the School Head Teachers). The resultant sum could either be used for providing facilities for their sixth form common room or donated to a charity of their choice. Four schools, two from Bedfordshire and two from Hertfordshire, agreed to take part in the research and two schools declined. The four schools that took part in the research provided a good mix of types of schools, consisting of an independent school with a large sixth form, a GMS school with a sixth form, a GMS school without a sixth form, and a city technology college without a sixth form, both of the latter feeding pupils into sixth form colleges in Luton.

As the results obtained from the focus groups indicated that the pupils were the decision makers with parents acting as advisors, it was decided to concentrate the research on questioning the pupils. A census of all year eleven and year twelve pupils would be used for the research. Year eleven pupils were chosen because they were, at the time the data were collected, undergoing the process of making the decision. The results confirmed that some of the pupils had made their decision at that stage, and some were still in the process of making their decision. By choosing this timing it was hoped to avoid problems of selective retention experienced by some of the researchers reviewed in the literature. Year twelve pupils were used because although by this time they had already made their decision, they would provide a useful comparison with the year eleven pupils, giving a longitudinal aspect to the research. They could also be asked about post decision areas, such as information they had become aware of since their decision that would have been useful to them when they made their decision.

Once the sample had been selected, thought needed to be given to the appropriate time of the school year for the data to be collected. The next section explains the timing of the data collection.

7.3   Timing of the Research

The questionnaires were pilot tested during January and February. The main data was collected during March and April, the reasons for the timing were a mixture of research design and practical circumstances.

During March and April the year eleven pupils were making the decision and the information would be fresh in their minds. Data could not easily be collected during the school holidays, and the Heads Teachers felt that if the research were left any later in the school year the year eleven pupils would be concentrating on their GCSEs and would not want to take part in the research.

The same timing was used for the year twelve pupils because, although it was still reasonably close to the time they had made their final decisions, by this stage they had started to study for their A levels, which had given them time to reflect on their decision.

When the timing had been decided and agreed, it was necessary to develop the questions to be used and plan how they would be incorporated into the questionnaires. The next three sections describe the development of the questionnaires.

7.4   The Questionnaire

It was decided to use self completion questionnaires to collect the data. The research questions generated a large number of questions and, to minimise the complication for the respondents, it was decided to use separate questionnaires for each group.

Three questionnaires were designed (see appendix five, six, and seven for examples of each questionnaire), one for year eleven pupils planning to take a levels, one for year eleven pupils not planning to take A levels, and one for the year twelve pupils.

The questionnaires were printed on A5 paper and bound into booklets both to give a professional appearance and to facilitate the handling of the large quantities that had to be taken to each school. A covering letter (see appendix five, six, and seven) was printed on to the front of each booklet explaining the purpose of the research to the pupils. For ease of administration each was printed on a different colour paper. Warm pastel shades of colour were used; they tend to generate more responses than cool colours (Saunders et al., 1997).

7.5 Types of Questions used in the Questionnaire

Asking pupils about decision making processes that they are, at times, unaware of using, presented a daunting task. By utilising a number of different methods of questioning, a solution in the form of a questionnaire was produced. This section describes, using as an example the questionnaire developed for year eleven pupils planning to take A levels, the different types of questions used in the questionnaires. (See the year eleven questionnaire in appendix five)

Dichotomous questions, in which the respondent is limited to two choices, are the simplest form of closed question; they are easy to administer and usually evoke a rapid response (Aaker et al., 1995; McDaniel and Gates, 1978; Gilbert and Churchill, 1999). Dichotomous questions are particularly well suited to determining certain points of fact about which the respondents are likely to hold well crystallised views (Hawkins and Tull, 1993). Dichotomous questions are prone to a large amount of measurement error because alternatives are polarised (Aaker et al., 1995). One special problem with dichotomous questions is that the response can depend on how the question is framed (Gilbert and Churchill, 1999). Dichotomous questions were used for questions Q1, Q4, Q18, & Q46, where the questions consisted of simple fact gathering and the answers were limited to a simple two choice answer.

Multiple choice lists, or multichotomous questions, offer the respondent a list of fixed-alternative responses, any of which they can choose (Saunders, et., al., 1997; Gilbert and Churchill, 1999). Check list questions stimulate memory and may put into words ideas which the respondent was not conscious of having (Crimp, 1990). Multiple choice questions are generally easier for the respondent, tending to reduce bias caused by varying levels of respondent articulateness, and are easier for the researcher to pre-code and analyse (Hawkins and Tull, 1993). A disadvantage of multiple-response questions is that the researcher must spend time generating a list of possible responses, which may require intense analysis of focus group tapes (McDaniel and Gates, 1998).

Multiple choice lists were employed extensively in the questionnaires. The lists of possible responses were generated by using both the findings from the literature review and the results obtained from the exploratory research. The question arises of whether the respondent should be given a 'don't know' option/neutral 'no opinion' option, or whether the respondents should be forced to decide. Opinion is divided over the question; 'the jury is still out' about which form better captures respondents true positions (Gilbert and Churchill, 1999). The experience gained from the focus groups indicated that it was not necessary to give pupils a 'don't know' option. In order to keep the lists to sensible lengths, and to allow for any potential missing options, an "other" category was included in some of the questions. Questions employing multiple choice lists were Q2, Q3, Q5, Q6, Q7, Q8, Q9, Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18, Q19, Q21, Q22, Q23, Q24, Q25, Q27, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35, Q36, Q38, & Q42.

The constant-sum scale requires respondents to divide a constant sum (usually one hundred) amongst a group of attributes in order to reflect the relative standing of attributes on a specific dimension (Aaker et al., 1995; Gilbert and Churchill,1999). The value of the constant-sum approach, as opposed to a ranking order approach, is that it allows the researcher to determine whether a particular attribute is of overwhelming importance, or part of a general concern, or not much more important than other attributes (Hawkins and Tull, 1993). Using a constant-sum scale, as well as determining the ranking order of attributes, the values assigned are also indicative of the relative magnitudes of each alternative as perceived by the respondent. An additional advantage of the constant-sum scale over rank order scale, is that if two characteristics are perceived to have equal value, it can be indicated (McDaniel and gates, 1998). An attractive feature of the constant-sum scale is the quasi-interval nature of the resulting scale. Due to the nature of the constant-sum scale: respondents may experience difficulty allocating points among more than a few attributes (Aaker et al., 1995); it can produce sharper distinctions among attributes; the comparative scaling methods do allow more insight into relative ranking of the attributes to each individual (Gilbert and Churchill, 1999).

In order to determine the relative importance applied to each of the reasons for choice of A level subjects, as opposed to just the order of importance, a constant sum scale (using a quadric comparison) was used for question Q37. In addition to showing the ranking of reasons for choice of subject, the method provided refinement by: indicating the relative importance of each reason; allowing a value of zero to be assigned to any reason not affecting the choice. McDaniel and Gates (1998) and Aaker et al., (1995) warn that some respondents have difficulty in allocating 100 points across a range of attributes. It was thought, and the pilot testing confirmed, that potential A level students should be able to undertake the task. The pilot testing did, however, indicate that question Q37 needed careful explanation during the introduction of the questionnaire.

When Likert scales are used by commercial organisations they rarely follow the text book process. Instead scales are usually developed jointly by a client project manager and a researcher. Often the scales are created after a focus group (McDaniel and Gates, (1998). It is generally accepted that, for consumer market research purposes, five point scales are most effective as well as being easier to comprehend from the respondents point of view (Holmes, 1974). Schertzer and Kernan (1985) warn that respondents have an aversion for scale extremes and suggest a scale range of five plus or minus two. Scales are a tried and tested form of consumer research (Parkinson, 1979; Brisoux, 1981; Corfman and Lehmann, 1987; Simonson, 1989; Dabholkar, 1998; Pham, 1998). Based on the information sources used by pupils, indicated by the focus groups, and an analysis of the sources from the literature, a degree of usefulness scale was developed for question Q39, a degree of influence scale for question Q40, and a time scale for Q41. These were used to determine the information sources used by pupils, how useful they were perceived to be, how much influence they had on the pupils decision and at what stage of the decision making process the sources were used.

This section has explained the types of questions that were used in the questionnaire. The next section goes on to explain how the questions were arranged in the

questionnaires, and how they are intended to provide answers to the research questions.

7.6   The Questions

In this section, because of the similarity of each questionnaire, to avoid repetition only one questionnaire will be explained; tables are given for the other two questionnaires showing the linkage of the questions to the research questions. The following section explains, in detail, the questionnaire for the year eleven pupils planning to take A levels. A summary of the information is shown in table 7.1.

Table 7.1   A summary of the information collected using the questionnaire for the year eleven pupils planning to studying A levels.

QUESTIONNAIRE QUESTION	RESEARCH QUESTION	AREA COVERED
2, 5, 11, & 12	1 & 7	Timing of School / College decision process
3, 6, 13	2	Evoked set of Schools / Colleges
7, 8, & 14	7	Decision Making Process Schools / Colleges
9 & 10	3	Decision Maker
15 & 16	7	Decision Process / Reasons for Choice
17, 18, 21, 30, & 31	1 & 7	Timing of Subject Decision Process
19, 22, 23, 32, 33, 35	2	Evoked Set of Subjects
24, 25, 26, 27, 34, & 36	7	Decision process A level Subjects
28, & 29	3	Decision Maker
37 & 38	7	Decision Process / Reasons for Choice
39, 40, & 41,	4 & 6	Information Sources
42	5	Amount of Worry Experienced
43, 44, & 45		Socio-economic Variables
46		Sex of Pupil

The questionnaire breaks down into four main sections; the first section examines the pupils choice of where to study their A levels, the second examines their choice of A level subjects, the third section looks at the information sources used by the pupils, and the final section collects personal information about the pupil.

In the first section question one is a dichotomous question to sort the pupils into those changing or not changing schools. Questions Q2, Q5, Q11, and Q12 relate to the timing of the decision and were asked to provide information to answer research question one and seven. Questions Q3, Q6, and Q13 relate to the pupils evoked set of schools and were asked to provide information to answer research question two. Question Q4 was a dichotomous question to sort the pupils into those who had decided or not yet decided where they were going to study their A levels. Questions Q7, Q8, and Q14 relate to the decision making process and were asked to provide information to answer research question seven. Question Q9 and Q10 relate to the decision maker and were asked to provide information to answer research question three. Question Q15 and Q16 related to the decision making process and the pupils reasons for choosing a place of study and were asked to provide information to answer research question seven.

In the second section question Q17, Q18, Q21, Q30, and Q31 examine the timing of the decision over choice of A level subjects and were asked to provide information to answer research questions one and seven. Questions Q19, Q22, Q23, Q32, Q33, and Q35 examined the pupils evoked sets of A level subjects and were asked to provide information to answer research question two. Question Q20 was a dichotomous question used to sort the pupils into decided and undecided over choice of A level subjects. Question Q24, Q25, Q26, Q27, Q34, and Q36 examined the pupils' decision making process and were asked to provide information to answer research question seven. Questions Q28 and Q29 examined the decision maker and were asked to provide information to answer research question three. Questions Q37 and Q38 examined the decision making process and the pupils reasons for choosing individual A level subjects and were asked to provide information to answer research question seven.

The third section examined three aspects of information sources: whether or not they were used by pupils; how useful they are to pupils; and how much, reported, influence they have on the pupil. Questions Q39, Q40, and Q41 were asked to provide information to answer research question four and six.

In the final section personal details were collected about the pupil, question Q42 examined the amount of worry experienced by the pupil. Questions Q43, Q44, and Q45 collected socio-demographic data about the pupil and question Q46 was asked to determine the sex of the pupil.

Table 7.2   A summary of the information collected using the questionnaire for the year twelve pupils studying A levels.

QUESTIONNAIRE QUESTION	RESEARCH QUESTION	AREA COVERED
2, 4, & 5	1 & 7	Timing of School / College decision process
3 & 6	2	Evoked set of Schools / Colleges
7 & 8	7	Decision Making Process Schools / Colleges
9 & 10	3	Decision Maker
11 & 12	7	Decision Process / Reasons for Choice
13, 14, 16, & 17	1 & 7	Timing of Subject Decision Process
15, 18, & 19	2	Evoked Set of Subjects
20, 21, 22, 23, 24, 29	7	Decision process A level Subjects
25 & 26	3	Decision Maker
27 & 28	7	Decision Process / Reasons for Choice
30, 31, 32, 33, 34	4 & 6	Information Sources
35	5	Amount of Worry Experienced
36, 37 & 38		Socio-economic Variables
39		Sex of Pupil

Table 7.3   **A summary of the information collected using the questionnaire for the year eleven pupils not planning to study A levels.**

QUESTIONNAIRE QUESTION	RESEARCH QUESTION	AREA COVERED
1, 4, 7, & 8	1 & 7	Timing of decision
2		Post GCSE
5 & 6	3	Decision Maker
9, 10, & 11	4 & 6	Information Sources
12	5	Amount of Worry Experienced
13, 14, & 15		Socio-economic Variables
16		Sex of Pupil

Once the design of the questionnaire was completed, the next stage was to test it on pupils of a similar profile to those who would be taking part in the research programme. The objective being to correct any faults in the questions, and to complete the development of the three questionnaires. The next section explains how the pilot testing was undertaken.

7.7   Pilot Study

The pilot study was unusual in its format. Given the complexity of some of the areas, it was thought that although a straight forward test would highlight some of the potential problems in the questionnaire, it may not help to explain them. The process decided upon was to use the format of a focus group. Three focus groups were undertaken, consisting of pupils from four local secondary schools. One was for year eleven pupils planning to take A levels, one of year eleven pupils not planning to take A levels, and one for year twelve pupils. The sessions lasted from one to one and a half hours. Pupils from schools to be used in the main survey were not used at this stage.

The procedure used was to assemble groups of each type of pupil, distribute and explain the questionnaires to them and explain the purpose of the research. The pupils were then asked, in silence, to complete the questionnaire; the time taken by

each pupil to complete it was recorded. They were asked to note on the questionnaire any problems they experienced, for later discussion.

On completion of their questionnaires the pupils took a refreshment break while the moderator undertook a brief analysis of the questionnaires, noting any mistakes or ambiguities. A focus group was then conducted asking the pupils for their comments and to raise any problems that they had experienced with the questionnaire. The moderator discussed problems that had been indicated by the analysis of the questionnaires.

Overall, although time consuming, this form of pilot testing proved to be very useful; providing a useful opportunity not only to discover potential problem areas but also allowing the pupils to suggest possible solutions to these. It highlighted faults in the administration, and gave an indication of the time needed to complete the questionnaire, which was useful for planning the administration of the main research programme. The resulting changes to the questionnaire are discussed in section 7.8 and the administration of the research programme is explained in section 7.9.

The pilot testing showed up a number of potential problem areas; the next section explains these and the modifications made to produce the final versions of the questionnaires used for the research.

7.8   The Final Questionnaire

The development of the questionnaire was dealt with in sections 7.4 to 7.6; this section will concentrate on changes made to the questionnaire as a result of the pilot testing.

A number of questions needed clarification. This was achieved by: a combination of rewording the questions; and improving the explanation given to the pupils, when the questionnaire was distributed.

A number of pupils missed the skip points, where they should have skipped a section of questions. This was rectified by increasing the size of type used for the instructions and arranging the layout so that they appeared at the end of a page.

The potential danger pointed out by Aaker et al., (1995) of respondents having difficulty answering constant-sum scale questions was apparent from an analysis of question Q37 (year eleven) and question Q27 (year twelve), with a number of pupils failing to understand how they should present their answers to the question. This was remedied by relaying out the question, improving the wording, and explaining the question when the questionnaires were distributed.

Additional options to some of the questions were added as a result of both the analysis of the pilot questionnaires, and pupil feedback given during the focus groups.

The questions asking the pupils how many A level subjects they planned to study, or were studying, was modified to make it clear that they should not include AS level subjects or additional GCSE subjects they may be taking or planning to take.

Once the questionnaire development had been finished, the next stage was to arrange for the pupils to complete it. The next section explains the administration of the research programme.

7.9   The Administration of the Questionnaire

Visits were arranged with the Head Teachers of each school. This involved arranging a half hour period with the pupils and being allocated a suitably large room in which to conduct the research.

The questionnaires were distributed to the pupils and an explanation of the research programme given to them. Verbal instructions on how to complete the questionnaire were given to the pupils, with potential problem areas indicated by the pilot study

being given special attention. The pupils were then asked to complete the questionnaire without talking to their peers. At the end of the session the completed questionnaires were collected by the researcher. This method, linked to the small financial inducement that the pupils were given, produced a high completion rate of over ninety per cent in all the schools (See chapter nine) and produced an effective census of all the pupils in the relevant years at each school.

Overall the methods used were successful in achieving the researchers objectives, with the half hour time allowed being adequate for the pupils.

7.10   Reliability and Validity

The following section examines the reliability of the methodology used for the research and asses the amount of confidence readers should place in the results obtained.

Triangulation (Krueger, 1994; Yin, 1994; Saunders et al., 1997) was employed in the research using both a qualitative and a quantitative study. The agreement between the qualitative results contained in chapter eight and the quantitative results contained in chapter nine give confidence in the overall results, in addition using a mixture of research techniques adds to the breadth and depth of the information obtained. The agreement in the results between chapter eight and nine consisted of the timing of the decision making process, the importance of personal sources of information, the decision maker, the existence and size of the evoked sets of schools and subjects, and the amount of worry experienced by pupils during their decision.

The method of using focus type groups for the piloting of the questionnaire worked very well because as well as highlighting potential problems associated with the questionnaire it also produced potential solutions to them. This is a fruitful method of pilot testing that future researchers could employ.

During the design of the questionnaire a number of pairs of questions (for example in the year eleven questionnaire; Q9 & Q10; Q11 & Q12; Q28 & Q29; Q30 & Q31) were inserted to test the internal reliability (Gilbert and Churchill, 1999) of the results. The high level of agreement, reported in chapter nine, between the answers to these questions confirms that the pupils were answering the questions consistently, and gives confidence in the internal reliability of the results.

To test the external validity (Gilbert and Churchill, 1999) comparisons were made between similar questions asked in earlier studies that examined choice of secondary school. Comparing the information sources used by the pupils in this study to those used by parents in earlier studies (Elliott, 1982; Bradley, 1996), when differences, explained in chapter nine, that can be accounted for by the older age of the adolescent pupils in this study are taken out of the comparison the results of this study are very like the results obtained in the earlier studies. Also discussed in chapter nine when similar differences are removed the reasons for choice of school are much the same as those obtained in the Bradley (1996) study. The agreement between this study and past studies gives confidence in the external validity of the results.

7.11 Conclusions

This chapter has explained how the quantitative part of the research programme was designed and administered. The first section explained how the questionnaire was developed, the main inputs for the design coming from the literature review and the exploratory research. It went on to discuss types of questions, how these were built into the questionnaires, and how they related to the research questions. The following section described how pupils helped in the development process, by taking part in focus groups used to test and develop the questionnaire into the final form described in section 7.8. The last section described how the research administration was planned and how the data was collected by visiting participating schools.

The pilot testing, using focus groups, proved to be a vital part of the development programme, indicating a number of potential problem areas that had been missed by

the researcher when checking the questionnaires. Finding solutions to the problems was made much easier by using the feedback given by the pupils and, in addition to correcting errors, the testing helped to avoid ambiguity and to word the questions in 'pupils language'. The development of the questionnaires confirmed Jacoby's (1978) findings that it is one of the most difficult steps in the research process.

Overall the administration of the questionnaires ran smoothly, with the time allocated for questionnaire completion proving adequate, and the research design producing a pleasingly high completion rate.

The stages covered were crucial to producing a suitable instrument to provide answers to the research questions posed in chapter four. Once the questionnaires had been designed and, using the administration programme, all of the data had been collected, the next stage was to enter the coded data into SPSS and to analyse the responses. The following two chapters go on to examine the results obtained from using the described methodologies; chapter eight presents and discusses the results of the qualitative research, and chapter nine presents and discusses the results of the quantitative research.

Chapter 8   Results of the Focus Groups

8.0   Introduction

This chapter discusses the results of the exploratory research. A qualitative research programme consisting of four focus groups was conducted. One group was composed of four pupils, one of five pupils, one of six pupils, and one of four parents.

During the first pupil group, it became clear that the choice of school was inextricably linked to the choice of A level subjects. The area of discussion of this group, and subsequent groups, was modified to include the discussion of A level subjects. A consistent pattern of key themes emerged from the groups. By the third pupil group the results were largely repeated and confirmed with little new information emerging.

The key themes that emerged from the groups were: the timing of the decision, discussed in section 8.1; the sources of information used by the pupils, in 8.2; the person making the decision, in 8.3; the number of schools/colleges and A level subjects considered by each pupil, in 8.4; the amount of worry that was involved with their decision, in 8.5; and the overall decision making process used by the pupils, in 8.6. Finally the conclusions drawn from the exploratory research are discussed in section 8.7.

8.1   Timing of Decision

The four focus groups produced a similar timing, extending over the period that the pupils take their GCSEs. The starting point of the decision process was when they choose their GCSE subjects. This choice to some extent dictates what A level subjects they can take. Comments were:

> *"It is always there when you are taking your GCSEs you are thinking what A levels?"*

> *"I started thinking about my A levels at about the end of year ten."*

> *"About three years."*

For administration and planning reasons the schools and colleges ask the pupils to choose their A level subjects some three to nine months before the start of the academic year; the length of time varies between schools and colleges. The final stage of the decision making process tends to split into two categories. The more confident pupils who feel able to make their decision, when the schools or colleges ask for it, before they receive their GCSE results, and already have a firm idea of what area they want to study. For example:

> *"I knew before my GCSEs no matter what I got I was still going to do those A levels."*

The second group of pupils, who are less confident, do not make the final decision until after they have received their GCSE results. A typical statement was:

> *"I made my decision after my GCSEs because I found that I couldn't really choose what subjects I was going to do until I got the results."*

The parents thought that the pupils should not be asked to make their decision until after they had received their results:

"I just wish she didn't have to make a decision about A levels yet, she can actually wait until September when she goes to sixth form. I don't think that any of them should have to commit themselves at this stage."

They felt that their children were being asked to make important decisions too early:

"I think it is a bit early when they make that choice."

8.2 Information Sources

The information sources tended to split into two categories; those of a more general nature that were not found to be very useful and only had a minor influence on the pupil, and more specific sources that had a strong influence on the pupils. For the purposes of clarity they have been labelled 'strong sources' and 'weak sources' in this chapter. The more general sources appeared to be collected during the early stages of the decision making process, and tend to be used for non-compensatory processing (Lussier and Olshavsky, 1979; Bettman and Park, 1980; Assael, 1995). The specific and strongly influential sources tend to be used more at the final stage of the decision making process, when a final judgement is made using compensatory processing (Lussier and Olshavsky, 1979; Bettman and Park, 1980; Mowen and Gaeth, 1992; Assael, 1995).

8.2.1 Weak sources

Both pupils and parents were doubtful about the advice given to pupils by teachers, thinking that their main focus was in their own subject, rather than on the pupil's best interest. Parents comments were:

"if your child is good at the subject they will say 'we hope that she will do this at A level', but only because it is their subject, not because its going to do them [the pupil] any good"

Most of the pupils were sceptical about advice from teachers. They thought that the information was biased because of league tables, the teacher only encouraging the more able pupils to study their subject at A level. Comments were:

"I think every teacher wants their subject to be popular, they always seem to want the good people so that they get good grades and it all seems to depend on grades, they seem to be able to throw people off courses if they are not going to be able to get above a C."

"I think teachers might have steered people away from them, from their subject, if they thought the person wasn't going to do very well for them in the league tables. I think the teachers have always got that in the back of their minds at the moment, this guy might get a D and that wont look very good."

Teachers did influence the decision, but more by who they are, rather than what they said. The pupils tended to avoid subjects taught by a teacher with whom they did not get on, and choose subjects taught by a teacher that they felt they could work with. The following comment illustrates the point:

"Probably the teachers are the greatest influence. I think you look more to the teachers and whether you get on with them, and whether you like their teaching style. You take what people say about the subject into account, but not as much."

Teachers were only found to be of some use to one of the pupils :

"I have talked to teachers at school as well and asked them what I should do and they said that the courses that I have picked are OK for me because I am quite good at those subjects"

These results support the findings of other research (Epperson, 1964), that as children grow older and into adolescence the teachers' influence diminishes and the parents' influence increases.

Careers Advisors were not found to be very useful by most of the pupils and were only mentioned in two of the focus groups, the parents group and one of the pupil groups. The parents, referring to a parents' evening that they had attended, said that they did not find Careers Advisors to be a useful source of information:

"There is one at School X, but he doesn't get any customers does he?"

"What is the point of speaking to him if you don't know what you want to do?"

Only one pupil acted on the advice of her careers advisor:

"My careers teacher, because I wanted to do a business studies course with English language and media, said that it would be more beneficial to do a language, so I have chosen Spanish."

Friends and peers were a less frequently mentioned source of information, and appeared to be used for gathering general information. They were found to be of little influence in terms of providing information but, as is discussed later, influence the choice of where to study for A levels, by their presence or absence. A comment from a pupil referring to information from peers was:

"I heard it from around people and what people were saying."

This result is in agreement with the work of Brittain (1963) who found that adolescents sought information from peers for inexpensive purchases, but sought advice from parents when making important purchases where they perceived a high risk involved with the decision. Adolescents are likely to consult their peers when purchasing items such as clothing, but are more likely to seek parental advice over the important decisions, with long term implications, of choosing A level subjects and where to study for them. This also supports the findings of Gilkinson (1965, 1973) who found that the factors influencing adolescent purchases varied with the importance to them of the product categories being bought.

Little mention was made of published sources of information, where it was discussed it tended to be used for sorting out schools worth visiting. When asked about brochures one pupil stated:

"Yea there's loads of them at home, my mum collected them."

In both cases where brochures were mentioned, it was the mother who had collected them, this agrees with the findings of Fodness (1992) who reported that the family information seeker tends to be the wife.

School/College visits were a source of information that allowed the pupils to observe the potential new environment, and gave them the opportunity to talk to both the pupils and teachers:

"They had students from the sixth form showing us around, which was good, and you could ask them about the school, they said good things about the school, and we spoke to teachers mainly in the subjects that I was looking to do, the economics teacher was particularly friendly."

"It was more relaxed, and like, the rules weren't as strict, and they kind of encouraged you more. The buildings and facilities are worse, only the sport worried me because the science labs are OK, but they are not as good as

School X, but we are getting new ones next year. All the teachers I met were
really nice."

Both the parents and pupils in Luton found that, although potentially useful, the open evening at College W was spoilt because it was too crowded and disorganised. The parents said:

"It was absolutely packed."

"Just one open evening, with so many schools being allocated to each night, and you go on that night. Its chaos, absolute chaos."

"It does make you wonder whether you get anything out of it, it just seems to me that you are going through the motions."

Pupil comments were:

"I think they could have had more tutors about to tell you about the courses because there were so many people there and we were stood there waiting and waiting and waiting and in the end we just walked out."

8.2.2   Strong sources

Elder siblings were a frequently used information source. A number of the pupils in the group had elder sisters who had recently started university and presented a source of up to date information, from a trusted source. The information was obtained both by talking to the sister, and from having observed her encountering problems during her A levels, and thus being able to learn from her mistakes. Illustrations of this were:

"My sister who was on her way to university after her A levels told me that universities don't really consider it as a proper A level."

"I wanted to do history but my sister had had a really difficult time with history when she did it. I could see how difficult she found it, and that sort of steered me away from that, it probably changed the whole direction of my A levels, instead of doing history, geography, and maths, I went for the more science subjects."

"My sister said don't do Spanish."

"I asked X (Y's older sister), what it was like for her, and she said that 'it was terrible.'"

"Yeah, my sister went there and she was all right."

Parents also found them to be a useful source of information to their children:

"She told her what college W was all about."

"A is asking B now and B is saying 'I did this and it wasn't quite right for me', and obviously he's gained from that because he now doesn't want to go to College W."

"I think that it may be more easy for the second child, because they gain from the experience and mistakes made by the first child."

Although the pupils were strongly influenced by their parents, the parents themselves felt ill equipped to advise their children. They were conscious of the period of time that had elapsed, since they had made a similar decision, and the amount of change that had taken place in the education environment over that period. This, linked to their feeling that their children were too young and inexperienced to make such a decision on their own, was a considerable cause of anxiety. Comments were:

"They were still at a young age, where they didn't think they were able to make their decision, and they still looked to their mum and dad for guidance."

"I personally think that they are not equipped to make those choices early on."

"She wasn't equipped to make her own options and her own choice at that stage."

"Things have changed so quickly, computers have taken over, and in a lot of ways we are not equipped to give them advice, because the job market has changed so considerably since we first embarked."

All the pupils were strongly influenced by their parents, particularly by advice to avoid, or take, certain subjects. No evidence of arguments was apparent, with the pupils welcoming, listening to, and acting on the parental advice:

"My parents persuaded me to do business studies, the other two were my decision."

"My dad persuaded me not to do business studies. He had quite a big influence in steering me away from maths as well."

"My father talked me into doing AS level statistics."

"I wanted to do a hotel and secretary course, but mum and dad turned me off that idea, because of the late nights and things."

Personal sources of information were more frequently used, by both the pupils and the parents, and found to be more useful than impersonal information sources. This

agrees with the findings of research into secondary and middle school communication (Scott, 1998), where personal sources were found to be more frequently used, and to be more useful to parents and children. The importance of personal sources has not changed over time, as the pupils have grown older. The results support the work of Moschis and Moore (1979) who found that adolescents rely more on personal information sources when buying high risk products.

8.3   The Decision Maker

The findings were that in all but two cases the pupils made the decision, and all of the parents thought the decision was the responsibility of their child, typical comments from the parents were:

"I think that she has decided now that she will go to College Y to do her A levels."

"He has decided to go to College X."

"I don't believe in pushing kids into college or university, I leave it up to them."

"You've almost got to encourage them to make that choice and once they have made that choice, take responsibility for it."

The results from the children were not quite so clear cut, with two out of the fifteen pupils believing it to be a joint decision:

"I think that it is about a fifty/fifty decision between me and my parents."

"It was a joint decision between me and my mum and dad."

The remaining thirteen pupils stated that it was their decision, but they were strongly influenced by their parents:

"I've always wanted to do design, around options time I decided I wanted to do a job in it."

"It is really your decision, they don't tell you, they advise you but they don't say you should go there."

"I haven't decided what I really want to do yet but, it was 'me' I want to do the arts stuff."

"I think that it was more my decision, because they know that I have got an idea of what I want to do and where I want to do it. They just sort of support me."

"I chose, in the end, Economics, English, geography, and AS German."

"I just made up my own mind."

"My parents basically advised me rather than told me."

"I chose history, Geography, and Business Studies."

"I made my decision after my GCSEs."

"I know what I want to do."

The results agree with the findings from earlier studies, reviewed in chapter 2, (Coldron and Boulton, 1991; Thomas and Dennison, 1991; Walford, 1991; Yorke and Bakewell, 1991; Hammond and Dennison, 1995, West et al., 1995) who found that there is no easy, clear-cut answer to the question of who made the decision. They

investigated whether the parents or the children, or a combination of the two, made the decision over choice of secondary school. They reported that in some cases the child made the decision; in many cases the parents made the decision and quite often it was a joint decision.

The results do show, however, that a change in the decision making unit has occurred over time. As the child has become an adolescent they have tended to take over the responsibility for the decision making from their parents, although still relying on advice from them. Some previous research has reported poor correlation when comparing results between parental reporting and adolescent reporting (Davis, 1976; Foxman et al., 1989), implying that answers given by adolescents may differ from those given by their parents. In these focus groups, however, the results from the parents' group agrees with those from the pupil groups, indicating that the role of many parents has changed from that of deciders to influencers.

8.4   Evoked Set

The pupils' evoked set of schools varied between one and four schools or colleges, this is similar to research into choice of schools. Gorard (1997b) found that parents had a 'stacked deck' of between one and three schools. The set for A levels ranged between three and six subjects.

If a school is not rejected some of the information from the brochure is stored in the network of information associated with that school. Visiting the school or college is used as a further mechanism to either reject a school or include it in the evoked set of schools; if it is accepted into the evoked set the information collected about the school during the visit is added to the network of information, covering the school, in the pupils memory. An illustration of an evoked set of four schools is:

"I looked at school X, school Y, school W, and school Z, so four"

Information from older siblings is used over the period to reject schools/colleges and A level subjects and build up a fuller picture of those placed in the 'evoked set'. An example of a pupil building an evoked set is:

"I wanted to do history but my sister had had a really difficult time with history when she did it. I could see how difficult she found it, and that sort of steered me away from that."

Some pupils had found it relatively easy to decide on one or two out of the three subjects that they were going to study, but were finding it difficult to decide on the other one or two subjects to go with the one or ones already chosen. Their evoked set, in these cases, consists of some that have been chosen and other subjects that they still had to make a choice from, for example:

"I am definitely going to do Media and English Language, because I know I am going to do it, my main area of worry is choosing the wrong third A level."

The resulting evoked sets are stored in memory and form the basis for the final decision, which is explained in section 8.6.

8.5   Worry

The parents were concerned over the amount of stress their child experienced, their comments were:

"X is worried to death, it is almost like doing a job application form. 'Have I done this right?'. 'Will they take me into the sixth form?'. 'What if I don't want to do this subject?'."

"It is a great worry to her, she doesn't need that worry at the moment, she should be concentrating on her GCSEs."

"It's a lot of pressure isn't it?"

"There is a lot of pressure, I'm dreading it."

When the pupils were asked about the amount of stress that they had suffered, unlike their parents, they reported very little stress involved with the A level decision:

"I didn't really worry about my choice."

"Not really- I just thought the subjects I am interested in- the subjects I thought would be useful- it didn't make me nervous at all."

"I didn't have that much hassle at all."

"I was a bit worried because I didn't know what I wanted to do."

"I was a bit worried to an extent, because your A levels are your final exams to go to university."

Most of the pupil's worry was concerned with their GCSE exams, rather than choosing A levels and where to study them:

"Just a bit of stress yes- I was really bad during my GCSE mocks, because I knew that what I did in my mocks were a guide as to how I will do in my actual exams- I was really really bad- I felt really stressed out- I had to be taken to the doctors and be put on medication."

The pupils were aware that if they made the wrong decision over choice of A levels, provided they did not leave it too late, they had the option of changing their chosen A level subjects. A typical comments was:

> "I think it was a bit worrying in case I get my options wrong, but you can change them when you get your results, and if you don't like the course you can drop out or change to another one."

There was some concern about moving to a new school/college, however, a factor balancing the worry about moving was friends. If they were moving with friends this tended to reassure them that, though the place would be new, some of the people would be familiar, and there would be friends to talk to:

> "There are quite a lot of us doing English and a few doing Spanish, so hopefully I will be with a few friends."

> "There are quite a lot of us going to college W."

> "I know a few people going."

> "I knew one of the students who is in the year above and she said that it was a great school and she really enjoyed it, she'd come from School X. She was quite a strong influence on me. There were two of us from School Z and we decided to go together, it felt better having a friend to go with."

> "I did not know anyone who went to School W, but a couple of my friends were also thinking of going to School W. We all passed the exam and got in, we all talked it over and decided."

By moving with friends the pupils can reduce the level of uncertainty, and thus reduce the perceived risk of moving into an environment where they may be unhappy. These findings are in agreement with those of earlier studies (Elliott, 1982;

Alston et al., 1985; Coldron and Boulton, 1991; Thomas and Dennison, 1991; West et al., 1991; Hammond and Dennison, 1995; Bradley, 1996) that show friends to be an important factor when children are choosing a new school. This factor has not changed with the increase in age of the pupils and friends are still important when adolescents are choosing a place to study for their A levels. Friends are used as a risk reliever (Roselius, 1971); if their friends are choosing the same school it supports their decision over choice of school. If they find the new school a strange environment and don't know any of the new pupils at least they have will have their old friends for company, to talk to, and the knowledge that they will not be alone.

8.6   The Decision Making Process

The decision over choice of schools is inextricably linked to the choice of A level subjects (Scott, 2000). The choice of schools or colleges and A level subjects takes place during the same time period. The choice of subjects that a school or college offers impacts on the choice or rejection of that school or college. For example:

> "I decided to go to school X because school Y doesn't do the subjects that I want to do, I rejected school Y because I couldn't have done the A levels that I want to do."

> "If they had done the English language I think that I would have probably gone to school Y, because the media studies course sounded better."

The pupils either have to give up the intention to study an A level subject because the school or college they want to attend does not offer it, or they have to choose another school or college that offers the subject.

The length of time taken for the decision making process extends up to three years. The type of decision making process involved with choosing A level subjects and where to study them can be described as a complex decision making process (Assael, 1995); it involves a multi-stage decision making process.

Gorard (1997b) proposed a three step process of choosing a secondary school, in which the child was only involved in the third step. This model does not offer a satisfactory explanation of the decision making process involved for adolescents choosing A level subjects and where to study them, because the pupils are involved throughout the process and the parents, in most cases, are not the deciders. His and Martin's (1995) work are useful in indicating that a multi-stage process is involved in school choice.

Previous research has shown that when complex decision making is employed, which spans over a lengthy time period, different types of decision processing are involved at different stages of the decision making process (Bettman and Park, 1980). Lussier and Olshavsky (1979) found that consumers frequently use a combination of both non-compensatory and compensatory processing. They use non-compensatory processing to screen out certain brands initially, and then use compensatory processing to evaluate the final candidates. Other researchers have described the process using different terminology. Bettman and Park (1980) suggest that consumers start off the process by attribute processing, eliminating some of the potential choices, and then move over to brand processing. Mowen and Gaeth (1992) suggest that in the evaluation stage judgements of probability and value are combined to form an overall assessment of a particular option. For the pupils involved in the focus group, these theories can be used to help explain their decision making process.

Early in the process the pupils use attribute (non-compensatory) processing, mainly using the weak information sources to eliminate some of the potential A level subjects and some of the potential places to study them. In this way the pupils select a: 'stacked deck', as Gorard (1997b) describes it; a region of acceptance (Jacoby,1971); or in more usual marketing terms an 'evoked set' (Sheth, 1974), of schools/colleges and of A level subjects. The activity of building up the evoked set is the longer part of the process and extends to the last stage when a final judgement is made. The information collected about each option, in the evoked set, is likely to be stored in the pupils' memory as 'chunks' of information as Bettman (1979) terms it,

or as Hill (1993) describes it as an associated network clustered closely together at 'knots' or 'nodes'. The focus groups showed that school brochures were used, during the process of selecting an evoked set of schools, as a sorting mechanism to reject those schools that didn't warrant a visit. An illustration of such a use is:

> *"It was my parents with me saying maybe I want to go there and my mum went and got it. We'd look through it [the school brochure] together and decide whether we wanted to go and see it."*

If a school is not rejected some of the information from the brochure is stored in the network of information associated with that school. Visiting the school or college is used as a further mechanism, to either reject a school or include it into the evoked set of schools. If it is accepted into the evoked set the information collected about the school during the visit is added to the network of information, covering the school, in the pupils memory.

Information from older siblings is used over the period to reject schools/colleges and A level subjects, and build up a fuller picture of those placed in the 'evoked set'. One example from a parent is:

> *"A is asking B now and B is saying 'I did this and it wasn't quite right for me', and obviously he's gained from that because he now doesn't want to go to College X?"*

Examples of pupils building evoked sets are:

> *"My sister said don't do Spanish."*

> *"I asked X (Y's older sister), what it was like for her, and she said that 'it was terrible.'"*

> *"Yeah, my sister went there and she was all right."*

"My sister who was on her way to university after her A levels told me that universities don't really consider it as a proper A level."

At the final stage of the decision making process the information now stored in the pupils memory is used, by more confident pupils, together with advice from their parents, to make a final judgement about the most suitable A levels to study and where to study them. An example of a confident pupil is:

"I knew before my GCSE's no matter what I got I was still going to do those A levels, because those were the ones I was good at and also which interested me."

For the less confident student the final stage is delayed until they receive the last piece of information needed for their decision, that of their GCSE results. Based on this information, together with the information stored in memory and advice from their parents, a final decision is made:

"I made my decision after my GCSEs because I found that I couldn't really choose what subjects I was going to do until I got the results."

8.7   Conclusions

The results confirmed Krueger's (1994) statement that three or four groups are sufficient for exploratory research, and that by the third or fourth group information will start re-occurring and little new data will be obtained. The third pupil group largely confirmed the results from the other groups and produced little new and useful information.

On the evidence that this research provides, previous models based on parental reporting of largely parental decision making is flawed, for use in helping to explain A level and school choice, because the parents no longer make the decision. Their

role has changed from that of deciders to that of influencers. The pupil is now taking responsibility for, and making, the decision. Pupils tend to fall into two categories; the confident pupils who are sure about what they want to do and are confident about their GCSE results, and the less confident pupils who are uncertain about the future and the GCSE results and wish to defer their final decision until after they have received their results.

In terms of information sources used by the pupils there is agreement between the findings of this research and that of previous research into choice of secondary schools, that personal sources are used more often, and found to be more useful, than impersonal sources. Information sources tend to fall into two types, the weaker sources which are largely used during the early stage of the decision making process, and the stronger sources, which consist of personal sources, and which are used at the later stage of the process. Important sources for pupils are visits/open evenings, parents, older siblings and pupils studying A levels. Parents who are a strong influence on pupils, as advisors, feel ill-equipped to advise their children. Elder siblings are an important source of information and have a strong influence on the final decision. Teachers influence pupils more by who they are, and what they are like, rather than in the actual advice they give to the pupils.

The three stage decision making process proposed by Gorard (1997b) for parental decision making is not appropriate to use to explain pupil decision making when they choose A level subjects and where to study them. The model assumes that parents are the decision makers and that the child is only involved in the final stage. The composition of the decision making unit has changed over time and the role of parents has changed, with the pupil now dominating the process. The decision making process is complex and consists of multiple stages. The processes of choosing A level subjects and where to study them are inextricably linked and extend over a time period of up to three years. During the first stage information is collected about schools/colleges and subject options and some options are eliminated. This results in building up 'evoked sets' of one to four schools and three to six A level subjects. The final stage of the process consists of making a judgement of the most

suitable place to study and the most suitable A level subjects. When moving to a new school/college moving with friends is used by pupils as a risk reliever.

At this stage caution needs to be applied to the results and their interpretation, as the sample used for the exploratory research only consisted of fifteen pupils and four parents. The results do, however, provide further insight into the way in which adolescent pupils decide between schools and A level subjects.

The results, linked to the theory reviewed in chapters two, and three, have allowed the production of a hypothetical model of the decision making process. It consists of pupils using non-compensatory processing to produce evoked sets of schools and A level subjects, the process extending over many months. The evoked sets and associated information are stored mainly in the pupils memory. At a later date pupils, using compensatory processing, make final judgements using these evoked sets. Confident pupils tend to be happy to make their final decision before they receive their GCSE results, while less confident pupils want this last piece of information before making their decision.

The next chapter explains, and discusses, the results the quantitative research programme which was used to test, further explain, and confirm these findings.

Chapter 9   The Quantitative Results

9.0   Introduction

The previous chapter discussed the results from the qualitative research which, although interesting, were based on a very small sample and can only give an indication of an adolescent pupil decision making process. This chapter discusses the results of a quantitative research programme, using a larger sample size, designed to test and extend the results of the qualitative research.

The chapter starts with an explanation of the design of the data sets, how the data was coded, missing values treated, the data was explored and cleaned, and the significance tests that were carried out.

Having entered the data onto SPSS the chapter moves on to the analysis of the results, starting with the timings of the different stages of the decision making process, then the evoked set of schools and A level subjects used during the decision. The next section explores the information sources used by the pupils as they make their choices, looking at the different sources used, how useful they were found to be, and at what stage of the decision making process the different sources were used. This is followed by an analysis of the composition of the decision making unit which looks at the relationship between pupil and parent, who makes the decision, and the amount of worry experienced by the pupil during the choice of school and A level subjects.

Finally it looks at the implications of the results and findings on the overall pupil decision making process.

9.1   Description of Data Set

In total of 634 questionnaires were distributed to pupils, 586 completed questionnaires were collected. This indicates that the method of going into the schools, explaining the procedure, waiting for and collecting the completed questionnaires worked well, achieving a rate of return of over ninety per cent. The main reason for the seven per cent non-return of questionnaires was caused by pupils arriving late and with some pupils not completing the questionnaires in the half an hour allowed. If the questionnaires were just handed out at the start of the day and collected at the end of the day, it is likely that the return rate would have been much lower.

Bryman and Cramer (1998) suggest that if many scores from a respondent are missing, it is probably best to omit this person from the sample. After the questionnaires had been collected they were manually checked before they were entered onto SPSS. A number were rejected at this stage. Reasons for rejection were :

1. Large sections of the questionnaire were not completed.
2. Facetious occupations were given for the parents indicating that the pupil had not taken the questionnaire seriously.
3. Regular patterns were apparent against some of the ticked boxes, indicating that the pupil had just ticked the box without answering the questions. These were apparent in Q39, Q40, and Q 41 (Year Eleven planning to take A levels) in the section asking about information sources. Where a pattern was apparent the answers were checked to see if they were consistent and made sense. Where repeated contradictory answers were given, the questionnaire was rejected.

The initial sifting process was undertaken to avoid unnecessary data entry and to avoid erroneous data being entered into the data set. Further tests were made to the data once it had been entered onto SPSS, these are discussed later in section 9.16. The initial vetting resulted in eleven per cent of the questionnaires being rejected. This indicates one potential problem with the methodology, that encouraging pupils

to complete questionnaires by offering them a financial inducement, which may have resulted in some pupils, who were not interested in taking part in the research, answering questionnaires so as not to reduce the financial payment to the school. The initial vetting removed these respondents before they were able to distort the data set.

A total of 518 usable questionnaires remained (eighty-two per cent of those distributed), which were entered onto SPSS. Table 9.1 shows the totals distributed and a breakdown of the returns from each school by questionnaire type.

School	No. Given out	No. Returned	% Returned	No. Rejected	% Rejected	No. Useful	% Useful
A Yr. 11 GTA	34	32	94	2	6	30	88
A Yr.11 BTA	77	72	93	2	2	70	91
B Yr.11 TA	50	46	92	9	18	37	74
C Yr.11TA	105	96	91	16	15	80	76
D Yr.12TA	44	43	98	3	7	40	91
A Yr.12TA	135	121	90	5	4	116	86
B Yr.11 NA	87	82	94	12	14	70	80
C Yr.11 NA	102	94	92	19	19	75	73
Total	634	586	92	68	11	518	82

Table 9.1 Breakdown of questionnaire returns

The table shows the results of the returns for four schools, school A, B, C, and D. School A consists of entries from the year eleven girls school pupils planning to take A levels, (TA), year eleven boys school pupils planning to take A levels, (TA), (all the year eleven pupils were planning to take A levels at this school), and the mixed sex year twelve pupils taking A levels. School B consists of entries from year eleven mixed pupils planning to take A levels (TA), and mixed pupils not planning to take A levels (NA). School C consists of entries from year eleven mixed pupils planning to take A levels (TA), and mixed pupils not planning to take A levels (NA). School D consists of year twelve mixed pupils taking A levels (YR 12). The columns in the table are from left to right are: the number of questionnaires distributed at each school; the number of questionnaires collected from each school; the percentage of questionnaires returned; the number of questionnaires rejected as a result of the

initial sifting stage; the percentage of questionnaires rejected; the resulting number, and percentages, of usable questionnaires that were entered onto SPSS.

This resulted in 518 usable questionnaires consisting of 217 completed by year eleven pupils planning to take A levels, 156 completed by pupils in year twelve taking A levels, and 145 by year eleven pupils not planning to take A levels. A target set of 400 usable questionnaires collected from four schools had been set, the result of 518 usable questionnaires was considered a sufficient number to proceed with the data entry and analysis.

The next section describes how the data was coded and entered onto SPSS.

9.1.1   The coding and entry of the data

The majority of the questions were pre-coded (See Questionnaires in Appendix 5,6, and 7). During the initial sifting stage lists of answers, and their frequencies, were made of the answers to the open ended questions. On completion of this stage these answers were coded, factors given by only one or two pupils were counted as outliers and were omitted. Coded lists were used to code the answers during data entry.

9.1.2   Reasons for using SPSS

The great advantage of using a package like SPSS is that it enables the researcher to score and analyse quantitative data very quickly and in many different ways. It provides the researcher with the opportunity for using more complicated and often more appropriate statistical techniques (Bryman and Cramer, 1998). The quantity of data obtained meant that it was necessary to use a statistical package to analyse the data. SPSS was chosen because of its wide use of, and acceptance by, social researchers (Bryman and Cramer, 1998), and its availability to the researcher within the university.

Because of the widespread use of SPSS, and the many books written on it, a detailed description of the package is not given here in the text. What is described in the next section is how the data set was laid out within SPSS.

9.1.3 Layout of the data set

Each pupil was allocated an individual case number, which was written onto the questionnaire to facilitate future checking, this made it easy to return to the original questionnaire. Each pupil was represented by a row of data, and allocated a school number.

Each variable along the row was given a unique name, the question number preceded by a Q. For the multi-choice list questions labels were set up using an abbreviated form of the answer. The constant-sum scale questions, Q27, year twelve, and Q37, year eleven, presented a problem in terms of the number columns that would be used by the answers, as it was necessary to allocate a column to each alternative choice of answer per A level subject. There were Thirty-two different A level subjects that the pupils had given as potential choices, which meant that the potential number of columns was 32 x 18 = 576 columns, which added to the columns used by the other answers this would have resulted in an excessively large data set. On examination of the research questions it was apparent that what was being investigated was the decision making process and not the individual A level subjects that the pupils were taking, which meant that it was not necessary to record details of each individual subject choice. The range of subjects, and their frequencies, were determined by a simpler form of manual analysis. The data was entered by numbering the subjects, one through to five and reasons for choice one through to eighteen. For example, Q27s1r1 through to Q27s5r18 which reduced the number of potential rows from 576 to ninety, producing a more manageable data set.

In order to facilitate significance testing, when answers to questions that were asked in years, months and weeks were entered into SPSS they were converted to ordinal

scales in weeks. For example in question two, for the year eleven questionnaire, six months was entered as twenty six weeks.

Initially three data sets were created, one for year eleven pupils planning to take A levels, one for year eleven pupils not planning to take A levels, and one for year twelve pupils studying A levels. During data entry, after the first thirty questionnaires had been entered onto SPSS an initial exploratory data analysis was undertaken to check that the layout of the data set facilitated future analysis. After all the data had been entered on to SPSS, the year eleven data set for pupils planning to take A levels was merged with the year twelve data set to form a master data set. The combined data set was used for comparisons between year eleven and year twelve pupils. Because the types of questions applied to the year eleven pupils not planning to study A levels was very different from those asked of pupils studying A levels, it was thought that there would be no advantage in merging this data set with the others.

9.1.4 Missing values

In SPSS, if no data has been entered the system supplies the 'system – missing' value, which is indicated in the data editor window by a full stop, and excludes these from its calculations of means, standard deviations and other statistics (Kinnear and Gray, 1999). Missing values that are included in the analysis can be defined as 'user – missing' values by using missing values within the define variable dialogue box (Cramer, 1994; Bryman and Cramer, 1998; Kinnear and Gray, 1999).

With 518 questionnaires completed by pupils it is almost certain that some data will be missing. This may be because of an oversight by the respondent, a deliberate decision made not to answer the question, an inability to answer the question, and many other possible reasons. Failure to take account of missing values can result in bias and errors of interpretation of the data set (Cramer, 1994; Bryman and Cramer, 1998; Kinnear and Gray, 1999).

The design of the questionnaires included skip statements which meant that sections of the questionnaire would be left blank. This resulted in a large number of deliberate missing values in the data set. For example those pupils not changing schools would skip from question Q1 to question Q17. These were treated as 'system – missing' value. It was necessary to distinguish the difference between the skip sections and those parts that were deliberately left blank by the pupil. In other areas of the data set, such as the multi-choice list, it was important that missing values were treated as zero, as it is important that reasons for choice of subject not used by a pupil be included in the analysis. These areas were set up as 'user – missing' values of zero.

9.1.5   Exploratory data analysis

Once the data has been entered onto SPSS to proceed immediately to a final analysis is decidedly risky. Two main reasons for this are that the researcher may miss the most illuminating features of the data, and that the performance of a statistical test always presumes that certain assumptions about the data are correct. The researcher who explores the data set may find interesting patterns (Kinnear and Gray, 1999).

Once the data had been entered onto SPSS an exploratory analysis of the data was undertaken using the exploratory tools available in SPSS. In addition to helping to clean the data, by finding and correcting errors in the data entry, this was very useful in forming a plan to analyse the data sets.

At the outset of the research it was thought that differences may exist between pupils planning to take A levels and those not planning to take them. If differences were found, it was thought that it would prove fruitful to explore them and to attempt to explain them. Pupils not planning to take A levels completed 145 questionnaires. The instrument used was a simplified version of the year eleven questionnaire, as many questions were not relevant to this group, (See appendix seven for an example of the year eleven questionnaire for pupils not taking A levels). During the exploratory analysis the results from this group were compared to the results from pupils taking A levels. As no apparent differences emerged between the answers to the questions

posed to both groups, no further use was made of the data set, and it is not referred to in the remainder of this chapter.

9.1.6 Cleaning of the data

During the exploratory data analysis some checks between questions were made to check consistency, so as to conform the reliability of the data in the data set. Checks that were made were:

1. Checks were made between Q11 and Q12, schools, and Q30 and Q31, A level subjects, on the year eleven questionnaires; and between Q4 and Q5, schools, and Q16 and Q17, A level subjects, on the year twelve questionnaires. Where answers were inconsistent, for example Q11 deciding upon a school 9 months before starting A levels, but not deciding Q12 until after their GCSE results, the questionnaires were checked to ensure that the data had been entered correctly. If this was the case they were checked for consistent answers throughout the questionnaire, if the questionnaire proved to be unreliable it was removed from the data set.

9.1.7 Significance testing

When examining attitudes towards a number of stimuli, using rating scales, the first step should be the tabulation of the number of respondents replying to each scale position. The next stage is usually comparing two or more sets of distributions, a common method of contrasting subgroups is to carry out a statistical significance test between means (Holmes, 1974).

The resulting data consisted of a range of types of data including ordinal and ratio data. After tabulation of the data further exploration was undertaken using, where appropriate, tests for difference and tests for relationships.

The use of parametric tests is a controversial issue which is still unresolved (Bryman and Cramer, 1998). Lord (1953) suggests that parametric tests can be used with ordinal variables since the tests apply to numbers and not what they signify. Parametric tests are routinely applied to psychological and sociological variables, such as attitudes, which are basically ordinal in nature (Bryman and Cramer, 1998). Bryman and Cramer go on to suggest that it is prudent, however, to compare results of a non-parametric test with those of a parametric test. In the following analysis parametric tests, using a t-test for two related samples, and a t-test for two un-related samples where appropriate, have been used. Where the tests have involved ordinal data they have been used in conjunction with non-parametric tests, using the Wilcoxon test for two related samples, and Mann-Whitney test for two un-related samples. The results of the additional non-parametric tests were then compared to those from the parametric test. Two tailed t-tests have been used throughout the report.

9.2   The Timing of the Decision

This section discusses the answers to the research questions:

> *Research question 1 (a): when did the pupils first start thinking about possible A level subjects, and when did they first start thinking about where they were going to study them?*

> *Research Question 1 (b): When did the pupils make their final decision over choice of A level subjects and choice of where to study them?*

The interpretation of the data, used to answer this question, is complicated by the different time frames used for the year eleven and year twelve pupils. For the year eleven pupils the survey was conducted approximately six months before they were due to start studying their A levels. They were asked 'How long ago did you....?'. For the year twelve pupils the survey was conducted approximately six months after they had made their decision; they were asked 'How long before you started your A

levels did you....?'. This makes any direct comparison between the two groups potentially confusing and, for this reason, the two individual data sets for year eleven and year twelve are used rather than a merged data-set.

Questions Q2, Q5, Q11, Q17, Q21, and Q30 (year eleven) and questions Q2, Q4, Q13, and Q16 (year twelve), which were asked as years, months and weeks on the questionnaires. In order to facilitate the interpretation of the results, on entry into SPSS these were converted into ordinal scales, changing the years and months into weeks.

9.2.1 The timing of the school choice decision for year eleven pupils

To answer the latter part of research question 1 (a), table 9.2 shows both the frequencies and the percentages for the year eleven pupils' answers to the question :

How long ago did you first start thinking about which school / college you were going to?

	Frequency	Percent	Valid Percent	Cumulative Percent
2 weeks	2	.9	1.5	1.5
1 month	3	1.4	2.3	3.8
3 months	15	6.9	11.5	15.4
6 months	26	12.0	20.0	35.4
1 year	54	24.9	41.5	76.9
2 years	22	10.1	16.9	93.8
3 years and over	8	3.7	6.2	100.0
Total	130	59.9	100.0	

Table 9.2 A breakdown of when year eleven pupils first started thinking about school choice

One hundred and thirty year eleven pupils, in the survey, planned to change school. Although a small proportion of pupils started to think about their next school over three years before they were due to start their A levels, most of them, approximately Ninety per cent, started to think about where to study their A levels between three months and two years before the survey was conducted. The mean time for pupils changing schools, from when they first started thinking about their decision, was

approximately fifty-five weeks, which equates to approximately eighty-two weeks before they start at their new school. Given that the survey was conducted during January and February approximately six months before they were due to start at their new schools.

	Frequency	Percent	Valid Percent	Cumulative Percent
Not decided yet	15	6.9	11.5	11.5
2 weeks	7	3.2	5.4	16.9
1 month	12	5.5	9.2	26.2
3 months	40	18.4	30.8	56.9
6 months	27	12.4	20.8	77.7
1 year	18	8.3	13.8	91.5
2 years	8	3.7	6.2	97.7
3 years and over	3	1.4	2.3	100.0
Total	130	59.9	100.0	

Table 9.3 A breakdown of when year eleven pupils made their choice of school

To answer the latter part of research question Q 1 (b), table 9.3 shows the frequencies and percentages for year eleven pupil' answer to the question:

How long ago did you make your decision over where to study your A levels?

Of the 130 pupils who were changing school, in the survey, fifteen, (Approximately twelve per cent), still had to make their decision. Of the remainder, approximately eighty-one per cent had chosen a school between one month and two years before the survey was undertaken. The survey took place approximately six months before the pupils were due to start at their new schools, which indicates that three quarters had decided on a school between seven months and two and a half years before they were due to start at the school. The mean time was approximately twenty-seven weeks before the survey was conducted. Thus, on average, pupils decide on their choice of school about a year before they are due to start at it.

Comparing the means for tables 9.2 and 9.3 gives an indication of the time period that had elapsed between the pupils first starting to think about their decision and making their final decision. This results in a mean elapsed time of approximately

twenty-nine weeks, and shows that they spend about six months making their decision which in turn indicates that a complex decision making process (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999) is being employed. A related samples t-test, confirmed by a Wilcoxon signed ranks test, shows a significant difference between the means for tables 9.2 and 9.3.

$$Z = -7.864 \qquad p = 0.000$$

$$T = 9.457 \qquad df = 129 \qquad p = 0.000$$

This indicates a significant difference between the time when the pupils first started thinking about their decision, and when they decided on their choice of school. The result agrees with Foskett and Hesketh (1996) who found a clear distinction between the start of the decision making process and when pupils came to a final decision.

	Frequency	Percent	Valid Percent	Cumulative Percent
six months	5	2.3	33.3	33.3
three months	7	3.2	46.7	80.0
one month	1	.5	6.7	86.7
two weeks	2	.9	13.3	100.0
Total	15	6.9	100.0	

Table 9.4 A breakdown of when the undecided year eleven pupils plan to make their choice of school

To further answer the latter part of research question 1 (b), table 9.4 shows both the frequencies and the percentages for the year eleven pupils' who still had to make their decision. They answered the question :

How long before you are due to start at your new school / college do you plan to make your decision over where to study your A levels?

For fifteen pupils, who had still to make their choice, table 9.4 shows that eighty per cent plan to make their decision before they have received their GCSE results, and the remaining twenty per cent plan to wait until after their results. These three pupils only represent two per cent of the year eleven pupils surveyed, which indicates that the number of pupils who are reluctant to make their decision before they have

received their GCSE results is quite a small part of the total sample. Table 9.5 confirms the result by answering the question:

Do you plan to make your final decision of where to study before or after you have received your GCSE results?

Approximately eighty per cent plan to make their decision before their GCSE results with the remaining twenty per cent waiting until they have received their results. The agreement between the results in the two tables suggests a degree of reliability (Gilbert and Churchill, 1999) in the results.

	Frequency	Percent	Valid Percent	Cumulative Percent
Before GCSE results	12	5.5	80.0	80.0
After GCSE results	3	1.4	20.0	100.0
Total	15	6.9	100.0	

Table 9.5 A breakdown of when year eleven pupils made their choice of schools

9.2.2 The timing of the school choice decision for year twelve pupils

To answer the latter part of research question 1 (a), table 9.6 shows both the frequencies and the percentages for the year twelve pupils' answers to the question :

How long before you started at your school / college did you first start thinking about where you were going to study?

	Frequency	Percent	Valid Percent	Cumulative Percent
2 weeks	1	.6	11.1	11.1
6 months	3	1.9	33.3	44.4
1 year	5	3.2	55.6	100.0
Total	9	5.8	100.0	

Table 9.6 A breakdown of when year twelve pupils first started thinking about school choice

A much smaller number of year twelve pupils, only nine in the survey, changed schools; approximately eighty-nine per cent of them started to think about choice of school between six months and a year before starting their A levels. The mean time for the pupils was approximately thirty-eight weeks.

	Frequency	Percent	Valid Percent	Cumulative Percent
2 weeks	2	1.3	22.2	22.2
1 month	2	1.3	22.2	44.4
3 months	2	1.3	22.2	66.7
6 months	2	1.3	22.2	88.9
1 year	1	.6	11.1	100.0
Total	9	5.8	100.0	

Table 9.7 A breakdown of when year twelve pupils made their choice of school

To answer the latter part of research question 1(b), table 9.7 shows both the frequencies and the percentages for the nine year twelve pupils' answers the question:

How long before you started at your school / college did you make your final decision of where to study your A levels?

Approximately fifty-six per cent of the year twelve pupils made their decision over choice of schools before they had received their GCSE results, while forty-four per cent of the pupils did not make their final decision until after they had received their GCSE results. The mean time for the pupils was approximately sixteen weeks.

These results are confirmed by table 9.8 which asked the question:

Was your final decision of where to study made before, or after, you received your GCSE results?

It shows that approximately fifty-six per cent made their decision before their GCSE results with the remaining forty-four per cent making their decision after they have received their results. This compares to the forty-four per cent of the pupils shown in table 9.7 who answered that they had made their decision between two weeks and a month before starting to study their A levels, which corresponds to the time before starting their A levels during which they had access to their GCSE results. The agreement between the results in the two tables suggests a degree of reliability (Gilbert and Churchill, 1999) in the results.

	Frequency	Percent	Valid Percent	Cumulative Percent
Before GCSE results	5	3.2	55.6	55.6
After GCSE results	4	2.6	44.4	100.0
Total	9	5.8	100.0	

Table 9.8 A breakdown of when year twelve pupils made their choice of schools

Comparing the means from table 9.6 and 9.7 the average number of weeks taken for the decision making process can be determined as approximately twenty-two weeks. A related samples t-test, confirmed by a Wilcoxon signed ranks test, shows a significant difference between the means for tables 9.6 and 9.7.

$$Z=-2.021 \qquad p=0.028$$

$$T = 3.251 \qquad df = 8 \qquad p=0.012$$

Which is confirms that the means of the two samples are significantly different.

9.2.3   Timing of the A level choice decision for year eleven pupils

To answer the former part of research question 1(a) table 9.9 shows the frequency and percentages of year eleven pupils answer to the question:

How long ago did you first start thinking about your choice of A level subjects?

	Frequency	Percent	Valid Percent	Cumulative Percent
2 weeks	4	1.8	1.8	1.8
1 month	6	2.8	2.8	4.6
3 months	45	20.7	20.7	25.3
6 months	68	31.3	31.3	56.7
1 year	74	34.1	34.1	90.8
2 years	16	7.4	7.4	98.2
3 years and over	4	1.8	1.8	100.0
Total	217	100.0	100.0	

Table 9.9 A breakdown of when year eleven pupils first started thinking about A level subject choice

Table 9.9 indicates that approximately ninety-four per cent of pupils first started thinking about their A level choice between three months and two years before they took part in the survey. The mean time for the pupils was approximately thirty-nine weeks.

	Frequency	Percent	Valid Percent	Cumulative Percent
Still undecided	42	19.4	19.4	19.4
two weeks	21	9.7	9.7	29.0
1 month	49	22.6	22.6	51.6
3 months	47	21.7	21.7	73.3
6 months	37	17.1	17.1	90.3
1 year	13	6.0	6.0	96.3
2 years	4	1.8	1.8	98.2
3 years and over	4	1.8	1.8	100.0
Total	217	100.0	100.0	

Table 9.10 A breakdown of when year eleven pupils made their choice of A level subjects

To answer the former part of research question 1(b), table 9.10 shows the frequency and percentage of year eleven pupils answers to the question:

How long ago did you make your decision over choice of A level subjects?

This indicates that of the 217 pupils surveyed forty-two (nineteen per cent) had not yet decided on their choice of A level subjects when the survey was conducted. Approximately seventy-one per cent of the pupils had made their decision between two weeks and six months before the survey was conducted, which took place approximately six months before the pupils were due to start their A levels. When the time between the survey date and the A level start date is accounted for, it means that approximately seventy-one per cent of the year eleven pupils had made their decision of subject choice between six months and a year before starting their A levels. The mean time of making their decision was approximately sixteen weeks before the survey was conducted.

Subtracting the mean for tables 9.9 from the mean from table 9.10 gives an indication of the time period that had elapsed between when the pupils first started thinking

about their A level choice and when they made their final decision. This produces a mean elapsed time of approximately twenty-three weeks, nearly half a year and corresponds to the approximately twenty-nine weeks taken for the school choice decision, indicating that both decisions are taking place over a similar duration and during the same time period. A time of twenty-three to twenty-eight weeks taken to make the decision suggests that complex decision making (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999) is involved.

A related samples t-test, confirmed by a Wilcoxon signed ranks test, indicates a significant difference between the answers provided for table 9.9 and table 9.10.

$$Z = -10.473 \quad p = 0.000$$

$$T = 10.305 \quad df = 216 \quad p = 0.000$$

In answer to the former part of research question 1(b), table 9.11 shows the answer to the following question given by the forty-two year eleven pupils who were still undecided.

How long before you start studying your A levels do you plan to make your final decision over the choice of A level subjects?

	Frequency	Percent	Valid Percent	Cumulative Percent
9 months	2	.9	4.8	4.8
6 months	4	1.8	9.5	14.3
3 months	12	5.5	28.6	42.9
1 month	20	9.2	47.6	90.5
2 weeks	4	1.8	9.5	100.0
Total	42	19.4	100.0	

Table 9.11 A breakdown of when the remaining year eleven pupils plan to make their decision

The table shows that approximately forty-three per cent plan to make their decision before their GCSE results with the remaining fifty-seven per cent waiting until after they have received their results.

	Frequency	Percent	Valid Percent	Cumulative Percent
before GCSE results	18	8.3	42.9	42.9
after GCSE results	21	9.7	50.0	92.9
After start A's	3	1.4	7.1	100.0
Total	42	19.4	100.0	

Table 9.12 A breakdown of when the undecided year eleven pupils plan to make their choice of A level Subjects

In answer to the former part of research question 1(b), table 9.12 shows the answer to the following question given by the forty-two year eleven pupils who were still undecided.

Do you plan to make your decision before or after you have received your GCSE results, or after you have started your A levels?

The table shows that approximately forty-three per cent of the pupils plan to make their decision before they have received their GCSE results, and that approximately fifty-seven per cent plan to delay their decision until after they have received their GCSE results. This represents eleven per cent of the sample of year eleven pupils surveyed. The agreement between these results and those of question Q30 indicates a degree of reliability (Gilbert and Churchill, 1999) in the results.

9.2.4 Timing of the A level choice decision for year twelve pupils

In answer to the former part of research question 1(a) table 9.13 shows the frequencies and percentages of the year twelve pupils answers to the question:

How long before you started studying your A levels subjects did you first start thinking about which A level subjects you were going to take?

	Frequency	Percent	Valid Percent	Cumulative Percent
2 weeks	4	2.6	2.6	2.6
1 month	5	3.2	3.2	5.8
3 months	18	11.5	11.5	17.3
6 months	50	32.1	32.1	49.4
1 year	57	36.5	36.5	85.9
2 years	18	11.5	11.5	97.4
3 years and over	4	2.6	2.6	100.0
Total	156	100.0	100.0	

Table 9.13 A breakdown of when year twelve pupils first started thinking about A level subject choice

The answers indicate that approximately ninety-two per cent of the pupils first started thinking about their A level choice between three months and two years before they started to study the subjects. The mean time for the pupils was approximately forty-five weeks. This compares to a mean time of approximately thirty-eight weeks for the nine year twelve pupils changing schools.

	Frequency	Percent	Valid Percent	Cumulative Percent
2 weeks	36	23.1	23.1	23.1
1 month	19	12.2	12.2	35.3
3 months	52	33.3	33.3	68.6
6 months	42	26.9	26.9	95.5
1 year	6	3.8	3.8	99.4
3 years and over	1	.6	.6	100.0
Total	156	100.0	100.0	

Table 9.14 A breakdown of when year twelve pupils made their choice of A level subjects

In answer to the former part of research question 1(b) table 9.14 shows the year twelve pupils answer to the following question:

> **How long before you started studying for your A levels did you make your final decision over choice of A level subjects?**

Approximately sixty-five per cent of the year twelve pupils made their decision over choice of A level subjects before they had received their GCSE results, while approximately thirty-five per cent of the pupils did not make their decision until after

their results. The mean time for the pupils was approximately fifteen weeks. These results are confirmed by table 9.15 which gives a breakdown of the year twelve pupils answer to the question:

Was your final decision over choice of A levels made before your GCSE results, after your GCSE results, or when you had started to study your A levels?

	Frequency	Percent	Valid Percent	Cumulative Percent
before GCSE results	100	64.1	64.1	64.1
after GCSE results	46	29.5	29.5	93.6
After start A's	10	6.4	6.4	100.0
Total	156	100.0	100.0	

Table 9.15 A breakdown of when year twelve pupils made their choice of A level subjects

Approximately sixty-four per cent of the pupils made their decision before they received their GCSE results, and that thirty-six per cent left their decision until after they have received their GCSE results. The agreement between these results and those of question Q16 indicates a further degree of reliability (Gilbert and Churchill, 1999) in the results.

By subtracting the mean from table 9.13 from the mean from table 9.14 the average number of weeks taken for the decision making process can be determined. The result being over thirty weeks, the length of time taken indicating that a complex decision making process is involved (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999). A related samples t-test, confirmed by a Wilcoxon signed ranks test, indicates a significant difference between the means.

$$Z = -9.330 \quad p = 0.000$$

$$T = 10.960; \quad df = 155; \quad p = 0.000$$

When the results obtained from the year eleven pupils are compared to those obtained from the year twelve pupils, the decision making process for the former is approximately twenty-three weeks and for the latter is approximately thirty weeks. Given that the year twelve pupils were reporting historically, their answers may be

subject to some selective distortion (Knox and Inkster, 1968). The combined set of results indicate that an average A level pupil will spend about six months deciding which subjects they are going to study.

9.2.5   Discussion of the overall timings

In answer to when the pupils first start thinking about the school and A level choice decision (Research question 1a), table 9.16 shows the year eleven pupils started thinking about schools approximately eighty-two weeks, and for year twelve pupils approximately thirty-eight weeks, before starting at their new school. For A level choice table 9.17 shows that the year eleven pupils first started thinking about their A level subjects approximately sixty-five weeks, and the year twelve pupils approximately forty-five weeks, before starting to study the subjects. The difference between the year eleven and year twelve timings is discussed later in this section. Both sets of figures indicate that pupils, on average, start thinking about the school choice and A level choice approximately a year before starting to study their A levels; just over a year for the year eleven pupils and just under a year for the year twelve pupils. The lengthy time period is similar to both times reported for parents making secondary school choices (West et al., 1995; Gorard, 1997b), and to times for post sixteen choices (Foskett and Hesketh1966).

Question	Year	Mean Time (Weeks)
When start thinking of Schools?	11	55.62 (+26)
When start thinking of Schools?	12	37.8
When make Decision?	11	27.08 (+26)
When make Decision?	12	15.78
Elapsed Time for School Decision	11	28.54
Elapsed Time for School Decision	12	22

Table 9.16 Mean times for school choice

In answer to the question of when pupils make their final decision over choice of school and A level subjects (research question 1b), table 9.16 shows that the year eleven pupils made their choice of school approximately fifty-three weeks, and the year twelve pupils approximately fifteen weeks, before starting at the school.

Regarding choice of A level subjects, the year eleven pupils made their decision on average approximately forty-two weeks, and year twelve pupils approximately fifteen weeks, before starting to study their A levels. Here again there is a difference between the average answers given by the year eleven and twelve pupils, which is discussed later in this section.

Question	Year	Mean Time (Weeks)
When start thinking of A levels?	11	39.27 (+26)
When start thinking of A levels?	12	45.0
When make Decision over A levels?	11	16.24 (+26)
When make Decision over A levels?	12	15.0
Elapsed Time for A levels Decision	11	23.03
Elapsed Time for A levels Decision	12	30

Table 9.17 Mean times for A level choice

Interestingly, although differences exist between the starting and finishing times for the year eleven and twelve pupils, tables 9.16 and 9.17 show that there is quite a good level of agreement over the average length of time of the decision making process. For school choice, year eleven pupils it is approximately twenty-nine weeks, year twelve pupils approximately twenty-two weeks; for choice of A levels, year eleven pupils approximately twenty-three weeks, and year twelve pupils approximately thirty weeks. All of the mean times point to a reasonably consistent time period of about six months. This gives a strong indication that a complex decision making process (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999) is involved. As both sets of decisions take a similar period of time and occur over the same time period, the similarity of the overall timings for pupils making multiple choices (choice of A levels) and single choices (choice of schools) would indicate that both types of decision take a similar period of time.

	Year	% Before GCSE Results	% After GCSE Results
School Choice decision made	11	97.7	2.3
School Choice decision made	12	55.6	44.4
A level Choice decision made	11	88.9	11.1
A level Choice decision made	12	64.7	35.3

Table 9.18 Percentage of pupils making their decision before and after GCSE results

Concerning whether the decision is made before or after the pupils have received their GCSE results, table 9.18 shows that approximately two per cent of the year eleven pupils and approximately forty-four per cent of the year twelve pupils report not deciding their choice of school until after receiving their GCSE results. Approximately eleven per cent of the year eleven pupils and approximately thirty-five per cent of the year twelve pupils report not making their decision over choice of A level subjects until after they had received their results.

Examining the difference in reporting of timings between year eleven and year twelve pupils, there are a number of possible explanations. Firstly the year twelve figure for schools was based on a very small sample of nine pupils which may not be representative of the overall population. Secondly the discrepancy between the reporting may be explained by selective distortion and retention (Knox and Inkster, 1968). Because the year twelve pupils were questioned some time after they had made their decision, they may have altered factors in their mind or forgotten what actually happened. The third explanation comes from the results of the focus groups which indicated that although some of the year twelve pupils originally thought that they had made their final decision, in practice they were forced into changing it after they had received their GCSE results. This explanation is supported by Foskett and Hemsley-Brown (2001) who found that in practice pupils predict that they will achieve substantially better GCSE results than their objective performance would suggest. This may also be the case for some of the year eleven pupils included in the survey who may be required, because of unexpected results, to change their decision after they receive their GCSE results, and may alter the final timing of their decision.

It is likely that the differences in the timings results from a combination of these three factors.

In answer to the research questions asked at the start of the section, for 1 (a) on average the year eleven pupils first started thinking about their A level subjects approximately sixty five weeks and about schools approximately eighty two weeks before commencement of study. The year twelve pupils first started thinking about subjects approximately forty five weeks and schools approximately thirty eight weeks before the commencement of study. The answer to 1 (b) is that on average the year eleven pupils made their decisions approximately forty two weeks, for subjects, and fifty three weeks, for schools, before commencement of study. For year twelve pupils the averages are approximately fifteen weeks, for subjects, and sixteen weeks, for schools, before commencement of study.

The next section moves on to confirm the existence of evoked sets and to determine how many subjects and schools the pupils have in them.

9.3 The Evoked Set

This section aims to answer the research question:

> **How many schools do the pupils have in their evoked sets, and how many A level subjects do the pupils have in their evoked sets?**

It also sets out to determine the proportion of pupils having different sets. It compares the results with the research on evoked sets and their formation, included in the literature review.

Because the same question was asked to the year eleven and year twelve pupils the answers from the merged data set are used. Question Q13 for the year eleven pupils is treated separately as it was not applicable to the year twelve pupils.

9.3.1 The evoked set of schools

	Frequency	Percent	Valid Percent	Cumulative Percent
one	29	7.8	20.9	20.9
two	60	16.1	43.2	64.0
three	28	7.5	20.1	84.2
four	15	4.0	10.8	95.0
five	2	.5	1.4	96.4
over five	5	1.3	3.6	100.0
Total	139	37.3	100.0	

Table 9.19 A breakdown of pupils' evoked sets of schools when they initially started thinking about their choice

Question 3 asks

> **When you first started thinking about schools / colleges, how many different ones did you consider?**

Table 9.19 indicates that approximately ninety-five per cent of the pupils had an evoked set of schools of between one and four schools when they first started thinking about their decision, with approximately eighty per cent having a set of between one and three schools. Table 9.20 shows that the evoked set has reduced, during the decision making process, with approximately eighty-one per cent of pupils now having a set of between one and two schools, with approximately thirty-six per cent of the pupils being left with their final choice of one school. This finding is supported by Hemsley-Brown (1997) who found evidence of early processing where at an early stage pupils rejected some options.

	Frequency	Percent	Valid Percent	Cumulative Percent
one	44	11.8	35.5	35.5
two	56	15.0	45.2	80.6
three	16	4.3	12.9	93.5
four	6	1.6	4.8	98.4
over five	2	.5	1.6	100.0
Total	124	33.2	100.0	

Table 9.20 A breakdown of pupils evoked sets of schools when they made their final choice of schools

Question 6 asks:

> **When you made your final choice of schools / colleges how many different ones did you choose from?**

The paired sample t-test, confirmed by a Wilcoxon signed ranks test, indicates that there is a significant difference between the answers given for the start of the process to those given for the end of the process, and that the evoked set has reduced from a mean of 2.36 schools at the start to 1.94 schools at the final stage of the decision process.

$$Z = -4.884 \qquad p = 0.000$$

$$T = 5.323 \qquad df = 123 \qquad p = 0.000$$

These findings agree with those of Gorrard (1997b), who found that parents had an evoked set of two to three schools.

9.3.2   The evoked set of A level subjects

Question 19 asks:

> **When you first started thinking about A level subjects, how many different subjects did you consider?**

	Frequency	Percent	Valid Percent	Cumulative Percent
one	1	.3	.3	.3
two	7	1.9	1.9	2.1
three	42	11.3	11.3	13.4
four	92	24.7	24.7	38.1
five	126	33.8	33.8	71.8
six	56	15.0	15.0	86.9
seven	18	4.8	4.8	91.7
eight	6	1.6	1.6	93.3
nine	3	.8	.8	94.1
ten	1	.3	.3	94.4
over ten	21	5.6	5.6	100.0
Total	373	100.0	100.0	

Table 9.21 A breakdown of pupils evoked sets of A level subjects when they started thinking about their choice

Question 22 asks:

When you made your final choice of A level subjects, how many different subjects did you choose from?

Table 9.21 shows that approximately eighty-five per cent of the pupils have an evoked set of between three and six subjects when they first start thinking about the choice, with an average evoked set of 5.14. Table 9.22 indicates that the evoked set has fallen during the decision making process, so that by the time that they make their final decision approximately eighty-five per cent of the pupils have an evoked set of between three and five subjects, with an average evoked set of 4.4 subjects. The results confirm that processing has occurred during the decision making process, prior to the point of time when the pupils make their final decision; this confirms that multiple-stage processing (Bettman and Park, 1980; Park and Smith,1989; Coupey, 1994; Shiv and Fedorikhin, 1999) is being used by the pupils.

Question 23 which asks:

How many subjects have you decided to study?

The answer produces a mean of 3.08 subjects. Subtracting this mean from the mean from question Q22 results in 1.32. It indicates that by the time that the pupils make

their final decision on average they have approximately only one excess A level subject to reject.

	Frequency	Percent	Valid Percent	Cumulative Percent
1	1	.3	.3	.3
2	8	2.1	2.4	2.7
3	58	15.5	17.5	20.2
4	124	33.2	37.5	57.7
5	102	27.3	30.8	88.5
6	25	6.7	7.6	96.1
7	7	1.9	2.1	98.2
8	2	.5	.6	98.8
over 10	4	1.1	1.2	100.0
Total	331	88.7	100.0	

Table 9.22 A breakdown of pupils evoked set of A level subjects when they made their final choice of A level subjects

A paired sample t-test, confirmed by a Wilcoxon signed ranks test, shows a significant difference between the means of 5.14 (table 9.21) at the start of the decision making process and 4.4 (table 9.22) at the final stage of the process.

$$Z=8.219 \qquad p = 0.000$$

$$T = 7.344 \qquad df = 330 \qquad p = 0.00$$

The reduction in the average size of choice sets for both schools, from 2.36 to an evoked set of 1.94, and A level subjects, from 5.14 to and evoked set of 4.4, confirms the work of Belonax and Mittelstaed, (1978); Parkinson and Reilly, (1979); Hauser and Wernerfelt, (1990); and Nedungadi, (1990); Bettman et al., (1998) who all propose that initial processing takes place to form an evoked set prior to making the final decision. Belonax and Mittelstaed, (1978); Lussier and Olshavsky,(1979); May, (1979); Parkinson and Reilly, (1979); Brisoux, (1981); and Nedungadi, (1990) explain the process of evoked set formation in terms of an initial screening process, involving non-compensatory processing, where pupils sift out some of the unwanted schools and A level subjects to form their evoked sets. During the process the schools and A level subjects are sorted into one of three regions (Jacoby et al., 1971): those that are placed in the region of acceptance are normally used for the final decision; those in the region of rejection are dropped; and those placed in the region of

neutrality are also usually dropped unless, as apparent from the focus groups, an unexpected problem occurs of failing to achieve an expected grade at GCSE.

The findings of this research also support the work of Zeithaml, (1981); Hauser and Wernerfelt, (1990); and Soloman et al., (1999), who all suggest that evoked sets for services are normally small. Although the evoked set of four A levels subjects may, on initial inspection, appear to be large, it must be remembered that normally a consumer is only choosing one item from an evoked set. In this case the pupil is usually choosing three subjects from the set of four. The findings show that on average pupils only include one extra school and A level subject in their final evoked set. The quantitative findings also support the results from the focus groups which indicated that often the most difficult part of the final process was deciding which A level subject should be dropped. Nedungadi, (1990) and Soloman, (1999) suggest that the details of the evoked sets are stored as a network of information in the consumers' memories. It is likely that in the case of schools and A level subjects the evoked set of school / A level subjects, together with their associated information, is stored in the pupil's memory. This is later confirmed in section 9.74 where it is found that ninety per cent of pupils store the information about schools, and ninety-six per cent of pupils store the information about subjects, in their minds.

The larger size of evoked set for A level subjects (4.40) compared to the smaller size (1.94) for schools, suggesting that larger evoked sets are used for multiple choice decisions than those used for single choice decisions. A paired sample t-test, confirmed by a Wilcoxon signed ranks test, showed the sizes of the means for subjects to be significantly different to the mean of schools, confirming that the size of evoked sets for multiple-choice decisions are significantly larger that those used for single-choice decisions.

A paired samples t-test and a Wilcoxon signed ranks test was carried out to test whether or not the mean sizes of evoked sets for schools (a single-choice decision) was different to the mean size of evoked set for A level subjects (a multiple-choice decision).

$$Z = -7.984 \qquad p = 0.000$$

$$T = -12.599 \quad df = 99 \qquad p = 0.000$$

The results confirmed that there was a significant difference between the two means.

The answers the research questions posed at the start of this section is that pupils have on average two schools and four A level subjects in their evoked sets when they make their final decision.

Having examined the existence of and size of evoked sets, the next section proceeds to the information sources pupils use, when they use them, and at how much influence they have on pupils.

9.4 Information Sources

In the following section the merged data set of year eleven and year twelve pupils was used as both groups were asked the same questions. To ease understanding and reduce the number of tables used, the individual SPSS tables have been combined to form the larger tables which are used in this section.

This section aims to answer the research questions:

> (a) **What information sources are used by the pupils when they make their decision, how useful do they find each source, and at what stage of the decision is each source used?**
>
> (b) **What information sources have a strong influence on the pupil making their decision, and when is the influence exerted?**

Question 39 asks:

> **This section asks about the sources of information that you used, or are using, to help you make your decision. Please tick against any source that you have used, in the appropriate box, to indicate how useful it was to you.**

In this section because a number of pupils had left rows blank, not ticking the 'not used' box, a tick in the not used box was inserted during data entry, so that they don't appear as system missing values.

9.4.1 Information sources found to be useful by pupils

Sources of Information	Very useful / Useful	Very useful	Useful	Not Very useful	useless	Not used
My own Experience of GCSE	86.0	46.9	39.1	7.5	1.3	5.1
Teachers	73.7	21.2	52.5	14.7	2.9	8.6
School open evenings	67.5	21.7	45.8	16.1	5.6	10.7
My parents	63.0	13.7	49.3	20.1	6.4	10.5
Older pupils studying A levels	61.7	24.7	37.0	15.8	3.5	19.0
Friends	58.5	10.2	48.3	24.4	3.5	13.7
Careers Advisors	48.5	22.8	25.7	21.7	9.9	19.8
School printed information	48.3	11.3	37.0	26.0	8.0	17.7
Other pupils	43.2	9.4	33.8	26.0	7.0	23.9
My older brother or sister	39.6	19.8	19.8	10.2	7.2	42.9
Work experience	38.3	16.6	21.7	10.2	5.9	45.6
University printed information	27.8	6.4	21.4	15.8	5.1	51.2
Books	26.0	6.4	19.6	16.6	3.8	53.6
Industry printed information	11.3	1.9	9.4	16.6	7.8	64.6
Internet	11.2	2.9	8.3	13.4	4.0	71.3

Table 9.23 Shows how useful pupils found the various information sources

Table 9.23 shows, in percentages, the answers, in order of usefulness, given by the pupils. To gauge the overall usefulness of each source the 'very useful' and 'useful' responses have been combined to form an additional column. The table shows that the results agree with those of other researchers (Moschis and Moore, 1979; Zeithaml, 1981; Murray, 1991) that personal sources are found to be more useful than impersonal sources. Personal sources range from eighty-six per cent for own experience to approximately thirty-eight per cent for work experience. Impersonal sources range from approximately forty-eight per cent for school printed information down to approximately eleven per cent for industry printed information and the internet. It should be noted that when the data was collected from the pupils the internet, which is growing rapidly (Ellsworth and Ellsworth, 1997, pp. 5), was is in its infancy, and that its use by pupils, as an information source, is likely to grow in the future.

Teachers were found to be a very useful or useful information source by approximately seventy-four per cent of the pupils, which although agreeing with Foskett and Hesketh's (1966) findings, contradicts the results from the focus groups where a high degree of scepticism was shown for the information given by the teachers. This appears to contradict the findings of Epperson, (1964), that as children grow older the parents' influence tends to increase at the expense of the teachers' influence. The results from the focus groups provide some explanation for the apparent contradiction; the pupils explained that they were sceptical about the advice given by teachers but found it very important to collect information about the teachers, to check that they would be able to get on with and work with a particular teacher while studying the A level subject taught by that teacher. The results do, however, show teachers to be a more useful source of information than was indicated by the small sample used for the focus groups.

Regarding parents as an information source, although approximately sixty-three per cent of pupils thought them to be very useful or useful, and approximately forty-nine per cent found them only to be useful. This can be explained by the information which came from the parents focus group; they would have liked to have been in a position to give better advice, but felt ill equipped because their own knowledge was so out of date.

Older brothers and sisters were found to be very useful / useful by approximately forty per cent of the pupils, given that many of the pupils don't have an older sibling, approximately forty-three per cent reported not using the source. The importance of older siblings as a source of information is confirmed by Taylor (1992) who found that older siblings recent experience of further or higher education could be a more precise source of information than that of parents. It is likely that the percentage would have been much greater if more pupils had access to this source of information and the importance of this source should not be underestimated. The result may be explained by Burnkrant and Cousineau (1975), who found that people use other people's product evaluations as an important information source.

When the results shown in table 9.23 are compared to those of earlier research into secondary school (see table 2.7) it demonstrates that pupils use similar information sources to parents. Bradley (1996) found open evenings to be most useful to seventy-eight per cent of parents, which compares to approximately sixty-eight per cent for the pupils shown in table 9.23; at the other end of the scale Bradley found non-personal sources, in the form of printed information, to be useful to thirty-eight per cent of parents compared to approximately forty-eight per cent for the pupils reported in table 9.23.

The results shown by table 9.23 and 9.24 agree in terms of the ranking order of the most useful and most influential sources, which shows consistency in the answers given by the pupils to question Q39 and Q 40 and indicates a degree of reliability in the results. The ratios of very useful to useful and strong influence to some influence are very similar for each information category, again pointing to the reliability of the results.

9.4.2   Information sources that influence pupils

Question 40 asks

> **This section asks about how much influence the sources of information have on your decision. For the information sources that you have used, please tick all that apply, to indicate the amount of influence they have had on you.**

Sources of Information	Strong / Some	A Strong Influence	Some Influence	A little Influence	No Real Influence	Not used
My own Experience of GCSE	83.9	52.5	31.4	8.6	1.6	5.9
Teachers	62.2	16.4	45.8	19.0	9.9	8.8
School open evenings	59.5	22.8	36.7	19.8	7.8	12.9
My parents	57.7	18.0	39.7	21.4	8.8	12.1
Older pupils studying A levels	50.7	18.0	32.7	16.1	12.3	20.9
Friends	44.3	11.3	33.0	29.5	11.8	14.5
Careers Advisors	41.6	18.5	23.1	18.2	17.7	22.5
School printed information	38.0	10.7	27.3	24.1	19.0	18.8
Other pupils	29.3	7.0	22.3	29.0	17.2	24.4
My older brother or sister	37.3	14.5	22.8	9.7	9.4	43.7
Work experience	32.9	14.7	18.2	9.7	10.5	46.9
University printed information	19.3	5.4	13.9	17.7	10.7	52.3
Books	18.0	4.6	13.4	14.7	12.3	55.0
Industry printed information	10.1	2.1	8.0	11.5	12.9	65.4
Internet	9.1	2.9	6.2	10.2	8.3	72.4

Table 9.24 The amount of influence of each information source

Table 9.24 shows that personal information sources are more influential than impersonal sources. Personal sources range from approximately eighty-four per cent for own experience to approximately twenty-nine per cent for other pupils; and impersonal sources range from approximately thirty-eight per cent for school printed information to approximately nine per cent for the internet. As in the previous table, 9.23, teachers are seen to be a strong / some influence by approximately sixty-two per cent of the pupils. Pupils' own experience is shown to be the strongest influence on the pupils. Older pupils studying A levels were found to be a strong influence by approximately eighteen per cent of the pupils, which again can be explained by Burnkrant and Cousineau's (1975) work, which showed the importance of other people's product evaluations. No significant differences were found between sources that influence female pupils and those that influence male pupils.

Comparing the results shown in table 9.24 for pupils to those of research into choice of secondary school in table 2.7 for parents, some factors appear to influence both parents and pupils, whereas for other factors differences are apparent. Elliott (1982) found that school brochures to be very influential to two per cent of parents and influential to twenty-seven per cent of parents; table 9.24 shows printed information to have a strong influence on approximately eleven per cent of pupils and some

influence on approximately twenty-seven per cent of pupils. Elliott found school visits to be very influential to forty-three per cent of parents and influential to twenty-nine per cent of parents which compares to a strong influence on approximately twenty-three per cent of pupils and an influence on approximately thirty-seven per cent of pupils reported in table 9.24. Differences occur in the preferences for personal sources used by parents and pupils; pupils tend to be influenced by other pupils and friends, whereas Elliott found parents to be influenced by other adults such as parents of children at the school, friends , and neighbours. The results confirm Moschis's (1976) findings that people are more influenced by those who have a high co-orientation.

9.4.3   When pupils make use of different information sources

Sources of Information	At an early Stage of your decision	All the way Through your decision	Towards The end of your decision	When you Made your final decision	Not used
My own Experience of GCSE	26.3	51.7	8.6	6.4	7.0
Teachers	20.4	31.9	26.3	8.8	12.6
School open evenings	26.8	16.9	33.8	4.6	18.0
My parents	17.2	43.7	18.2	5.1	15.8
Older pupils studying A levels	23.1	22.8	19.8	7.0	27.3
Friends	27.1	33.0	16.9	4.0	19.0
Careers Advisors	23.3	18.0	20.9	10.2	27.6
School printed information	25.2	18.5	20.9	8.6	26.8
Other pupils	22.0	24.9	16.4	5.1	31.6
My older brother or sister	13.9	23.1	11.0	4.3	47.7
Work experience	20.1	13.9	7.8	5.6	52.5
University printed information	11.0	11.0	13.4	5.9	58.7
Books	14.7	10.5	7.2	5.6	61.9
Industry printed information	8.0	8.6	6.7	8.0	68.6
Internet	7.8	7.0	6.4	5.1	73.7

Table 9.25 When the information sources are used by pupils

Question 41 asks:

> **For those sources that you have used please tick against all that apply to indicate when you used, or plan to use, them.**

Table 9.25 shows that the pupils' own experience is used by the pupils all the way through the decision. It shows that most of the information sources are used more often at an early stage of the decision making process and less often at later stages, when the pupils make their final decision. This can be explained both by the answers to the evoked set questions Q19 and Q22, and the answers to Q27. The answers to the evoked set questions showed that when the pupils came to the final stage of the decision making process they had already processed some of the information and rejected some of the subjects. The answers to Q27 (table 9.40) show that when the pupils make their final decision they rely mainly on information stored in their memory. These results can be explained by Coupey (1994) who suggests that constructive processing is used to create information displays which enable the pupils to retrieve the information more easily, and in a more usable form, when they make their final decision.

Four personal sources of information, own experience, teachers, parents, and older siblings, stand out as being used all the way through the decision. With the exception of teachers these are the 'stronger' external information sources of parents and older siblings that emerged from the focus groups. These are sources that pupils have close day to day contact with and have had the opportunity to get to know and establish confidence in, and that are usually easily available to them as an information source. The answers from the pupils in the survey indicate a confidence shown in teachers as an information source, not shown by many of the pupils in the focus groups, and indicate that they should be included in the 'strong' information source category.

9.4.4 Discussion of information sources used by pupils

The use of many of the information sources early on in the process and the lack of their use later on during the process indicates that initial processing of the information has been undertaken. This supports the hypothesis of early non-compensatory processing (Belonax and Mittelstaedt, 1978; Parkinson and Reilly, 1979; Hauser and Wernerfelt, 1990; Nedungadi, 1990; Bettman et al.,1998) being used to sort out excess options to produce an evoked set. The resulting information

from the processing being stored in the pupil's memory for later compensatory processing.

The results from Q19 and Q22 show that some processing had occurred before the final decision was made and at this stage, on average, only one A level remained to be rejected. Table 9.25 indicates that some of the information collected early in the process is stored in the pupils memory and that pupils do not refer back to the original information sources during the final decision making stage. These results indicate that compensatory processing (Park and Smith, 1989; Bettman et al, 1998) is used at the final stage where an overall judgement of which A level to drop and which ones to study is made, largely using information stored in the pupils memory. The greater use of information sources at the early and middle stages of the process, and lesser use at later stages, is explained by Moorthy et al., (1997). Pupils become more expert-like with experience and learn to reduce their search costs by concentrating on the most relevant attributes and by differentiating schools and subjects.

In answer to the research questions asked at the start of this section, the six most useful and influential information sources for pupils are their own experience, their teachers, school open evenings, their parents, older pupils studying A levels, and their friends. The following section moves on to look at who makes the decision over choice of school and subjects.

9.5 The Decision Maker

The results from the focus groups were that most of the pupils and all of the parents thought that the decision maker was the pupil.

The research question asks:

> **Who makes the decision over choice of A level subjects, and who makes the decision over where to study them?**

Two sets of questions were used to gain responses to answer the question. Questions Q9 and Q10 for choice of place of study, and questions Q28 and Q29 for choice of A level subjects. As the same question was asked of both the year eleven pupils and the year twelve pupils the data from the merged data-set are used in this section.

9.5.1   Pupil parent involvement in choice of schools

Question 9 asks:

This section asks about who made the decision over the choice of where you plan to study your A levels. Please tick one box which best describes your situation.

	Frequency	Percent	Valid Percent	Cumulative Percent
own decision	50	13.4	40.3	40.3
with parent's help	58	15.5	46.8	87.1
joint decision	14	3.8	11.3	98.4
parents with consultation	1	.3	.8	99.2
parents only	1	.3	.8	100.0
Total	124	33.2	100.0	

Table 9.26 Breakdown of who makes the decision over choice of school

Table 9.26 shows that approximately forty per cent of the pupils thought that it was their own decision, which corresponds to the approximately forty-one per cent who answered to one hundred per cent involvement in question Q10. This indicates that the answers given by the pupils was consistent between questions, and confirms reliability in the results. Overall approximately eighty-six per cent of the pupils reported that they made the decision over choice of where to study their A levels, with approximately forty-six per cent of them reporting that they had received help from their parents. Less than one per cent of pupils answered that it was the parents' decision, and only approximately eleven per cent reported a joint decision.

Question 10 asks:

If the decision was a joint decision please indicate by ticking the appropriate box to indicate your degree of involvement in the decision.

	Frequency	Percent	Valid Percent	Cumulative Percent
75%me 25%parents	53	14.2	42.7	42.7
50%me 50%parents	13	3.5	10.5	53.2
25%me 75%parents	3	.8	2.4	55.6
90%me 10% parents	3	.8	2.4	58.1
100%me	51	13.7	41.1	99.2
95%me 5%parents	1	.3	.8	100.0
Total	124	33.2	100.0	

Table 9.27 Degree of involvement of pupils and parents in choice of school decision

Table 9.27 adds to the knowledge of parental involvement in the decision making process by showing the frequency and percentage of parental involvement. There is a consistency in the results by agreeing with the answers given in question Q9. Approximately forty per cent reported in question Q9 that it was their decision and approximately forty-one per cent reported in question Q10 that it was one hundred per cent their own decision. Few pupils reported a high amount of parental involvement, with only approximately eleven per cent reporting a fifty/fifty parental involvement, whereas approximately eighty-seven per cent of the pupils reported twenty-five per cent or less, parental involvement in their decision. This tends to confirm the result from the focus groups that pupils, rather than their parents, are now making the decision over choice of school.

9.5.2 Pupil parent involvement in choice of A level subjects.

For choice of A level subjects question 28 asks:

> **This section asks about who made the decision over the choice of the A levels you plan to study. Please tick the box which best describes your situation.**

	Frequency	Percent	Valid Percent	Cumulative Percent
self	138	37.0	41.8	41.8
parental help	168	45.0	50.9	92.7
joint decision	21	5.6	6.4	99.1
parents consulted	3	.8	.9	100.0
Total	330	88.5	100.0	

Table 9.28 Breakdown of who makes the decision over choice of A level subjects

Tables 9.28 and 9.29 again show consistent answers across the questions; with approximately forty-two per cent of the pupils saying that they made the decision over choice of A level subjects, and approximately forty-two per cent saying that it was one hundred per cent their own decision. This suggests a degree of reliability in the results with the pupils providing consistent answers to the questions. The results mirror those of Q9 and Q10, for school choice, indicating that the pupil participation in the two sets of decisions is similar, with over ninety per cent of pupils reporting that they had made the decision over choice of A level subjects, with approximately fifty per cent of them reporting having received help from their parents. The results show that pupils involve their parents to the same extent when they are making single choice decisions and multiple choice decisions.

Question 29 asks:

If the decision was a joint decision please indicate by ticking the appropriate box to indicate your degree of involvement in the decision.

	Frequency	Percent	Valid Percent	Cumulative Percent
75%me 25%parents	123	33.0	37.3	37.3
50%me %50%parents	16	4.3	4.8	42.1
25%me 75% parents	2	.5	.6	42.7
90%me 10%parents	27	7.2	8.2	50.9
100%me	137	36.7	41.5	92.4
95%me 5%parents	9	2.4	2.7	95.2
85%me 15%parents	8	2.1	2.4	97.6
80%me 20%parents	6	1.6	1.8	99.4
60%me 40%parents	2	.5	.6	100.0
Total	330	88.5	100.0	

Table 9.29 Degree of involvement of pupils and parents in choice of school decision

The results show that pupils now take the decision and think that it is clearly their responsibility. Although Foxman et al., (1989), has questioned the accuracy of child reporting the results were confirmed by the evidence from the parents' focus group, where all of the parents clearly thought that it was the pupils' decision and responsibility.

The results shown in tables 9.26-9.29 give a clearer indication of who makes the decision over choice of school than previous studies have provided (Alston et al., 1985; Stillman and Machell, 1986; Coldron and Boulton, 1991; Thomas and Dennison, 1991; Walford, 1991; West et al., 1995; Gorard, 1997; West et al. 1998). Some studies indicated a high level of pupil decision making (Thomas and Dennison, 1991; Walford, 1991) while other studies showed largely parental decision making (Stillman and Machell, 1986; West, 1995). Taken together the research painted a picture of parents largely making the decision, but with their child exerting a strong influence over their decision. The results presented in tables 9.26-9.29 give a much clearer picture and show that a change has taken place as the pupil has grown older; it is now the pupil who is the decision maker and the parent's role has changed from decider to advisor. These results agree with other post sixteen researchers (Foskett and Hesketh, 1996; Ball et al., 2000; Foskett and Hemsley-Brown, 2001) who found that the chooser by the age of sixteen is the pupil who plays a dominant role in the process. The mixed results from the previous research into secondary school choice may have been caused by examining a situation that was changing over time; some of

the pupils and parents were more advanced in terms of time and pupil maturity than others.

In summary the answer to the research question posed at the start of this section is that it is now the pupil who makes the decision over both choice of schools and choice of A level subjects. Having established that it is the pupil who makes the decisions, the next section looks at the amount of worry this causes pupils.

9.6 The Amount of Worry Involved with the Decision

The focus groups indicated that although parents were very concerned over the amount of worry their children experienced during the decision, the pupils themselves only reported modest degrees of worry. This section seeks to confirm the results obtained from the focus groups by asking the pupils about the amount of worry they experience during their decisions. It builds on the results from the focus groups by determining whether a difference exists between the amount of worry experienced by male and female pupils. It also seeks to determine, which is discussed later in the chapter, whether those pupils who make their decision before they receive their GCSE results worry less over the decision than those pupils who delay their decision until the results are confirmed.

Question 42 asks:

> **Please tick the box which best describes the amount of worry you have experienced, or are experiencing.**

The question is asked to determine the amount of worry experienced by the different pupils. The same question was asked of both the year eleven and year twelve pupils, so the merged data set is used.

	Frequency	Percent	Valid Percent	Cumulative Percent
extremely worried	23	6.2	6.2	6.2
very worried	39	10.5	10.5	16.7
worried	68	18.2	18.3	34.9
slightly worried	156	41.8	41.9	76.9
not worried	86	23.1	23.1	100.0
Total	372	99.7	100.0	

Table 9.30 The amount of worry experienced by pupils

Table 9.30 shows that approximately thirty-five per cent of the pupils were either extremely worried, very worried, or worried about their decision, while approximately sixty-five per cent of the pupils were only slightly or not worried. This indicates that a higher proportion of pupils were worried over their decision than the results from the focus groups indicated.

The results from a Levene's test show that the variances are not statistically different, since the p value is greater than 0.05.

$$F = 2.478 \qquad p = 0.116$$

An independent samples two-tailed t-test, confirmed by a Man-Whitney U test, was used to test if there is a significant difference in the amount of worry experienced by male and female pupils, this was confirmed by a t value, based on equal variances, which is significant.

$$Z = -4.187 \qquad p = 0.00$$

T = 3.893 (Equal variances assumed)   df = 370   p = 0.000

T = 3.885 (Equal variances not assumed)   df = 355   p = 0.000

It is concluded that there is a significant difference between the amount of worry experienced by male and female pupils, with female pupils suffering more worry than male pupils. This is in line with Stables and Stables' (1995) conclusions that female pupils lacked confidence relative to male pupils.

To investigate a possible connection between the amount of worry experienced by pupils and whether or not the made their decision before or after receiving their GCSE results a univariate analysis of variance was conducted. The results show that those pupils who defer their decision until after they have received their GCSE results experience significantly more worry than those pupils who make the decision before receiving their GCSE results.

$$F = 12.275 \qquad df = 1 \qquad p = 0.001$$

The interaction between the sex of the pupil and when they made their decision is not significant.

$$F = 1.480 \qquad df = 1 \qquad p = 0.225$$

$$R \text{ Squared} = 0.072 \text{ (Adjusted R Squared} = 0.064)$$

The next section examines the decision making process used by that pupils.

9.7   Pupil Decision Making

This section attempts to answer the complex research question:

> **Do the pupils use non-compensatory processing in order to produce an evoked set of schools / colleges, and an evoked set of A level subjects? Do the pupils use the evoked sets to make a final judgement of which are the best alternatives?**

In order to answer these questions, a number of questions were included in the questionnaire to elicit answers. To aid comprehension the results are presented in the order that they appear in the questionnaire. After all of the individual results have been discussed they are then used to examine the overall decision making process used by the pupils.

9.7.1 Stages in the Decision Making Process

Question Q7, for schools, asks about the decision making process, and whether it includes the production of an evoked set.

	Frequency	Percent	Valid Percent	Cumulative Percent
left one school	68	18.2	54.8	54.8
one or two schools	25	6.7	20.2	75.0
reject earlier and later	10	2.7	8.1	83.1
early and final	8	2.1	6.5	89.5
all at final	13	3.5	10.5	100.0
Total	124	33.2	100.0	

Table 9.31 Stages in the school decision making process for year eleven and twelve pupils

Table 9.31 shows how the pupils made their choice of schools, approximately fifty-five per cent of the pupils rejected all of the surplus schools during the process, effectively missing the final stage because they were only left with one school. Approximately twenty-seven per cent of the pupils used a two-stage process, where they rejected some of the schools early on, missed the second stage, and rejected all of the remaining surplus schools at the final stage. Approximately eight per cent of the pupils indicated that they had used a three-stage process; the first stage consisting of rejecting some of the schools early on in the process, the second stage consisting of rejecting some more schools before they made their final decision at the last stage, where they rejected the remaining schools. Only approximately ten per cent of the pupils did not reject any schools until they made their final decision.

Question Q14, for schools, asks those year eleven pupils who have still to make their decision how they plan to make their decision.

	Frequency	Percent	Valid Percent	Cumulative Percent
left one school	1	.3	6.7	6.7
two or three schools	2	.5	13.3	20.0
reject early & later	2	.5	13.3	33.3
early & final	2	.5	13.3	46.7
all @ final	8	2.1	53.3	100.0
Total	15	4.0	100.0	

Table 9.32 How year eleven pupils plan to complete the decision making process over school choice

Table 9.32 shows that a small number, fifteen, of the pupils reported that they had not made their final decision when the survey was conducted. Of these approximately seven per cent had effectively made their decision, because they were only left with one school; approximately twenty-seven per cent planned to use a two stage process, having already rejected some of the schools, and planning to reject all of the remaining surplus schools at the second and final stage. Approximately thirteen per cent were planning to use a three stage process and had still to undertake the third stage and make their final decision. Approximately fifty-three per cent of the pupils planned to reject all of the surplus schools only at the final stage.

Question Q24 asks pupils how they made their decision over choice of A level subjects.

	Frequency	Percent	Valid Percent	Cumulative Percent
left with choice	109	29.2	32.9	32.9
1 or 2 over	86	23.1	26.0	58.9
early & later	59	15.8	17.8	76.7
early & final choice	56	15.0	16.9	93.7
all @ final choice	21	5.6	6.3	100.0
Total	331	88.7	100.0	

Table 9.33 Stages in the decision making process for choice of subjects for year eleven and twelve pupils

Regarding choice of A levels, table 9.33 shows that approximately thirty-three per cent of the pupils rejected all of the surplus subjects during the process, effectively pre-empting their final decision because they were only left with the subjects they

planned to study. Approximately forty-three per cent of the pupils used a two stage process, rejecting some subjects early on and all of the remaining excess subjects when they made their final decision. Approximately eighteen per cent of the pupils used a three stage process, rejecting some subjects early on in the process, and some more before they made their final decision, and the remainder when they made their final decision. Only approximately six per cent of the pupils did not reject any subjects until they made their final decision. The forty-two missing were the pupils who were still undecided when the questionnaire was completed, their decision process is shown in tables 9.35, 9.36 and 9.37.

The answers to question Q7 regarding choice of schools and question Q24 regarding choice of A level subject support the findings in section 9.3, and provide strong evidence of the production of an evoked set of schools and A level subjects. For A levels only approximately six per cent of the pupils indicated that they had not used an evoked set when they made their final decision; approximately ninety-four per cent indicated that they had produced and used an evoked set. Question Q24 (table 9.33) shows that approximately eighteen per cent of the pupils used a three-stage process, approximately forty-three per cent used a two-stage process, and approximately thirty-nine per cent used a one-stage process. The three-stage process consists of starting with a larger number of A level subjects, the larger number is reduced during the early information search stage to produce a smaller and more manageable evoked set of A level subjects. An explanation of evoked set production is provided in chapter three by Wright (1975), Parkinson and Reilly (1979), Brisoux (1981), Grether and Wilde (1984), Bettman et al., (1998), who indicate that non-compensatory processing is used to reduce the number of potential choices down to a manageable evoked set, in this case of schools or subjects. The results from the focus groups both confirm and explain the process, in which pupils started with a larger number of A level subjects and undertook a selection process where some subjects were rejected on the basis of failing the test for one important attribute. The process reduces the number of subjects down to a manageable number.

During this, and the next stage, the information processing and information search run in parallel. The reduction of the choice set during the first stage also serves to make the information search for the remaining A level subjects more manageable. Pupils become more knowledgeable (Moorthy et al., 1997) and determine the important attributes on which to concentrate on and build into information displays (Coupey, 1994). Further evidence of early processing is also provided by the answers to question Q19 and Q22 (Tables 9.21 and 9.22 respectively) which show that the mean number of A level subjects falls, significantly, from 5.14 to 4.40 over the processing stage, indicating that some processing has taken place. The answer to question Q24 indicates that there is a second stage in which pupils reject further subjects before arriving at the final evoked set. At the final stage of the process the pupils largely relying on memory (Bettman, 1979; Nedugadi, 1990; and Hill, 1993,) make a final judgement of which subjects they are going to study; where compensatory processing is used (Johnson and Russo, 1984; Mowen and Gaeth, 1992; Assael, 1995; Bettman et al., 1998; and Solomon, et al., 1999).

The results shown in tables 9.31, 9.32, and 9.33 provide strong evidence that multiple-processing (Bettman and Park, 1980; Park and smith, 1989; Coupey, 1994; Shiv and Fedorikhin, 1999) is being used by the pupils when they decide over schools and A level subjects. This is supported by Hemsley-Brown (1999) who found evidence of early processing taking place prior to the final decision. The tables also provide evidence that multiple-processing is used both for single choice and multiple choice decisions. A Chi square test was undertaken to determine whether there was a significant difference between the number of stages used for multiple-choice and single-choice decisions. It should be noted that the sample is a related sample and strictly the Chi Square test should be applied to unrelated samples. The following matrix (Table 9.34) shows the frequencies of each stage for schools and subjects.

	School	A level	Total
One-stage	81	130	211
Two-stage	33	142	175
Three-stage	10	59	69
Total	124	331	455

Table 9.34 Frequencies by stage for schools and subjects

The Chi Squared test showed a significant difference in the number of stages used for the two types of decisions.

Chi Squared = 15.667 df = 2

0.1	0.05	0.02	0.01	0.001
4.6	5.99	7.82	9.21	13.82

9.7.2 How year eleven pupils plan to make their decision

	Frequency	Percent	Valid Percent	Cumulative Percent
haven't rejected any yet	14	3.8	33.3	33.3
rejected some	28	7.5	66.7	100.0
Total	42	11.3	100.0	

Table 9.35 How year eleven pupils are making their subject decision

Table 9.35 shows that of these forty-two pupils, approximately thirty-three per cent had not yet rejected any subjects, and approximately sixty-seven per cent had rejected some subjects, but still had too many subjects.

Subjects	Frequency	Percent	Valid Percent	Cumulative Percent
1	12	3.2	42.9	42.9
2	13	3.5	46.4	89.3
3	2	.5	7.1	96.4
4	1	.3	3.6	100.0
Total	28	7.5	100.0	

Table 9.36 The number of subjects year eleven pupils need to reject

Table 9.36 shows, for the twenty nine pupils that have already rejected some subjects, the number of excess subjects these pupils still had to reject, indicating that approximately eighty-nine per cent of the pupils had only one or two excess subjects

to reject when they made their final decision. This confirms that the evoked set for these pupils only consists of one or two subjects more than the pupils intend to study; so for a pupil planning to study three A levels the evoked set would consist of four or five subjects. This agrees with the previous finding (section 9.3) of a mean evoked set of 4.4 subjects prior to pupils making their final decision. This indicates a degree of reliability (Gilbert and Churchill, 1999) in the results.

	Frequency	Percent	Valid Percent	Cumulative Percent
reject all @ final decision	26	7.0	61.9	61.9
some before	16	4.3	38.1	100.0
Total	42	11.3	100.0	

Table 9.37 How year eleven pupils plan to make their A level subject decision

Table 9.37 shows that of these pupils approximately sixty-two per cent plan to reject all the excess subjects only when they make their final decision, and approximately thirty-eight per cent still plan to reject some more subjects before they make their final decision.

The results shown in tables 9.35, 9.36, and 9.37 provide further evidence that multiple-processing (Bettman and Park, 1980; Park and smith, 1989; Coupey, 1994; Shiv and Fedorikhin, 1999) will be used by the pupils when they decide on their A level subjects.

9.7.3   The difficulty experienced by year eleven and twelve pupils during the choice process

Question 25 asks the pupils how difficult they found it to make their decision over choice of A level subjects.

	Frequency	Percent	Valid Percent	Cumulative Percent
easy	184	49.3	55.6	55.6
sure about 1	41	11.0	12.4	68.0
sure about 2	88	23.6	26.6	94.6
sure about 3	18	4.8	5.4	100.0
Total	331	88.7	100.0	

Table 9.38 Difficulty experienced by pupils during the subject decision

Table 9.38 shows that approximately fifty-six per cent of the pupils reported that they had found it easy to reject their surplus subjects, while approximately forty-four per cent reported experiencing having difficulty in making their final choice. Question Q22 (table 9.21) showed that the mean evoked set consisted of only 4.4 subjects at the final decision which means that most pupils only have one subject to reject at the final decision. These results confirm the findings from the focus groups that it was the last one or two subjects rejected that cause the greatest problems. Here approximately twelve per cent were sure about one subject but had experienced difficulty choosing the remainder; approximately twenty-six per cent were sure about two of the subjects but were having difficulty deciding which one, from the remaining two, should be the last subject; and approximately six per cent of the pupils taking four subjects were sure about three but were having difficulty choosing the last one. The results suggest that about half the pupils find the decision easy, and the other half have difficulty choosing the final one or two subjects. The forty-three missing entries are composed of the year eleven pupils who had not made their decision when the survey was conducted.

9.7.4 How pupils store their information

	Frequency	Percent	Valid Percent	Cumulative Percent
in mind	54	14.5	43.5	43.5
plus check	33	8.8	26.6	70.2
talk over	24	6.4	19.4	89.5
notes	4	1.1	3.2	92.7
only notes	6	1.6	4.8	97.6
no notes	3	.8	2.4	100.0
Total	124	33.2	100.0	

Table 9.39 How information about schools is stored by year eleven pupils

Table 9.39 shows that for the information they collected about schools, approximately ninety per cent of the pupils store the information in their mind. Of these approximately twenty-seven per cent still needed to check up on some details, and approximately nineteen per cent needed to talk the decision over with someone.

	Frequency	Percent	Valid Percent	Cumulative Percent
in mind	132	35.4	39.9	39.9
check details	89	23.9	26.9	66.8
talk to someone	95	25.5	28.7	95.5
mind & notes	11	2.9	3.3	98.8
mainly notes	2	.5	.6	99.4
not use notes	2	.5	.6	100.0
Total	331	88.7	100.0	

Table 9.40 How information about subjects is stored by year eleven pupils

Table 9.40 shows how pupils store information about A level subjects and presents a very similar picture to the previous table, with approximately ninety-six per cent of the pupils storing the information in their minds, approximately twenty-seven per cent of these reporting that they needed to check up on some details, and approximately twenty-nine per cent who needed to talk their decision over with someone.

Questions Q8 and Q27 (tables 9.39 and 9.40) show that during the final decision approximately ninety per cent and ninety-six per cent, respectively, of pupils rely solely, or mostly, on information stored in their memories. The information about the schools and A level subjects is likely to be stored as a network of information in their

memory (Jacoby, et al., 1977; Bettman, 1979; Nedugadi, 1990; Hill, 1993; and Robertson, 1999). The chunk of information, which normally is linked to a brand name (Jacoby, et al., 1977; Bettman, 1979) is in this case linked to the name of a school or the name of an A level subject to which other information about the school or A level subject is linked to form the network of information. This network facilitates the final judgement, it takes the form of an information display (Coupey, 1994), or schemata (Hodkinson and Sparkes, 1997), which is used during the final judgement (Meyer, 1987; Meyers-Levy and Tybout, 1997) to make the decision.

9.7.5   Reasons for choice of A level subjects

This section examines the pupils' reasons for choice of A level subject by asking them to divide one hundred points across the reasons for choice of each subject, giving more points to the more important reasons. Table 9.41 shows the results in terms of the mean score for each reason for each subject. The final column shows the overall rounded mean across the four subjects. As only two pupils in the survey studied five subjects, they have been omitted from the table.

	Subject 1 Means	Subject 2 Means	Subject 3 Means	Subject 4 Means	Overall Means
	N = 373	N = 368	N = 347	N = 65	
I am interested in the subject	38.38	38.87	40.06	42.15	40
I am good at the subject	24.64	20.98	20.42	24.15	23
Needed for the job I want to do	12.97	12.42	11.11	7.08	11
University requirement	6.05	6.83	6.14	6.63	6
I like the teachers who teach it	4.20	3.95	3.99	2.64	4
I think the subject is easy	3.84	3.58	4.82	5.23	4
My parents advised me to take it	3.64	4.30	4.78	4.03	4
Career teacher advised to take it	2.29	3.22	3.52	3.31	3
I have friends who are taking it	1.89	1.75	1.76	0.70	2
Teacher advised to take it	1.46	2.87	2.46	2.23	2
Good spread of subjects	0.55	0.53	0.43	0.92	1
Others	0.09	0.70	0.51	1.23	1
Total	100.00	100.00	100.00	100.00	101.00

Table 9.41 Year eleven and twelve pupils reasons for choice of A level subjects

Table 9.41 demonstrates the advantage of using a constant sum scale, over a conventional rating scale, because in addition to indicating the order of priority of the

reasons for choice. It provides an indication of how important, relative to the other reasons, each individual reason is. Thus interest in the subject is ranked as more important than liking the teachers who teach the subject. The table shows that the mean reason rating of forty points for interest in the subject is a factor of ten greater than liking the teacher, which has a reason mean of four points, indicating that the former is a very important reason for choice.

The results shown in the table fall into three broad strata in terms of strength of reason, they are: personal views; worldly requirements; and other peoples views, in the form of advice. The first stratum including interest in, and liking, the subject both stand above the other reasons, in terms of importance to the pupils, with forty, and twenty-three points respectively. The second stratum which include job, and university, requirements, with eleven and six points respectively, although only half the points of the previous strata are greater than the final stratum, which include advice from parents, careers advisers and teachers. The subject means are quite consistent across the table, with little differences between subjects. There is a slight indication that when choosing the fourth subject the pupils reduce the importance of university requirement in favour of interest and going for a subject that they will think will be easy.

Reason for Rejection	Subject 1 No.	Subject 1 %	Subject 2 No.	Subject 2 %
Not needed for job	157	42.1	134	35.9
Subject too hard	154	41.3	133	35.7
Not interested in subject	138	37.0	132	35.4
No good at subject	107	28.4	107	28.7
Not needed by university	100	26.8	91	24.4
Parents advised not to take it	57	15.3	53	14.2
Do not like teachers who teach it	50	13.1	48	12.9
Teacher advised against it	34	9.1	34	9.1
Career teacher advised against it	26	7.0	37	9.9
No friends taking it	21	5.6	24	6.4
Timetable clash	21	5.6	20	5.4

Table 9.42 Year eleven and twelve reasons for rejecting A level subjects

Table 9.42 shows the reasons for rejecting A level subjects; it indicates for two subjects the number and percentage of pupils' reasons for rejection. The results are consistent for the subjects across the table. Three reasons stand out as the most frequently cited, approximately forty-two per cent citing not needed for their future career, approximately forty-one per cent thinking the subject too hard, and approximately thirty-seven per cent not being interested in the subject. It is interesting that the reasons for rejection are not the exact opposite of those for choosing the subject. A number of factors change position; interest in the subject being the most important reason for choosing a subject falls to third position for reasons for rejecting a subject; too hard / easy moves from sixth ranking to second ranking; needed for the job moves from third position to first position. This implies that some factors are stronger reasons for choosing subjects, while other factors are stronger reasons for rejecting subjects.

Pupil's own perceptions, subject too hard, not interested in the subject, and not good at the subject, all appear in the top half of the table 9.42; whereas other people's perceptions, in the form of advice from parents, teachers and careers advisors, all appear in the bottom half of the table. This implies that pupils place higher value on their own perceptions than on other people's perceptions. The top five reasons for rejecting subjects are a combination of job / university requirements and personal perceptions of the subjects.

9.7.6   Reasons for choice of schools

Reason for choice of School N = 139	Number Of pupils	Percentage Of pupils
Choice of A Level Subjects	110	79.1
Happy there	80	57.6
Good Facilities	77	55.4
Close Location	72	51.8
Good Exam Results	70	50.4
Good Reputation	63	45.3
Friends Going to Same School	47	33.8
School Well Organised	46	33.1
Good Atmosphere	36	25.9
Good Teachers	35	25.2
Older Sibling Attended	21	15.1
Uniform Policy	12	8.6
Good Discipline	11	7.9
No School Fees	1	0.7

Table 9.43 Year eleven and twelve pupils' reasons for choice of school

Table 9.43 shows the pupils' reasons for choice of school that they are attending (year twelve pupils) , or plan to attend (year eleven pupils). The most frequently cited reason is the choice of A level subjects offered by the school, with approximately seventy-nine per cent of the pupils citing this reason. When these results, shown in table 9.43, are compared with the results from research into choice of secondary school discussed in chapter two (Tables 2.1 and 2.2) they are remarkably consistent. The two exceptions are choice of A level subjects and discipline. Taking the former, it is not surprising that subject choice has moved up in priority as pupils near studying for these subjects. The latter can be explained by changes in priorities as pupils grow older. Parents of younger children are more likely to be concerned over discipline than more mature sixth formers, who themselves may even be put off by excessive discipline.

Comparing the results shown in table 9.43 with those of Bradley (1996), table 2.2, if A level choice and discipline are removed from the tables, then the first four factors, happiness, facilities, location, and exam results are the same, in the same order of priority. The results shown in table 9.43 are close to the findings of Foskett and Hesketh (1996) that important specific factors are reputation, providing the subjects wanted, proximity, and friends moving with them.

Overall the results show that many reasons for choice of school remain the same regardless of the age of the pupils, the two main exceptions being discipline and choice of A level subjects. The agreement between these findings and those of other research suggests a degree of validity (Gilbert and Churchill, 1999) in the results.

Reasons for Rejection N= 77, 41, 24	School 1 No.	School 1 %.	School 2 No.	School 2 %	School 3 No.	School 3 %
Don't offer A levels wanted	57	74.0	26	63.4	11	45.8
Too far to Travel	37	48.1	24	58.5	16	66.7
Not Happy at School	32	41.6	9	22.0	6	25.0
Poor Facilities	26	33.7	11	26.8	3	12.5
Poor Atmosphere	21	27.3	7	17.1	8	33.3
Friends Not Going	14	18.2	10	24.4	6	25.0
Poor Exam Results	10	13.0	8	19.5	2	8.3
Lack of Discipline	10	13.0	6	14.6	3	12.5
Worried about Safety	9	11.7	7	17.1	4	16.6
Bad Reputation	7	9.1	4	9.8	0	0.0
Worried about Bullying	7	9.1	2	4.9	3	12.5
Poor Teachers	6	7.8	4	9.8	1	4.2
Poor Organisation	5	6.5	8	19.5	2	8.3
Uniform Policy	2	2.6	3	7.3	4	16.6

Table 9.44 Reasons for rejecting schools

The reasons for rejecting schools / colleges tend to be consistently the converse of the reasons for choice; the important reasons being: don't offer the A level subjects wanted, location, happiness, facilities, atmosphere, friends not going, and exam results. The matching of the two sets of results indicates the reliability of the results, showing that the pupils were consistent in their answers to the questions.

In answer to the research question asked at the start of this section pupils use non-compensatory processing to produce evoked sets of schools and A level subjects, which are used to make a final judgement of the most appropriate school and set of subjects. The next chapter discusses this question in more detail and develops a multi-stage model of adolescent pupil decision making by using these results, together with those from chapter eight, to build on the literature reviewed in chapters two and three.

Chapter 10 Using the Literature to Aid the Interpretation of the Results

10.0   Introduction

This chapter uses the literature reviewed in chapters two and three to help interpret and explain the results presented in chapters eight and nine. It was concluded at the end of the literature review that no one model existed that offered a satisfactory explanation of the decision making process used by adolescent pupils when choosing A level subjects and where to study them. There were, however, studies into small aspects of the overall process that could be used together to build a hypothetical model of this process.

The results presented in the previous two chapters not only confirm the viability of the proposed model, but also build on it, and refine it, to produce a plausible explanation of the decision making process used by adolescent pupils when they choose subjects and schools.

The results presented in section 9.5 confirm the results of the qualitative research, that the pupils now make the choice of where they are going to study their A levels (tables 9.26 and 9.27) and what subjects they are going to study (tables 9.28 and 9.29). This confirms the findings from post sixteen research (Hodkinson et al., 1966; Ball et al., 2000; and Foskett and Hemsley-Brown, 2001) that the chooser by the age of sixteen is the pupil who plays the dominant role in the process. Based on this the chapter concentrates on pupil decision making.

The chapter starts by discussing information searching and processing, perceived risk, and how pupils store the information they have collected. It then moves on to discuss three models; a single-stage, a two-stage and a three-stage model, of adolescent pupil decision making. Finally it examines differences between single choice and multiple choice decisions.

10.1   Information Searching and Processing

The classical decision making process (Engel et al., 1968; Solomon, et al., 1999) consists of problem recognition followed by information searching, evaluation, product choice, and post-purchase reaction. The results from the survey indicate that a more complex process is involved when pupils choose a school and decide which A level subjects they are going to study. The classical model states that information is collected at a distinct stage in the process. However, table 9.25 shows that information is used throughout the decision making process.

Previous research (Jacoby et al., 1978; Park and Smith, 1989; Moorthy et al., 1997) has shown that consumers weigh the costs and benefits of information searching when making decisions, and that their research strategy is reflected in the trade-off between perceived benefit and search cost. For the pupils involved in the research, the cost of the search principally amounts to the time that they spend on the information search.

The results presented in section 9.4 show that the pupils prefer personal information sources and undertake extensive information searching which they use throughout the decision making process. When compared to previous research into secondary school choice (chapters two) the results showed differences in personal information sources preferred by pupils compared to their parents, both preferring those sources with which they had a high co-orientation (Moschis, 1976). Useful, and influential, information sources for pupils: are their own experience, teachers, open evenings, parents, and older pupils studying A levels. These results are similar to Foskett and Hesketh's (1966) findings in post sixteen choice that important information sources are careers teachers, open evenings, other teachers and institutional literature. Table 9.25 shows that although the information sources are used throughout the process, more use is made of them during the earlier stages of the process.

10.2   Impact of Perceived Risk

The results from the qualitative research, discussed in chapter eight, indicate that perceived risk may not be the only motive for the amount of information searching

pupils undertake. Although it may be expected that the decision involves a high risk, as it is likely to impact on the pupils' future lives and careers, the results from the focus groups show that this is not the case. Although the parents were very concerned over the amount of worry experienced by their children over choice of school and A level subjects, as the results from the focus groups show in practice the pupils were mainly concerned about their GCSE results and less concerned over their A level choice. The pupils were aware that if they made a mistake over a subject choice that this could be rectified during the first month, or so, of the first term and that the only cost would be the cost of catching up on the weeks of study that they had missed. To quote one of the pupils in a focus group:

> "I think it was a bit worrying in case I get my options wrong, but you can change them when you get your results, and if you don't like the course you can drop out or change to another one"

The result in table 9.30 shows that the majority (approximately sixty-five per cent) of the pupils were only slightly worried or not worried about the decision. It did show, however, that female pupils are significantly more likely to experience worry than male pupils. There is also evidence (section 9.6) that those pupils who experience worry over their decision are significantly more likely to postpone their final choice of A level subjects until after they have received their GCSE results. Though the results provide no evidence of it, the results imply that female pupils may expend more time and effort on information searching than male pupils. Although no conclusive results were produced by this research it may prove to be a fruitful area for future research.

Consumers tend to find choices over services more difficult than choices over products (Parasuraman et al., 1985), and may extend information acquisition when choosing services (Murray, 1991). This may partially explain why the pupils, in the study, make more extended use of information over the entire decision making process than the classical model would predict. The pupils are likely to find the choice of A level subjects and where to study them a more difficult decision than that of choosing products, and may feel they need to collect and process more information before making their final choice.

10.3   How Pupils Store the Information

Tables 9.39 and 9.40 provide information about what happens to the information once it has been collected by the pupils, during the decision making process, with approximately ninety per cent (schools), and ninety six per cent (A level subjects) of the pupils totally storing or mostly storing the information in their memory until they make their final decision. The work of Bettman (1979) and Hill (1993) with their network view of memory, helps to provide a theoretical explanation of how the pupils store the information in their memories. The information is stored as 'chunks', as an organised cognitive structure that can grow as more information is integrated into it. A chunk could be a brand name, or in this case the name of a school or subject, which summarises more detailed information for a consumer familiar with a brand (Bettman, 1979). Semantic memory may be represented as an associated network with concepts which are similar in meaning being clustered together as 'knots' or 'nodes in the network (Hill. 1993).

In the case of the pupils the name of the school or A level subject is likely to be the 'knot' or 'node' or Betman's 'chunk', with information about the school or A level subject connected to it to form a network of information, the name of the school or A level subject being the key which is used to recall the information. This may be explained by the more recent work of Bettman's et al., (1998) in which they found that for consumers' who first learn information, before making a decision, tend to organise that information in memory by brand and were more likely to process the information in an alternative based fashion. Consumers who choose first are more likely to organise the information in memory by attribute, and to process the information using attribute processing (Bettman et al., 1998). The results of the survey show that the pupils collect information about schools and A level subjects before making their decision, thus the above work indicates that, for later processing, it is likely that the information is stored by name of school or A level subject and not by attribute. This supports the hypothesis that the final processing of the information by pupils involves compensatory processing and not attribute processing.

As the pupils collect information about the school or subject the networks expand. The results, in section 9.2, from the questions regarding the timing of decision show it to be a lengthy process, lasting about half a year for both school and A level choice. This is similar to Foskett and Hesketh's (1966) findings in post sixteen choice that a third of the pupils started the process before year 10 and a significant proportion reported starting it before entering secondary school. Throughout the time the pupils are collecting and processing information, they go through a learning process during which they improve skills in both selecting the most appropriate information and in processing that information. Moorthy et al., (1997) provide an explanation of the learning process that the pupils go through during this time. The pupils become more expert-like with experience, and learn to reduce search costs, by concentrating on the most important attributes, and to differentiate schools and subjects. Coupey's (1994) work can be used to provide further explanation; pupils use constructive processing to build information displays which serve as a basis for the final evaluation of the schools and subjects. The pupils edit out information about schools and subjects rejected during the formation of evoked sets, constructing a new information display which is more easily processed. Hodkinson et al., (1966) provide a similar explanation to that of Coupey that pupils amass conceptual structures (schemata) which serve as tools for interpreting their experiences, new experiences result in a modification of the schemata. The ability to analyse and select the most relevant information improves with expertise (Bettman et al., 1998). The theory of Bettman (1979) and Hill (1993) is supported by the more recent work of Robertson (1999) who, using modern technology including PET brain scanners, uses the term 'Hebbian learning' to explain the memory process of assimilating information in memory.

Over the period the information is processed to form evoked sets. The results from the questions on evoked set formation show a significant reduction from the size of the initial choice set, falling from 2.36 for schools and 5.14 for A level subjects to a final evoked set of 1.9 for schools and 4.4 for A level subjects. During the process some schools or subjects are rejected and no further information is added to the networks. Over time, as the network is no longer used, it is edited out during the formation of an updated information display (Moorthy et al., 1997) and gradually fades from memory (Robertson, 1999). As Robertson (1999) writes connections are made in the brain, and

connections are broken, as we learn and forget. For those schools and subjects selected to form the evoked set each network of information is added to as more information is collected by the pupil. By the time that they make their final decision the pupils have access to a reasonably comprehensive information display consisting of a network of information about each school or A level subject, and as tables 9.39 and 9.40 show it is this information stored in the pupil's memory that is largely used during the final decision.

10.4 The Decision Making Process

A small proportion of pupils (approximately ten per cent for schools and six per cent for subjects) reports not undertaking any processing until they make their final decision. This section concentrates on discussing the results for the majority of pupils who either use one-stage, two-stage, or three-stage processing.

The results from section 9.2 confirm that the pupil decision making process is a long process (Foskett and Hesketh 1966) and extends over approximately a six month period (tables 9.16 and 9.17) this indicates that complex decision making (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999) is taking place. The results, shown in table 9.31 for schools and table 9.33 for subjects, confirm that multi-stage processing is employed by most pupils. For clarity each of the stages is examined separately in the following sections.

10.4.1 One-stage process

Illustration 10.1 outlines the one-stage process, used by approximately fifty-five per cent of pupils for schools and approximately thirty-three per cent of pupils for subjects.

At the start of the process, when pupils recognise that they have to make a decision over choice of school and / or subjects, they have on average 2.36 schools and 5.14 subjects in their choice set. The first part of the process consists of collecting and processing information about these schools and subjects. Attribute-based comparisons

are used to whittle the information down to a manageable amount (Coupey, 1994).
Evidence of early processing was found by Hemsley-Brown (1999) where at an early
stage all of the pupils had rejected some options.

Illustration 10.1   One-Stage Decision Processing Model

```
                    ┌─────────────┐
                    │ Information │
          ┌────────►│ Searching & │
          │         │ Processing  │
          │         └──────┬──────┘
          │                │
          │                ▼
┌─────────────┐      ┌─────────────┐
│ Problem     │      │ Attribute   │
│ Recognition │  ┌──►│ Processing  │
└──────┬──────┘  │   └──────┬──────┘
       │         │          │
       ▼         │          ▼
┌─────────────┐  │   ┌─────────────┐      ┌─────────────┐
│ Evoked Set  │  │   │ Evoked Set  │      │ Final Set   │
│ Schools 2.36│──┘   │ Schools 1   │─────►│ Schools 1   │
│ Subjects 5.14│     │ Subjects 3  │      │ Subjects 3  │
└─────────────┘      └─────────────┘      └─────────────┘
```
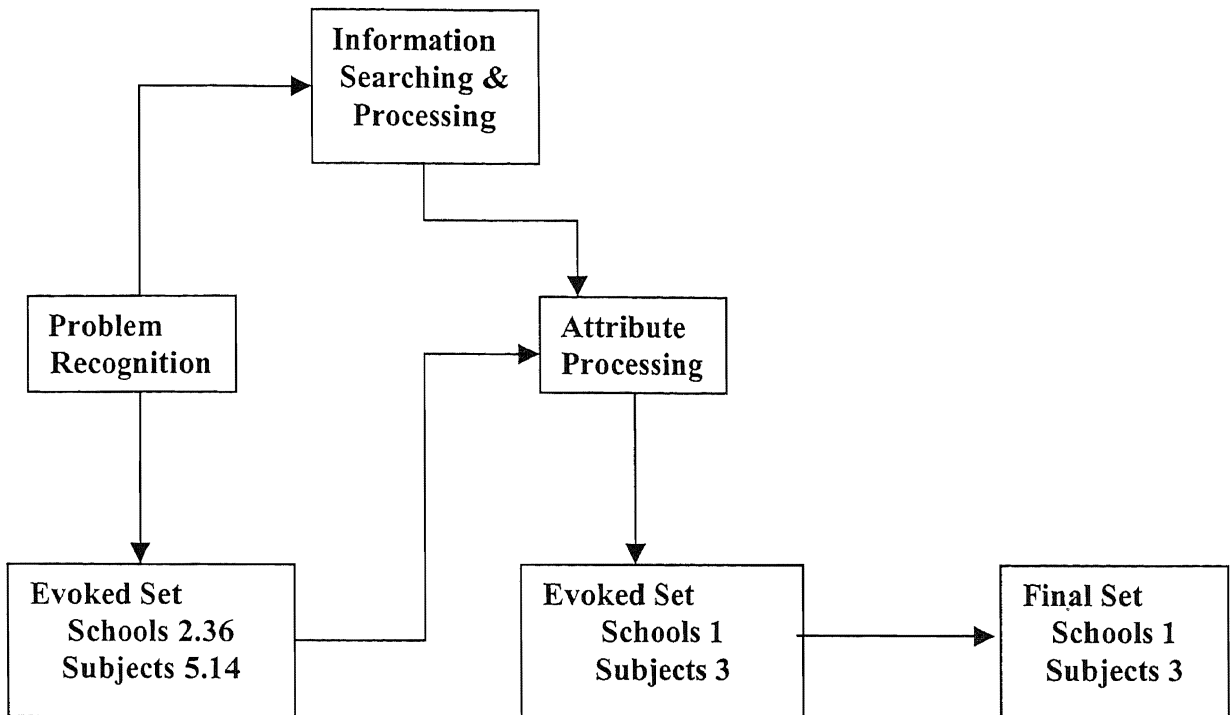
The first stage of the process involves simplifying the choice process, using non-
compensatory processing to reduce the number of schools or subjects in the
consideration set (Andrews and Manrai, 1998). Pupils use non-compensatory
processing (Bettman, 1977; Coupey, 1994; Bettman et al., 1998) to simplify their
choice task. Subjects and schools are rejected because of one overriding attribute, for
example not offering the particular A level subject wanted in the case of a school, or
subject too hard in the case of a subject. For these pupils the number of schools and
the number of subjects in their evoked sets equals the number that they need in their
final choice sets, they realise that their decision has been made and that no further
processing is necessary.

10.4.2 Two-stage process

Illustration 10.2 shows the two-stage process used by approximately twenty-seven per cent of pupils for schools, and approximately forty three per cent of pupils for subjects. The process starts in the same way as the one-stage process, with pupils obtaining and processing information, using attribute-based comparisons (Coupey, 1994), to winnow down the choice set to produce a manageable evoked set of 1.9 schools and 4.4 subjects. At this stage the process differs as the pupils still have more schools and subjects than they need in their final choice sets. To aid their final decision making the pupils continue to collect and process information about the remaining schools and subjects.

Illustration 10.2 Two-Stage Decision Processing Model
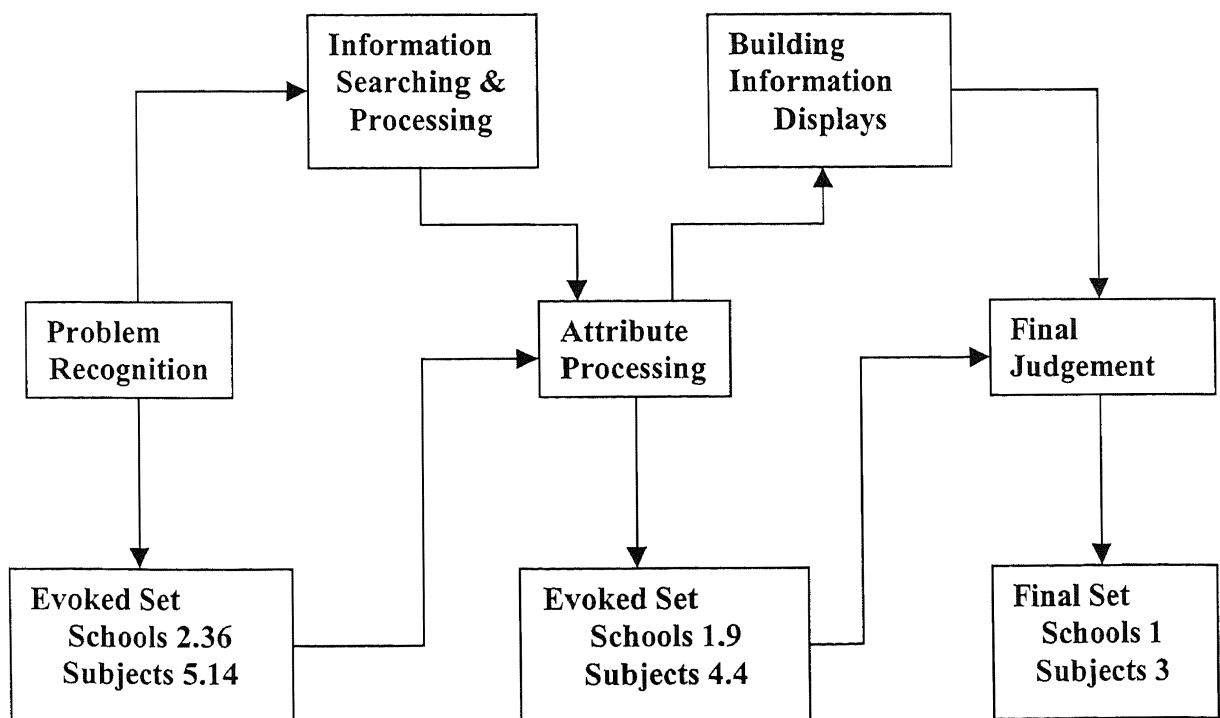
The information is formed into information displays (Coupey, 1994) that the pupils store in their memories as a network of information as shown in tables 9.39 and 9.40 (Jacoby et al., 1977; Bettman, 1979; Nedugadi, 1990; Hill, 1993; Robertson, 1999).

As pupils move through the process they improve and develop their skills and become more expert-like (Moorthy et al., 1997) and learn to discriminate between information that is important to collect and the less relevant information. Information collected previously about schools and subjects that were rejected from the choice sets, now found to be irrelevant, gradually fades from memory (Robertson, 1999).The overall volume of information collected and processed reduces as the pupils learn to concentrate on the important information (Bettman et al., 1998).

For the final stage of the process the pupils use the information displays for each school and subject in the evoked sets stored in their memories to make a final judgement (Meyer, 1987; Coupey, 1994). Pupils recall the information and use it to infer a value and weigh and integrate all of the information into an overall evaluation (Meyers-Levy and Tybout, 1997). The process is more deliberate and controlled than the previous stage, and engenders cognition about the alternatives (Shiv and Fedorikhin, 1999). Evaluation is the judgement of probability and the judgement of value and the two components are used to make an overall assessment of outcome (Mowen and Gaeth, 1992). The valuation judgement involves the assessment of goodness and badness of an event, independent of its probability of occurrence. The prediction judgements assess the likelihood of an event occurring or its frequency of occurrence. In this final stage the pupils combine their evaluations of value together with the likelihood of occurrence to form an overall assessment of each school and subject to make their final decision.

10.4.3 Three-stage process

Illustration 10.3 shows the three-stage process used by approximately eight per cent of pupils for schools, and approximately eighteen per cent of pupils for subjects. The process starts in the same way as the two-stage process with pupils using attribute-based processing to winnow the choice down to an intermediate choice set of schools and subjects. When the research programme was designed a third stage was not anticipated and no questions were built into the questionnaire regarding the size of the intermediate evoked sets. It is recommended in the next chapter that further research

be undertaken to confirm the production of, and determine the size of, the intermediate sets.

This group of pupils use an additional stage before they make their final decision. During the process they learn to discriminate between that information which is important and that which is not (Bettman et al., 1998). They continue to collect and process information which they use to build information displays (Coupey, 1994) which contain standards (Bettman and Park, 1980). These new information displays are used for comparison-against-standards-processing (Bettman and Park, 1980) in order to reduce the size of their choice sets down to manageable sized evoked sets which are used when they make their final decision.

Illustration 10.3   Three-Stage Decision Processing Model

```
┌──────────────┐      ┌──────────┐      ┌──────────────┐
│ Information   │      │  Build   │      │  Building     │
│ Searching &   │      │Standards │      │ Information    │
│ Processing    │      │          │      │ Displays      │
└──────────────┘      └──────────┘      └──────────────┘

┌──────────────┐  ┌──────────┐  ┌──────────────┐  ┌──────────────┐
│  Problem     │  │Attribute │  │ Comparison   │  │   Final      │
│ Recognition  │  │Processing│  │  Against     │  │ Judgement    │
│              │  │          │  │ Standards    │  │              │
│              │  │          │  │ Processing   │  │              │
└──────────────┘  └──────────┘  └──────────────┘  └──────────────┘

┌──────────────┐  ┌──────────┐  ┌──────────────┐  ┌──────────────┐
│ Evoked Set   │  │Evoked Set│  │ Evoked Set   │  │  Final Set   │
│ Schools 2.36 │  │Schools ? │  │ Schools 1.9  │  │  Schools 1   │
│ Subjects 5.14│  │Subjects ?│  │ Subjects 4.4 │  │  Subjects 3  │
└──────────────┘  └──────────┘  └──────────────┘  └──────────────┘
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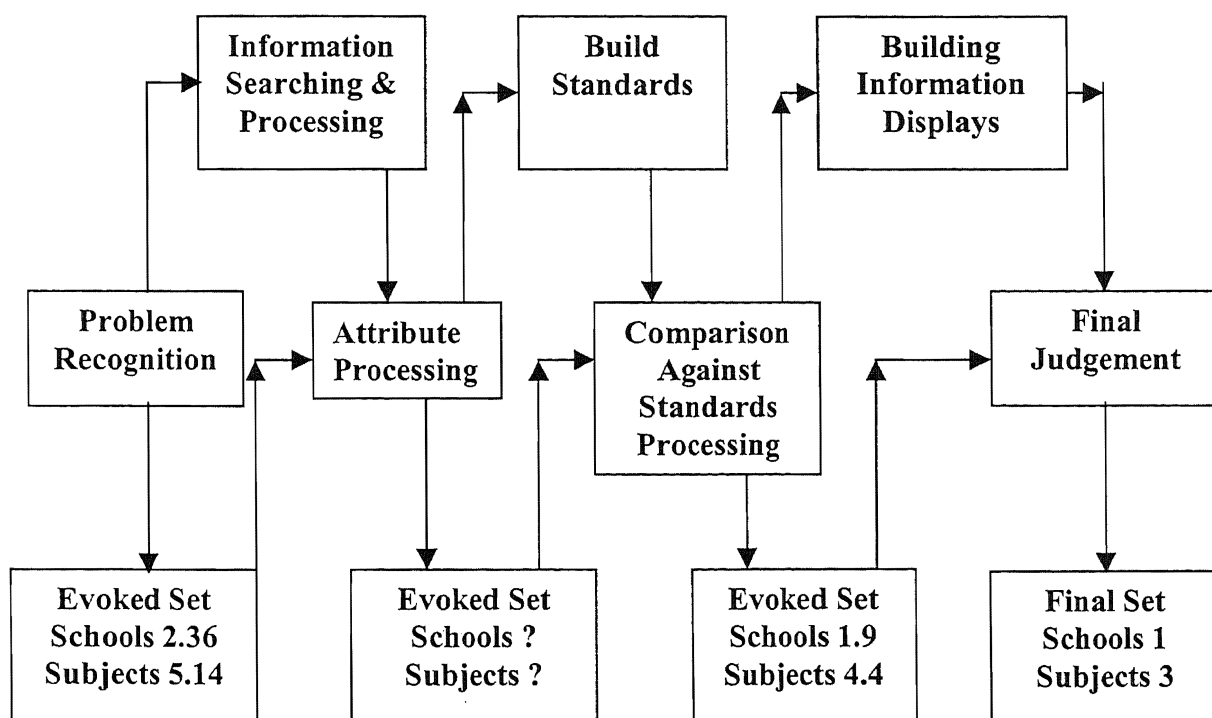
The final stage is similar to that of the two-stage process. For this stage of the process the pupils continue to collect and process information. Because of their increased learning and enhanced skills, they now collect considerably less volume of information which they use to construct new information displays for each school and

subject in their evoked sets which they use to make their final judgement (Meyer, 1987; Coupey, 1994).

As in the final stage of the two-stage process pupils recall this information and use it to infer a value and weigh and integrate all of the information into an overall evaluation (Meyers-Levy and Tybout, 1997). The process is more deliberate and controlled than the previous stage, and engenders cognition about the alternatives (Shiv and Fedorikhin, 1999). Evaluation is the judgement of probability, and the judgement of value (Mowen and Gaeth, 1992), the two components are used to make an overall assessment of outcome. The valuation judgements involve the assessment of the goodness and badness of an event, independent of its probability of occurrence. The prediction judgements assess the likelihood of an event occurring or its frequency of occurrence. In this final stage the pupils combine their evaluations of value together with the likelihood of occurrence to form an overall assessment of each school and subject to make their final decision.

10.5   Single and Multiple Choice Decisions

Examining the results for differences between single product and multiple product choices, they show that some of the factors are the same and that some others are different. By the age of adolescence pupils are likely to be the main decision maker for both single and multiple choices (section 9.5). Both types of choice extend for a similar time period of approximately six months (section 9.2). Most pupils store the information for their decision in their minds for both types of choices (section 9.7).

The first difference between the two types of choices is that of evoked sets (section 9.3) which are significantly larger for multiple-choice decisions (4.40 subjects) than for single choice decisions (1.94 schools). A second difference is that there are significant differences between the number of stages used for single and multiple-choice decisions, tables 9.31 and 9.33 show that approximately forty-three per cent of pupils use a two-stage process and approximately eighteen per cent of pupils use a three-stage process for multiple-choice decisions, whereas only approximately

twenty-seven per cent use a two-stage process and approximately eight per cent use a three-stage process for single choice decisions.

The next chapter discusses the main conclusion that can be drawn from the results, the research limitations, and makes recommendations for further research.

Chapter 11 Conclusions, Limitations and Future Research

11.0   Introduction

It was concluded at the end of the literature review that many research studies, in educational research, had examined parents' and children's choice of secondary school. The research had concentrated on reasons for choice of school, information used by parents and children, and who makes the decision; at the expense of examining the process itself. The decision making process involved, when parents and children choose a school, is messy and complicated (Carroll and Walford, 1997) and has been neglected by researchers (Bowe et al., 1994; Gorard, 1999).

Due to the lack of educational theory covering the decision making process, the review moved on, in chapter three, to look at research into consumer behaviour for an explanation of the process. It concluded that no one model existed that provided a satisfactory explanation of the pupil decision making process. Elements of theory could, however, be used to explain parts of the process involved with choice of school. It also concluded that, although much research had been undertaken into single choice decisions, there was a paucity of research into multiple choice decisions.

A research programme consisting of a mixture of qualitative and quantitative techniques was designed. Building on elements of theory, from the literature, an exploratory research employing focus groups was used to develop a hypothetical model of the pupil decision making process, and to generate research questions. Early in the exploratory research it was found that the decision for adolescents choosing where to study their A levels was inextricably linked to choice of subjects. It was decided to include choice of A level subjects in the research programme. Based on the exploratory results a quantitative study was developed and undertaken using a larger sample size, to test the hypothetical model on both single (choosing a school) and multiple (choosing A level subjects) choice situations and to answer the research questions.

The following chapter starts by explaining the contribution to knowledge made, by this research, to both educational and consumer behaviour research; it then presents the main conclusions drawn from the research, in the approximate order that they appear in the decision making process, starting with the overall timing of the process; it then discusses the research limitations and makes recommendations for further research.

11.1 Contribution to Knowledge

The study has added to the body of knowledge of decision making by examining an area largely neglected by research to date (Bowe et al., 1994; Gorard, 1999), that of the decision making process used when choosing schools and A level subjects. It found that the parents', of adolescent pupils, role has changed from decider to influencer. At this age the pupil is now the decision maker. The research has increased the understanding of the process by constructing a multi-stage model of adolescent pupil decision making, which provides an explanation of the process used by the pupils when they choose schools and A level subjects.

In addition to determining pupils' reasons for choice of A level subjects, it has added to the body of knowledge of reasons for choice of schools by finding that there are two important differences, in reasons for choice of schools, between parents of younger pupils and the older adolescent pupils questioned in this survey. The first difference is the choice of A level subjects offered by schools which is an important reason for choice for adolescent pupils and may result in a school being rejected, at an early stage in the choice process, if it does not offer the subjects wanted by the pupil. Discipline, as reported in earlier studies, is an important reason for parents of younger pupils when choosing a secondary school; it is not found to be an important reason for adolescent pupils choosing schools.

The study has added to the knowledge of consumer research by investigating differences between single-choice and multiple-choice decision making, an area neglected by consumer research to date. It has found that, although some aspects of the choice process are similar, there are important differences between the two types

of decision. Evoked sets are larger for multi-choice decisions, and multi-choice decisions are likely to involve more stages in the decision making process than single-choice decisions.

11.2   The Timing of the Decision

Although the time for individual pupils varies from two weeks to over three years, on average pupils begin to think about their choice of school approximately sixty weeks before they start at the school. The survey showed the time to be approximately eighty-two weeks for year eleven pupils and approximately thirty-eight weeks for year twelve pupils. The long period of time is similar to that found in earlier studies (West et al., 1995; Gorard, 1997b) into parents' choice of secondary school. On average pupils begin to think about their choice of A level subjects approximately fifty-five weeks before they start to study them; approximately sixty-five weeks for year eleven pupils and approximately forty-five weeks for year twelve pupils.

The time for making a final decision varied for individual pupils from two weeks to over a year before they start at the school, the average time for pupils being approximately thirty-five weeks; approximately fifty-three weeks for year eleven pupils and approximately sixteen weeks for year twelve pupils. The difference in timing between year eleven and year twelve pupils, as discussed in chapter nine, being partially explained by the timing of the survey which was undertaken before the year eleven pupils had taken, and received, their GCSE results, which is likely to cause a proportion of them to alter their final decision, and thus its timing.

The overall duration of the decision for choosing schools is approximately twenty-six weeks; approximately twenty-nine weeks for year eleven pupils and approximately twenty-two weeks for year twelve pupils. For choosing A level subjects it is approximately twenty-seven weeks; approximately twenty-three weeks for year eleven pupils and approximately thirty weeks for year twelve pupils.

Overall it can be concluded that the process is lengthy both for single-choice and multiple-choice decisions, both decisions extending over approximately a sixth

month period. The length of time indicating that the decision making process is complex (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999).

11.3   The Evoked Set of Schools and Subjects

The choice set of schools is 2.36 schools at the start of the process which falls to an evoked set 1.94 schools when the pupils make their final decision. At the beginning of the process pupils have a choice set of 5.14 subjects which falls to an evoked set of 4.4 subjects at the final decision. The fall in size of choice set provides evidence that multiple-stage processing (Bettman and Zins, 1977; Bettman and Park, 1980; Coupey, 1994; Shiv and Fedorikhin, 1999) is being employed by the pupils during their decision making process. The small size of evoked set agrees with previous researchers (Zeithaml, 1981; Hauser and Wernerfelt, 1990; Soloman et al., 1999) who have found that evoked sets for services tend to be smaller than those used for products. The evoked sets used by pupils for single-choice decisions are significantly smaller than those used for multiple-choice decisions.

11.4   Information Sources

The six information sources that pupils find most useful are: their own experience; their teachers; school open evenings; their parents; older pupils studying A levels; and their friends. All of the most useful sources are personal information sources, which agrees with previous researchers (Moschis and Moore, 1979; Zeithaml, 1981; Murray, 1991) who found personal sources to be more useful to consumers than impersonal sources. The findings are also similar to those found by Bradley (1996), discussed in chapter two, who obtained similar results when investigating parents' choice of secondary school.

Not surprisingly the six information sources that influence pupils the most are the same as the most useful sources. These again are similar to sources found by Elliott (1982) to influence parents the most when they are choosing a secondary school. There are however important differences between the studies. Elliott found that parents were influenced most by other adults, such as parents of children at the

school and neighbours, whereas this study found pupils to be most influenced by people of a similar age, older pupils studying A levels, and friends. These differences are explained by Moschis (1976) who found that people are more influenced by those with whom they have a high co-orientation.

Although the results show that pupils use the information sources throughout the process, it was found that they make more use of the sources during the early stages of the process. The reason for the use of more information sources early in the process is that during these stages the pupils are using non-compensatory processing (Belonax and Mittelstaedt, 1978; Parkinson and Reilly, 1979; Hauser and Wernerfelt, 1990; Nedungadi, 1990; Bettman et al., 1998) to form information displays (Coupey, 1994), which contain the information relating to their evoked sets of schools and subjects. These are stored in the pupils memories as a network of information (Bettman, 1979; Hill, 1993; Robertson 1999). The pupils use the information stored in their memory (tables 9.39 and 9.40) when they make their final decision. Further explanation is provided for the reduction in use of information sources as pupils move through the process, by Moorthy et al., (1997). The pupils develop more expertise during the process and learn to discriminate between factors and focus on the most relevant attributes of schools and subjects, thus reducing the total amount of information that they have to obtain and process.

11.5   The Decision Maker

Studies reviewed in chapter two (Stillman and Maychell, 1986; West et al., 1995) showed the parent to be the main decision maker when choosing secondary schools. This study, tables 9.26-9.29, shows that by adolescence the parent pupil role in decision taking has reversed, with most pupils taking the decision themselves over both choice of subjects and where to study, the parents role having changed from decider to advisor.

11.6 The Amount of Worry Experienced by Pupils Over the Decision

The concern expressed by many parents over the amount of worry experienced by the children over the decision is misplaced. Table 9.30 shows that most pupils are either not worried, or are only slightly worried, over their decision. There is though a significant difference between the amount of worry experienced according to gender, with female pupils experiencing significantly more worry then male pupils.

Time constraints and the design of the research programme did not allow the implications of this finding to be pursued. It would be useful for future researchers to examine the impact of this finding. To examine whether females experience higher perceived risk in other purchasing situations and, if so, whether the additional perceived risk encourages female consumers to undertake more information searching than males, and what impact this may have on their overall decision making process.

Pupils who are worried about their decision are significantly more likely to defer their decision until after they have received their GCSE results.

11.7 Multi-Stage Decision Making

Tables 9.31 and 9.33 provide clear evidence that multi-stage (Bettman and Park, 1980; Park and Smith, 1989; Coupey, 1994; Shiv and Fedorikhin, 1999) decision making is being employed by pupils. For choice of schools sixty-five per cent of pupils used a one-stage process, twenty-seven per cent of pupils used a two-stage process and eight per cent used a three-stage process. For choice of A level subjects thirty-nine per cent used a one-stage process, forty-three per cent used a two-stage process, and eighteen per cent used a three-stage process. The results showed a difference between single-choice decisions and multi-choice decisions, with significantly more pupils using a two-stage and three-stage process for multi-choice decisions. It would be useful for future researchers to explore this area, in terms of consumer decision making, to determine if similar results are obtained for consumers choosing multi-choice products and services.

11.8   How Pupils Store Their Information

The results (tables 9.39 and 9.40) provide evidence that pupils rely on their memory when they make their final decision, which partially explains why the use of information sources is greater during the early stages of the decision making process. By the time that pupils make their final decision the majority store the information in their minds, ninety per cent of pupils for schools and ninety six per cent for subjects. During the process pupils build up information displays (Coupey, 1994) for each school and subject. An explanation of how pupils store the information in their minds is provided by Jacoby et al., (1977); Bettman, (1979); Nedungadi, (1990); Hill, (1993); and Robertson, (1999). The pupils store the data as a network of information with the name of the school or subject acting as the key to recalling the information. Tables 11.1, 11.2 and 11.3 show, for illustrative purposes, a representation of how the information stored in the pupils memory increases during the decision making process. The actual rate of accumulating information was not measured during the survey; it would be interesting for future researchers to measure when, and at what rate, information is processed and stored in memory.

11.9   Pupils Reasons for Choice of Subjects and Schools

The six most important reasons for choice of subjects are: interest in the subject; being good at the subject; being needed by their future career; a university requirement; liking the teachers; and thinking the subject to be easy. Pupils rely more heavily on their own perceptions of the subject than of those of external advisors such as teachers and parents.

The top six reasons for rejecting subjects are: not a future job requirement; subject too hard; not interested in the subject; not good at the subject; not a university requirement; and parents advised against it. The reasons are important because any single important attribute may be used as a reason during the non-compensatory

processing (Bettman, 1997; Coupey, 1994; Bettman et al, 1998) using attribute processing (Bettman et al, 1998) to reject a subject from their original choice set.

The top six reasons for school choice are: choice of A level subjects; the pupil's happiness; the facilities; its location; the exam results; and the school's reputation. When these results are compared to previous research (Bradley, 1996) examining parents' reasons for choice of secondary school, with two important exceptions, the results are remarkably similar. Changes have taken place that account for the two differences. Discipline is more important to parents of younger children, but by the time pupils reach adolescence it is less important to them; indeed they may be put off by excessive discipline. The second reason, that should be noted by schools, is that of choice of A level subjects. This is less important to parents of younger children or irrelevant if their child intends later to transfer to a sixth form college; it is of much more immediate importance to pupils about to study the subjects.

The reasons for rejecting schools tend to be the converse of those for choosing them, they are: don't offer the A level subjects wanted; location; happiness; facilities; atmosphere; and friends not going to the school. Here again the reasons are important, and should be noted by schools. During initial processing any single important attribute may be used as a reason, during the non-compensatory processing (Bettman, 1997; Coupey, 1994; Bettman et al, 1998) using attribute processing (Bettman et al, 1998), to reject a school from their original choice set. Schools should be aware of the impact of the early processing because however good their school is, if they fail to pass on one of these important attributes, they may be rejected early on in the process and not considered later. At this later compensatory processing stage positive factors, of schools under consideration, may be used to compensate for any negative factors.

11.10 The Pupil Decision Making Process

The review of educational literature concluded that there was a lack of explanation provided by the literature, to date, on the decision making processes involved during the choice of secondary schools (Bowe et al., 1994; Carroll and Walford, 1997;

Gorard, 1999). Because of this paucity of explanation the review turned, in chapter three, to the consumer behaviour literature for an explanation of the process. Although no one model of consumer decision making was found that provided an adequate explanation of the overall process, it has been possible to provide an explanation. By using the findings from many studies, that examined individual elements of the process, in conjunction with the results reported in chapters eight and nine, a plausible explanation of the process, involved when pupils choose A level subjects and where to study them, has been produced. The results presented in chapter nine support the proposed hypothetical decision making process of using non-compensatory processing, earlier in the process, to produce evoked sets of schools and subjects which are then employed, using compensatory processing, at the final stage of the process.

The results show the processes of choosing schools, and of choosing A levels, to be lengthy, lasting for approximately six months. The length of time leads to the conclusion that a form of complex processing (Bettman and Park, 1980; Assael, 1995; Soloman et al., 1999) is being employed by the pupils. The results also lead to the conclusion that multi-stage decision making (Bettman and Park, 1980; Park and Smith, 1989; Coupey, 1994; Shiv and Fedorikhin, 1999) is involved during the process. Evidence which supports this conclusion is the different stages involved in the decision, (tables 9.31 and 9.33), and the production of evoked sets prior to making the final decision (tables 9.19 and 9.21).

A small percentage of pupils (approximately ten per cent for schools and approximately six per cent for subjects) report rejecting all of the schools and subjects at the final stage. No explanation for the type of process used by these pupils was indicated by the results.

For the remaining pupils there are up to three stages used in the decision making process (tables 9.31 and 9.33) with a proportion of pupils either using a one-stage, two-stage, or a three-stage process (see illustrations 11.1, 11.2 and11.3). For school choice approximately fifty-five per cent use a one-stage process, approximately twenty-seven per cent use a two-stage process, and approximately eight per cent use a three-stage process. For choice of A level subjects approximately thirty-three per

Illustration 11.1   One-Stage Decision Processing Model
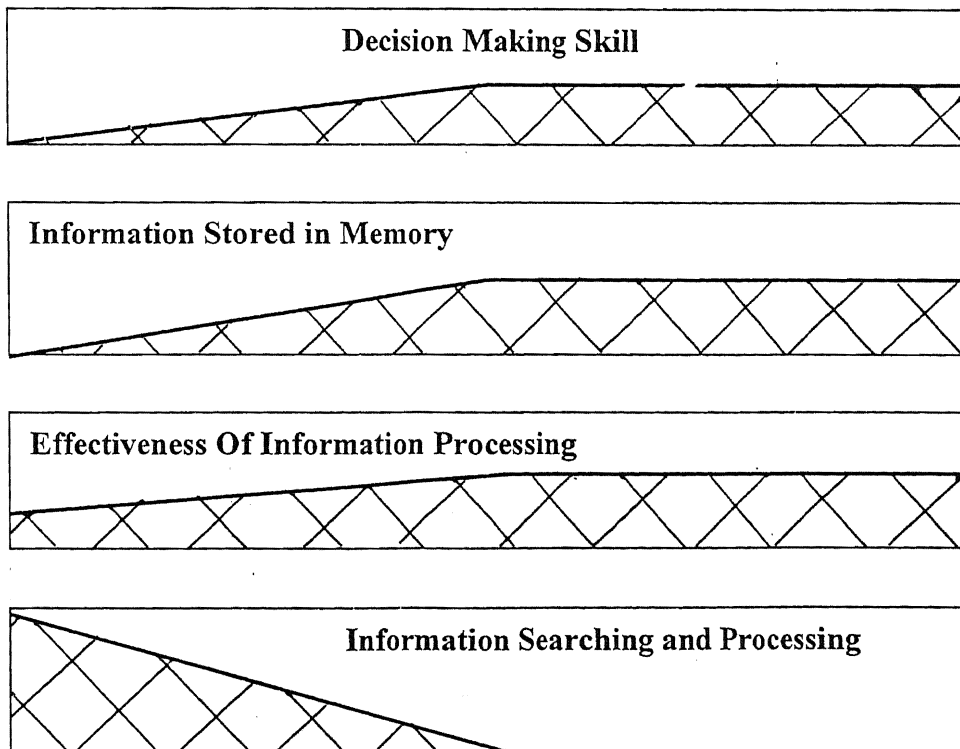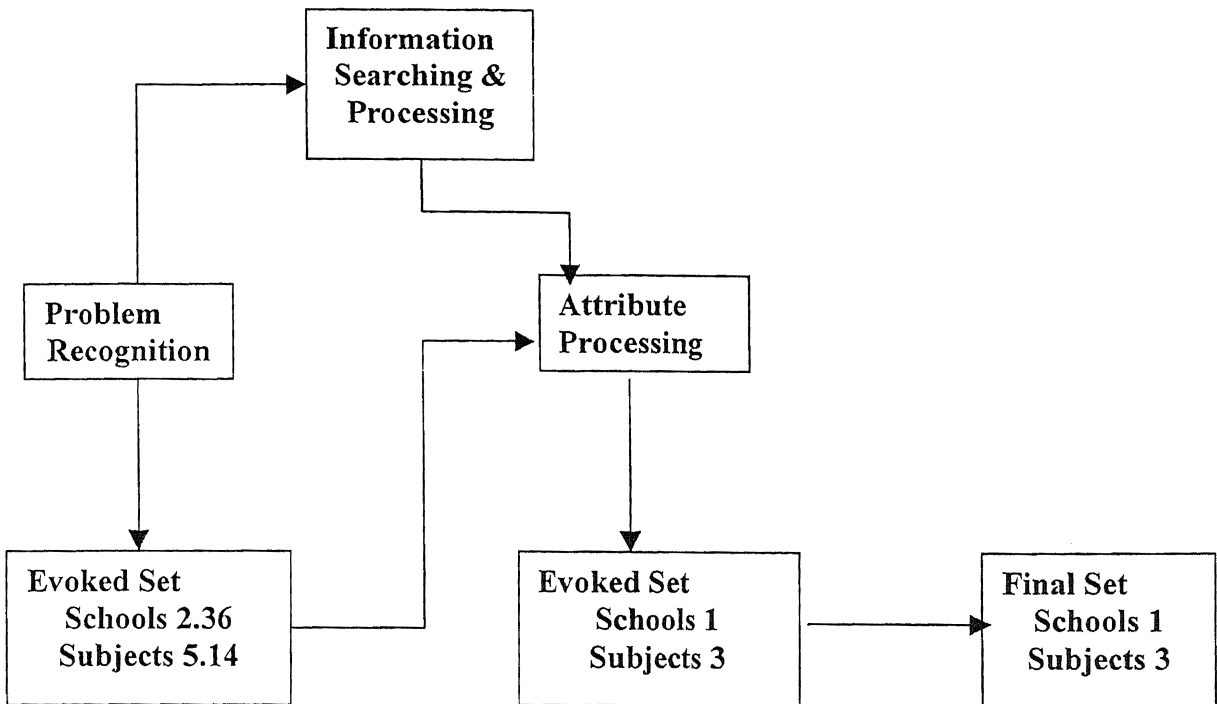
cent use a one-stage process, approximately forty-three per cent use a two-stage process, and approximately eighteen per cent use a three-stage process. There are significantly more pupils who use multi-stage processing (Two and Three-stage) for choice of A level subjects (multiple-choice decision) than for choice of schools (single-choice decision).

Each stage of the process involves a different type of processing: the first being attribute processing (Bettman, 1977; Park and Smith, 1989; Bettman et al., 1998), the second stage using comparing against standards processing (Bettman and Park, 1980), and the third and final stage consisting of an overall judgement (Meyer, 1987; Coupey, 1994).

The sequence of stages may be described as follows: during the first stage pupils recognise that they have to make a decision and collect information about schools and subjects, this results in excessive information about too many schools and subjects. At this stage they have, on average, 2.36 schools and 5.14 subjects in their evoked sets. In order to reduce the volume of information they use attribute-based comparisons (Coupey, 1994) which are a form of non-compensatory processing (Bettman, 1977; Park and Smith, 1989; Bettman et al., 1998) to winnow the information down to a manageable amount. In this way their task is simplified (Andrews and Manrai, 1998). Pupils sort schools and subjects, on the basis of important attributes, into regions of acceptance and rejection (Jacoby, 1971), to form evoked sets of acceptable schools and subjects (Howard and Sheth, 1969). The initial screening of subjects and schools is used to simplify the overall task by reducing the size of their choice set (Belonax and Mittelstaedt, 1978). At this stage for some of the pupils (see illustration 11.1) the size of the resultant evoked set equals the size of their final choice set (e.g. one school or three subjects) and so no further processing is necessary. Pupils using a two-stage process (see illustration11.2) now move on to the final stage of the process.

The information about each school and subject in the evoked set is formed into an information display (Coupey, 1994), which is stored in the pupil's memory as a network of information (Jacoby et al., 1977; Bettman, 1979; Nedungadi, 1990; Hill,

Illustration 11.2 Two-Stage Decision Processing Model
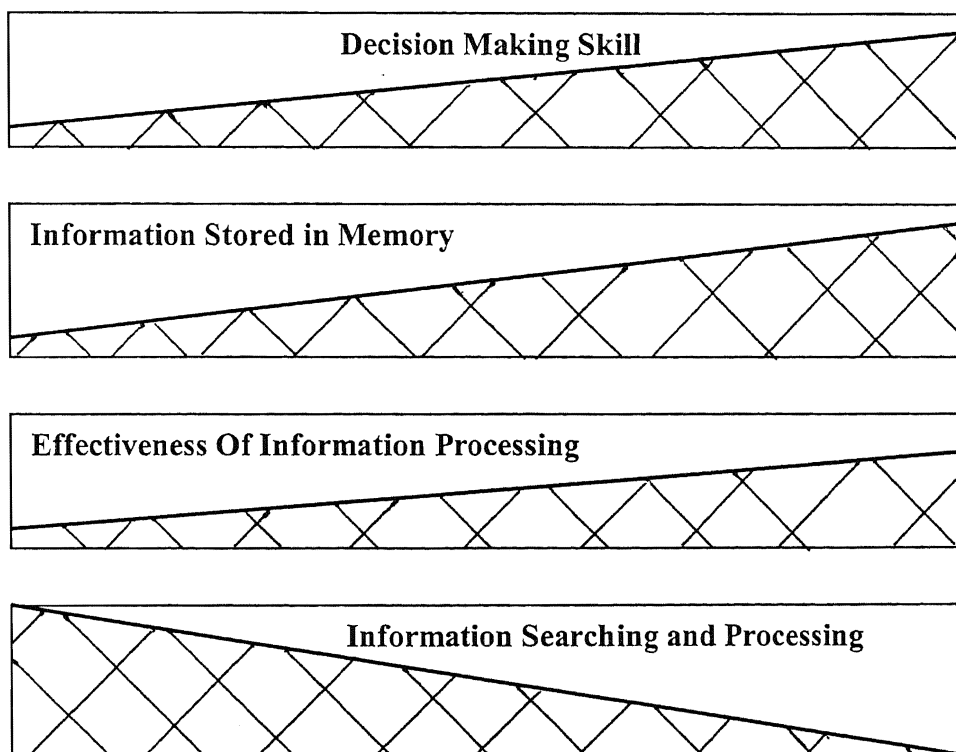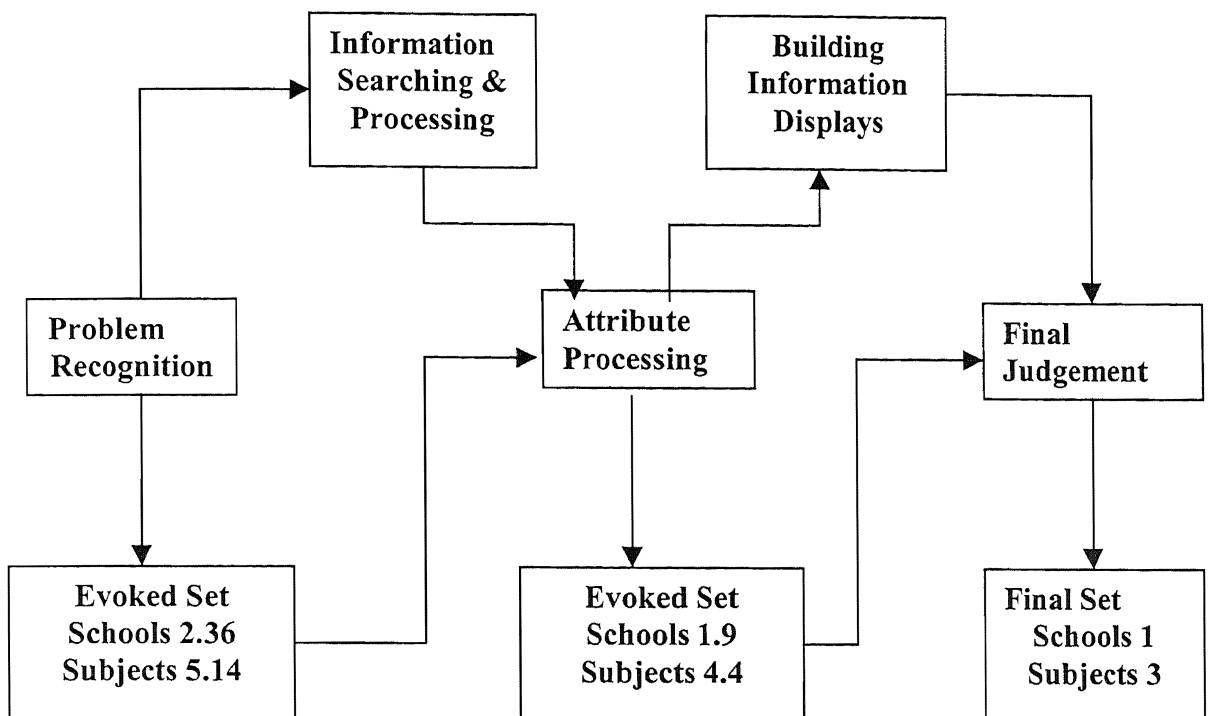
1993; and Robertson, 1999). Over the course of the decision making process the amount of information stored, about the schools and subjects, in their memory increases (see shaded areas in illustrations 11.1, 11.2, and 11.3).

As pupils move through the process they improve and develop their skills (see shaded areas in illustrations 11.1, 11.2, and 11.3) and become more 'expert like' (Moorthy, et al., 1997) learning to discriminate between information that is important to collect and less relevant information (Bettman, et al., 1998). During the process the pupils become more effective at both collecting and processing information (see shaded areas in illustrations 11.1, 11.2, and 11.3). Information collected previously about schools and subjects that were rejected from their choice set, now found to be irrelevant, gradually fades from memory (Robertson, 1999). The volume of information collected and processed reduces as the pupils learn to concentrate on the important information (see shaded areas in illustrations 11.1, 11.2, and 11.3). The decision making skill, the resulting increase in information processing effectiveness, and the resultant reduction in volume of information collected, are all shown only for illustrative purposes in the shaded areas in illustrations 11.1, 11.2 and 11.3; they are not intended to show the actual rates, as these were not measured during the survey. It would be interesting for future researchers to measure: the actual rate at which the pupils' skills develop, during the process; the resultant rates of increase in processing effectiveness; and the extent, to which, the volume of information collected and processed falls during the decision making process.

Pupils who use a three-stage process (see illustration 11.3) use an additional intermediate stage, which consists of continuing to collect and process information, used to build new information displays (Coupey, 1994) consisting of data and standards (Bettman and Park, 1980). The new information displays, stored in the pupils' memory as a network of information (Jacoby et al., 1977; Bettman, 1979; Nedungadi, 1990; Hill, 1993; and Robertson, 1999), is used for comparison-against-standards-processing (Bettman and Park, 1980) to reduce the size of their choice set to a more manageable level before making their final decision. Data was not produced for the size of the evoked sets used during this intermediate stage.

Illustration 11.3   Three-Stage Decision Processing Model


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┌──────────────┐        ┌──────────┐        ┌──────────────┐
│ Information   │        │  Build   │        │  Building     │
│ Searching &   │        │ Standards│        │ Information   │
│ Processing    │        │          │        │ Displays      │
└──────────────┘        └──────────┘        └──────────────┘

┌──────────────┐   ┌──────────┐   ┌──────────────┐   ┌──────────────┐
│  Problem     │   │ Attribute│   │ Comparison   │   │    Final     │
│ Recognition  │   │Processing│   │ Against      │   │  Judgement   │
│              │   │          │   │ Standards    │   │              │
│              │   │          │   │ Processing   │   │              │
└──────────────┘   └──────────┘   └──────────────┘   └──────────────┘

┌──────────────┐   ┌──────────┐   ┌──────────────┐   ┌──────────────┐
│ Evoked Set   │   │Evoked Set│   │ Evoked Set   │   │ Final Set    │
│ Schools 2.36 │   │Schools ? │   │ Schools 1.9  │   │ Schools 1    │
│ Subjects 5.14│   │Subjects ?│   │ Subjects 4.4 │   │ Subjects 3   │
└──────────────┘   └──────────┘   └──────────────┘   └──────────────┘
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Decision Making Skill

Information Stored in Memory

Effectiveness Of Information Processing

Information Searching and Processing

For the final stage of the decision process the pupils use the information displays, for each school and subject in their evoked sets, stored in their memories to make a final judgement (Meyer, 1987; Coupey, 1994). Pupils recall the information and use it to infer a value and weigh and integrate all of the information into an overall evaluation (Meyers-Levy and Tybout, 1997). The process is more deliberate and controlled than the previous stages and engenders cognition about the alternatives (Shiv and Fedorikhin, 1999). Evaluation is the judgement of probability, and the judgement of value (Mowen and Gaeth, 1992). The two components are used to make an overall assessment of outcome. The valuation judgements involve the assessment of goodness and badness of an event independent of its probability of occurrence. The prediction judgements asses the likelihood of the event occurring or its frequency of occurrence. In this final evaluation stage the pupils combine their evaluations of value together with the likelihood of occurrence to form an overall assessment of each school and subject to make their final selection.

11.11   Implications for Schools and Colleges

Institutions should recognise that the decision making process is likely to start with non-compensatory processing. This means that they may be rejected from the pupil's choice set at the start of the process because they fail on one important criterion. If at this stage it is rejected it is unlikely to be considered later when compensatory processing is employed. During this later stage weaker attributes may be compensated by stronger attributes. To avoid this possibility, institutions must be aware of the pupil's reasons for choosing and rejecting institutions (shown in tables 9.43 and 9.44). Reasons for rejecting institutions tend to be the converse of those for choosing them and important reasons for choice are choice of A level subjects, the pupils happiness, good facilities, close location, good exam results and good reputation.

To ensure that they offer an appropriate range of A level subjects the institution should undertake local research to determine those subjects currently in demand in

their area. Where practical they should offer a wide range of choice including these subjects.

To ensure pupil happiness the institution should organise pupil councils/committees and listen to both positive and negative comments. Where practical pupil complaints should be acted upon and the result communicated back to the pupils. In a similar way regular quality surveys should be conducted and problem areas rectified. Keeping current pupils happy and satisfied should ensure that a positive message is sent out about the institution by its pupils through word of mouth communication. The message will be passed to both prospective pupils and the general public which should have a positive effect on the institutions reputation. The institution should cultivate a good relationship with the local media. It should pass on in the form of press releases any good news about the institution, such as good exam results, sporting successes, and individual achievements by pupils. Such action should build on its reputation.

The research showed that personal information sources are preferred by pupils. Important sources are their own experience, teachers, open evenings, parents, older siblings and older pupils studying A levels. To build on the pupils own experience the institution should invite pupils to open days and open evenings. The research has shown that the choice process can be lengthy and extend over years. Institutions may wish to capitalise on this by inviting year 10/11 classes from local secondary schools to attend the institution for a morning or afternoon, during normal term-time to see the institution in action. This would allow the pupils to increase their own experience by meeting teachers and pupils studying at the institution. This, it is hoped, would establish the institution in the pupils choice set at an early stage.

During open evenings the pupil and their parents should be given the opportunity to see the institution at work, be shown the facilities, and be given ample opportunity to meet and talk to teachers and pupils studying at the institution. It should be noted that the prospective pupil will not only be listening to what the teacher has to say about his or her subject but will be assessing them regarding their future working relationship. If the points about ensuring pupil happiness are acted on older siblings and other pupils already studying at the institution should be happy. They should

pass on a positive message to the prospective pupils about the institution. As these pupils have no direct interest in selling the institution their message possesses high credibility.

Institutions should be aware that some pupils, particularly females, tend to worry over their decision. It should attempt to alleviate the worry by minimising complicated bureaucracy, for example complicated forms; and by reassuring the pupils that if they make a wrong choice of subject they may change it, during the first few weeks, when they start at the institution.

11.12   The Research Limitations and Recommendations for Future Research

In any research investigation, where time and resources are limited, there is always room for improvement. The following section outlines improvements that could be made, in the light of experience and because of the research limitations, and makes recommendations for future research.

The study was limited to two counties and four schools. It could have been improved by using a larger and more geographically diverse sample (Crimp, 1990; Hawkins and Tull, 1993; Aaker et al., 1995; Gilbert and Churchill, 1999); it would be useful for future researchers to undertake studies, employing similar methodologies, at other schools in other areas of England and Wales.

During the period of the investigation AS and A2 levels were introduced, widening the choice set for pupils; they now usually take an additional subject during their first year of sixth form study. As the study was based on the old A level system it would be useful for future researchers to undertake studies, under the new system, to examine the effects of the larger choice of subjects. This is particularly interesting in that the results, from this research, showed that the average size of evoked set was approximately four subjects. The change, in many cases, would now mean that during their first year the size of the evoked set equals the number of subjects they are required study under the new system. Future research could determine the size of the evoked set under the new system, to check whether it has increased in size, in

line with the increase in subjects to be studied, or whether the size has remained the same and the problem of excess subjects, for many pupils, has disappeared.

In order to focus on the pupil decision making process, although interesting, the moral and ethical considerations of marketing education to potential sixth formers was deliberately excluded from the study. This would be a useful area for future researchers to peruse. For the same reason the effect of socio-economic grouping was excluded from the study. In addition to being an interesting area of research, given the current Government's wishes, to encourage more pupils to enter sixth form study and move on into Further and Higher Education, makes it a fruitful area to examine. It would be beneficial for future researchers to investigate the impact that the socio-economic grouping, of their parents, has on their decision of whether, or not, to continue their studies after GCSE.

A further potential limitation was providing an inducement (Gilbert and Churchill, 1999) to pupils if they completed the questionnaire. Although 'the deliver and collect on the same day' method (Saunders et al., 1997) worked well in practice; the researcher delivered the questionnaires to the school, explained the questionnaire and the purpose of the research to the pupils, and waited while they completed them. Whilst this method produced response rates of over ninety per cent, offering a payment of fifty pence to the school, for each completed questionnaire received, produced some problems. The payment may have been the reason for some erroneous questionnaires being received, in that a small number of pupils not interested in the study may have felt obliged to complete the questionnaire so that the school received the payment. Although there were only a small number of such cases and these were removed from the sample before the data was entered onto SPSS, future researchers should take this potential factor into consideration when using similar methodologies.

Another potential research limitation was the use, in the questionnaire, of a constant sum scale question (Aaker et al., 1995) which, although it added to the richness of the results concerning reasons for choice of A level subjects, was shown by the pilot testing to be a potential problem area. It was found that it was not easily understood by the pupils and needed careful explanation. The researcher explained the question

to the pupils when the questionnaires were distributed. Although the majority of the pupils then coped with the question, there was a small minority who still did not understand the question. Future researchers using this type of question should exercise caution over its administration and check on the arithmetical ability of their proposed sample.

The size of the questionnaire, and thus the number of questions included in it, was limited by the amount of time (half an hour) that pupils could reasonably be expected to spend completing it. Due to the complexity of the subject and the limit to the size some questions had to be left out. Two areas that were omitted. One was the questioning of female pupils to determine whether they devoted more time and effort to information searching and processing as a way to reduce their perceived risk. As the results showed that female pupils were significantly more worried than male pupils it would be useful for future researchers to pursue this area; to investigate, for example, whether female pupils make more use of information sources so as to reduce their perceived risk. The second area was that of the intermediate processing stage, which was least well supported by previous research findings, it relied for an explanation on the work of Bettman and Park (1980). Due to time constraints the questionnaire only contained questions the answers to which confirmed the existence of an intermediate stage, but did not provide an explanation of what occurred during it. It would be very useful for future researchers to examine this stage in more detail, in particular the size of the intermediate evoked sets, so as to either confirm Bettman and Park's comparison-against-standards processing, or to provide a more suitable explanation of the process.

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Topline Report For Focus Group 21.02.98.   Appendix 1

Attendance: pupil A, pupil B, pupil C, and Pupil D.

1   All members contributed well , pupil B was confident and assertive, pupil D quite confident, while pupil A and B tended to be quiet and needed some probing.

2   After the session all members said that they were nervous at first, but soon relaxed and got into the session and enjoyed the evening.

3   The tape recorders worked well, although Pupil C talked very quietly which made transcription difficult. Lesson: use an external microphone next time.

4   pupil C was only considering College Y at St Albans, the other three were choosing between college X and College W. The impression given was that although in many respects they preferred college X and thought that the open evening was better organised, they were choosing to transfer to the College W because it offered a wider choice of subjects at A level. college X was too restrictive in this respect. This contrasted with their parents who all mainly considered the College W, unless they expected their child to achieve less than satisfactory results at GCSE, when they would then consider college X.

5   The children seemed to have a more mature attitude and seemed more in control of the situation than their parents thought.

6   The main problem involved with choosing their A level subjects appeared to be with choosing the third subject. The main two appeared fairly straightforward, it was what should be studied with these two that seemed to present their main problem. They showed some evidence of thinking about their future careers and of having talked to teachers, parents, elder siblings, and careers advisors about their choice.

7   There appeared to be some difficulty with talking to teachers at College W open evening. The impression given that it was so crowded that it was difficult to get to talk with individual teachers.

8   Overall they appeared apprehensive over moving to College W, because of its size, compared to their current schools and the difference in learning culture. It was important to them that they transferred with some friends.

9   When questioned about school name, as a brand, they seemed to have a clear perception of a school, largely based on the level of discipline and the examination results. Their main source of information appeared to come from observation and word of mouth, from friends and other children who have or use to attend the school. With the exception of school P their impression was a low one of other schools in the area.

Appendix 1

10   Apart from pupil C, who's parents appeared to be disinterested in her decision, and left her to get on with it, the other members appeared to work closely with their parents, listening to their advice and appreciating their moral support.

11   Elder siblings, who had recently gone through the process, appeared to be a useful source of information.

12   Overall it was a very useful session.

Transcript of Luton Pupils Focus group 21.02.98.   Appendix 2

Attendance: Female Pupil A, Female Pupil B, Female Pupil C, Female Pupil D

M= Moderator

M   Can you tell me about the timing of your decision about where to study for your a levels?

B   I started thinking about what I wanted to do ages and ages ago, I've known what I wanted to do for ages and I know what courses I want to do

M   How long is ages and ages?

B   About three years I've wanted to do journalism for about four years and then I started to think about what I wanted to do I've also made my decision about what career I want to go into

M   how did you find about what A levels you would need

B   I asked through the school and recently I've written off to universities and journalism training centres and I've asked them what would be the best way to take after GCSE's considering what grades I get and they said media was an obvious choice and I was going to do media anyway because I want to go into the media world and English and English Literature and a language was a good one to do and I've chosen a language as the language would be useful as well because it will benefit so I have chosen Spanish so if I get my five grades A-C, I am going to do three A levels.

C   I was told, after my mocks, that I wouldn't get my GCSE's so my careers advisor told me to take GSE retakes

M   How long ago was it when you started thinking about what you will do after GCSE's?

C   About two weeks ago

M   What about you D?

D   About a couple of months ago I started thinking about being a bilingual secretary so I decided to go to college W to do A levels in Spanish and French. I talked to my careers advisor and I went down to the college W to information about courses.

A   I've always wanted to do design around options time I decided I wanted to do a job in it. I am doing art and design and I might do a language but they are really hard so I don't know yet I might want to do a design thing

Appendix 2

M   How helpful did you find the careers advice

A   It wasn't really helpful we just talked about what I had to do

M   For all of you your sources of information were your careers advisors at the schools, visits to college W. How many places did you go and visit A?

A   Only college W and college X

B   I only went to the college W because the media studies course they do at college X, I wouldn't have been able to do my language or my English language course and I need them to do my degree. So I can't go anywhere apart from the college W to do my courses, so I only went to college W to look around and to tell me what was involved and to tell me what I would be doing. They had students to show you round particular areas and if you got lost, It just looked so big compared to school its massive. I was like really worried because I thought that if I come here where am I going to be what am I going to do ? It was really scary. I asked my friends what courses they were going to be doing to see if they were doing the same, but we might not end up in the same class. There are quite allot of us doing English and a few doing Spanish, so hopefully I will be with a few friends.

C   I just went to college X and I would have liked to go to college Y in St Albans, but I didn't get told about it until the day before, so I couldn't go. college Y is for animal care which is what I want to do.

D   I went to the college W and college X, I went to college X to look at the business studies. At college X we sort of went round and round but at college W you were shown round and if you had any troubles you could ask where to go, I thought that the college W was the best. I felt quite sure after college W because I knew what I wanted to do, they didn't really say much about the courses at college X.

M   At school do they point you either towards college X or the college W?

All three   No they don't

B   It's your decision really, the colleges come into school and you have like lessons where they have different teachers and lecturers from the different areas and you go and ask them what is involved in the course and would you be able to it and they tell you what you need to do it. The school help you, if you want to talk to a couple of teachers and ask if it is better to go somewhere or go to a sort of different place they sort of explain what would be best for you, looking at marks and everything. It is really your decision they don't tell you, they advise you but they don't say you should go there, they say it might help if you go to this place because you might be able to do better than if you went to somewhere like college X.

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Appendix 2

M   Have you made your decisions yet?

A   I know I am going to college W to do art and design but I don't know what other subject yet.

M   why did you reject college X?

A   At college X I would loose some of the flexibility of later choice, it would be OK if I was definitely going to do a career in that.

B   I'm going to college W hopefully , I'm doing media studies, English language and Spanish and after that if I pass my A levels, I want to either take a year out and travel or I like to go and work for a local paper and work there for some time and then go to university and do a post graduate degree in journalism. I am really sort of determined about what I want to do, I've just got to get the marks.

M   Why did you reject college X?

B   Because of the courses, I wouldn't have been able to do the courses anywhere else apart from the college W, so I really sort of had to go there.

C   I think that I prefer, probably to go and do my GCSE's again so I can get a higher grade and go into a job or go and study somewhere else, so I have always got my GCSE's to fall back on. If college W won't take me I'd rather go to college Y and do the animal course, but I've been told it is harder to get into than most other things because most people want to work with animals. I would like to work for a recovery centre or rescue centre or may be a vet I don't really mind as long as I work with animals.

D   I'm hoping to go to college W and do Spanish and French and then get a job and do a course in part time business studies.

M   What were you looking for at the college W?

B   I know some people who go there and they tell me that it is really good, when I went to look, I made sure that they did the courses that I want to do and I made sure that and I talked to the teachers so that they showed me a little bit what they were like and what they were about so that I could get a gist of what they were going to be like, they seemed friendly, especially the media studies they really seemed like outgoing and really friendly. I was a bit taken aback because I thought that they would be a bit more formal, but they were really nice, they seemed really friendly. I think that once I've had a few weeks there I will be all right. I didn't really mind about the facilities they had there, just as long as I could do the subjects I want to do. I didn't look at any sports or other facilities, I'm more interested in doing my A levels, and I really want

to concentrate on them. If they have a college magazine, I'll get involved in that, because I write for the one at school already.

A   We did look at the fashion and textiles bit and that wasn't very good compared to college X.

M   What about computers,

A   I was a bit afraid of computers, before we got the one upstairs, but now I wouldn't mind doing something on computers. I didn't talk to that many teachers, but the ones that I did were quite nice.

C   At the college W the teachers talked to my mum rather than talking to me saying how much I would enjoy it there, I just wondered off around the room. When we came out my mother said do you want to do that, and I said no, and she said I thought that you didn't look too interested.

B   The teachers talked to me because I asked the questions, my mum just stood in the background, I made myself ask the questions because it was me that was going to do the course, If I hadn't have asked them I wouldn't have got the information that I wanted. They were quite surprised that I asked them. They told me what I wanted to know and gave me loads of leaflets.

A   I don't really like talking to people so my mum asked the questions, they were talking to both of us though so it was all right.

D   I was looking for a nice atmosphere we here people are happy. I think it would have helped if when you walked in people had said hello to you instead of just sitting there wondering if you were going to go over and talk to them, we just collected the leaflets and walked back out again I think they could have had more tutors about to tell you about the courses because there were so many people there and we were stood there waiting and waiting and in the end we just walked out.

M   What are you looking at getting out of college W in terms of outcomes?

A   Just my A levels and then I'm going to do a course at college X if I am still interested in art, I was going to do a foundation course at college X after A levels, and then go on to university.

M   What about you as a person, What do you want to get out of it?

A   I guess I'll make new friends.

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B   I don't know what grades I will need to get at A levels, I want to do media studies and apparently it is a very hard job to get into and my careers advisor said that I will have to be really determined and make sure that I want to do it, If I'm going to get a bit bored with the course then there is no point in doing it so I've really got to keep at it and come out with the A levels. I want to be a show biz journalist and meet the celebrities and everything and do the interviews and write the articles, that is what I want to get out of college to be able to write for a teenage magazine. I think that going to college W will give me a better attitude towards working life I should act more mature and get to grips with what I want to do, going to college I will grow up a lot more and push myself to do what I want to do and hopefully
make a load of new friends as well. There are quite allot of us going to college W there aren't that many going to college X.

C   I'm the only one going to college Y from my school.

M   what do you want to get out of going to college Y?

C   I want to get a job working with animals, maybe working in an animal rescue centre, or the RSPCA I've always wanted to work with animals. I asked my careers advisor and he said one of the girls went there last year and she's doing a course there now and a couple of girls from my school have been there and have got places with vets. He said you will have to start from the bottom and work your way up.

M   Have you talked to a rescue centre to find out what qualifications they want?

C   No my careers adviser said to just go along to college Y, my careers advisor wasn't really very helpful.

D   After college W I would like to work somewhere like Vauxhalls, they gave me some information about commercial apprenticeships.

M   regarding the decision about where to study do you think that you made it yourself or with your parents?

A   I haven't decided what I really want to do yet, but it was me I want to do the arts stuff, but my teachers gave me some other subjects, but I still haven't decided, but I do want to do something like that a science or a language, I think that it is about a fifty / fifty decision between me and my parents, my sister said don't do Spanish, I still don't know what I want to do, allot of people have said that languages are really hard so I don't know what to do.

B   I talked to my parents about what I wanted to do and they just sort of supported me, I think that it was more my decision, because they know that I have got an idea of what I want to do and where I want to do it. They just sort of support

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me, if I can't do what I want to do they sort of help me do something else. I have talked to teachers at school as well and asked them what I should do and they said that the courses that I have picked are OK for me because I am quite good at those subjects, I think that is one of the reasons I have picked those subjects because I know I can do well in them. My careers teacher, because I wanted to do a business studies course with English language and media, but he said that it would be more beneficial to do a language so I have chosen Spanish then I sort of thought that if I don't do very well, then I might drop it, I will just have to wait and see what it is like.

C   It will be all my own decision because my dad and mum said as long as you are happy with what you are doing, I don't care, they are not really very helpful. It would be nice if I had some more help, but if I need something I will go down to my sister and speak to her, it would be nice if my mum would encourage me sometimes, she doesn't though.

D   It was a joint decision between me and my mum and dad, because I wanted to do a hotel and secretary course, but mum and dad turned me off that idea, because of the late nights and things, we talked it over and it was a joint decision between us. There was a bit of an argument because I really wanted to do that course, but then I realised that I wouldn't like working those late nights and with customers who weren't satisfied.

M   Have you had any arguments with your parents?

C   When I told them what sort of course I wanted to do mum said just make sure that you get into them.

B   I haven't had any major arguments with mum and dad about it, but they do say are you sure you want to do this are you sure you want to do that and I always say yes, they back me up and they said to me whatever you get back make sure that you look at it properly, know what you are looking at know what you want to do. I haven't had any major arguments with them they just sit down and make sure that I don't get to stressed out about it.

A   No no arguments at all.

M   In terms of stress how stressful has been the process?

A   Only in my third A level, I had to put three A levels down, I put two down, but I could end up changing the third one when I have got my results.

B   Just a bit of stress yes, I was really bad during my mocks, because I knew that what I did in my mocks were a guide as to how I will do in my actual exams, I was really really bad, I felt really stressed out and I had to be taken to the

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doctors and be put on medication. I am really worried that if I don't do well in the subject that I need then I won't be able to do what I really want to do.

M   Have you found any ways of overcoming the stress?

B   I have found that if I talk to certain teachers, teachers that I get on really well with, teachers that I can talk to they tell me to calm down and not to worry about it, but its hard because I sort of have it going over in my head all the time that I have got to do this and do that so I can do what I want to do. But I am determined not to get stressed out when I do the exams I am not going to let myself get too fat.

M   Have you had your mock results?

B   I did really well in the subjects that I need to do, so it should be all right, so I am not too bad now.

M   In terms of the decision have you gone through any particular process?

A   No not really, before I wanted to go to college X, but after I had visited the college W I decided that I should go there.

B   No not really, I did not really go through any process, I new what I wanted to do so when I got the application form I just filled it out and put down what I wanted to do and it wasn't until I went to the college W, the open evening that I new that I would probably want to go there because when we had the careers evening at school, they told us about different media studies courses. The college X one sounded a bit better because they did loads of trips to TV stations and looked into the more practical side of it, which I would have been really interested in, but because of the other two I couldn't do it which was really disappointing, so I was a bit worried about whether I was making the right choice or not, but when I saw that I couldn't do the others and that I needed them, I sort of new that it had to be the college W. If they had done the English language I think that I would have probably gone to college X, because the media studies course sounded better.

D   I decided to go to the college W because college X doesn't do the subjects that I want to do, I rejected college X because I couldn't have done the A levels that I want to do.

M   Are you happy with your choices?

A   Yes I am, I haven't made my mind up yet about the third subject yet.

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B   Yes I am happy knowing that I am going to be able to do the courses that I want and then hopefully pass them and then go into a job that I am going to enjoy. I think that I have made the right choices, I'm happy.

C   Yea, I'm reasonably happy, but I would have liked some more help from my parents.

D   Yes I'm happy with my decision.

M   Are any friends going with you to the college W?

C   I know a few people going, but most of the people I know are going into jobs.

M   What do you think of the risk of making a wrong decision?

D   Don't know really, I haven't really thought about it

C   I don't want to be like my brother, he's dropped out of everything.

B   The only risks that I am worried about are if I don't pass my GCSE's that I need to do my courses, but I think I am going to pass them anyway, because of the way that my mocks have turned out.

M   Are you worried that you may have chosen the wrong subjects?

B   Only the Spanish one, it was hard for me to decide whether to do it or not. I asked E (A's older sister), what it was like for her and she said that it was terrible, but when I went to look at Spanish the teacher seemed really nice and friendly. It did look allot harder than what we are doing now, but they said that you start at the GCSE stage because you have to go back and look at tenses and stuff and you have to go over everything again so you should be OK because we have done some of that already, but I am definitely going to do media and language because I know I am going to do it, my main area of worry is choosing the wrong third A level, if I don't like it I'll just drop it and stick to the two, because I am worried about how I going to cope knowing about how worried I got with my mocks. If I don't like it and can't cope with the three then I think that Spanish will be the one that I drop.

M   Is there the option to change if you decide that you have chosen the wrong subject?

B   I don't know, I think you can change the course if you are early enough as long as you don't go half way through the year, I think you can drop it, but once you are really into it I don't think you are allowed to change the course, you have to drop it and that is it.

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M   What about your thoughts of the risks A?

A   Well failing the exams and it depends what you want to do afterwards because, I don't know. Its a case of doing the subjects that I enjoy, I'll have to find out what subjects I will need to go to university.

M   If you think of a school as a brand name what sort of a picture does college X bring to mind?

C   Scary place, a modern sort of place, I liked it.

M   What about school L?

B   Thugs - We have allot of pressure put on us we are all prefects as well and because of that you are left to your own devices you have to cope on your own.

M   school M?

B   Trouble, they have improved allot, when I was in my junior school, I was in the catchment area of school M, and I really wanted to go to school L, not just because of my friends but because it was a much better school as well.

A   Maybe because it was rougher.

B   Yea, my sister went there and she was all right, but when we went up to school L it got quite bad and it was really sort of bullyish and everything else, a really bad feeling. They come up to our school and threaten to beat everyone up.

A   Not much. It was more school N.

B   A while ago they did that and it was quite bad wasn't it? They have got the day off on Friday last week and we didn't, so they are waiting to see us when we came out.

C   Yes that was really bad wasn't it?

B   It's really stupid, its about trying to get back at the other school because of what they did before its pathetic really.

M   You mentioned school N what does that mean to you?

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C   No discipline, it's got a bad reputation, its twice as bad as school M, one of our friends was roughed up a couple of months ago. One of my friends that goes there got beaten up and in hospital.

M   So when I say names of schools, it's grades of discipline.

Group   Yea.

B   I don't think that really school N is that bad, I know quite a few people that go there and they seem all right, they don't say like its really bad or anything, but that's them. Because you go there you certain things and you think that we are better than you lot.

C   I think school P is the best school to go to around here.

M   What about the name school P?

B   Very well disciplined, very good exam results in the top of the league tables.

C   I suppose they are like us, you don't hear of them going out and punching people and beating everyone up you don't actually hear much about school P. I think it is just like the schools are not that close together, they are quite separate but you still hear quite allot about them . Some of the people who go to our school have come from school N and they say that it is quite bad and you have just have to take their word for it, because you don't actually go there, they just tell you what it is like.

M   So you build up your impression of a school by talking to friends and people who have gone to the school.

Group   Yea that's right.

B   I think that if you sat down at school with the others and said that school P is better, you would not be too popular, because we are from school L.

M   So when we are talking of schools the mental picture you have is built up of the level of discipline you have in schools, exam results of the school, do the teachers figure in that picture at all?

B   Not in mine, because you have to have actually go to the school to get to know what the teachers are like and how they work and everything, because I think the teachers at our school are very good, personally, Mr X and Mr Y are classed as the strict ones, but they are not, they can be, they are only strict when they need to be, allot of the teachers at our school are really easy going and I think that's what makes it easier to get on with them.

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A   When one of our teachers was away, we had a replacement teacher for physics from school N and we didn't learn anything, in my mind he was a really bad teacher, everyone mucked about. You just sat and thought I don't understand a word that he is saying.

Words 4650

Report on Pupils' Focus Group 21.02.98.   Appendix 3

Timing of the Decision

The range of time spent thinking about the decision, before the focus group, ranged from two weeks to three years. Statements were:

> "About three years"

> "About two weeks ago"

This wide range of time is similar to the range of time reported by the previous study (Gorard, 1997a), into length of the decision process when choosing a secondary school.

Information Sources

The children used a range of information sources, mostly personal, and generally found them to be of more use than was reported by their parents. When the pupil had a career in mind, a small number of published sources were used. One pupil wrote to universities and industry sources to help determine the most appropriate A level subjects to study.

> "recently I've written off to universities and journalism training centres"

Much more frequently friends and other pupils were used:

> "I know some people who go there and they tell me that it is really good"

> "I know quite a few people that go there and they seem all right"

Elder siblings were thought to be a useful source of information and advice on the decision:

> "my sister said don't do Spanish"

> "I will go down to my sister and speak to her"

> "I asked E (A's older sister), what it was like for her, and she said that 'it was terrible'"

> "Yea, my sister went there and she was all right"

The teachers at their school, and the school careers advisor, were a sources of information used by the pupils. These were found to be more useful by the pupils than was the case in the parents focus group. Illustrations were:

"My careers teacher, because I wanted to do a business studies course with English language and media, said that it would be more beneficial to do a language, so I have chosen Spanish"

"I talked to my careers advisor"

"I have talked to teachers at school as well and asked them what I should do and they said that the courses that I have picked are OK for me because I am quite good at those subjects"

The pupils generally found College W open evening of more use than did their parents:

"they seemed friendly, especially the media studies, they really seemed like outgoing and really friendly"

"the teacher seemed really nice and friendly"

They too had some reservations over the way in which the evening was administered:

"I think they could have had more tutors about to tell you about the courses because there were so many people there and we were stood there waiting and waiting and in the end we just walked out"

Some concerns were shown over the size of College W in comparison their current school:

"It just looked so big compared to school, its massive"

A factor balancing the worry about the size was moving to the new college with friends, this tended to reassure them, that though the place would be new, some of the people would be familiar, and there would be friends to talk to:

"There are quite allot of us doing English and a few doing Spanish, so hopefully I will be with a few friends"

"There are quite allot of us going to sixth form"

"I know a few people going"

These findings are in agreement to those of earlier studies (Elliott, 1982; Alston et al., 1985; Coldron and Boulton, 1991; Thomas and Dennison, 1991; West et al., 1991; Hammond and Dennison, 1995; Bradley, 1996), that show friends to be an important factor when children are choosing a new school. This shows that this factor has not

changed with the increase in age of the pupils and that friends are still important when adolescents are choosing a place to study for their A levels.

The Decision Making Process

Three of the pupils stated that they were the decision maker, although acknowledging the help and advice from sources already covered, illustrations of this are:

> "I've always wanted to do design around options time I decided I wanted to do a job in it."

> "It is really your decision they don't tell you, they advise you but they don't say you should go there"

> "I haven't decided what I really want to do yet, but it was me I want to do the arts stuff,"

> "I think that it was more my decision, because they know that I have got an idea of what I want to do and where I want to do it. They just sort of support me"

It was not clear cut that for all the pupils that it was their decision, for one pupil there was evidence of joint decision making:

> "It was a joint decision between me and my mum and dad"

> "I think that it is about a fifty / fifty decision between me and my parents"

These findings support the earlier work into secondary school choice, (Coldron and Boulton, 1991; Thomas and Dennison, 1991; Walford, 1991; Yorke and Bakewell, 1991; Hammond and Dennison, 1995, West et al., 1995), that reported that the composition of the decision making unit tended to vary from family to family. What does seem to have changed is the proportion of pupils claiming to make the decision themselves. Differences have been noted between correlation's of parental reporting and adolescent reporting, (Davis, 1976; Foxman et al., 1989), but in this case there is agreement between the parents, who think their child makes the decision, and that of the pupils.

The pupils agreed with the parents that in Luton there was no real choice of where to study for A levels:

> "I wouldn't have been able to do the courses anywhere else apart from college W, so I really sort of had to go there"

"I decided to go to the college W because college X

doesn't do the subjects that I want to do"

"If they had done the English language I think that I would have probably gone to college X, because the media studies course sounded better."

Stress

There was less concern about stress, cause by the decision making, from the children than was the case with the parents. Most of the stress suffered by the pupils arose from worries about taking and passing their GCSEs:

> "Just a bit of stress yes, I was really bad during my mocks, because I knew that what I did in my mocks were a guide as to how I will do in my actual exams, I was really really bad, I felt really stressed out and I had to be taken to the doctors and be put on medication."

Perceptions of School Names

Questions were asked to illicit the basis on which a school reputations is associated with the names of schools and how this is formed by the pupils. A number of different school names were given to the group and they were asked to give their impression of each school. These tended to be based on the type of discipline maintained in the school, the information for these perceptions came largely, from friends, and talking to and observing the pupils who attend the school. Typical comments about perceptions of bad schools were:

> "Trouble"

> "it was rougher"

> "my sister went there and she was all right, but when we went up to (School N) it got quite bad, and it was really sort of bullyish and everything else, a really bad feeling. They come up to our school and threaten to beat everyone up."

> "No discipline, it's got a bad reputation, its twice as bad as (School L), one of our friends was roughed up a couple of months ago. One of my friends that goes there got beaten up and put into hospital."

> "Some of the people who go to our school have come from (School N) and they say that it is quite bad, and you have just have to take their word for it, because you don't actually go there, they just tell you what it is like."

In contrast perceptions of a good school were:

"Very well disciplined, very good exam results in the top of the league tables"

"you don't hear of them going out and punching people and beating everyone up"

The importance of the school teachers at the school was discussed, but the pupils said that they really had to attend a school before they could form an impression of the teachers. The perceptions of their own teachers tended to be based on the teachers relationship with the pupils and their ability to maintain discipline, rather than on their qualifications and knowledge. Typical comments about what they thought of good teachers were:

"Mr X and Mr Y are classed as the strict ones, but they are not, they can be, they are only strict when they need to be"

Perceptions of the teachers formed during the open evening at College W were:

"I was a bit taken aback because I thought that they would be a bit more formal, but they were really nice, they seemed really friendly."

Perceptions of a bad teacher were:

"we had a replacement teacher for physics from (School N) and we didn't learn anything, in my mind he was a really bad teacher, everyone mucked about.

Lack of discipline in the class being an important factor associated with a bad teacher.

Conclusions

1. Pupils found the College W evening more useful than their parents, they agreed however that it was too crowded.
2. Pupils found advice from teachers and careers advisors helpful. This disagreed with their parents perceptions of their usefulness.
3. Older siblings are important sources of information for pupils.
4. The majority of pupils feel responsible for making the decision over choice of A level subject, and where to study for their A levels.
5. Although feeling responsible for the decision, the pupils welcomed advice and information from their parents.
6. The parents worries about stress, involved with the decision, was not supported by findings from the pupils. Their main area of worry was associated with taking and passing their GCSEs', and not with the decision making process.

Appendix 3

7. Personal information sources were used more frequently and carried higher credibility than impersonal sources.

Letter sent to School Head Teachers   **Appendix 4**

Name and Address of School
(To a school with year eleven
pupils only)

Dear Mr/Mrs X

I am undertaking research into the decision making process involved when pupils choose the 'A' level subjects they are going to study and where they are going to study them, as well as what pupils, not planning to take 'A' levels, are planning to do after they have taken their GCSE'. A colleague of mine thought that the results may prove to be useful to you, and that you might be interested in taking part in the research.

I am looking for four schools to volunteer to participate in my research, and hope that you will consider being one of them, by allowing me to carry out some research at your school.

This would be potentially useful to you by providing: additional information on the reasons for choosing schools and 'A' level subjects; details of the type of information and sources of information used by pupils to help them make their decision. The results of the research will be treated confidentially, with no school being named in my analysis or any resulting publications. The schools will be referred to as school A, B, etc. All schools taking part will receive a copy of the conclusions drawn from the results of the data collected.

The research I hope to undertake at your school would consist of administering questionnaires to all year eleven pupils. I enclose a draft copy of the year eleven questionnaire. I am asking permission to come to your school to explain the questionnaire to the pupils, and to ask them to complete it. I imagine that it would involve one visit to your school, to administer the year eleven questionnaire. The questionnaire takes approximately twenty minutes to complete. The times would obviously be at your convenience, but could be during their lunch break, a free period, or after school. The ideal time would be, if I could be allowed, say, twenty minutes of a morning assembly. I could distribute the questionnaires, collect the ones completed during assembly, ask those pupils, who have not completed them, to finish them off during breaks and hand them in to a central point. I could return after school to collect the remainder of the questionnaires.

In order to offer some motivation to the pupils, I propose to pay 50p for each completed questionnaire, which could either be denoted to one of the school's charities, or used to buy some equipment for the school.

Regarding the time scale for the research I would hope to come to the school to administer the questionnaires, either towards the end of this term or early at the start of the summer term, before the pupils start their examinations.

Appendix 4

In addition to a draft questionnaire I enclose a copy of my MPhil to PhD transfer report, which gives a more detailed description and justification for my proposed research. Please do not feel obliged to read it, it is enclosed in case you want to know a little more about the background to my research.

I hope that this letter has provided you with sufficient information. My next step, if you are interested, would be to visit you to discuss the planned research and answer any further questions you may have, and hopefully arrange suitable times for me to undertake the research. I will phone you in a few days when you have had the opportunity to read this letter.

Yours sincerely

Mike Scott
Senior lecturer.

Name of School:

Year 11 Questionnaire

Dear Pupil,

I am researching pupil decision making when pupils transfer at year twelve. I am investigating how you choose your A level subjects and where you are going to study them.

I would be very grateful if you would help me by completing this questionnaire, which should take about twenty minutes. In return I will give 50p for each completed questionnaire I receive, which can either donated to one of the school charities, or used to buy equipment for the sixth form.

Mike Scott
Senior Lecturer
University of Luton

1

Q1 Are you planning to move to a new school / college to study your A levels?

Yes	No
1	2

Please tick the appropriate box.

If No please go to Q17 Page 6

This section asks about your choice of where you plan to study your A levels.

Q2 How long ago did you first start thinking about which school / college you were going to?

Please tick only one box

3+ Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
2	3	4	5	6	7	8	9

Q3 When you first started thinking about schools / colleges, how many different ones did you consider?

Please tick only one box

1	2	3	4	5	5+
1	2	3	4	5	6

Q4 Have you come to a decision over which school or college you are going to study your A levels at?

Please tick

Yes	No
1	2

If No please go to Q 11 Page 4

Appendix 5

2

Q5 How long ago did you make your decision over where to study your A levels?

Please tick only one box

3+ Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
1	2	3	4	5	6	7	8

Q 6 When you made your final choice of schools / colleges, how many different ones did you choose from?   Please tick only one box

1	2	3	4	5	5+
1	2	3	4	5	6

These questions ask about how you went about making your decision.

Q7 Please tick <u>one</u> box which best describes how you made your decision. If none are suitable please explain how you made it in the empty box provided.

I rejected some of the schools / colleges that I was considering over the period that I was thinking about A levels, and by the time that I made my final decision I was only left with the one school / college that I chose. 1	
I rejected some of the schools / colleges that I was considering over the period that I was thinking about A levels, so that when I made my final decision I only had one or two to choose from. 2	
I rejected some schools / colleges early on, some later, but before my final decision, and some schools / colleges when I made my final decision. 3	
I rejected some of the schools / colleges early on, and some others when I made my final decision. 4	
I rejected all of the surplus schools / colleges, at the time that I made my final decision. 5	
Other: 6 - 20	

3

Q8 Please tick against <u>one</u> of the following statements that best represents your situation when you were making your final decision. If none of the statements describes your situation please use the last box to describe your own situation.

By that time I had all the information I needed 'stored' in my mind. 1	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to check up on some details. 2	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to talk it over with someone. 3	
By that time I had some of the information I needed 'stored' in my mind and some of the information stored as notes. 4	
When I made my final decision I mainly used written notes. 5	
Although I made some written notes, I found that when I made my final decision I did not use them. 6	
other: 7-20	

Q9 This section asks about who made the decision over the choice of where you plan to study your A levels. Please tick <u>one</u> box which best describes your situation, and or use the last box if none of the options fits your situation.

I made the decision on my own 1	
I made the decision with help from my parents 2	
The choice was a joint decision made by me and my parents 3	
My parents made the decision after talking it over with me 4	
My parents made the decision without consulting me 5	
Other: 6-10	

Q10 If the decision was a joint decision please indicate by ticking the appropriate box to indicate your degree of involvement in the decision. Please use the last box if none of the options fits your situation.

75% Me 25% Parents	50% Me 50% Parents	25% Me 75% Parents	% Me
			% Parents
1	2	3	4-10

<u>**Now please go to Q15 Page 5**</u>

4

Q11 How long before you are due to start at your new school / college do you plan to make your decision over where to study your A levels? Please tick only one box

1 Yrs	9 Mths	6 Mths	3 Mths	1 Mth	2 Wks
1	2	3	4	5	6

Q12 Do you plan to make your final decision of where to study?

Before you had received your GCSE results. 1	
Not until after you had received you GCSE results. 2	

Q13 How many schools / colleges are you now choosing from? Please tick only one box

1	2	3	4	5	5+
1	2	3	4	5	6

Q14 These questions ask how you plan to go about making your decision. Please tick the box which best describes how you plan to make your decision. If none are suitable please explain how you plan to make it in the empty box provided.

I have rejected some of the schools / colleges that I was originally considering, and I now only left with the one school / college that I am planning to go to. 1	
I rejected some of the schools / colleges that I was considering over the period that I was thinking about A levels, so that when I make my final decision I will only have two or three to choose from. 2	
I rejected some schools / colleges early on, some later, and I will not reject any of the other options until I come to my final decision. 3	
I rejected some of the schools / colleges early on, and I will not reject any of the other options until I come to my final decision 4	
I will not reject any of the options until I come to my final decision. 5	
Other: 6-20	

5

Q15 This section asks about your reasons for choosing a school
/ college where you plan to study. Please tick all that apply.

I think that I will be happy here	1	
The school / college is close to home/ easy to travel to	2	
I like the discipline at the school / college	3	
The facilities are good at the school / college	4	
The school / college is well organised	5	
The school / college gets good exam results	6	
My friends are going to the same school / college	7	
My older brother / sister went to the school / college	9	
They offer the A level subjects that I want to study	10	
I like the atmosphere at the school / college	11	
I think that they have good teachers at the school/college	12	
I like the school uniform or uniform policy	13	
The school has a good reputation	14	
Other reasons: 15-20		

Q16 For up to three schools / colleges that <u>you have rejected,</u>
please tick against all that apply against the reasons for
rejecting each one. Use the first column for the first school and
the second for the second school etc.

Reasons for rejection		School / col. 1	School / col. 2	School / col. 3
I thought that I would not be happy here	1			
The school/college was too far to travel to	2			
Lack of discipline at the school / college	3			
The facilities are not good at the school / college	4			
The school / college is badly organised	5			
The school/college gets poor exam results	6			
My friends are not going to the school / college	7			
I was worried about bullying at the school /college	8			
They do not offer the A level subjects I want	9			
I don't like the atmosphere at the school / college	10			
I thought that they have poor teachers college	11			
I don't like the school uniform / uniform policy	12			
I was worried about my personal safety	13			
The school has a bad reputation	14			
Other reasons: 15-20		1	2	3

6

This section asks about the timing of your decision over choice of A level subjects that you plan to study.

Q17 How long ago did you first start thinking about your choice of A level subjects?

Please tick only one box

3 + Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
2	3	4	5	6	7	8	9

Q18 Do you think that the time when your school / college asks for your choice of A level subjects is?

Please tick only one box

Too Early	About right	Too late
1	2	3

Q19 When you first started thinking about A level subjects, how many different subjects did you consider? (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	5	6	7	8	9	10	10+
1	2	3	4	5	6	7	8	9	10	11

Q20 Have you come to a decision over which A level subjects you are going to study?

Please tick

Yes	No
1	2

If No please Go to Q30 Page 10

7

Q21 How long ago did you make your decision over choice of A level subjects? Please tick only one box

3+ Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
1	2	3	4	5	6	7	8

Q22   When you made your final choice of A level subjects, how many different subjects did you choose from? (Please do not include any extra GCSEs or AS Level subjects). Please tick only one box.

1	2	3	4	5	6	7	8	9	10	10+
1	2	3	4	5	6	7	8	9	10	11

Q23 How many subjects have you decided to study? (Please do not include any extra GCSEs or AS Level subjects). Please tick only one box.

1	2	3	4	5
1	2	3	4	5

These questions ask about how you went about making your decision.

Q24 Please tick <u>one</u> box which best describes how you made your decision. If none are suitable please explain how you made it in the empty box provided.

I rejected some of the subjects that I was considering over the period that I was thinking about A levels, so that by the time that I made my final decision I was only left with the ones that I chose. 1	
I rejected some of the subjects that I was considering over the period that I was thinking about A levels, so that when I made my final decision I only had one or two subjects more than I needed. 2	
I rejected some subjects early on, some subjects later, but before my final decision, and some subjects when I made my final decision. 3	
I rejected some of the subjects early on and some others when I made my final decision. 4	
I rejected all of the surplus subjects, that I decided not to study at the time that I made my final decision. 5	
Other: 6 - 10	

8

Q25 Please tick <u>one</u> of the following statements the one that best describes your situation.

When I made my final decision I found it easy to reject any remaining excess subjects. If you tick this box please go to Q27 ₁	
When I made my final decision I found the decision difficult because although I was sure about one of the subjects, I could not make up my mind which subjects to study with it. ₂	
When I made my final decision I found the decision difficult because although I was sure about two of the subjects, I could not make up my mind which subject/s to study with them. ₃	
When I made my final decision I found the decision difficult because although I was sure about three of the subjects, I could not make up my mind which subject to study with them. ₄	

Q26 How did you overcome the difficulty of choosing the remaining subject / s? 1-20

9

Q27 Please tick against <u>one</u> of the following statements that best represents your situation when you were making your final decision. If none of the statements describes your situation please use the last box to describe your own situation.

By that time I had all the information I needed 'stored' in my mind. 1	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to check up on some details. 2	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to talk it over with someone. 3	
By that time I had some the information I needed 'stored' in my mind and some of the information stored as notes. 4	
When I made my final decision I mainly used written notes. 5	
Although I made some written notes, I found that when I made my final decision I did not use them. 6	
other: 7-15	

Q28 This section asks about who made the decision over the choice of the A levels you plan to study. Please tick the box which best describes your situation, and or use the last box if none of the options fits your situation.

I made the decision on my own 1	
I made the decision with help from my parents 2	
The choice was a joint decision made by me and my parents 3	
My parents made the decision after talking it over with me 4	
My parents made the decision without consulting me 5	
Other: 6-10	

Q29 If the decision was a joint decision please indicate by ticking the appropriate box to indicate your degree of Involvement in the decision. Please use the last box if none of the options fits your situation.

75% Me 25% Parents	50% Me 50% Parents	25% Me 75% Parents	% Me
			% Parents
1	2	3	4 - 10

10

Q30 How long before you start studying your A levels do you plan to make your final decision over the choice of A level subjects?

Please tick only one box

9 Mths	6 Mths	3 Mths	1 Mth	2 Wks
1	2	3	4	5

Q31 Do you plan to make the decision?

Before you receive your GCSE results when the school / college asks you to decide. 1	
After you have received your GCSE results. 2	
After you start the subjects, you may change your choice. 3	

This section asks you about the A level subjects you plan to study and about the range of A level subjects that you will consider before arriving at you final decision.

Q32 How many different <u>A level</u> subjects are you now considering?   (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	5	6	7	8	9	10	10+
1	2	3	4	5	6	7	8	9	10	11

Q33 How many subjects are you planning to study?   (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	5
1	2	3	4	5

11

Q34 Please tick <u>one</u> box which best describes how you are planning to make your decision.

I haven't rejected any subjects yet **Go To Q36** 1	
I have already rejected some of the subjects that I was considering, but I am still left with too many subjects **Go to Q35** 2	

Q35 How many subjects do you need to cut out? (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	4+
1	2	3	4	5

Q36 Please tick <u>one</u> box which best describes how you are planning to make your decision.

I expect to reject all of the surplus subjects when I make my final decision 1	
I expect to reject some of the surplus subjects before I make my decision, and the remainder when I make my final decision 2	

12

This section asks about your reasons for selecting the A level subjects you are considering. (Please do not include GCSEs or AS levels).

Q37 Please enter the A level subjects you are most likely to choose. Divide 100 points among the reasons listed, for each of your A level subjects so that the division will reflect how important each reason is to you in your choice of the subject. (You may use the boxes at the bottom to add two more reasons not listed). E.g. If you only have 1 reason give it 100, or if you have 2 equally important reasons give 50 for each. If you have 3 reasons 1 of which is much more important 1 than the other 2 give it, say, 50 and the other two 25 & 25. The total for each subject should add up to 100.

Please enter your ⟶
A level subjects here

	1	2	3	4	5
I am interested in the subject 1					
I am good at the subject 2					
I like the teachers who teach it 3					
I think that the subject is easy 4					
My parents advised me to take it 5					
My teacher advised me to take it 6					
My career teacher advised me to take it 7					
I have friends who are taking it 8					
Because of university requirements 9					
It is needed for the job that I want to do 10					
Other 11-20					
Other 10-20					

13

This section asks you about your reasons for rejecting any A level subjects.

Q38 Please enter the names of <u>two</u> subjects that you have rejected and tick against your reasons for rejecting the subject.

Reasons for Rejection	Subject: 1	Subject: 1
I am not interested in the subject 1		
I am no good at the subject 2		
I do not like the teachers who teach the subject 3		
I think the subject is too hard 4		
My parents advised me not to take the subject 5		
My teacher advised me not to take the subject 6		
My career teacher advised me not to take the subject 7		
I have no friends who are taking the subject 8		
It is not needed by the university I want to go to 9		
It is not needed for the job that I want to do 10		
Because of a timetable clash 11		
Others: 12-20	1	2

14

This section asks about the sources of information that you used, or are using, to help you make your decision.

Q39 Please tick against any source that you used in the appropriate box to indicate how useful it was to you. If you used any sources not given please add the source in the blank box given at the end.

Sources of Information	Very Useful	Useful	Not Very Useful	Useless	Not Used
Friends 1					
Other pupils 2					
My own experience of the subjects at GCSE 3					
Teachers 4					
Careers advisors 5					
Older pupils studying A levels 6					
My parents 7					
My older brother or sister 8					
School open evenings 9					
School printed information 10					
Printed information provided by universities 11					
Printed information provided by industry 12					
Internet 13					
Books 14					
Work Experience 15					
Other: 15-25	1	2	3	4	5

15

This section asks you about how much influence the sources of information have on your decision.

Q40 For the information sources that you have used, please tick all that apply, to indicate the amount of influence they have had on you, and use the last box for any sources of information you used that are not listed.

This source had : on my decision	A strong Influence	Some Influence	A little Influence	No real Influence
Friends 1				
Other pupils 2				
Your own experience of the subjects at GCSE 3				
Teachers 4				
Careers advisors 5				
Older pupils studying A levels 6				
Your parents 7				
Your older brother or sister 8				
School open evenings 9				
School printed information 10				
Printed information provided by universities 11				
Printed information provided by industry 12				
Internet 13				
Books 14				
Work Experience 15				
Other: 16-25	1	2	3	4

16

This section asks about when you made, or plan to make, the most use of these sources of information.

Q41 For those sources that you have used please tick against all that apply to indicate when you used, or plan to use, them. Use the last box if none of the options fits your situation.

Source of information	At an early stage of your decision	All the way through your decision	Towards the end of your decision	When you made, or make, your final decision
Friends 1				
Other pupils 2				
Your own experience of the subjects at GCSE 3				
Teachers 4				
Careers advisors 5				
Older pupils studying A levels 6				
Your parents 7				
Your older brother or sister 8				
School open evenings 9				
School printed information 10				
Printed information provided by universities 11				
Printed information provided by industry 12				
Internet . 13				
Books 14				
Work Experience 15				
Other: 16 - 25	1	2	3	4

17

This section looks at the amount of worry involved with your decision over your choice of A levels.

Q42 **Please tick the box which best describes the amount of worry you have experienced, or are experiencing.**

Extremely Worried	Very Worried	Worried	Slightly Worried	Not Worried
1	2	3	4	5

This section collects some background information about you.

Q43 My mother's occupation is:

_____1-15

Q44 My Father's occupation is:

_____1-15

Q45 My post code is:

_____

Q46 I am

Male 1	
Female 2	

Please tick
The appropriate box

Thank you very much for completing the questionnaire.

Mike Scott.

Name of School:

Year 12 Questionnaire

Dear Pupil,

I am researching pupil decision making when pupils transfer at year twelve. I am investigating how you chose your A level subjects and where to study them.

I would be very grateful if you would help me by completing this questionnaire, which should take about twenty minutes. In return I will give 50p for each completed questionnaire I receive, which can either be donated to one of the school charities, or used to buy equipment for the sixth form.

Mike Scott
Senior Lecturer
University of Luton

1

Q1 Did you move to a new school / college to study your A levels?

Yes	No
1	2

Please tick the appropriate box.

If No please go to Q13 Page 6

This section asks about the timing of your decision over choice of where to study your A levels.

Q2 How long before you started at your school / college did you first start thinking about where you were going to study?

Please tick only one box

3+ Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
2	3	4	5	6	7	8	9

This section asks you about the range of schools or colleges you considered when choosing where to study for your A levels.

Q3 When you first started thinking about schools / colleges, how many different ones did you consider?

Please tick only one box

1	2	3	4	5	5+
1	2	3	4	5	6

Q4 How long before you started at your school / college did you make your final decision of where to study your A levels?

Please tick only one box

3+ Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
1	2	3	4	5	6	7	8

2

Q 5 Was your final decision of where to study made?

Before you had received your GCSE results.	1
After you had received you GCSE results.	2

Q 6 When you made your final choice of schools / colleges, how many different ones did you choose from?   Please tick only one box

1	2	3	4	5	5+
1	2	3	4	5	6

These questions ask about how you went about making your decision.

Q7   Please tick the box which best describes how you made your decision. If none are suitable please explain how you made it in the empty box provided.

I rejected some of the schools / colleges that I was considering over the period that I was thinking about A levels, so that by the time that I made my final decision I was only left with the one school / college that I chose. 1	
I rejected some of the schools / colleges that I was considering over the period that I was thinking about A levels, so that when I made my final decision I only had two or three to choose from. 2	
I rejected some schools / colleges early on, some later, but before my final decision, and some schools / colleges when I made my final decision. 3	
I rejected some of the schools / colleges early on and some others when I made my final decision. 4	
I rejected all of the surplus schools / colleges, at the time that I made my final decision. 5	
Other: 6-20	

3

Q8 Please tick against <u>one</u> of the following statements that best represents your situation when you were making your final decision. If none of the statements describes your situation please use the last box to describe your own situation.

By that time I had all the information I needed 'stored' in my mind. 1	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to check up on some details. 2	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to talk it over with someone. 3	
By that time I had some the information I needed 'stored' in my mind and some of the information stored as notes. 4	
When I made my final decision I mainly used written notes. 5	
Although I made some written notes, I found that when I made my final decision I did not use them. 6	
other: 7-20	

This section asks about who made the decision over the choice of where to study your A levels.

Q9 Please tick <u>one</u> box which best describes your situation, and or use the last box if none of the options fits your situation.

I made the decision on my own 1	
I made the decision with help from my parents 2	
The choice was a joint decision made by me and my parents 3	
My parents made the decision after talking it over with me 4	
My parents made the decision without consulting me 5	
Other: 6-10	

4

Q10 If the decision was a joint decision please indicate by ticking the appropriate box the degree of involvement that you had in making the decision.   Please use the last box if none of the options fits your situation.

75% Me 25% Parents	50% Me 50% Parents	25% Me 75% Parents	% Me
			% Parents
1	2	3	4 - 10

Q11 This section asks about your reasons for choosing the school / college where you are studying.   Please tick all that apply

I thought that I would be happy here 1	
The school / college is close to home/ easy to travel to 2	
I like the discipline at the school / college 3	
The facilities are good at the school / college 4	
The school / college is well organised 5	
The school / college gets good exam results 6	
My friends are going to the same school / college 7	
My older brother / sister went to the school / college 9	
They offer the A level subjects that I want to study 10	
I like the atmosphere at the school / college 11	
I thought that they have good teachers at the school / college 12	
I like the school uniform or uniform policy 13	
The school has a good reputation 14	
Other reasons: 15-20	

5

This section asks about your reasons for rejecting up to three schools / colleges that you may have considered.

Q12 Please tick against your reasons for rejecting the schools / colleges. Use the first column for the first school and the second for the second school etc.

Reasons for rejection	School / College 1	School / College 2	School / College 3
I thought that I would not be happy there 1			
The school / college was too far to travel to 2			
Lack of discipline at the school / college 3			
The facilities are not good at the school / college 4			
The school / college is badly organised 5			
The school / college gets poor exam results 6			
My friends are not going to the school / college 7			
I was worried about bullying at the school / college 8			
They do not offer the A level subjects I want to study 9			
I don't like the atmosphere at the school / college 10			
I thought that they have poor teachers at the school / college 11			
I don't like the school uniform / uniform policy 12			
I was worried about my personal safety 13			
The school has a bad reputation 14			
Other reasons: 15 - 20			

6

This section asks about the timing of your decision over choice of A level subjects that you are studying.

Q13 How long before you started studying your A level subjects did you first start thinking about which A level subjects you were going to take?

Please tick only one box

3 + Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
2	3	4	5	6	7	8	9

Q14 Was the time when your school / college asked for your choice of A level subjects?

Please tick only one box

Too Early	About right	Too late
1	2	3

Q15 When you first started thinking about A level subjects, how many different subjects did you consider? (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	5	6	7	8	9	10	10+
1	2	3	4	5	6	7	8	9	10	11

Q16 How long before you started studying for your A levels did you make your final decision over choice of A level subjects?

Please tick only one box

3+ Yrs	3 Yrs	2 Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks
1	2	3	4	5	6	7	8

Appendix 6

7

Q17 Was your final decision over choice of A level subjects made?

Please tick against the appropriate box.

Before you had received your GCSE results when the school / college asked you to decide. 1	
After you had received your GCSE results. 2	
After you started to study the subjects, you changed your choice. 3	

Q18 When you made your final choice of A level subjects, how many different subjects did you choose from? (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	5	6	7	8	9	10	10+
1	2	3	4	5	6	7	8	9	10	11

Q19 How many subjects are you now studying? (Please do not include any extra GCSEs or AS Level subjects).

Please tick only one box

1	2	3	4	5
1	2	3	4	5

8

These questions ask about how you went about making your decision.

Q20 Please tick <u>one</u> box which best describes how you made your decision. If none are suitable please explain how you made it in the empty box provided.

I rejected some of the subjects that I was considering over the period that I was thinking about A levels, so that by the time that I made my final decision I was only left with the ones that I chose. ₁	
I rejected some of the subjects that I was considering over the period that I was thinking about A levels, so that when I made my final decision I only had one or two subjects more than I needed. ₂	
I rejected some subjects early on, some subjects later, but before my final decision, and some subjects when I made my final decision. ₃	
I rejected some of the subjects early on and some others when I made my final decision. ₄	
I rejected all of the surplus subjects, that I decided not to study at the time that I made my final decision. ₅	
Other: 6 - 10	

9

Q21 Please tick from the following statements the <u>one</u> that best describes your situation.

When I made my final decision I found it easy to reject any remaining excess subjects. If you tick this box please go to Q23.₁	
When I made my final decision I found the decision difficult because although I was sure about one of the subjects, I could not make up my mind which subjects to study with it. ₂	
When I made my final decision I found the decision difficult because although I was sure about two of the subjects, I could not make up my mind which subject/s to study with them. ₃	
When I made my final decision I found the decision difficult because although I was sure about three of the subjects, I could not make up my mind which subject to study with them. ₄	

Q22 How did you overcome the difficulty of choosing the remaining subject / s? Please enter your answer here:

1 - 20

Q23 Please tick <u>one</u> of the following statements that best describes your situation:

When the school / college asked for my decision, I had already decided which A level subjects that I was going to take. ₁	
Although I had some idea of the A level subjects I wanted to study, when the school / college asked for my decision, I did not want to make my final decision until after I had received my GCSE results. ₂	
I had no real idea of what A level subjects to study, when the school / college asked for my decision. ₃	

10

Q24 Please tick against <u>one</u> of the following statements that best represents your situation when you were making your final decision. If none of the statements describes your situation please use the last box to describe your own situation.

By that time I had all the information I needed 'stored' in my mind. 1	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to check up on some details. 2	
By that time I had most of the information I needed 'stored' in my mind, but I still needed to talk it over with someone. 3	
By that time I had some the information I needed 'stored' in my mind and some of the information stored as notes. 4	
When I made my final decision I mainly used written notes. 5	
Although I made some written notes, I found that when I made my final decision I did not use them. 6	
other: 7-15	

Appendix 6

11

This section asks about who made the decision over the choice of your A level subjects.

Q25 Please tick <u>one</u> box which best describes your situation, or use the last box if none of the options fits your situation.

I made the decision on my own 1	
I made the decision with help from my parents 2	
The choice was a joint decision made by me and by my parents 3	
My parents made the decision after talking it over with me 4	
My parents made the decision without consulting me 5	
Other: 6-15	

Q26 If the decision was a joint decision please indicate by ticking the appropriate box the degree of involvement that you had in making the decision.

Please use the last box if none of the options fits your situation.

75% Me 25% Parents	50% Me 50% Parents	25% Me 75% Parents	% Me
1	2	3	% Parents 4-10

12

This section asks about your reasons for choosing the A level subjects you are studying

Q27   Please enter only A level subjects (not GCSEs or AS levels). Divide 100 points among the reasons listed, for each of your A level subjects so that the division will reflect how important each reason was to you in your choice of the subject. (You may use the boxes at the bottom to add two more reasons not listed). E.g. If you only have 1 reason give it 100, or if you have 2 equally important reasons give 50 for each. If you have 3 reasons 1 of which is much more important 1 than the other 2 give it, say, 50 and the other two 25 & 25. The total for each subject should add up to 100.

Please enter your A level subjects here →

	1	2	3	4	5
I am interested in the subject 1					
I am good at the subject 2					
I like the teachers who teach it 3					
I think that the subject is easy 4					
My parents advised me to take it 5					
My teacher advised me to take it 6					
My career teacher advised me to take it 7					
I have friends who are taking it 8					
Because of university requirements 9					
It is needed for the job that I want to do 10					
Other 11-20					
Other 10-20					

13

This section asks you about your reasons for rejecting any A level subjects.

Q28 Please enter the names of <u>two</u> subjects that you have rejected and tick against your reasons for rejecting the subject.

Reasons for Rejection	Subject 1	Subject 2
I am not interested in the subject 1		
I am no good at the subject 2		
I do not like the teachers who teach the subject 3		
I think the subject is too hard 4		
My parents advised me not to take the subject 5		
My teacher advised me not to take the subject 6		
My career teacher advised me not to take the subject 7		
I have no friends who are taking the subject 8		
It is not needed by the university I want to go to 9		
It is not needed for the job that I want to do 10		
Because of a timetable clash 11		
Others: 12-20	1	2

14

Q29 Please tick against one of the following statements that best represents your situation when you were making your final decision. If none of the statements describes your situation please use the last box to describe your own situation.

When I made my final decision, I rejected some subjects because I did not like a number of aspects of the subject. 1	
When I made my final decision, I rejected some subjects because I did not like an individual aspect of the subject. 2	
I am not sure on what basis I rejected some subjects when I made my final decision. 3	
Other: 4 - 10	

15

This section asks about the sources of information that you used to help you make your decision.

Q30 Please tick against any source that you used in the appropriate box to indicate how useful it was to you. If you used any sources not given please add the source in the blank box given at the end.

Sources of Information	Very Useful	Useful	Not Very Useful	Useless	Not Used
Friends 1					
Other pupils 2					
My own experience of the subjects at GCSE 3					
Teachers 4					
Careers advisors 5					
Older pupils studying A levels 6					
My parents 7					
My older brother or sister 8					
School open evenings 9					
School printed information 10					
Printed information provided by universities 11					
Printed information provided by industry sources 12					
Internet 13					
Books 14					
Work Experience 15					
Other: 15-25	1	2	3	4	5

Appendix 6

16

This section asks you about how much influence the sources of information you used had on your decision.

Q31 For the information sources that you have used, please tick against all that apply, to indicate the amount of influence they have had on you, and use the last box for any sources of information you used that are not listed.

This source had : on my decision	A strong influence	Some influence	A little influence	No real influence
Friends 1				
Other pupils 2				
Your own experience of the subjects at GCSE 3				
Teachers 4				
Careers advisors 5				
Older pupils studying A levels 6				
Your parents 7				
Your older brother or sister 8				
School open evenings 9				
School printed information 10				
Printed information provided by universities 11				
Printed information provided by industry 12				
Internet 13				
Books 14				
Work Experience 15				
Other: 16-25	1	2	3	4

Appendix 6

17

This section asks about when you made most use of these sources of information.

Q32 For those that you have used, please tick all that apply to indicate when you used them. Use the last box if none of the options fits your situation.

Source of information	At an early stage of your decision	All the way through your decision	Towards the end of your decision	When you made your final decision
Friends 1				
Other pupils 2				
Your own experience of the subjects at GCSE 3				
Teachers 4				
Careers advisors 5				
Older pupils studying A levels 6				
Your parents 7				
Your older brother or sister 8				
School open evenings 9				
School printed information 10				
Printed information provided by universities 11				
Printed information provided by industry 12				
Internet 13				
Books 14				
Work Experience 15				
Other: 16-25	1	2	3	4

18

Q 33 If you are now aware of any sources of information that would have been useful, if you had known of them when you made your decision, would you please list them here:
1-12

Q 34 The most helpful person who I think gave me the best advice when I made my decision was: Please only tick one box

My mother	1	
My father	2	
My parents	3	
My friend	4	
My teacher	5	
My brother or sister	6	
An older pupil	7	
Other: 8-15		

19

This section looks at the amount of worry involved with your decision over your choice of A levels.

Q35 **Please tick the box or boxes which best describes the amount of worry you experienced**

Extremely Worried	Very Worried	Worried	Slightly Worried	Not Worried
1	2	3	4	5

This section collects some background information about you.

Q36 **My mother's occupation is:**
_____ 1 - 15

Q37 **My Father's occupation is:**
_____ 1 - 15

Q38 **My post code is:**
_____

Q39   I am

Male 1	
Female 2	

Please tick
The appropriate box

Thank you very much for completing the questionnaire.

Mike Scott.

Name of School:

Year 11 Not Taking A levels Questionnaire

Dear Pupil,

I am researching pupil decision making into how you decide what you are going to do after you have taken your GCSEs.

I would be very grateful if you would help me by completing this questionnaire, which should take about ten minutes. In return I will give 50p for each completed questionnaire I receive, which can either be donated to one of the school charities or used to buy equipment for the school.

Mike Scott
Senior Lecturer
University of Luton

1

This section asks about the timing of your decision over choice of what you plan to do after your GCSEs.

Q1 How long ago did you first start thinking about what you were going to do after your GCSEs?

Please tick only one box

2+ Yrs	I Yr	6 Mths	3 Mths	1 Mth	2 Wks	I Don't Know
2	3	4	5	6	7	8

This question asks you about what you plan to do after you have taken your GCSEs.

Q2 Please read the options and tick the appropriate box to indicate what you plan to do after you have taken your GCSEs. If none of the options is suitable to describe your circumstances please fill in your details in the empty box.

Please tick only one box

Leave school and start work	1	
Study a GNVQ course at college	2	
Start an apprenticeship	3	
I don't know what I am going to do	4	
Other: 5-10		

Q3 Have you come to a decision over what you are going to do after you have taken your GCSEs?

Please tick

Yes	No
1	2

If No please go to Q 7   Page 3

2

Q4 How long ago did you decide what you are going to do after your GCSEs?

Please tick only one box

I+ Yr	6 Mths	3 Mths	1 Mth	2 Wks	I don't know
1	2	3	4	5	6

This section asks about who made the decision over the choice of what you are going to do after your GCSEs.

Q5 Please tick the box which best describes your situation, and or use the last box if none of the options fits your situation.

I made the decision on my own	1	
I made the decision with help from my parents	2	
The choice was a joint decision made by me and my parents	3	
My parents made the decision after talking it over with me	4	
My parents made the decision without consulting me	5	
Other: 6 - 10		

Q6 If the decision was a joint decision please indicate by ticking the appropriate box to indicate your degree of involvement in the decision.

Please use the last box if none of the options fits your situation.

75% Me 25% Parents	50% Me 50% Parents	25% Me 75% Parents	% Me % Parents
1	2	3	4 - 10

Please go to Q9 Page 4

3

Q 7 When do you plan to make your final decision over what to do after your GCSEs?

Please tick only one box

9 Mths	6 Mths	3 Mths	1 Mth	2 Wks	I don't know
1	2	3	4	5	

Q 8 Do you plan to make the decision?

Before you receive your GCSE results	1	
After you have received your GCSE results.	2	
I don't know	3	

Appendix 7

4

This section asks about the sources of information that you used, or are using, to help you make your decision.

Q9 **Please tick against any source that you used in the appropriate box to indicate how useful it was to you. If you used any sources not given please add the source in the blank box given at the end.**

Sources of Information	Very Useful	Useful	Not Very Useful	Useless	Not Used
Friends 1					
Other pupils 2					
My own experience of the subjects at GCSE 3					
Teachers 4					
Careers advisors 5					
Older pupils studying A levels 6					
My parents 7					
My older brother or sister 8					
School open evenings 9					
School printed information 10					
Printed information provided by universities 11					
Printed information provided by industry 12					
Internet 13					
Books 14					
Work Experience 15					
Other: 15-25	1	2	3	4	5

5

This section asks you about how much influence the sources of information have on your decision.

Q10 For the information sources that you have used, please tick all that apply, to indicate the amount of influence they have had on you, and use the last box for any sources of information you used that are not listed.

This source had : on my decision	A strong influence	Some influence	A little influence	No real influence
Friends 1				
Other pupils 2				
Your own experience of the subjects at GCSE 3				
Teachers 4				
Careers advisors 5				
Older pupils studying A levels 6				
Your parents 7				
Your older brother or sister 8				
School open evenings 9				
School printed information 10				
Printed information provided by universities 11				
Printed information provided by industry 12				
Internet 13				
Books 14				
Work Experience 15				
Other: 16-25	1	2	3	4

6

This section asks about when you made, or plan to make, the most use of these sources of information.

Q11 For those sources that you have used please tick against all that apply to indicate when you used, or plan to use, them. Use the last box if none of the options fits your situation.

Source of Information	At an early stage of your decision	All the way through your decision	Towards the end of your decision	When you made, or make, your final decision
Friends 1				
Other pupils 2				
Your own experience of the subjects at GCSE 3				
Teachers 4				
Careers advisors 5				
Older pupils studying A levels 6				
Your parents 7				
Your older brother or sister 8				
School open evenings 9				
School printed information 10				
Printed information provided by universities 11				
Printed information provided by industry 12				
Internet 13				
Books 14				
Work Experience 15				
Other: 16-25	1	2	3	4

7

This section looks at the amount of worry involved with your decision over what you plan to do after you have taken your GCSEs.

Q12 Please tick the box which best describes the amount of worry you have experienced, or are experiencing.

Extremely Worried	Very Worried	Worried	Slightly Worried	Not Worried
1	2	3	4	5

This section collects some background information about you.

Q13 My mother's occupation is:

_____1-15

Q14 My Father's occupation is:

_____1-15

Q15 My post code is:

_____

Q16 I am

Male 1	
Female 2	

Please tick
The appropriate box

Thank you very much for completing the questionnaire.

Mike Scott.