An evaluation of the Pre-University Summer School at the University of Glasgow, 1986-1993, and its effects on student performance

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Summary

The focus of the investigation in this thesis is the Pre-University Summer School, at the University of Glasgow. The years examined are from 1986 to 1993. The Pre-University Summer School is a course which provides preparation and access to higher education for groups of students who are socio-economically and/or educationally disadvantaged. The investigation focuses on this type of student.

The central research question of the investigation is how can the 'Success' of the Summer School be evaluated? The criterion of 'success' of the Summer School had already been established by its Director, namely that students who had attended the Summer School should perform as well as 'average' groups of students who had not participated in the Summer School. The term 'average' groups of students was taken to mean similar non-traditional students.

In answering this central question the thesis concentrates primarily on the academic performance of various groups of non-traditional and non-standard students at the University of Glasgow, comparing and contrasting progress and completion rates between those who attended Summer School and those who did not.

It is, however, considered that the quantifying of the numbers and percentages of dropping-out and continuing students merely provides factual information and is insufficient towards an understanding of why such students discontinue their studies. To

this end the thesis also focuses on a longitudinal qualitative study which examines the problems encountered by students whilst in higher education and identifies the similarities and differences between dropping out and continuing students.

The thesis finally offers recommendations for the development of courses such as the Summer School which focus on non-traditional and non-standard students and, further, for wider application in the area of preparation for all students in higher education. These recommendations are based on the conclusions of both the quantitative and qualitative research.

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Glossary/definitions of terms

- "a" - assisted with entry to university on the basis of performance on Summer School, i.e., students who did not have sufficient previous qualifications to enter university
- APT - Area of Priority Treatment
- drop-out - non-completing student who left university without a degree, for any reason
- ED - Enumeration District, a numer of approximately 150 households grouped together for the purposes of assessing deprivation in areas
- EPA - Educational Priority Area
- FE - further education
- GCE - General Certificate of Education(England and Wales)
- HE - higher education
- HMI - Her Majesty's Inspectorate
- HNC/HND - Higher National Certificate/Higher National Diploma
- "n" - 'non-attenders', students who attended Summer School schools but did not attend Summer School
- non-SWAP - adults who attended the Summer School and who did not have a Scottish Wider Access Programme qualification
- NSS - non-Summer School
- SCE - Scottish Certificate of Education(Scotland)
- SED - Scottish Education Department
- SOED - Scottish Office Education Department
- SRC - Strathclyde Regional Council
- SS - Summer School
- SWAP - Scottish Wider Access Programme

• "u" - unassisted with entry to university through the Summer School, i.e., students who attended Summer School and who had sufficient previous qualifications to enter university

• UCAS/UCCA - Universities Central Admissions Service/ Universities Central Council on Admissions

Introduction

Orientation and methodology

Introduction

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i Introduction: Orientation of the thesis

The main aim of the thesis is to investigate the Pre-University Summer School, at the University of Glasgow, from the years 1986-1993. The investigation is undertaken through an examination of both groups of students who attended the Pre-University Summer School and of similar groups of students who did not attend the Summer School. The investigation focused on students from these groups who undertook undergraduate degrees at the University of Glasgow.

The Pre-University Summer School is a course which provides preparation and access to higher education for groups of students who are disadvantaged, socio-economically and/or educationally. If it could be shown that the students who attended this course have been successful in higher education, then it could be argued that such a course, or aspects of it, would be beneficial to other groups of similar students. The Summer School could then provide the basis for a model for future developments in the area of induction in higher education.

The central research question, therefore, is how can 'success' on the Pre-University Summer School be evaluated? The criterion for success established by the Director of the Summer School was that its students should perform as well as average groups of students

in higher education. This thesis, therefore, sets out to investigate and compare the academic performance at the University of Glasgow of students who participated in the Summer School with that of students from similar backgrounds who had not attended the Summer School. By such a comparative study the value, or not, of the Summer School initiative can be determined.

There are three distinct groups of students eligible to attend the Summer School:

1. School leavers from designated schools in Strathclyde Region.
2. Adults who have come from certain Scottish Wider Access Programme (SWAP) courses.
3. Individual adults who are socio-economically and/or educationally disadvantaged (non-SWAP adults).

The central research question this thesis addresses is:-

1. How can the 'success' of the Pre-University Summer School best be evaluated?

It is argued that this can be undertaken by examining the performance of past Summer School students in comparison to other groups of similar students. However, this then raises a set of further secondary research questions:-

1. What are the background/educational characteristics of the groups of students who are eligible to attend the Summer School?

2. How can similar groups who are equally disadvantaged be identified?

3. Is it possible to identify schools similar in number to those participating in the Summer School and also from areas of social and economic disadvantage which could be used as a control group in this study?

4. By what measures/indicators can these schools be identified?

5. Can adults who attended the University of Glasgow between 1986 and 1993 and who were similar in educational background to those who have attended the Summer School be identified and used as another control group in this thesis?

This investigation has become particularly relevant today. The Summer School began as a pilot project in 1986 at a time when expansion and widening access were beginning to come to the forefront of issues in higher education. Increased access was promoted by two White Papers 'Meeting The Challenge' (HMSO, 1987) and 'Higher Education: a new framework' (HMSO, 1991). It was further endorsed by Sir Christopher Ball, chairman of the CBI, in 'More Means Different' in 1990. Ball (1990) perceived that many more students, in particular non-traditional students, must be encouraged into higher education in order to raise the general level of education of the workforce, to increase social equity and to dissipate the threat of a rising 'underclass'.

The expansion of higher education which has taken place has exceeded all estimates. Kenneth Baker, then Secretary of State for Education in England and Wales, announced, in

1989, that his target was to raise the percentage of school leavers in higher education from 15% to 30% by the year 2000. To encourage this growth he introduced a system of incentives that rewarded universities for the number of students they attracted. However, the target of 30% had been almost reached by 1993 in England and Wales and exceeded in Scotland, seven years earlier than intended.

At the same time, the number of universities expanded in 1992, in England and Wales, and in 1993, in Scotland, when polytechnics and colleges of technology were allowed to adopt university status. This expansion has meant that there are many more university places to be filled.

The current issues, in this period of rapid expansion, have become those of standards and funding. The fear is that quality is decreasing with increasing numbers and at the same time concerns are raised over how to fund expansion (Scott-Clark & Rayment, 1995). The Committee of Vice Chancellors and Principals has asked the government-funded Higher Education Quality Council (HEQC) to investigate the possibility of setting a minimum standard for degrees. At the same time grant cuts and increased student loans are shifting the burden of financing the period of study progressively towards students. In particular, the cessation of the Mature Students Allowance will have severe consequences for many non-traditional students. This allowance afforded mature students approximately £1000 in addition to the student grant dependent on age. It is now generally agreed that, if higher education is to expand further, a way must be found to fund it without asking the taxpayer for more money. Scott-Clark and Rayment (1995) point out that higher education spending rose in real terms by 21% between 1989 and 1993 and that this cannot be sustained.

Within these contextual changes, courses such as the Summer School have come under increasing scrutiny. In the late 1980s it was sufficient to justify its existence to its funders, namely Strathclyde Regional Council, the University of Glasgow and other members of the Consortium of higher education institutions which support the Summer School. Justification, at that time, could be provided through annual reports detailing numbers attending and higher education destinations of past students. However, an increasingly popular way of evaluating access courses, routes into higher education, is to identify how students proceeded and performed at undergraduate levels (McBain, 1995). Concern is now abroad in the educational world regarding the academic worth of certain access courses and of students from these courses.

In September 1995, the 'scandal' of admitting non-standard students, i.e., those without minimum entry qualifications, in England and Wales was highlighted by the media (Scott-Clark & Rayment, 1995). Despite the fact that these students had completed foundation courses, it was argued that employers would not recognise them as potentially useful members of the workforce. Furthermore, the Summer School has been the forerunning model for other Scottish Special Entry Summer Schools which operate in most of the universities in Scotland. Therefore, an evaluation of the Summer School is of importance not only to these higher education institutions but also within the wider debate on expansion of higher education.

Wagner (1989) points out that the higher education institutions which restrict access are still those which are conferred status, prestige, honours and resources. He states:-

> It is still accepted implicitly, and occasionally stated explicitly, that those institutions who widen access only do so because they cannot attract the more traditionally qualified students.

> Access is seen as necessary to fill empty places, not as a deliberate choice of discrimination in favour of certain types of students. The argument that certain institutions widen access because they want to, rather than because they need to, is simply disbelieved (Wagner, 1989:p36).

In summary, the ethos in higher education is rapidly altering from expansion to consolidation (Ross, 1994). The emphases are on kite-marking standards, commercially funded universities and self-funded students, and therefore the position of the non-traditional student becomes increasingly vulnerable.

ii The theoretical contexts of the thesis

The current issues of quality, performance and accountability in higher education represent the overarching purpose for undertaking the thesis. There are, however, other important contextual aspects to the thesis which emerge alongside the analysis within the specific chapters. These theoretical contexts have been included within the chapters as opposed to within a separate contextual chapter for the following reason: although the contexts are all linked to the position of socio-economically and educationally disadvantaged students in higher education, the contexts are more specifically linked to the different aspects of the analysis. For example, Chapter Two traces the policy which led to the inception of the Summer School. This policy is inextricably linked to the concept of deprivation and the use of indicators to measure deprivation. Accordingly, deprivation and indicators of deprivation are discussed within this chapter. Chapter Four, which presents the analysis of the academic performance of the school leavers, is linked to equality of opportunity and social class and under-achievement. Again these issues are debated within this chapter. Chapter Six, which summarises the performance of all of the Summer School students as well as the non-SWAP adults, is set within the context of positive discrimination. And Chapter

Seven examines the theories and methods of research on withdrawing students as this chapter presents the findings, within the thesis, on the reasons for students withdrawing from university.

Having stated the contextual issues of the thesis, it becomes necessary to examine briefly the methodologies used.

iii Methods used to investigate the Pre-University Summer School

Within the context of the changing issues in higher education outlined previously, the central research question of the thesis was how to evaluate the success of the Pre-University Summer School. It will be recalled that the criterion for success had been set by the Director of the Summer School, namely that its students should perform as well as an average group of students in higher education.

Preliminary evidence (Walker, 1992a) had indicated that the students who had attended the Summer School in the early years, 1986-1988, had performed at least as well as the general body of students at the University of Glasgow and better than other access students. If it could be shown that this had also been the case in the later years, 1989-1993, when the Summer School began to accept many more non-traditional students, then it could be argued that there were indeed elements of the Summer School which should be incorporated into all access/preparation courses to improve students' chances of succeeding on degree courses. Thus the central concern of the thesis became an evaluation of the Summer School based on the hypothesis that the Summer School had a positive impact on

the performance of its past students and, therefore, could be adapted for a wider audience of students.

The question of how this evaluation could be undertaken had to be addressed. Evaluation research can be conceptualised as a sequence of events, or a series of steps. Struening and Guttentag (1975) identified the series of steps which are involved in completing evaluation studies. They state:-

> Among the crucial steps involved in completing evaluation studies are the following: conceptualizing the problem, reviewing relevant literature, developing a research strategy, determining a research design, selecting and maintaining a sample, choosing measures and assessing their psychometric properties, selecting appropriate personnel to conduct the study, maintaining data collection standards, analyzing the data, and communicating the results. Many options are open to evaluators as they develop each crucial step in their specific studies (Struening & Guttentag, 1975:p3).

Struening and Guttentag have outlined the vital steps which it was considered were necessary to follow in order to undertake the evaluation in the thesis.

Evaluation research is usually concerned with assessing the effectiveness of programmes of social improvement. The efforts of the programmes are to improve some existing state of affairs and the evaluation research documents the amounts and kinds of improvement that occur (Nunnally, 1975). If a new programme of social improvement is effective, then the people who participate in the programme should improve, in other words, they change for the better through participation. Change and the measurement of change are the key issues in evaluation research.

Programmes of social improvement are analogous to 'treatment' like that in a controlled experiment. Here in the thesis, it can be seen that the students who have attended the Summer School have received the 'treatment', i.e., the programme of improvement, whilst the control groups have not.

The measures for the study of change selected in the thesis could have been numerous, such as, for example, ability to use the university library or to take effective lecture notes. However, in line with current trends in evaluating success in higher education, it was determined by the author that success would be measured by progress and performance in degree examinations and graduation rates. It is acknowledged that the decision to measure success by this method introduced an element of bias in that the method had been selected by the author. However, it is argued that this measure of change was the most appropriate available for the quantitative analysis. Therefore the numbers/percentages of students who were continuing with degree studies and/or had graduated were measured against the numbers/percentages of students who had discontinued or dropped out. Further the performance of the students who had received the 'treatment', i.e., participated in the Summer School, was examined against that of those who did not participate.

In order to provide the most comprehensive evaluation possible it was determined that the most appropriate methods to employ would be longitudinal, providing a full picture of the performance of the largest possible sample of students over a period of time. Also these methods should be a combination of quantitative and qualitative research. The argument is that it is insufficient for the evaluation to produce numerical facts on the performance of the students without attempting to understand why they succeed or fail in higher education.

Therefore the aim was that the quantitative evaluation would provide the numerical facts and the qualitative would provide more comprehensive understanding.

iiia Longitudinal quantitative methods

The longitudinal quantitative methods consisted initially of a review of the academic performance of all of the past Summer School students who entered the University of Glasgow, 1986-1993. The data collection was confined to the University of Glasgow, although many past Summer School students had entered other higher education institutions within the Consortium, and some outwith the Consortium. This focus was both necessitated by lack of access to information on Summer School students who did not enter the University of Glasgow and, at the same time, dictated by the fact that the largest group of past Summer School students had entered this University, thus producing a sufficiently large group for the analysis.

The quantitative analysis, therefore, focused initially on the examination passes and completion rates of the past Summer School students. There were three major problems encountered with this analysis:-

1. The Summer School students were not entirely a homogeneous group.

The Summer School students were homogeneous only in that they had all attended Summer School and that they were all in some sense socio-economically or educationally disadvantaged. However, they were heterogeneous in that their previous qualifications and

entry routes differed as did age and other demographic details. There were three distinct groups of Summer School students. These were determined as:-

- school leavers from the 31 schools in the areas of greatest social and economic deprivation in Strathclyde Region
- adults from certain Scottish Wider Access Programme (SWAP) courses, primarily Science and Engineering
- adults with a variety of non-SWAP qualifications ranging from Scottish Certificate of Education (SCE) Highers to Higher National Certificates (HNC) and various other modular qualifications

The diversity of the students was further compounded by the fact that some had entered the University by meeting General Entrance Requirements and/or faculty entrance requirements whereas others had gained entry through performing well on the Summer School, having not met General Entry Requirements and/or faculty entrance requirements. Throughout this thesis Summer School students who entered the University by meeting the General Entrance Requirements and/or faculty entrance requirements are referred to as "unassisted students", i.e., they entered without any assistance from the Summer School. Those students who did not have the General Entrance Requirements and/or faculty entry requirements but who gained entry as a result of their Summer School performance are termed "assisted students".

It was determined that in order to evaluate the Director's criterion of success, i.e., that students performed as well as an average group of students, these 'average' groups of students should have similar educational backgrounds. The difference would be that they had not attended the Summer School. It was considered that the academic performance of the past Summer School students could not be compared with a random selection from the general body of students as this would take no account of educational and social

background. How then could comparative groups of similar students be identified? It seemed that the most appropriate groups for comparison would be as follows:-

- school leavers from the same 31 schools participating in the Summer School who had not attended Summer School
- school leavers from a group of similar 31 schools in Strathclyde Region, i.e., from areas of social and economic deprivation
- adults from SWAP courses who had not attended Summer School

It was found not to be possible to identify a comparative group of non-SWAP adults as their previous qualifications were so diverse. Furthermore, as the Summer School students were the only group to have entered the University through the assisted places scheme it was impossible to find a comparative group, accordingly, the performance of the assisted students was compared with that of the unassisted students within each of the three main groups. The groups of students were as follows:-

- school leavers who attended Summer School and who met General Entrance Requirements and/or faculty entrance requirements
- school leavers who attended Summer School who did not meet General Entrance Requirements and/or faculty entrance requirements and used the assisted places scheme as a means of entry
- adults from SWAP courses who attended Summer School and who met General Entrance Requirements and/or faculty entrance requirements
- adults from SWAP courses who attended Summer School and who did not meet General Entrance Requirements and/or faculty entrance requirements and used the assisted places scheme as a means of entry
- adults with a variety of non-SWAP qualifications who attended Summer School and who met General Entrance Requirements and/or faculty entrance requirements
- adults with a variety of non-SWAP qualifications who attended Summer School and who did not meet General Entrance Requirements and/or faculty entrance requirements and used the assisted places scheme as a means of entry

2. The selection of a group of 31 schools in Strathclyde Region similar to the 31 Summer School schools in terms of social and economic deprivation proved to have difficulties.

The schools designated to participate in the Summer School had been selected in 1986 as being those in the worst areas of social deprivation within Strathclyde Region. This is discussed in detail in Chapter Two. These areas were termed "Areas of Priority Treatment". Since that time, the Region has moved away from the notion of defining multiple deprivation on an area basis and towards examining deprivation by the use of individual indicators. Therefore, Strathclyde Regional Council's Education Department, when defining deprivation, now no longer focuses on schools in Areas of Priority Treatment but instead on the individual characteristics of the schools. This meant that in order to select a control group of 31 comparative schools it was first necessary to devise new methods of identifying the characteristics of the Summer School schools which were more in line with the methods currently used by Region's Education Department. These methods, once identified, could then be applied to the selection of comparative schools with the same characteristics. This is discussed in Chapter Three. By using the Spearman Rank Correlation Test, which correlates ranked sets of data for equal numbers of pairs, in this case rankings arising from the characteristics of the 31 Summer School schools, it was then possible to identify a control group of 31 similar schools.

3. There were difficulties encountered in identifying the students in the University records.

Prior to undertaking of this thesis the Summer School students were not identified as such by the records held by the University of Glasgow's Registry. Students' names and dates of

birth had to be obtained from paper-file records held by the Summer School. From this it was possible to obtain their matriculation numbers through scanning the university records. Having determined the students' matriculation numbers, the numbers were then fed into the Registry's current and historical data bases of student degree exam passes, in small groups of approximately twenty matriculation numbers at a time. This information then appeared on two lists chronologically and not by individual student record. In other words, the performance in degree exams of the entire group of twenty students for a given year was listed together, followed by the performance in the following year etc. This information differed between the current and historical data bases. The current data base gave the most up-to-date information and the historical data base gave the full information on the number of degree examination passes. It was therefore necessary to refer to both of them and by this method it was possible to compile individual records for each of the students.

As there is no class of degree given to students who graduate with Ordinary degrees at the University of Glasgow, it was necessary to refer back to faculty regulations to ensure that students who appeared to have the correct number of passes obtained these passes at the required levels for Ordinary graduation.

The matriculation numbers of the comparative groups of students who did not attend Summer School were available either through the identifiers that they had attended one of the 62 schools, 31 Summer School and 31 non-Summer School, or that they had attended a SWAP course. These matriculation numbers were then fed through the Registry's data bases by the same method outlined above.

The collection of the data was also hindered by the fact that it was only possible to access the records when a terminal linked to these records became available for use and by problems with the computing system generally.

In all, there were 1698 student records which had to be compiled and analysed by these methods. A breakdown of these numbers is given below:-

Summer School students, 1986-1993:-

• school leavers	212
• SWAP	89
• non-SWAP	105
• total Summer School	406

Non-Summer School students, 1986-1993:-

• school leavers, same 31 schools	354
• school leavers, comparative schools	838
• SWAP, non-Summer School	100
• total non-Summer School	1292

iiib Longitudinal qualitative analysis

The qualitative analysis was also longitudinal and consisted in tracking a group of 57 Summer School students from the 1992 Summer School into their third year of degree study at the University of Glasgow. This number represented approximately half the total number entering the University from the Summer School that year. Details of the sample selection are given in Chapter Seven.

The methodology consisted of seven semi-structured interviews over a two and a half year period for each student. The results of the interviews were analysed as follows:-

Case studies were compiled for each of the 57 students by analysing their responses in the interviews and their academic transcripts at the end of each year. The case studies of the students who dropped out were then compared with the case studies of the students who continued. This analysis focused on the academic and personal problems encountered by the students.

iv The validity of the analysis

The question of the validity of both the quantitative and qualitative analysis had to be addressed. Validity by its strictest definition means "based on the truth". However, generally a measuring instrument is valid if it does what it is intended to do. It was considered that the quantitative analysis was as valid as the University of Glasgow students' records allowed and, therefore, was not called to question. However, there are always validity questions within qualitative research. To the extent that a variable which is to be measured is abstract rather than concrete it is referred to, in theories of validity, as being a construct. Nunnally and Durham (1975) expand on this, they state:-

> Such a variable is literally a construct in that it is something that a scientist puts together from his own imagination, something that does not exist as an isolated, observable dimension of behaviour. This construct represents a hypothesis (usually only half formed) that a variety of behaviours will correlate with one another in studies of individual differences and/or will be similarly affected by experimental treatments (Nunnally & Durham, 1975:p297).

In a strict sense 'construct validity' is logically impossible, since scientists can never be sure that a construct has been measured or that a theory regarding a construct has been tested. The evidence obtained from the research is not so much proof of the truth of the theory as it is proof of its usefulness.

No social data is totally accurate. Weiss (1975) states that inaccuracy creeps in through a number of channels. These are:-

1. Predispositions of the respondent. Problems arise here if the respondent wishes to give the 'right' answer; has a faulty memory; is indifferent, acquiescent or deferential; or desires to live up to the stereotype.

2. Predispositions of the interviewer. The interviewer brings with him/her attitudes, expectations and prejudices. These can all produce bias.

3. The procedures used in the study. The procedures strongly influence the ground on which the two meet, e.g., wording of the questions, length of interviews, methods of recording the answers. Long complicated interviews can reduce co-operation and increase error. Socially sensitive questions lead to a tendency to misreport.

4. Interaction between respondent and interviewer. Over a period of time a relationship builds up between respondent and interviewer and the immediate presence of the interviewer becomes a salient point of the interview. It, therefore, is necessary for the interviewer to remain both impartial and at the same time establish a co-operative rapport.

Weiss states:-

> Valid answers, when reduced to quantitative terms, actually provide a measure of the concept they purport to measure. Thus, the burden of establishing or improving response validity falls not only on the interviewer and the respondent, but also on the researcher who develops concepts, devises measures, writes questions, and manipulates the consequent data (Weiss, 1975:p363).

Throughout the longitudinal qualitative analysis in this thesis the researcher and the interviewer were one and the same. It is argued that this increased the validity in that there could have been no misunderstanding between setting and delivering the questions. At the same time it is acknowledged that bias could have arisen in the analysis of the interviews. For this reason, an educational researcher with considerable interview experience was asked to review independently the case studies in order to cross-validate the results.

v Summary

Every effort was made to increase validity and to reduce bias in the qualitative aspects of the thesis where possible. Having acknowledged this, the research results are presented initially by examining the structures and provision of the Pre-University Summer School, and further, as part of the network of Scottish Summer Schools (Chapter One). The thesis then historically traces the policy and legislation which led to the inception of the Summer School (Chapter Two). Thereafter, the comparative schools are selected (Chapter Three) and the whole group of school leavers analysed (Chapter Four). Detailed analysis of the performance of the SWAP students follows (Chapter Five), and the final quantitative analysis is presented in Chapter Six. The qualitative analysis is presented in Chapter Seven

and the final chapter, Chapter Eight, presents the conclusions and recommendations based on the findings of both the quantitative and qualitative analysis.

Chapter One

The Pre-University Summer School

Chapter One

The Pre-University Summer School

1.1 Introduction: Orientation of the Chapter

This chapter is intended to offer the reader an introduction to the Pre-University Summer School at the University of Glasgow and this type of provision in higher education in Scotland. It, therefore, is primarily factual. A more analytical review of the policy leading to the inception of the Summer School within the context of deprivation is offered in Chapter Two.

The Pre-University Summer School began as an innovative pilot project in 1986. It was the first Summer School of its kind in Scotland. However, currently there are summer schools operating in eleven of Scotland's universities. This chapter concentrates upon, initially, the Pre-University Summer School. It provides information on the following: the target groups; the main aims; the curriculum of the first week, "The University and Its Ways", and of the following eight weeks where students study their subject choices. Details are also given on assessment and the assisted places scheme and on funding and staffing arrangements. Some further information is offered on the numbers of students involved over the years.

A review of the more general provision of summer schools in Scottish universities is provided. Summer schools can be viewed as one of two types:-

1. Science Enhancement. These summer schools target educationally disadvantaged students and provide access to Science and Engineering courses in higher education.

2. Special Entry. These summer schools target socio-economically and educationally disadvantaged students and provide access to higher education courses of all types.

Most of the Special Entry summer schools borrowed or adapted aspects of 'good practice' from the Pre-University Summer School, which can be regarded both as a Special Entry Summer School, in that students can enter university as a result of a good academic performance at the Summer School, and as having links with Science Enhancement Summer Schools in that it targets educationally disadvantaged students.

1.2 The Pre-University Summer School

The Pre-University Summer School began as a pilot project in 1986. It is a course which runs over the summer before entry to higher education and offers preparation and access to socio-economically and/or educationally disadvantaged students. Initially in 1986, it targeted only school leavers from nine schools in Strathclyde Region, designated by the Region as being the most deprived. However, thereafter the number of schools involved grew and, at the same time, from 1987 onwards, the Summer School began to accept increasing numbers of adults. Also, from 1987, the Summer School began to operate on

behalf of a consortium of higher education institutions in Strathclyde Region. The consortium now includes The University of Glasgow, The University of Strathclyde, Glasgow Caledonian University, The University of Paisley, and The Glasgow School of Art. The central administration of the Summer School is based at The University of Glasgow.

1.2.1 The target groups of the Pre-University Summer School

There are three distinct groups targeted by the Pre-University Summer School. These groups are:-

• School leavers from 31 schools, designated as being amongst the most deprived in Strathclyde Region. These students are targeted on an aggregate basis by school, i.e., any student attending one of the 31 schools and interested in higher education is eligible for the Summer School.

• SWAP adults. These are students who have attended certain Scottish Wider Access Prgramme (SWAP) courses. The SWAP courses are one-year modular access courses which are certified by The Scottish Vocational Education Council (SCOTVEC). The target group attended SWAP courses within the West of Scotland Access Programme and as such were targeted on a group basis. The emphasis of these courses is generally on Science and Engineering students but not exclusively so. SWAP students have been accepted on the Summer School since 1988.

• Non-SWAP adults. These are educationally and/or socio-economically disadvantaged adults with various qualifications other than SWAP courses, including adults in the designated schools. These students have been accepted since 1987 and are targeted mostly on an individual basis.

1.2.2 Main aims of the Pre-University Summer School

There are two main aims of the Summer School.

1. To give the students confidence in themselves and in their abilities to cope at university.

2. To allow those who have not reached the standards designated by admissions officers to have their applications reconsidered on the basis of their Summer School reports (Dunn, 1989b).

The first main aim is to increase confidence. This is done by 'demystifying' higher education in that students are introduced to the way academic and social life is conducted at university. Week One of the Summer School can be viewed solely as an induction course. Furthermore, confidence is raised through an introduction to the subjects the students intend to study in the first year of university. The second main aim, to offer 'top up' qualifications for access, is met through the assisted places scheme, which allows students who have been rejected by universities to have their applications reconsidered on the basis of their performance at Summer School.

1.2.3 The curriculum of the Pre-University Summer School

The curriculum is divided into two distinct areas:-

1. Week One is entitled "The University and Its Ways". During this week the students are introduced to various aspects of university life. These include lectures and how to take lecture notes; seminars, group discussions and presentations of papers; the library, using computer terminals and retrieving information; and tours of the campuses, depending upon the students' first choice of destination. There are also lectures on communication skills; on assessment, including class essays, class tickets, exemptions; on using reading lists; on time management; and on writing laboratory reports. Information is also given, during Week One, on matriculation procedures; student loans; banks; and financial and personal problems (Dunn, 1995).

Week One is aimed at increasing confidence by introducing students to new ways of approaching university life and by helping students to feel that they are 'insiders' in a new environment. It is intended that the Summer School students, most of whom do not have a tradition of higher education in their family backgrounds, will become familiar with the university before their undergraduate course starts so that the environment in which they find themselves is no longer alien to them. In many cases their confidence is increased in that, by October, they are able to advise other new undergraduates on the ways of doing things at university.

2. Weeks Two to Nine are devoted to studying three subjects of the students' choice. They select subjects which they intend to study in the first year of their degree course. They are

free to change subject(s) if they realise that a subject they had hoped to study at university is not for them. Approximately 30% do so (Walker, 1992b). In the first Summer School in 1986 the subjects were taught at SCE Higher level, offering, in essence, remediation. However, from 1987 onward it was determined that it would be better for the students to have subjects taught at first year university level so that they could assess whether they liked a subject and were likely to be good at it at university. Accordingly tutors now select and teach aspects of the first year syllabus in their subject, another advantage being that when the students enter university, they are already familiar with sections of the first year course. Each teaching group contains a maximum of 25 students and operates in two half-day blocks of time. For example, Psychology, which is a very popular subject at present, is taught in five teaching groups throughout the week, each with two half-day sessions.

Also running between Weeks Two and Nine is a compulsory Written English course, 'English Language'. This is a half-course and is taught either with an Arts or Science bias, depending on the faculty destinations of the students in the group. Arts-based students, and this includes students entering the Faculties of Arts, Social Sciences and Law and Financial Studies, focus on essay and writing skills required for degrees in these Faculties, whereas Science students, and this includes the Faculties of Science, Engineering, Medicine and Dentistry, focus on the writing of laboratory reports and other Science-based writing and study skills This course aims to improve generally the students' standards of transferable skills.

Teaching takes place at The University of Glasgow, The University of Strathclyde, Glasgow Caledonian University and the Glasgow School of Art (it is aimed to match the location of students' Summer School courses to first choice of university where possible)

so, for example, four of the five Psychology groups are taught at the University of Glasgow and the fifth at the University of Strathclyde.

The subject choice available to the students attending Summer School has increased steadily over the years. In 1986 the Summer School offered only Mathematics, Physics and Chemistry. The following year this was extended to include English, French and Philosophy. In 1989 the choice was extended again to include English Language, English Literature, Sociology, Psychology, Economics, Biology, Accountancy, Art, Computing Science and Engineering. The most recent addition has been Law in 1993 (Dunn, Annual Reports, 1986-1995).

1.2.4 Assessment and the assisted places scheme within the Pre-University Summer School

Almost all the students attending the Summer School hold conditional offers of entry to higher education through the Universities Central Admissions Service (UCAS) (there are a few who have unconditional offers and a handful who know they will return to school for a sixth year). Those who meet the conditions of their offers from the universities are not formally assessed on the Summer School. Those who do not meet the conditions of their offers are formally assessed on their performance at Summer School. Tutors in the final week of the course are requested to state whether or not they think the students are likely to cope with first year work in their subject, not whether they can guarantee that they will pass. It should be remembered that, throughout this thesis, those students who entered the University of Glasgow by this means of entry are termed 'assisted'. This refers to this

assisted places scheme. Those who met entrance requirements and did not require the Summer School performance to be taken into account are referred to as 'unassisted'.

The assisted places scheme operates in the following way. Students must receive positive assessments in all four of their subjects, including English Language, to qualify for an assisted place. When a student has received a positive report through the Summer School the report is then sent to the admissions officer of the faculty/university to which the student is applying. The student will then have his/her application reconsidered on the basis of the report. The University of Glasgow, for example, sets aside 50 places on a quota basis each year for assisted places students (University of Glasgow, 1985). Since 1993, ten of these places have been available in the Faculty of Law.

Over the years, 1986 to 1993, an average of approximately 30% of all Summer School students who subsequently entered higher education have done so through the assisted places scheme (Dunn, Annual Reports, 1986-1993).

A brokerage system operates through the consortium whereby, if students have not met their original UCAS offer and have been rejected by their first choice of higher education institution, they may still enter higher education in one of the other institutions involved on the strength of their Summer School report. This system of brokerage is known as the Colleges and Universities Entrance Scheme (CUES). The Colleges and Universities Entrance Scheme also operates on an 'in-house' basis in that applicants who have come from the schools designated to participate in the Summer School have the acronym 'CUES' stamped on their UCAS forms. This informs admissions officers of the background of the

applicant in order that that can be taken into consideration when the application is being looked at.

1.2.5 Funding and staffing arrangements in the Pre-University Summer School

Overall funding is provided annually by Strathclyde Regional Council. The figure has been set at £59,000 per annum in recent years. However, the universities match this in kind by providing lecture theatres, laboratory space and teaching rooms plus lighting, heating and equipment. Further, the honoraria which the teaching staff receive can hardly be said to approach even remotely market rates. After deregionalisation in April 1996, the Summer School will have to negotiate funding with the individual new authorities.

There are no fees for the students. However, there are also no grants. Students receive travel passes to and from their homes. The funding for travel is also provided by Strathclyde Region. This comes from a separate budget which is part of the Region's Bursary Funds. The travel budget is usually between £10,000 and £12,000.

Over the years the numbers of staff have risen. In 1986 there were nine. In 1989 this had risen to 65 members of staff involved. This figure rose to 75 by the following year and currently approximately 100 members of staff are involved. The central administration operates primarily from the Department of Education at the University of Glasgow but also from the University of Strathclyde. There are four/five members of staff at the University of Glasgow, including the Director and the Deputy Director, and two at the University of Strathclyde. Staff devote just part of their time to administering the Summer School. For

example, the Director is employed for 60% of his time to run the Summer School and the Deputy Director is employed for 50% of his time.

1.2.6 The numbers of students involved in the Pre-University Summer School

The pilot project of 1986 began with only ten students. This number rose to 27 in 1987, 45 in 1988 and 179 the following year. Thereafter, since 1990, the Summer School has enrolled approximately 250 students per year (Dunn, Annual Reports, 1986-1995). Generally, many more than the 250 students initially apply for Summer School at the beginning of the year preceding the Summer School. However, some then usually self-select by either deciding not to apply for higher education or opting for a summer job instead. Priority is always given to school leavers, after which places are made available to SWAP adults and non-SWAP students.

Approximately 70% of those who do attend Summer School enter higher education of some kind including Higher National Diploma (HND) courses (Hamilton, 1994). Those who do not enter higher education either return to school, enter further education, or seek employment. William Dunn, the Director of the Pre-University Summer School, in referring to 60 of the 250 1994 Summer School students states:-

> We do not regard the 60 students who did not enter higher education as failures. Most either saw that higher education was not for them this year and went back to school to do Highers or college to do modules or realised that university was not for them at all and sought employment. A small number went to college to do NCs or HNCs (Dunn, 1994:p2).

1.3 Summer schools at Scottish Universities

Summer schools now exist in eleven of the universities in Scotland. They have been established on the initiatives of individual institutions and not as a national scheme. However, there are consortia of higher education institutions in both Strathclyde Region and Tayside Region. Several summer schools have local partnerships involving some of the regional authorities.

Through funding from the Paul Hamlyn Foundation a project was launched, to run from September 1992 to December 1995, to assist in the development of collaboration and the exchange of information between summer schools. There are regular meetings among the directors of the summer schools where issues of common concern can be discussed. The issues range over topics such as self-evaluation and monitoring, support for student learning skills, exchange of information and materials, course funding, networking, and promotional publicity (Cudworth, 1995a).

The summer schools fall into two main categories:

1. Science Enhancement Summer Schools. These are summer schools which aim to recruit students with non-standard entrance qualifications into Science and Engineering.

2. Special Entry Summer Schools. These summer schools encourage the admission of non-traditional entrants, in particular from communities in areas of social and economic deprivation, to undergraduate programmes.

The length of time that the summer schools have been running, the duration of the courses, the student numbers, and the full or part-time nature of the courses vary between schools. Tables 1 and 2 below provide a summary of provision.

1.3.1 Science Enhancement Summer Schools

Six Scottish universities operate these types of courses. Details are summarised in Table 1.

Table 1 Science Enhancement Summer Schools

Science Enhancement Summer Schools	Start Year	Length in Weeks	Student Nos.	Full-Time or Part-Time (ft or pt)
University of Strathclyde	1988	10	100	pt
Robert Gordon University	1990	5	100	pt/ft
Paisley University	1990	6	35	ft
University of Abertay Dundee	1991	2	35	ft
Glasgow Caledonian University	1992	8+	350+	pt/ft
Napier University	1994	4	40	pt

(reproduced from *Summer School for Special Entry to Higher Education*, Bulletin edited by Cudworth, C., March 1995b:p6)

Science Enhancement Summer Schools address the problem of improving students' science and mathematical skills through an introduction to the first year university syllabus. Some also offer a flexible learning approach.

The main aim is to assist students, whose qualifications are not a true refection of their academic potential for degree study, in respect of the requirements for specific Science subjects and overall grades. As indicated in Table 1, these are short courses ranging from two to ten weeks. They are arranged to run for a number of weeks at some point between the end of SCE Higher course and the start of the universities' first terms. They are designed to respond to the publication of SCE Higher results in order to allow applicants to supplement their qualifications. In this respect Science Enhancement Summer Schools have similarities with the Pre-University Summer School in that they operate an element of access. However, the target audience is different in that the main emphasis is on educational disadvantage. There is no emphasis on socio-economic disadvantage. Students from all social backgrounds participate. The Pre-University Summer School's main emphasis is on socio-economic disadvantage although it also targets educationally deprived individuals.

1.3.2 Special Entry Summer Schools

Five Scottish universities have what might be termed "Special Entry Summer Schools". The Pre-University Summer School at the University of Glasgow was the first of these and provided the impetus and was the basic model adopted by the others. Table 2 provides a summary of these summer schools operating in Scotland.

Table 2 Special Entry Summer Schools

Special Entry Summer Schools	Start Year	Length in Weeks	Student Nos.	Full Time or Part Time (ft or pt)
Pre-University Summer School (Universities of Glasgow, Strathclyde, Glasgow Caledonian, Paisley and Glasgow School of Art)	1986	9	250+	pt
Summer School for Access (University of Aberdeen)	1991	10	170	ft
USE Summer School (University of Edinburgh)	1992	10	60	pt
Access Summer School (University of Dundee)	1993	10	80	ft
Access Summer School (University of Abertay Dundee)	1994	4	30	ft

(reproduced from *Summer School for Special Entry to Higher Education*, Bulletin edited by Cudworth, C., March 1995b:p6)

All Special Entry Summer Schools aim to encourage greater participation in university study by people from social classes III (manual), IV and V. They also aim to assist access to higher education for disadvantaged students. This provision follows the model of the Pre-University Summer School but is also in response to further evidence that, despite expansion in higher education in recent years, there has been little change in the student profile, in that those from social classes III (manual), IV and V are still under-represented. (Office of Population Censuses and Surveys, 1991, Polytechnics and Colleges Admissions Service, 1992, and Universities Central Council on Admissions, 1992). The Director of the Summer School for Access, University of Aberdeen, points out that improving opportunities by increasing the supply of places does not appear to have been effective in modifying this trend (Cudworth, 1995b).

All of the Special Entry Summer Schools, in line with the Science Enhancement Summer Schools, are short courses taking place some time between the end of SCE Higher exams and the start of first term undergraduate study. They offer introduction, preparation and qualifications for degree study. They provide a mixture of lectures, tutorials and practicals taught on campus by university staff. Some have tutoring support and self-instruction provision.

One of the features of the Special Entry Summer Schools is their ability to address specific regional issues. The Director of the Access Summer School, University of Dundee, Sheila Watt, states:-

> A feature of the Special Entry Summer Schools is their regional perspective, in the form of the work undertaken in the local communities. Promotion of the Summer Schools is addressed to specific secondary schools and communities, minority groups and disadvantaged individuals. The programmes work closely with schools in inner city "areas of priority treatment" as defined by the local authorities (Watt, 1995a: p2).

The summer schools usually last for approximately ten weeks from mid-June to late August with the exception of the Access Summer School, University of Abertay Dundee, which provides a shorter course of four weeks. The Summer Schools are all multi-disciplinary. There is no special emphasis on Science and Engineering. Some provide part-time courses whilst others are full-time.

All summer schools have an element of access. Chris Cudworth (1995c), co-ordinator of the Paul Hamlyn Project 1992-1995, states:-

> Over the various Summer Schools, between 30% and 80% of the students use the Summer School results to supplement their other qualifications to gain entry to their chosen course. The variation is due to differences in the nature of the courses and the origins of the students rather than any indicator of relative effectiveness (Cudworth, 1995c:p4).

There are, however, some clear differences between the various Special Entry Summer Schools, namely:-

- The Access Summer School, University of Dundee, does not target adults. The other Summer Schools do.

- The Access Summer School, University of Dundee, targets students who are deemed to be individually disadvantaged and, therefore, able to benefit from the Summer School. The other Summer School target on an aggregate basis largely. The exception is the Pre-University Summer School which targets groups from schools and from SWAP courses but also individual adults who are educationally disadvantaged.

- The Pre-University Summer School and the USE Summer School, University of Edinburgh, both provide part-time courses whereas the others provide full-time courses.

The summer schools also have many areas of similarity, some of which are outlined below:-

- All the Summer Schools guarantee entry to degree study provided Summer School performance is satisfactory. The Pre-University Summer School also guarantees entry to HND study.

- All of the Summer Schools are multi-disciplinary.

- All of the Summer Schools target socio-economically and educationally disadvantaged groups and individuals (Summer Schools for Special Entry to Higher Education in Scotland: Self evaluation and Monitoring Workshop, November 1994).

1.4 Summary

This chapter has provided the reader with an introduction to the Pre-University Summer School and highlighted the Summer School's position as part of the network of Scottish summer schools. The Pre-University Summer School was the fore-runner of the summer schools which now operate at ten other Scottish universities. These Summer Schools are all autonomous and place different emphases on targeting, length of course provision and part-time and full-time status. There are basically two types of Summer School - the Science Enhancement Summer School and the Special Entry Summer School. In the former the emphasis is on 'top up' qualifications whilst in the latter the emphasis is firmly rooted in compensating for deprivation.

Chapter Two

The origins of the Pre-University Summer School together with the selection of the participating schools

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The origins of the Pre-University Summer School together with the selection of the participating schools

2.1 Introduction: Orientation of the chapter

The Pre-University Summer School was an innovative development implemented in 1986 as a mechanism to compensate for backgrounds of deprivation by encouraging school leavers from certain schools in Strathclyde Region to participate in higher education. The previous chapter has provided details of the Summer School.

This chapter examines the concept of deprivation and some of the problems associated with the use of material and social indicators to define it. It then follows Strathclyde Regional Council's own methods of defining deprivation and its consequent identification and reassessment of Areas of Priority Treatment in the Region. From this it is possible to trace the development of the Drumchapel/Easterhouse Joint Initiative and of the Summer School as an adjunct to the Initiative, both being programmes designed to compensate for area-based deprivation.

The focus of the chapter is on the selection of the original schools for participation on the Summer School and of the schools which have joined the scheme in subsequent years. The aims of the chapter are twofold:-

1. To indicate the way in which the Pre-University Summer School has had its origins rooted in policy designed to compensate for deprivation. This policy focused initially on encouraging school leavers into higher education.

2. To bring to the fore the debate surrounding the definitions and identification of deprivation, as a precursor for Chapter Three, which seeks to select a control group of similarly deprived non-Summer School schools.

This chapter deals solely with schools - school leavers. Discussion regarding the position of adults on the Summer School comes later in the thesis.

It must be borne in mind that the Summer School is a programme designed to compensate for deprivation and that its designated schools were selected as being among those with the highest degree of deprivation within the Region. Therefore, it is first necessary to establish what is meant by deprivation.

2.2 The concept of deprivation

Prior to the emergence of the concept of deprivation in the late 1960s the identification of inequalities in Britain generally focused on the concept of poverty and primarily the examination of poor housing. These were, almost without exception, studies of 'slum'

areas (Norris, 1979). Deprivation as a concept attempts to bring together wider problem areas than that of material poverty. Townsend says:-

> Deprivation may be defined as a state of observable and demonstrable disadvantage relative to the local community or the wider society or nation to which an individual, family or group belongs. The idea has come to be applied to conditions (that is, physical, environmental and social states or circumstances) rather than resources and to specific and not only general circumstances, and therefore can be distinguished from the concept of poverty (Townsend, 1987:p125).

Norris argues that the notion of deprivation brings together the issues raised by three separate concepts - deprivation, multiple deprivation, and urban deprivation. He contends that the overriding concern in all three is the problem of inequality. The concept of deprivation, according to Norris, includes features other than material resources, specifically emotional and cultural inequalities. He states:-

> While the poor were often seen as those lying at the bottom of an overall distribution the deprived can be interpreted as being those who fall below a certain well-defined line. It turns the examination away from a study of the overall structure to those who do not reach a certain level.
> The introduction therefore of the problem of accessibility to non-material resources by the use of the notion of deprivation means that the issue is seen as multidimensional. Multiple deprivation as an issue emerges from this feature of deprivation as a concept. If deprivation means a relative lack of access to all kinds of resources, both material and non-material, then an immediate problem is the identification of the relationship between an individual's position and the whole range of dimensions to which the general notion is supposed to apply (Norris, 1979:p19).

The notion of deprivation is seen here as that of lack of access to both material and non-material resources and would include lack of access to higher education. If an argument were to be made against positive discrimination here, it would be that, with compulsory

schooling in Britain, all of society has an equal chance of entering higher education through the schooling system and therefore positive discrimination is unnecessary. However, research (Garner, 1989; Rutter & Madge, 1979) indicates that neighbourhood deprivation explains, to a large extent, poor attainment in school. Garner argues that young people from deprived areas could be doubly or even three times deprived by being disadvantaged in home circumstances, by compositional effects in the schools they attend and by where they live (Garner, 1989). Therefore, equality of opportunity and of access cannot apply in isolation without taking into account levels of deprivation. Furthermore Garner states that neighbourhood deprivation is the most important factor:-

> Neighbourhood deprivation depressed attainment. Within any school, children from the most deprived home neighbourhoods tended to perform worst, even after allowance was made statistically for differences in family-background. Attendance at schools which housed large proportions of children from deprived neighbourhoods tended to lower the child's attainment whatever the family characteristics of the child (Garner, 1989:p4).

By taking into account varying levels of deprivation and the effects of neighbourhood deprivation, it is possible to conclude that equality of access within higher education cannot currently be a valid concept without the use of positive discrimination. Positive discrimination tends to operate through area-based initiatives and, as will be shown, the Summer School is an example of this type of discrimination. There are, however, risks in the use of positive discrimination through area-based initiatives. The people who benefit most from positive discrimination are those most able to take advantage of any extra resources. These are usually the least deprived in a given area. At the same time the most disadvantaged who do not reside in that area will be excluded from the benefits of the policy initiative (Garner, 1989). In the case of the Summer School it is pupils who attend certain schools in Areas of Priority Treatment who are given access to positive

discrimination to the exclusion of others who might be equally deprived but do not attend the selected schools. The argument would here become one that proposes that positive discrimination should be directed at individuals and families. However, as deprivation is generally defined using an area-based approach, by the use of material and social indicators, it is logistically unlikely that a more individualistic strategy could be devised for use in local and central government policy.

2.2.1 The use of indicators to define deprivation

The study of deprivation tends to focus on efforts to develop efficient material and social indicators to discriminate among individuals, households, social groups and areas. The fact that these indicators can be identified by patterns of geographical concentration has resulted in the widespread adoption of area-based policies. The implementation of area-based policies has in turn concentrated effort still further towards the design of efficient indicators at the expense of researching the root causes. The lack of strong prior definition in the design of indicators has led to a situation in which deprivation has become that which the indicators measure. Edwards states:-

> First, urban deprivation has never been adequately defined, it is at best an ambiguous term and in all probability its nature and manifestations are constantly shifting. The application of precise and detailed statistical techniques to such an ambiguous area is about as meaningful as using a micrometer to measure a marshmallow. Secondly, urban deprivation is a description of the human condition - often a miserable condition - and politicians, administrators and social scientists have no moral qualifications which enable them to measure fine degrees of misery....Finally, and more practically, the designation and application of social indicators must always be seen firmly within the context of the use to which they will be put. They are but a crude exercise to identify some areas - and some concentrations of populations - for which a claim can be made

> that they are amongst the most deprived and therefore deserving of additional benefits (Edwards, 1975:p280).

Townsend (1987) supports this argument by pointing out that there is a difference between a measure of deprivation and the types of people experiencing that deprivation. He uses the example that being a certain status, perhaps, black, old or a single parent, is not a measure of deprivation. Even if many people with such statuses are deprived, it is their deprivation and not their status which should be measured.

Research into deprivation should focus on explanations of particular forms of deprivation rather than previously identified indicators. For example, directed research could focus on the root causes behind the ways in which low educational attainment is transmitted into particular life chances and styles (Garner, 1989). There are, however, advantages to defining deprivation through the use of previously identified indicators. Indicators are usually based on census data, thus are officially and nationally recognised, and as such produce credibility for the targeting of policies. Attempts to measure deprivation other than through the use of indicators have limitations as they are rarely the basis for official policy.

The Strathclyde Regional Council model of defining deprivation relies heavily on the indicator method based on census data. In order to validate the indicator methods used, other agencies such as the Region's Social Work Department and Community Education Department were consulted to bring their experience and opinions to bear on the results of the use of indicators.

2.3 Deprivation and Areas of Priority Treatment in Strathclyde Region

In the 1970s Strathclyde Regional Council's (SRC) Social Strategy identified the need for an area-based strategy to tackle multiple deprivation. Consequently, Areas of Priority Treatment (APT) were first established in 1976. These were areas which were considered to be the most deprived in the Region and so required special provision and resources to compensate for this. The APTs were then reviewed in 1981/1982 and again in 1982/1983. For the purposes of this thesis the most important review was that of 1982/1983 as, it is argued, the Summer School came into being as a consequence of this.

2.3.1 The 1982/1983 review of Areas of Priority Treatment

The 1982/1983 review of Areas of Priority Treatment was carried out by Strathclyde Region's Chief Executive Department in conjunction with the Officer Group, which comprised representatives of Strathclyde Police and the Departments of Social Work and Education (Chief Executive SRC, 1983). The review was carried out initially by identifying the 'worst' 30% of the census Enumeration Districts (ED)[each ED contained approximately 150 households]. These 'worst' Enumeration Districts were identified using the following seven indicators of deprivation:-

unemployment
single parent households
large households
overcrowding
the permanently sick
houses lacking basic amenities
vacant houses (Chief Executive SRC, 1984)

All Enumeration Districts in Strathclyde Region were given a score for each of the indicators and from this an average score over the seven indicators was tabulated. By this method it was possible to identify which of the Enumeration Districts were in the 'worst' 30% in the Region.

After the identification of the 'worst' Enumeration Districts, meetings were held with staff in all six Divisions in Strathclyde Region. The six Divisions in Strathclyde Region are Argyll, Ayr, Dunbarton, Glasgow, Lanark and Renfrew. The meetings involved the Social Work Community Development Organiser, the Area Officer, or District Manager, and the Community Education Area Officer. The meetings were held for two purposes:-

1) to ascertain whether the results reflected the experience of the staff.

2) to establish where the boundaries should be in the event of areas comprising Enumeration Districts being adopted as areas of priority treatment.

These discussions confirmed that the results produced by the seven indicators accurately reflected the knowledge and experience of the locally based staff. There was hardly any disagreement about the areas identified (Officer Group SRC, 1983). At the same time meetings also took place with the Scottish Office Housing and Urban Renewal Research Unit and with Glasgow District Council Planning and Housing Departments. The purpose of the meetings was to compare the results of studies carried out by these two bodies which had similar but not identical indicators. This process showed that the use of different indicators did significantly affect the results, particularly at the level of individual Enumeration Districts. However there were very few differences between the three (Strathclyde Region, Scottish Office and Glasgow District Council) regarding the actual **areas** identified.

Based on the consultations and the results of the survey of Enumeration Districts, a list of areas was drawn up. This list identified 228 areas altogether. The problem then became how to reduce the number of areas to a manageable and realistic level in the context of both financial and staffing resources available to the Region. The concern was that this would involve subjective decision-making as to which were the 'worst' areas and, therefore, those most qualified for the kind of initiatives which were to be taken through an area-based approach (Officer Group SRC, 1983). Choices would have to be made between large areas and small areas and, most importantly, a decision would need to be made on a cut-off point below which areas would not receive APT status. In order to try to determine a solution to these problems it was decided to review the 228 areas using a combination of three methods.

1. Method One - each area was given an average factor score using the original seven indicators.

2. Method Two - the areas were re-grouped using the classification system of having at least five Enumeration Districts in the worst 5% in the Region.

3. Method Three - average scores on the individual indicators were calculated for each area. At this stage the main seven indicators were reduced to four indicators - those relating to large families, single parents, unemployment, and overcrowding. The Officer Group, explaining the reasons for this change, said:-

> This puts a greater emphasis on problems of families and children than on physical housing conditions or the permanently sick. This is justified by the fact that most of the areas with the highest vacancy rates and highest proportions of houses without amenities are in the private sector areas where there has been

> substantial change through rehabilitation or demolition since 1981. Many-but not all-of the areas with the highest proportions of permanently sick have been identified on the basis of the other indicators (Officer Group SRC, 1983:p3).

In practice greater importance was attached to the last two methods because there were considered to be two main disadvantages with the first method, i.e. , average factor score using the seven indicators. The disadvantages of Method One were seen to be:-

1. The method's total dependence on a process which had already been shown by the contrasting results of research by the Scottish Office and by Glasgow District Council to produce different results according to the indicators and weightings used.

2. The 'average' score received using the seven indicators depended on the Enumeration District structure of the areas. In other words, a small area with a single 'bad' ED might score highly. However a large area with a high scoring core of 'bad' EDs could receive a lower than average score if the remaining EDs in the area were not so 'bad'. It could therefore be possible for the results to reflect size and not severity.

2.3.2 Identifying Areas of Priority Treatment in Strathclyde Region

Because of the problems stated above with Method One, the 1982/1983 review relied primarily on Methods Two and Three to define which areas were to be deemed APT in Strathclyde Region.

Initially the review focused on Method Three, i.e., the average score on four indicators. Two cut-off points were selected for each of the four variables. In order to counteract the

problem of having too many areas the cut-off points were set deliberately high. These were:-

	Cut-off 1.	Cut-off 2.	Regional average
Unemployment	25%	23%	15.5%
Large Families	10%	8%	5.6%
Single Parents	20%	18%	14.8%
Overcrowding	20%	18%	11.1%

(Officer Group SRC, 1983)

The areas originally identified were ranked according to the number of indicators on which they scored above the cut-off points. The minimum score which was eventually taken for areas being considered as APT was anything over the highest cut-off point on any two indicators.

2.3.3 Results of the review based on the two methods used by Strathclyde Region

It was initially assumed that any ED scoring in the worst 5% in the Region should be included in an APT possibly with the exception of single EDs. These areas were, therefore, checked against their actual scores. The results at this stage were that 86 areas were identified as scoring highly on both Methods Two and Three. These 86 areas can be broken down as follows:-

- There were four areas with at least five contiguous EDs all in the worst 1% (4).
- Nineteen areas with at least five contiguous EDs all in the worst 5% were identified (19).

- There were 22 areas with at least five contiguous EDs in the worst 20%, at least some of which were in the worst 5% (22).

- There were four areas with at least five EDs in the worst 30%, at least one of which was in the worst 5% (4).

- Six further areas with fewer than five contiguous EDs, at least one of which was in the worst 5%, were included (6).

This gave a possible 55 APTs. The actual scores were then used to check the areas with no EDs in the worst 5% and from this the following other areas were included:-

- Fifteen areas with at least five areas with at least five contiguous EDs in the worst 10% (15).

- A further seven areas with at least one ED in the worst 10% and four areas with fewer than five EDs were listed (11).

- Three of the eleven areas with no EDs in the worst 10% also scored above the cut-off point on the actual scores and were included, although there had been no particular pressure to do so from local staff (Officer Group SRC, 1983) (3).

- Two further areas with large ethnic populations were also included, although they would not have been so using the above methods (2).

At this stage it was proposed that 86 areas be adopted for APT status. Of these 71 were existing APTs or parts of existing APTs before the 1982/1983 review. This meant that there would be fifteen new APTs. Seventeen previous APTs were to be de-designated. Of the seventeen, four were specifically mentioned by local staff as still requiring APT status, and eventually two of these were accepted. Therefore the 1982/1983 review identified 88 APTs in all.

The issue of marginal areas and loss of APT status raised the point as to what, if anything, should be done to help the de-designated areas and the other areas identified as multiply

deprived but not receiving APT status. These areas were considered to be significant for two reasons:-

1. The need to provide continuing support for initiatives started whilst areas were APT.

2. Many of these areas would have been eligible for the Urban Programme from the Scottish Office through meeting the criterion of having the worst 10% of EDs in Scotland.Thus, if the Regional Council did not afford these areas some status, then it could be denying community groups and voluntary organisations access to resources which central government had made available (Officer Group SRC, 1983).

In an effort to deal with the situation it was decided that the Officer Group in the Region looking at this issue should suggest to the Regional Deprivation Group that the areas identified in the analysis by both the Scottish Office and the Region could be given a "lesser-than-APT" status, which would entitle them to access to the Urban Programme. In practice these came to be known as 'other areas' of need identified by the Scottish Office.

At the same time it was recognised by the Officer Group that there were further areas of need which had not been recognised by the Scottish Office. It was agreed that these should be recognised but that less formal arrangements should be made for them.

2.3.4 Summary and results of the 1982/1983 Review of Areas of Priority Treatment in Strathclyde Region.

The 1982/1983 review of APTs in Strathclyde Region was carried out in order to identify the areas in the Region which were most in need of compensation for multiple deprivation. The review was undertaken by the Chief Executive's Department in conjunction with the Officer Group. It also took into account the results of similar reviews carried out by the Scottish Office and Glasgow District Council. The analysis involved primarily the

regrouping of areas through the classification of at least five EDS in the 'worst" 5% in the Region and then calculating an average score on four indicators, namely, large families, single parents, unemployment, and overcrowding. The results of this review were then considered by Divisional Deprivation Groups and their recommendations were discussed by the Regional Deprivation Group. The recommendations which resulted from this can be summarised as follows:-

- Fourteen Special Initiative Areas were to be designated. It was considered that the problems in these areas were so intense that they would require inter-agency co-operation using the past experience of the Area Initiatives and the Joint Economic Initiatives (Appendix I).

- The 88 areas identified should be adopted as the Areas of Priority Treatment in the Region (this number was inclusive of the fourteen Special Initiative Areas)

- There were also to be 113 areas recognised as 'other areas' of need. These areas were also identified by the Scottish Office and were to be eligible for community-based urban programme projects.

- A further 28 areas were recognised as possible 'other areas' of need but were not identified as such by the Scottish Office and, therefore, were not considered Regional Council priority. (Chief Executive SRC, 1983)

2.3.5 Divisional breakdown of deprivation in Strathclyde Region

From the review it was noted that, although Strathclyde Region had four out of ten of all the Enumeration Districts in Scotland, it had eight out of ten of the most deprived. Therefore it can be observed that there was a disproportionate level of deprivation in the Region as a whole in comparison with the rest of Scotland.

The results of the review indicated that of the six Divisions in Strathclyde Region Glasgow Division had the greatest concentration of multiple deprivation of all the Divisions. For example, Glasgow Division had 32% of all the Enumeration Districts in the Region but it

also had 69% of the 'worst' 1% when examined by the original seven indicators (Section 2.3.1) (Chief Executive SRC, 1983). Furthermore, twelve out of the fourteen Special Initiative Areas (Section 2.3.4) identified were in Glasgow Division. It can be concluded that the high density urban populations such as those in Glasgow Division are more likely to suffer from multiple deprivation through the problems associated with factors such as having large families, being single parents, unemployed and living in overcrowded accommodation.

2.4 The Drumchapel/Easterhouse Joint Initiative

Arising from the identification of the fourteen Special Initiative Areas through the 1982/1983 review of APTs, Glasgow District Council and Strathclyde Regional Council launched a major new initiative to deal with the two worst areas of deprivation in Glasgow District. These areas were Drumchapel and Easterhouse, council estates on the fringe of Glasgow. It was considered that they should be designated as priority areas for a joint social and economic initiative by both authorities (Chief Executive SRC, 1985). It was proposed at this stage that if the Joint Initiative was successful, then similar joint initiatives might be established at a later date. The initiatives would be monitored and evaluated as a means of identifying good practice for inclusion in subsequent initiatives. In other words, this was to be a pilot project for a larger scheme to tackle deprivation jointly between Strathclyde Region and Glasgow District.

2.4.1 Aims and objectives of the Drumchapel/Easterhouse Joint Initiative

The overall aim in both areas was to bring about fundamental and comprehensive improvements in the long term whilst at the same time taking short-term action to reduce unemployment and poverty, to improve health and housing conditions and to make better the quality of service and facilities.

The Joint Initiative had specific objectives:-

i) to regenerate the local economy and in particular to create jobs for local people.

ii) to maximise incomes and reduce poverty through the creation of jobs, provision of training opportunities and improvement of take-up rates of welfare benefits.

iii) to maximise community involvement in the proposals.

iv) to develop a sense of community identity.

v) to improve the condition and quality of housing.

vi) to improve health conditions and services.

vii) to improve education, social work, leisure and recreation services.

viii) to devolve management and implementation of the projects to the areas.

ix) to involve all appropriate agencies.

x) to maximise the use of all available resources including those of the private sector for appropriate purposes including shopping, leisure and recreation, housing and industrial development.

xi) to encourage innovation and joint working with the aim of finding more effective ways to meet the needs of the area.

xii) to generate a high degree of interest and commitment from staff working in the area, and other public agencies, the private sector and the community (Chief Executive SRC, 1985).

The overall aims and objectives of the Joint Initiative have been included in this chapter for two reasons:-

1. To demonstrate the type of developments which arose from the review of areas of multiple deprivation in the Region and in Glasgow District Council. It can be seen that efforts were to be made to tackle economic problems through offering local employment prospects, including training opportunities (i,ii). At the same time the Joint Initiative was committed to counteract social malaise through community involvement by encouraging local residents to take responsibility for themselves and their environment (iii,iv,viii). Problems of overcrowding and single parents were to be tackled by improving the housing available and also services such as health, education, social work, leisure and recreation (v,vi,vii).

2. To indicate how the University of Glasgow became involved in the Joint Initiative as a part of the overall aim to bring about fundamental and comprehensive long-term changes. This was to be undertaken in Drumchapel and Easterhouse, by fostering links with higher education institutions and by attempting to introduce an awareness of higher education amongst some of the members of the communities. The origins of this type of thinking can be observed in Objectives ix, xi and xii where the need to involve all appropriate agencies innovatively and jointly is outlined. This is why, therefore, the University of Glasgow was approached to assist in the Regional and District efforts to tackle the problems in the two areas of multiple deprivation. The form that the University's involvement took can now be discussed.

2.5 The University of Glasgow's involvement in the Drumchapel/Easterhouse Joint Initiative

The University of Glasgow was invited by Strathclyde Region's Director of Education to consider whether special provision should, and could, be made for school leavers from Drumchapel and Easterhouse who wished to enter the University. The argument for special provision was that pupils from these areas of deprivation suffered not only in social terms but also from poor school facilities and strong anti-educational attitudes. It was noted by the University that the relatively poor examination performance among school leavers from such areas had led to under-representation in some faculties and that the social consequences of this were undesirable (University of Glasgow, 1985). The notion of proactive involvement by the University in the areas of Drumchapel and Easterhouse was a possible long-term method of producing fundamental changes in the communities.

As a consequence of the invitation extended to the University, a series of meetings took place over a period of six months between the University and the Region. The result of these meetings was to implement a scheme which was to commence in the session 1986/1987, details of which are outlined in the section following.

2.5.1 Students from Areas of Deprivation at the University of Glasgow, 1986

In 1985 a document entitled 'Planning for the late 1980's' (University of Glasgow, 1985) was submitted to the University's Court. This paper outlined the part the University was to

play in the Drumchapel/Easterhouse Joint Initiative and was the result of negotiations with the Region. It detailed a scheme for students from Drumchapel and Easterhouse:-

1) The University was to admit students from the areas of Drumchapel and Easterhouse as a pilot scheme. These students were to enter under special conditions. If the scheme proved to be successful, then it would be extended to other areas of deprivation.

2) The University was to accept an annual quota of 50 such students to be divided and distributed among all faculties.

3) The students who were to be admitted through the scheme were to have academic qualifications which fell between General Entrance Requirements of the University and the published thresholds for the various faculties. In other words they would not have achieved 'the going rate' for entry to individual faculties but would not fall below entry requirements for the University as a whole. General Entrance Requirements are almost always lower than the rates required by faculties due to competition for places available.

4) Strathclyde Region was to provide extra academic support for the students admitted under this scheme. This support was to take the form of additional preparatory classes. This in effect is the basis of the Pre-University Summer School and at the same time indicated the Region's responsibility for provision.

5) The Region was to provide suitable accommodation for the students to permit them to live away from home. This provision was made to counteract the influences of the home environment and not due to travel difficulties as the two initiative areas, Drumchapel and Easterhouse, and the University are within Glasgow Division. In reality very few students have required this facility over the years, it only being available to those with severe difficulties at home. At the same time resources have been such that it would not have been possible to offer accommodation to all of the students involved. This type of provision could also be argued against in that it implies moral and social decisions regarding individuals' home environments which are based on value judgements. Nor could it be seen as benefiting the communities involved by removing from them those members who enter higher education (University of Glasgow, 1985).

The scheme, in effect, constituted positive discrimination. This, in turn, opened the University up to the criticism that it was discriminating in favour of those living in areas of deprivation whilst turning away better qualified applicants. To counter this argument, a prescribed number of places, 175, was earmarked for the scheme and was declared to be supernumerary to home and EC targets. In other words, it was considered important that

the positive discrimination of the scheme should not imply negative discrimination elsewhere (University of Glasgow, 1985).

Within this scheme lie the origins of the University's commitment to students from areas of deprivation. This commitment can currently be observed through the University's mission statement which states:-

> The aims of the University are....to offer higher education to individuals of all ages and social backgrounds with sufficient ability and motivation to profit from it (University of Glasgow, 1994:p1).

The mechanistic form of the commitment which the scheme detailed was a preparatory course for higher education, the Pre-University Summer School.

2.6 The selection of schools for participation in the Pre-University Summer School

From the decision of the University to assist students from areas of deprivation to enter higher education it is possible to map the developments which led to the Pre-University Summer School. The selection of schools to participate in the Summer School was an area-based decision arising from, initially, Strathclyde Regional Council's review of APTs, including the setting up of Special Initiative Areas, and latterly, the Joint Initiative of Strathclyde Region and Glasgow District Council. The schools were selected, in 1986, because they fell within the areas of Drumchapel and Easterhouse and, therefore, came under the Joint Initiative. At this stage the Summer School scheme was to run for three years and to be extended to other areas if successful.

The schools selected in 1986 were:-

Drumchapel
- Kingsridge SS(c)
- St Pius' SS(c)
- Waverley SS(c)

(SS denotes Secondary School)
(c denotes closed at time writing in 1996)

Easterhouse
- Cranhill SS(c)
- Garthamlock SS
- Lochend SS
- St Gregory's SS(c)
- St Leonard's SS
- Westwood SS(c)

Thus the Summer School initially involved nine schools in Drumchapel and Easterhouse. The reader will observe that six of the nine are currently closed. Falling rolls led to closures and amalgamations in the late 1980s. However, the pupils who would have attended these schools, had they been open, currently still participate in the scheme by attending the schools which have emerged from closures and amalgamations. For example, Drumchapel High, which currently participates in the Summer School, has taken the place of Kingsridge, St Pius' and Waverley Secondary Schools.

The first Pre-University Summer School took place in June-August 1986.

2.6.1 Expansion of the number of schools involved in the Summer School

In April 1987 the Co-ordinating Committee of the group for the Recruitment of Students From Specified Areas in Strathclyde Region held a meeting at the University of Glasgow (Co-ordinating Committee Memorandum 2/4/87). There it was agreed that the pilot

Summer School of 1986 had been a success and that it should be extended to other areas and other higher education institutions. This could have the effect of an increase in the number of students participating and the number of subjects on offer. This meeting had followed on from a preliminary gathering, which had taken place at the Glasgow College of Technology (now Glasgow Caledonian University) the previous month. There the Education Officer for Glasgow Division had intimated that Strathclyde Region felt the scheme should be extended in a limited way. The extension was to include two other higher education institutions, the University of Strathclyde and Glasgow College of Technology, and more secondary schools. The schools were to be selected by one criterion, namely, that they drew 80% of their in-take from primary schools in certain areas of deprivation (Co-ordinating Committee). All the schools which were selected at this time also lay within the fourteen Special Initiative Areas as defined by the Chief Executive of Strathclyde Region (see Appendix I). These areas listed were:-

Castlemilk
Govan
Greater Springburn area
Pollock area
The East End area

At this meeting it was agreed that the areas and the schools within those areas would be divided amongst the three higher education institutions. The precise division was determined by the Education Officer for the Glasgow Division of Strathclyde Regional Council. The areas and the schools for which the three higher education insitutions would have responsibility are listed below:-

1. Glasgow College of Technology:-

Castlemilk and Springburn areas

Glenwood SS(c)[now Castlemilk High School] (c denotes now closed)
Grange SS(c)[now Castlemilk High School]
St Margaret Mary's SS
Colston SS(c)[now Springburn Academy]
Albert SS(c)[now Springburn Academy]
Possilpark SS(c)
St Augustine's SS

2. University of Strathclyde:-

Pollock, Govan and East End areas

Craigbank SS(c)
Bellarmine SS
Govan High School
St Gerard's SS
John Street SS
St Mungo's Academy
Our Lady and St Francis(c)

3. University of Glasgow:-

Drumchapel and Easterhouse areas

Kingsridge SS(c)[now Drumchapel High]
St Pius' SS(c)[now Drumchapel High]
Waverley SS(c)[now Drumchapel High]
Cranhill SS(c)
Garthamlock SS
Lochend SS
St Gregory's SS(c)
St Leonard's SS
Westwood SS(c)
St Andrew's SS
(Co-ordinating Committee, 9/4/87:p2)

St Augustine's Secondary School and Our Lady and St Francis were both exceptions to the 80% catchment rule. However, they were included because of perceived need by the Co-ordinating Committee. The possible inclusion of John Ogilvie RC Secondary in Hamilton, Lanark, was also mentioned at this meeting but it was not included at that time.

The Committee of the Co-ordinating Group concerned with the Recruitment of Students from Specified Areas in Strathclyde Region (1987) outlined some of the problems which, it had been observed, were associated with higher education participation amongst pupils from areas of deprivation. These were given as:-

- Only a very small number of pupils attained three SCE Highers or more. Thus, very few would be likely to achieve General Entrance Requirements.
- Students who had higher education potential seldom thought of going to university. It was suggested that peer group pressures were largely responsible for this.
- Parents did not have higher education aspirations for their children.
- There were particular problems in encouraging ethnic minority groups into higher education. This was especially so where women were concerned.

As a result of the problems identified it was decided that the three higher education institutions now participating in the Summer School, University of Glasgow, University of Strathclyde and Glasgow College of Technology, would accept joint responsibility for the schools in their area. This was done not to promote rivalry but to increase the institutions' involvement with individual schools. The three higher education institutions participating now became known as the Consortium of the Pre-University Summer School. In order that university applications from students attending schools participating in the Summer School could be easily spotted by admissions officers, a system known as the Colleges and Universities Entrance Scheme (CUES) was established. A system of brokerage was set up

to facilitate entry to any of the three higher education institutions from any of the schools (see Chapter One, Section 1.2.4). The secondary schools were all issued with an ink marker, a stamp, bearing the letters "CUES". The schools were all asked to stamp in ink "CUES" on the front page of each UCCA application in order to indicate to admissions officers, in the various higher education institutions, that these students had come from the schools participating in the Summer School and, therefore, required special consideration.

The list of schools now participating in the Summer School in 1995 is somewhat different from the 1987 list of 24 schools. It includes fourteen of the 24 schools in Glasgow Division involved in 1987 plus three additional Glasgow schools, St Roch's, Smithycroft and All Saints' Secondary Schools. As previously indicated, closures and amalgamations have meant that one new school might encompass several old ones. Therefore, in this sense, none of the original schools has been removed from the scheme. Furthermore, 1989 saw some considerable expansion of the Summer School both to all of the higher education institutions in Strathclyde Region and to schools from other Divisions. The decision as to which schools to include from the other Divisions was for the first time made by the Director of the Summer School and not by the Region's Education Department. The schools from Divisions other than Glasgow were selected by two criteria, namely:-

- as being amongst the most deprived in the Divisions.
- as being within reasonable travelling distance of the higher education institutions. (This factor has proved to be crucial to the survival of the Summer School in that the limited resources given to students' travel expenses can be severely affected by even small numbers of students travelling long distances.)

2.6.2 Schools currently participating in the Pre-University Summer School

Currently there are 31 schools in Strathclyde Region participating in the Pre-University Summer School. There are two schools in Dunbarton Division, seventeen in Glasgow, two in Lanark and ten in Renfrew. The full list by Division can now be given:-

1 Dunbarton:-

Braidfield High
St Columba's High

2 Glasgow:-

All Saint's SS
Bellarmine SS
Castlemilk High
Drumchapel High
Garthamlock SS
Govan High
John Street SS
Lochend SS
Smithycroft SS
Springburn Academy
St Andrew's SS
St Augustine's SS
St Gerard's SS
St Leonard's SS
St Margaret Mary's SS
St Mungo's Academy
St Roch's SS

3. Lanark:-

Blantyre High
John Ogilvie High

4. Renfrew:-

Barrhead High
Glennifer High
Greenock High
Merksworth High
Notre Dame High

Port Glasgow High
St Luke's High
St Stephen's High
St Mirin's High
Wellington Academy

There are also four schools from Fife Region which participate in the Pre-University Summer School - Beath, Buckhaven, Kirkland and Lochgelly High Schools. However, these schools have not been included in the analysis of the performance of school leavers as their criteria for selection and funding arrangements are totally different. The schools in Fife are more 'comprehensive' in nature due to sparser populations and, therefore, pupils are selected by each school to participate in the Summer School on an individual basis. Also, funding is by a separate arrangement between Fife Region and the Summer School. These schools, therefore, act as an adjunct to the scheme and cannot be considered as participating according to the same terms as those in Strathclyde Region. Due to the diverse nature of the four Fife schools it would have been inappropriate to include them in the analysis and to attempt to select similar schools for the control group.

The reader should note that no schools were included from the Ayr and the Argyll Divisions of Strathclyde Region. The reasons for this are twofold:-

1) As in Fife Region, the disparate nature of the populations and the number of sparsely populated areas contribute towards a different profile of the schools from that of the more densely populated areas in the other Divisions. In other words the schools are more truly 'comprehensive' in make-up and, therefore, less appropriate for involvement in a scheme such as the Summer School, unless pupils were targeted on an individual basis which is considered an unacceptable form of positive discrimination by the organisers of the scheme.

2) As mentioned in section 2.6.1, the limited travel budget of the Summer School has meant that it would not be possible to offer places on the Summer School to participants who do not live within reasonable travelling distance.

2.7 Summary and conclusions

This chapter has identified the way in which the concept of deprivation arose in the 1960s as a follow-on from studies of poverty and poor housing. It was then shown that the main policy method used to identify deprivation has been that of the use of scores on indicators, e.g., percentage of unemployed, numbers of single parents. There are problems involved in the use of indicators (Edwards, 1975; Garner, 1989; Townsend, 1987). However, the indicator method is generally accepted for policy-making decisions as it relies on official census data and is, therefore, perceived to be 'indisputable evidence'. Strathclyde Regional Council has relied heavily on this use of indicators to define deprivation within its boundaries.

The selection of schools for participation on the Pre-University Summer School was traced by examining, historically, Strathclyde Regional Council's efforts to identify areas of multiple deprivation. From those identified 'Areas of Priority Treatment' the Regional Council then determined fourteen 'Areas of Special Initiative' and it was from this group of the 'worst' areas that the Drumchapel and Easterhouse Joint Initiative arose between Strathclyde Region and Glasgow District Council. It was a combined project to tackle multiple deprivation through inter-agency cooperation. The Summer School emerged as one of the innovative developments which came through liaison and co-operation between the Joint Initiative and the University of Glasgow. Its aim was to bring about fundamental changes in the communities within these areas by encouraging school leavers, without a family tradition of higher education, into the University.

The selection of schools to participate in the Summer School was on the basis of an area-based criterion, i.e., 80% of the in-take must be from primary schools in areas of deprivation. It focused, initially, on schools from Drumchapel and Easterhouse, and then also on other schools from the Special Initiative Areas in Glasgow Division. The expansion of the Summer School saw the inclusion of schools from other areas in other Divisions in Strathclyde Region areas which were considered to be similarly deprived.

Chapter Three

The selection and comparison of the control group of 31 non-Summer School schools

Chapter Three

The selection and comparison of the control group of 31 non-Summer School schools

3.1 Introduction: Orientation of the chapter

This chapter focuses on the selection of a comparative control group of 31 non-Summer School schools. As indicated in the "Introduction", Sections i & iii, the agreed criterion for 'success' of Summer School students, in higher education, was that they should perform as well as 'average' groups of students. The term 'average' was taken to mean groups with the same background qualifications and demographies, e.g., school leavers, SWAP students, the difference being that these students had not attended Summer School. The findings would have been invalid if the comparisons had been made against a random selection of the entire body of undergraduate students as this would not be comparing like with like. For example, it would not be appropriate to assess the performance of a mature student with modular qualifications against the performance of a school leaver.

In order to validate the findings of the analysis of the academic performance of the goups of students at the Summer School, it was determined that the most appropriate method was to

select control groups with characteristics as similar as possible to the groups attending Summer School. In Chapter Two it was explained that the schools selected to participate in the Summer School were chosen as being among the most deprived in four divisions in Strathclyde Region. It was, therefore, decided to attempt to select a control group of 31 similarly deprived schools within Strathclyde Region, if possible. This entailed the use of new methods of examining deprivation in the schools, Summer School and non-Summer School, to assess the levels of deprivation.

The chapter, initially, outlines the new methods of examining deprivation in the schools. It then reviews the Summer School schools by these methods to determine their characteristics. Having done this, it was then possible to select the control group schools by these methods. Accordingly, a group of 31 non-Summer School schools were then identified.

Thereafter this chapter assesses whether the new measures of deprivation are indeed correlated with entry to higher education. The question of whether the Summer School has increased the ratio of higher education entrants to the University of Glasgow is also addressed.

The 'true' comparative nature of the control group of schools is examined against the Summer School schools. This was deemed to be particularly relevant prior to the analysis of the performance of all of the school leavers in that the aim was to select schools which were as similar as possible. The results of this analysis are given in Chapter Four.

3.2 Comparative schools as a control group

The problem of selecting a control group of 31 non-Summer School schools was considerable. It was determined that these schools should have closely similar characteristics to the Summer School schools. The question was how could these schools be identified? Initially, it was considered that the comparative schools would be chosen by using the same methods used to select the Summer School schools (see Chapter Two, Sections 2.6 to 2.6.2). However, negotiations with the Strathclyde Region's Education Department (Personal interview with Chief Research Officer, SRC Education Dept., April 1994) indicated that there were now problems with this selection method. The problems were:-

1. The Summer School schools were originally selected as being in Special Initiative Areas which were also deemed Areas of Priority Treatment (APT) and by virtue of having 80% of their catchment in an APT. In late 1993 the Region had reviewed the notion of multiple deprivation in APTs and the result had been a move away from area-based multiple deprivation. From early 1994 onwards the Region examined deprivation on individual indicators - unemployment, single parents, overcrowding, long-term illness and vacant housing in small groups of Enumeration Districts (ED). Resources were targeted on these groups of EDs to counteract individual indicators of deprivation. Therefore, it was no longer appropriate to select schools by their location in an APT (Chief Executive SRC, 1993).

2. Although the Education Scotland Act (SED, 1981) included parental choice of school, it was not until the early 1990s that heightened parental awareness, through bodies such as

the school boards, increasingly led to many parents sending their children to schools other than those in their local catchment areas. This meant that it was no longer viable to examine deprivation in schools on area-based criteria.

3. De-regionalisation of Strathclyde Region in April 1996 would have soon rendered the selection method of the 1980s inappropriate and non-modifiable.

For these three reasons it was decided to use the same methods to identify the comparative schools as were now used by Strathclyde Regional Council's Education Department to determine deprivation in schools. When examining deprivation in schools, the Region's Education Department now focuses on the characteristics of the individual school and not on the area within which the school is situated. An example of an indicator of deprivation in an individual school might be the percentage of pupils receiving a clothing allowance or the percentage of pupils receiving free school meals. Having decided to adopt a method other than that used originally to identify the Summer School schools, it became necessary to re-examine these schools using the same indicators as used to identify the comparative schools. In other words, the socio-economic characteristics of the Summer School schools are being looked at again in order that the control group of schools should have similar features.

3.3 The Summer School Schools as part of all Strathclyde Region's secondary schools

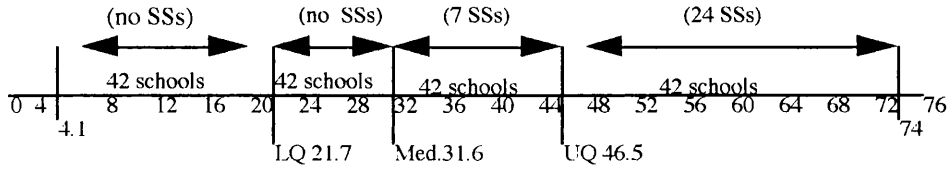
Before selecting the non-Summer School schools it was necessary to determine how the Summer School schools themselves fitted into the spectrum of all the 171 secondary

schools in Strathclyde Region, in relation to the discriminators selected. The focus was initially on general 'social background'. The two main social background indicators available at this stage were:-

> Clothing %, i.e., the percentage of pupils in the school receiving a clothing allowance (A government grant to enable low income and unemployed families to buy school clothes).
>
> APT%, i.e., the percentage of pupils attending the school who reside in an APT area.

The full list of the 171 schools by Clothing % and APT%, for the year 1993, is given in Appendix II, which lists the schools in increasing order by Clothing %. However, in order to provide a clear, concise picture of these statistics, the data can be presented here in diagrams giving, in each case, the quartiles, that is, the upper quartile, lower quartile and median. These diagrams indicate the positions of the Summer School schools in relation to all 171 secondary schools for the two social indicators.

Diagram 1 The percentage receiving clothing allowance by Quartiles (LQ=lower quartile, Med.=median, and UQ=upper quartile)



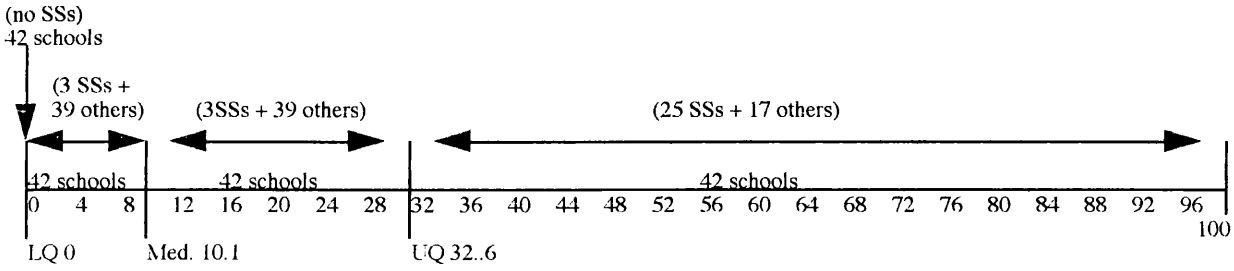
(SSs denotes Summer School schools)

Summer School schools clothing grant %:-

> **(Med.)**31.9, 32.2, 35.3, 37.3, 39.6, 41.9, 42.9**(UQ)** 48.8, 51.7, 51.8, 54.2, 55.9, 56.2, 59.4, 60.1, 60.5, 62, 62.3, 63.1, 63.7, 64, 64, 64.3, 65, 67.2, 68, 68.8, 71.3, 72, 72.8, 74.

Diagram 1 indicates that all of the Summer School schools had percentages receiving clothing allowances above the median for the 171 secondary schools. It should be noted that none of the Summer School schools was on the median and none was on the upper quartile.

Diagram 2 The APT% by Quartiles



Summer School schools APT%:-

8.8, 9.1, 9.3,(**Med**)13.6, 19.5, 20.5,(**UQ**)33.6, 34.8, 43.1, 48.2, 52.3, 58.9, 59.5, 61.1, 61.3, 67.5, 74.7, 79.6, 81.3, 82.8, 86.2, 86.6, 88.8, 90.4, 92.3, 93.1, 94.9, 95.2, 96.4, 98.5, 100.

There were no Summer School schools on the median or the quartiles.

Diagram 2, the APT% diagram, is too compressed at the lower end, in other words there are too many schools with no percentage APT to provide a clear statistical view of the position of the Summer School schools. From observing the two diagrams it becomes apparent that Diagram 1 (the Clothing % diagram) provides a much clearer picture of the position of the Summer School schools with regard to all the schools in Strathclyde Region. The 31 Summer School schools all lie in the upper half, i.e., all have greater than

the median Clothing % of 31.6%. Therefore, Clothing % is considered to be a better statistical discriminator for the purposes of selecting comparative schools. Consequently, it was decided to discard APT% and to use the Clothing % statistic as the identifying characteristic of social deprivation which "marked" the Summer School schools.

3.3.1 Selection of a comparative (i.e., control) group of 31 non-Summer School Schools

To commence the selection procedure, the task was initially to examine the non-Summer School schools which had a Clothing % of greater than or equal to the median, 31.6%, as was the case with all the Summer School schools. There were 56 non-Summer School schools in this group (see Appendix II). Of the 56, ten were from Ayr Division and one was from Argyll Division. Since Ayr and Argyll Division schools were not included in the Summer School schools selection (Chapter Two, Section 2.6.2), it was decided to ignore these eleven schools and to concentrate on the remaining 45 non-Summer School schools. The 31 schools to be selected from these remaining 45 had to have, as far as possible, similar characteristics to that of the 31 Summer School schools.

To make this further selection, it was decided to review data on 'behaviour' and 'performance'. Statistics in these areas were kindly provided by the Chief Research Officer, Strathclyde Regional Council's Education Department, for the year 1992/1993. They could be categorised as follows:-

1) Attendance %, i.e., the percentage of all enrolled pupils from S1 to S6 attending daily on the average. This is considered to be a 'behaviour' statistic.

2) Attainment %. This was examined initially under three headings:-

a) the percentage of S4 with three or more SCE Standard Grade passes at levels 1-3.
b) the percentage of S5 with one or more SCE Higher passes at grades A-C.
c) the percentage of S5 with three or more SCE Higher passes at grades A-C.

Attainment % is a 'performance' statistic.

Since the research is focusing on entrance to the University of Glasgow, it was decided to concentrate on 1) Attendance % and 2)c) Attainment % at three SCE Highers, A-C.

3.3.2 Structure of the 31 Summer School schools with regard to Clothing %, Attendance % and Attainment %

Having decided that the non-Summer School schools should be selected by the three statistical discriminators, Clothing %, Attendance %, and Attainment %, it became necessary to look at the Summer School schools by these characteristics. It was decided to rank the Summer School schools by the three sets of data.:-

1) r_1, rank by Clothing % (low rank corresponding to high clothing %).
2) r_2, rank by Attendance % (low rank corresponding to low attendance %).
3) r_3, rank by Attainment % (low rank corresponding to low attainment %).

If two or more schools had the same percentage, each was given the average rank of the ranks available for these schools. For example, if schools A and B had the same Clothing % and should have ranks 6 and 7, each was given rank r_1=6.5 and the ranks of the remaining schools started at r_1=8. Also, if three schools had, for example, the same Attendance % and should have ranks 21, 22 and 23, each was given the rank r_2=22 and the ranks of the remaining schools started at r_2=24.

The following table, Table 3, gives the ranks r_1, r_2, r_3 of the 31 Summer School schools as part of the 76 schools originally selected as being on or above the median for Clothing %, i.e., 31 Summer School schools and 45 non-Summer School schools:-

Table 3 Ranks of the Summer School schools as part of the 76 schools by Clothing %, Attendance % and Attainment %.

Summer School schools	Clothing% r_1	Attendance% r_2	Attainment% r_3
Castlemilk H(G)	1	20	15
Lochend SS(G)	2	2	3
St Augustine's SS(G)	3	3	7
St Leonard's SS(G)	4	19	9
St Margaret Mary's SS(G)	5	16	19.5
St Roch's SS(G)	6	11.5	3
Garthamlock SS(G)	7	22	3
Smithycroft SS(G)	9	10	10
Springburn A(G)	10	1	3
John Street SS(G)	11.5	6	14
St Gerard's SS(G)	11.5	7	17.5
Merksworth H(R)	13	17	16
Drumchapel H(G)	14	9	6
St Andrew's SS(G)	15.5	26.5	23
Bellarmine SS(G)	17	8	3
Wellington A(R)	18	56	24
All Saints' SS(G)	19	5	11
Govan H(G)	20	18	8
St Mirin's H(R)	22	37	73
Braidfield H(D)	24.5	31	21
St Mungo's A(G)	27	29	17.5
Greenock H(R)	29	67.5	43.5
St Stephen's H(R)	30	51	51
John Ogilvie H(L)	37	46	42
St Columba's H(D)	43	49	37.5
Port Glasgow H(R)	45	71	39
Notre Dame H(R)	52	67.5	75
Barrhead H(R)	56	43	54.5
Blantyre H(L)	64	53	25
St Luke's H(R)	73	70	68
Glennifer H(R)	74	58.5	58.5

(D) denotes Dunbarton Division
(G) denotes Glasgow Division
(L) denotes Lanark Division
(R) denotes Renfrew Division

Table 3 ranks the 31 Summer School schools by the three discriminators, i.e., Clothing %, Attendance % and Attainment %. It gives the rank of these schools in their positions relative to all of the 76 schools examined. Having determined the ranks, the next step was to correlate suitable pairs of columns of ranks, i.e., to determine whether there was a significant relationship between suitable pairs of discriminators. There is available a useful statistical test, the Spearman Correlation Test (Beyer, 1966; Cadogan & Sultan, 1994; Colton, 1974; Kendal, 1955; Schmidt, 1979). The significance level, p=0.05, will be used to interpret the obtained correlation coefficient. In other words, the probability of getting a particular set of data by chance is less than 5%. The test involves n sources (here the number of schools) giving rise to two sets of ranked data. Each set has a rank r_1 from the first set of data and a rank r_2 from the second. The correlation between the two sets of data involves their differences, r_1-r_2, and is measured by the formula:-

$$r_S = 1 - \frac{6\Sigma(r_1-r_2)^2}{n(n^2-1)} \quad ,$$

r_S being the Spearman rank correlation coefficient. The mathematics of the formula are shown in Appendix III.

If the modulus of the Spearman rank ($|r_S|$) is greater than or equal to a suitable critical value (given in the table of critical values, Table 4), for the appropriate value of n then there is a significant correlation. If r_S is > 0 there is a positive correlation and if r_S is < 0 there is a negative correlation. Table 4 below gives the critical values for certain numbers of pairs of measurements.

Table 4 Table of critical values for the numbers of pairs measured

Numbers of pairs of measurements	Critical value
5	1.00
6	0.89
7	0.79
8	0.74
9	0.68
10	0.65
12	0.59
14	0.54
16	0.51
18	0.48
20	0.45
22	0.43
24	0.41
26	0.39
28	0.38
30	0.36
31	0.35

(Cadogan & Sultan, 1994)

3.3.3 Difference in rank values of the discriminators for the Summer School schools on their own

In order to make a selection of a control group from the 45 non-Summer School schools, it was necessary to investigate the differences in rank values of the discriminators for the Summer School schools by themselves, i.e., not as a part of the whole 76 schools. In other words, it was essential to establish whether or not there was a significant correlation between pairs of discriminators. At this stage it was decided to examine the correlation between Clothing % and Attainment % (using the differences r_1-r_3) and Attendance % and Attainment % (using the differences r_2-r_3). The pair, Clothing % and Attendance % (which would use r_1-r_2), was ignored since it relates to the school only, whereas the other two

relationships bring in attainment which is, as mentioned above, central to higher education entrance.

Table 5 below ranks the Summer School schools by themselves by the three discriminators and gives the differences for the pairs, Clothing % and Attainment % (r_1-r_3), and Attendance % and Attainment % (r_2-r_3).

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Table 5 Rank differences between Clothing % and Attainment % (r_1-r_3), and Attendance % and Attainment% (r_2-r_3) for the Summer School schools

Summer School schools	Clothing%	Attendance%	Attainment%		
	r_1	r_2	r_3	r_1-r_3	r_2-r_3
Castlemilk H(G)	1	15	13	-12	2
Lochend SS(G)	2	2	3	-1	-1
St Augustine's SS(G)	3	3	7	-4	-4
St Leonard's SS(G)	4	14	9	-5	5
St Margaret Mary's SS(G)	5	11	17	-12	-6
St Roch's SS(G)	6	10	3	3	7
Garthamlock SS(G)	7	16	3	4	13
Smithycroft SS(G)	8	9	10	-2	-1
Springburn A(G)	9	1	3	6	-2
John Street SS(G)	10.5	5	12	-1.5	-7
St Gerard's SS(G)	10.5	6	15.5	-5	-9.5
Merksworth H(R)	12	12	14	-2	-2
Drumchapel H(G)	13	8	6	7	2
St Andrew's SS(G)	14	17	19	-5	-2
Bellarmine SS(G)	15	7	3	12	4
Wellington A(R)	16	26	20	-4	6
All Saints' SS(G)	17	4	11	6	-7
Govan H(G)	18	13	8	10	5
St Mirin's H(R)	19	20	30	-11	-10
Braidfield H(D)	20	19	18	2	1
St Mungo's A(G)	21	18	15.5	5.5	2.5
Greenock H(R)	22	28.5	25	-3	3.5
St Stephen's H(R)	23	24	26	-3	-2
John Ogilvie H(L)	24	22	24	0	-2
St Columba's H(D)	25	23	22	3	1
Port Glasgow H(R)	26	31	23	3	8
Notre Dame H(R)	27	28.5	31	-4	-2.5
Barrhead H(R)	28	21	27	1	-6
Blantyre H(L)	29	25	21	8	4
St Luke's H(R)	30	30	29	1	1
Gleniffer H(R)	31	27	28	3	-1

After ranking the schools, the Spearman Rank Test was then applied to obtain the two selected correlations. The results are now briefly outlined:-

The correlation between Clothing % and Attainment % (r_1-r_3):

$$r_S = 1 - \frac{6\Sigma(r_1-r_3)^2}{n(n^2-1)} \qquad r_S = 1 - \frac{6x(1078.5)}{31x(960)}$$

$$r_S = 1 - \frac{6471}{29760} \approx 0.78 > 0.35 .$$

The correlation between Attendance % and Attainment % (r_2-r_3):

$$r_S = 1 - \frac{6\Sigma(r_2-r_3)^2}{n(n^2-1)} \qquad r_S = 1 - \frac{6x(835)}{31x(960)}$$

$$r_S = 1 - \frac{5010}{29760} \approx 0.83 > 0.35 .$$

By referring back to Table 4 it is possible to observe that the critical value for 31 pairs of measurements is 0.35. In both cases, Clothing % and Attainment % (0.78), and Attendance % and Attainment % (0.83), the Spearman coefficient is above 0.35, therefore it can be concluded that the correlation is significant. Although these results are not surprising, it is of interest to observe that it is not necessarily always the schools with the highest Clothing % which have the poorest Attainment %. An example of this is Castlemilk High, which is ranked number one for Clothing % (r_1=1) and is ranked number thirteen for Attainment % (r_3=13). Other examples with a similar result are St Leonard's Secondary and St Mirin's High. The opposite result is observed in Bellarmine Secondary and Govan High, where the schools have a lower Clothing % but a poorer Attainment % (see Table 5). For each

correlation the probability of all the differences arising by chance is small. Other influences must come into play, e.g., leadership of headteacher, ability and effectiveness of teaching staff, level of parental expectation and involvement, peer group influences, facilities available.

3.3.4 Use of differences in rank values of the discriminators for selection of 31 non-Summer School schools

As indicated in Section 3.3.2, the ranked values of the discriminators are emphasised rather than the actual numerical values themselves, since it is the ordering of the schools that matters rather than the actual degrees of deprivation, truancy and attainment. Prior to selection of the 31 non-Summer School schools from the 45 available it is necessary to examine first the position of the Summer School schools within the whole 76 schools currently under scrutiny. The positions of the Summer School schools (in bold type) is given below in Table 6.

Table 6 Rank differences between Clothing % and Attainment % (r_1-r_3), and Attendance % and Attainment% (r_2-r_3) for the the whole number of 76 schools

(Summer School schools are indicated in bold type)

Summer School and non-Summer School schools	Clothing% rank r_1	Attendance% rank r_2	Attainment% rank r_3	r_1-r_3	r_2-r_3
Castlemilk H(G)	**1**	**20**	**15**	**-14**	**5**
Lochend SS(G)	**2**	**2**	**3**	**-1**	**-1**
St Augustine's SS(G)	**3**	**3**	**7**	**-4**	**-4**
St Leonard's SS(G)	**4**	**19**	**9**	**-5**	**10**
St Margaret Mary's SS(G)	**5**	**16**	**19.5**	**-14.5**	**-3.5**
St Roch's SS(G)	**6**	**11.5**	**3**	**3**	**8.5**
Garthamlock SS(G)	**7**	**22**	**3**	**4**	**19**
John Bosco SS(G)	8	11.5	43.5	-35.5	-32

Smithycroft SS(G)	**9**	**10**	**10**	**-1**	**0**
Springburn A(G)	**10**	**1**	**3**	**7**	**-2**
John Street SS(G)	**11.5**	**6**	**14**	**-2.5**	**-8**
St Gerard's SS(G)	**11.5**	**7**	**17.5**	**-6**	**-10.5**
Merksworth H(R)	**13**	**17**	**16**	**-3**	**1**
Drumchapel H(G)	**14**	**9**	**6**	**8**	**3**
St Andrew's SS(G)	**15.5**	**26.5**	**23**	**-7.5**	**3.5**
Crookston Castle SS(G)	15.5	4	22	-6.5	-18
Bellarmine SS(G)	**17**	**8**	**3**	**14**	**5**
Wellington A(R)	**18**	**56**	**24**	**-6**	**32**
All Saints' SS(G)	**19**	**5**	**11**	**8**	**-6**
Govan H(G)	**20**	**18**	**8**	**12**	**10**
Queen's Park SS(G)	21	21	47	-26	-26
St Mirin's H(R)	**22**	**37**	**73**	**-51**	**-36**
Victoria Dr SS(G)	23	28	13	10	15
Whitehill SS(G)	24.5	14	12	12.5	2
Braidfield H(D)	**24.5**	**31**	**21**	**3.5**	**10**
North Kelvinside SS(G)	26	25	30	-4	-5
St Mungo's A(G)	**27**	**29**	**17.5**	**9.5**	**11.5**
Braidhurst H(L)	28	58.5	46	-18	12.5
Greenock H(R)	**29**	**67.5**	**43.5**	**-14.5**	**24**
St Stephen's H(R)	**30**	**51**	**51**	**-21**	**0**
Woodside SS(G)	31	23.5	28	3	-4.5
Hillpark SS(G)	32	13	52	-20	-39
Clyde Valley H(L)	33	41	29	4	12
Eastbank A(G)	34	47	26.5	7.5	20.5
Thomas Muir H(D)	35.5	55	50	-14.5	5
Rosehall H(L)	35.5	30	31	4.5	-1
John Ogilvie H(L)	**37**	**46**	**42**	**-5**	**4**
Knightswood SS(G)	38	26.5	48	-10	-21.5
St Margaret's H(L)	39	53	40	-1	13
St Patrick's H(L)	40	58.5	64	-24	-5.5
Bellahouston A(G)	41	15	33	8	-18
Lourdes SS(G)	42	23.5	53	-11	-29.5
St Columba's H(D)	**43**	**49**	**37.5**	**5.5**	**11.5**
Port Glasgow H(R)	**45**	**71**	**39**	**6**	**32**
Columba H(L)	45	63	35	10	28
Bishopbriggs H(D)	45	61.5	76	-31	-14.5
Cathkin H(G)	47	40	20	27	20
Notre Dame H(G)	48	49	54.5	-6.5	-5.5
St Columba's H(R)	49	72	69	-20	3
St Cuthbert's H(R)	50	43	65.5	-15.5	-22.5
St Thomas Aquinas SS(G)	51	35	45	6	-10
Notre Dame H(R)	**52**	**67.5**	**75**	**-23**	**-7.5**
St Andrew's H(D)	53	66	37.5	15.5	28.5
Caldervale H(L)	54	38	36	18	2
John Paul A(G)	55	53	56	-1	-3
Barrhead H(R)	**56**	**43**	**54.5**	**1.5**	**-11.5**
Our Lady's H(L)	57.5	65	61.5	-4	3.5
Bellshill A(L)	57.5	32	32	25.5	0
Taylor H(L)	59	43	34	25	9
Airdrie A(L)	60	45	65.5	-5.5	-20.5
Linwood H(R)	61	73	61.5	-0.5	11.5
Clydebank H(D)	62.5	69	58.5	4	10.5
Hillhead H(G)	62.5	58.5	70	-7.5	-11.5
Blantyre H(L)	**64**	**53**	**25**	**39**	**28**
Cardinal Newman H(L)	65	49	60	5	-11
Our Lady's and St Patricks (D)	66	34	67	-1	-33
Trinity H(G)	67.5	39	74	-6.5	-35
Brannock H(L)	67.5	61.5	26.5	41	35
Castlehead H(R)	69	74	71	-2	3

Penilee SS(G)	70	33	72	-2	-39
Cleveden SS(G)	71	75	63	8	12
Vale of Leven A(D)	72	76	41	31	35
St Luke's H(R)	**73**	**70**	**68**	**5**	**2**
Glennifer H(R)	**74**	**58.5**	**58.5**	**15.5**	**0**
Earnock H(L)	75.5	36	49	26.5	-13
Cumbernauld H(D)	75.5	64	57	18.5	7

To obtain information about the structure of the Summer School schools within the whole 76 available an examination of the values of $|r_1-r_3|$ can be used. If $|r_1-r_3|$ is small enough attainment can be regarded as being reasonably in line with Clothing %. An obvious start would be to choose $|r_1-r_3|\leq 5$ and to examine the Summer School schools that do not satisfy this condition, i.e., for which $|r_1-r_3|>5$. There are nineteen schools in this group. When their values for r_1, r_3 are re-ranked in the range 1 to 19, it is found that the Spearman coefficient is $r_s=0.71$. Since the critical value for n=19 is 0.46, there is a strong correlation between the two sets of ranks. It follows that $|r_1-r_3|\leq 5$ has provided too tight a measure of "closeness" and that a wider interval such as $|r_1-r_3|\leq 10$ should be considered. Since the interval $|r_1-r_3|\leq 5$ has been rejected, the detailed analysis associated with it has not been included here and analysis is given in Appendix IV. To justify $|r_1-r_3|\leq 10$ as a suitable choice for "small enough", the Summer School schools with $|r_1-r_3|>10$ were considered. There were ten schools in this group with $|r_1-r_3|>10$. The ten schools are listed below.

Table 7 Summer School schools with $|r_1-r_3|>10$

	Old values			Ranks for range 1 to 10		
School	r_1	r_3	r_1-r_3	r_1	r_3	r_1-r_3
Castlemilk H(G)	1	15	-14	1	3	-2
St Margaret Mary's SS(G)	5	19.5	-14.5	2	4	-2
Bellarmine SS(G)	17	3	14	3	1	2
Govan H(G)	20	8	12	4	2	2
St Mirin's H(R)	22	73	-51	5	9	-4
Greenock H(R)	29	43.5	-14.5	6	6	0
St Stephen's H(R)	30	51	-21	7	7	0
Notre Dame H(R)	52	75	-23	8	10	-2
Blantyre H(L)	64	25	39	9	5	4
Gleniffer H(R)	74	58.5	15.5	10	8	2

The Spearman coefficient for the rankings in the range 1 to 10 is

$r_s=1-6x56/10x99\approx$ 1-0.34=0.66.

Since the critical value for n=10 is 0.65, the correlation between the two sets of ranks is significant, but only just at the p=0.05 level. Consequently, it is reasonable to take $|r1-r3|\leq 10$ as a measure of "small enough", and to divide the set of 31 SS schools in Table 6 into three groups of schools:-

1. Those schools with $|r_1-r_3|\leq 10$, where attainment is roughly what would be expected by the percentage of students receiving clothing allowance.

2. Those schools with $r_1-r_3<-10$, where the attainment percentage is better than expected by the clothing percentage.

3. Those schools with $r_1-r_3>10$, where attainment percentage is worse than expected (2. and 3. covering the case $|r_1-r_3|>10$, dealt with above).

From Table 6 it can be observed that the 31 Summer School schools consist of:-

- 21 schools with $|r_1-r_3|\leq 10$
- six schools with $r_1-r_3<-10$
- four schools with $r_1-r_3>10$

Also from Table 6 the 45 non-Summer School consist of:-

- 25 schools with $|r_1-r_3|\leq 10$
- ten schools with $r_1-r_3<-10$
- ten schools with $r_1-r_3>10$

For the selection of the 31 non-Summer School schools it was reasonable to include:-

- the 25 schools with $|r_1-r_3| \leq 10$
- three of the ten schools with $r_1-r_3 < -10$
- three of the ten schools with $r_1-r_3 > 10$

This selection included all of the possible schools where attainment was roughly what would be expected by the percentage receiving a clothing allowance and a balanced selection from the two other categories where attainment was either better or worse than expected.

In order to select the six non-Summer School schools from the two groups (2.) $r_1-r_3<-10$ and (3.) $r_1-r_3>10$, it was necessary to examine the Summer School Schools and the non-Summer School schools simultaneously, using also the other available measure, the difference in rank value between Attendance % and Attainment %, r_2-r_3. The idea was to choose three from the ten non-Summer School schools whose values of r_1-r_3 and r_2-r_3 are reasonably similar to those of three of the Summer School schools for each of the groups $r_1-r_3<-10$ and $r_1-r_3>10$. The schools examined are given below in Table 8 and Table 9.

Table 8 Schools where Attainment % is better than would be expected by Clothing %, $r_1-r_3<-10$

Summer School schools	**r_1-r_3**	**r_2-r_3**	non-Summer School schools	**r_1-r_3**	**r_2-r_3**
Castlemilk H(G)	**-14**	**5**	John Bosco SS(G)***	-35.5	-32
St Margaret Mary's	**-14.5**	**-3.5**	Queen's Park SS(G)	-26	-26
St Mirin's H(R)***	**-51**	**-36**	Braidhurst H(L)*	-18	12.5
Greenock H(R)*	**-14.5**	**24**	Hillpark SS(G)	-20	-39
St Stephen's H(R)**	**-21**	**0**	Thomas Muir H(D)	-14.5	5
Notre Dame H(R)	**-23**	**-7.5**	Lourdes SS(G)	-11	-29.5
			St Patrick H(L)	-24	-5.5
			Bishopbriggs H(D)	-31	-14.5
			St Columba's H(R)**	-20	3
			St Cuthbert's H(R)	-15.5	-22.5

Table 9 Schools whereAttainment % is worse than would be expected by Clothing %, r_1-r_3>10

Summer School schools	**r_1-r_3**	**r_2-r_3**	non-Summer School schools	r_1-r_3	r_2-r_3
Bellarmine SS(G)**	**14**	**5**	Whitehill SS(G)**	12.5	2
Govan H(G)	**12**	**10**	Cathkin H(G)	27	20
Blantyre H(L)***	**39**	**28**	St Andrew's H(D)	15.5	28.5
Glennifer H(R)*	**15.5**	**0**	Caldervale H(L)	18	2
			Bellshill A(L)*	25.5	0
			Taylor A(L)	25	9
			Brannock H(L)***	41	35
			Vale of Leven A(D)	31	35
			Earnock H(L)	26.5	-13
			Cumbernauld H(D)	18.5	7

From Table 8 it is possible to make a selection of three of the non-Summer School schools whose differences - r_1-r_3, r_2-r_3 - are roughly comparable with the differences of three Summer School schools that illustrate the three types of behaviour there, namely $|r_2$-$r_3|$ small, r_2-r_3 large negative and r_2-r_3 large positive. The schools involved are indicated by asterisks.

From Table 9, for r_1-r_3>10, three non-Summer School schools can be selected that reflect the behaviour of the four Summer School schools relative to the value of r_1-r_3 and to the types of values of r_2-r_3, namely r_2-r_3=0, r_2-r_3>0 and small, and finally r_2-r_3>0 and large. Again the schools are indicated by asterisks.

3.3.5 The control group of 31 non-Summer School schools

By using the Tables 8 and 9 giving values of r_1-r_3 and r_2-r_3, and listing all the non-Summer School schools now selected (25 with $|r_1$-$r_3|\leq$ 10, three with r_1-r_3<-10 and three with r_1-r_3>10), it was possible to identify the following schools which reflected in a reasonable

way the structure of the 31 Summer School schools and which could be considered to provide a suitable control group for this study. The list is now given:-

1) The 25 schools with $|r_1-r_3| \leq 10$, i.e., attainment is roughly what would be expected by clothing %.

Crookston Castle SS(G)
Victoria Dr SS(G)
North Kelvinside SS(G)
Woodside SS(G)
Clyde Valley H(L)
Eastbank A(G)
Rosehall H(L)
Knightswood SS(G)
St Margaret's H(L)
Bellahouston A(G)
Columba H(L)
Notre Dame H(G)
St Thomas Aquinas SS(G)
John Paul A(G)
Our Lady's H(L)
Airdrie A(L)
Linwood H(R)
Clydebank H(D)
Hillhead H(G)
Cardinal Newman H(L)
Our Lady and St Patrick's (D)
Trinity H(G)
Castlehead H(R)
Penilee SS(G)
Cleveden SS(G)

2) The three schools with $r_1-r_3<-10$, i.e., those whose attainment % is better than expected by clothing %

John Bosco SS(G)
Braidhurst H(L)
St Columba's H(R)

3) The three schools with $r_1-r_3>10$, i.e., those with attainment % worse than expected by clothing %

Whitehill SS(G)
Bellshill A(L)
Brannock H(L)

3.3.6 Summary of selection procedures for the control group

Section 3.3.5 above gave the full list of 31 comparable non-Summer School schools selected by using the Spearman Correlation Test. It was considered that the Spearman Test provided the most useful statistical device for selecting a comparable control group in this case. Given the absence of criteria available previously for selection of the Summer School schools themselves (Section 3.2), it became necessary to review the Summer School schools by other methods which would be applicable also to the selection of a control group. It is worth noting, anecdotally, that a review of the non-Summer School schools by Divisions produces a fairly similar pattern to that of the Summer School schools themselves, with the exception of Lanark and Renfrew. The Divisional breakdown is:-

Summer School schools		non-Summer School schools	
Dunbarton	2	Dunbarton	2
Glasgow	17	Glasgow	16
Lanark	2	Lanark	10
Renfrew	10	Renfrew	3

It might have been possible then to devise a method which examined the schools by Division rather than individually. However, as stated in Section 3.2, it seemed sensible that the selection procedure for the control group should resemble as closely as possible procedures used to examine deprivation currently by Strathclyde Region's Education Department where schools are assessed individually using chosen indicators. At the same time, Strathclyde Regional Council is to be abolished in 1996 and the Divisions will disappear. Therefore, an examination of the schools by Division would be shortly outdated and thus less appropriate than the method employed

3.4 The 'true' comparative nature of the control group of 31 non-Summer School schools

Having selected the control group of 31 non-Summer School schools, one question which must be asked prior to the analysis of the school leavers' academic performance is how 'truly' comparative are the 31 non-Summer School schools? A review of Table 6 indicated that the schools listed first, i.e., the most deprived according to the percentage receiving a clothing allowance, were heavily represented by Summer School schools. It will be recalled that in Chapter Two, Sections 3.5 to 3.6, that the Glasgow Division schools participating in the Summer School were originally selected by Strathclyde Region as being the 'worst' in Glasgow (with the exception of one school which was included later). If the entire group of 76 secondary schools in Strathclyde are examined by Clothing % rank (r_1) (Table 6), the 27 schools which range from rank 1 (highest Clothing %) to rank 27 include 21 Summer School schools. Of this, seventeen are in Glasgow Division and four are from other divisions. There are only six possible non-Summer School schools from which to select in this range. In fact, five of these six schools were selected for the control group, all of them being situated in Glasgow Division. The sixth school was discarded as there were other schools which displayed overall characteristics more closely linked to the entire group of Summer School schools.

At the other end of the scale, the highest ranking Summer School schools by Clothing %, i.e., lowest percentage of pupils receiving Clothing %, are given as ranks 52, 56, 64, 73, 74 (Table 6). Of the 27 schools at the upper end of the ranking only five are Summer School schools and 22 are not. In other words, of the 27 schools indicating the lowest

levels of deprivation by Clothing %, above the median, only five are Summer School schools.

The two results given above, therefore, necessitated further investigation of the similarities and differences between the Summer School schools and the control group of non-Summer School schools which were selected. At this point it was hypothesised that the selected group of non-Summer School schools were merely largely similar but not the same, with the Summer School schools being weighted towards the 'worst' end of the scale by the indicator of deprivation.

Thus, it was decided to undertake a fuller review of the comparative nature of the two sets of schools. As the central concerns of the thesis focus on higher education, the next step was to investigate the percentages from the two sets of schools entering higher education. However, before that can be undertaken, it is first necessary to establish that there was indeed a correlation between the indicator of deprivation, Clothing %, and percentage entrance to higher education. If it were found that this were not the case, it would have rendered the selection method invalid.

3.5 Entrance to higher education

This section provides background information on the figures used in the chapter for the percentages entering higher education from the schools under investigation. These figures were taken from the Scottish Office Audit Unit report on school leaver destinations (HMI, 1993). The figures for 1993 were selected because they were taken from the same year as

the other indicators used, i.e 1992/1993. There are some contextual factors which must be taken into account prior to the analysis:-

1. The figures are estimates only. The figures were collected by the careers services in the various divisions. The practices for gathering such evidence are not currently standardised and differences in practices may lead to different results.

2. The information pertains to leavers who left during the year 1st August 1992 to 31st July 1993. It does not state what happened to pupils immediately after leaving school. It offers information on the destinations of leavers in mid-October 1993 not before or after that point in time (HMI, 1993).

3. The percentages entering higher education are the percentages of the total number of school leavers of leaving age from the schools, including S4, S5 and S6.

4. In the Audit Unit Report, where the number of leavers in the 'percentage entering higher education' column was between one and four this was denoted by three asterisks (***). Therefore 0% means no leavers but *** means between one and four leavers. For the analysis, in order to give schools a 'higher education' rank, where there were three asterisks in this column, the rank was given by the percentage entering further education. Although this method was not ideal it did give an indication of the percentage staying on in some form of education.

5. It should be noted that the number of school leavers in a small school might make a large difference to the percentages. For example, John Bosco Secondary, Glasgow Division,

had only fifty leavers for the year 1992/1993 and therefore one or two leavers in a given category could have made a large difference to the percentages.

6. 'Higher education' follows the definition used by the Scottish Office which states:

> Full-time Higher Education includes leavers following HND (higher national diploma) or HNC (higher national certificate) courses, degree courses, courses for the education and training of teachers, higher level courses for professional qualifications and other courses at a higher level not falling within these categories. Higher level means above the standard of courses for the Scottish Certificate of Education Higher grade, the Certificate of Sixth Year Studies, the National Certificate or the General Certificate of Education of England and Wales or Northern Ireland at Advanced level (HMI, 1993:p6).

Further education is defined as "full-time education which is not higher and not undertaken at school".

3.5.1 Average percentages entering higher education in the four Strathclyde Region Divisions

The average percentages entering higher education for all of the schools in the four divisions examined are given below. This was undertaken in order to give an indication of where the Summer School and non-Summer School schools stood in relation to the averages for the divisions.

Table 10 Average percentages entering higher education[1]

Divisions	tot. no. leavers	tot. no. entering HE	percentage entering higher education
Dunbarton	3940	1064	27%
Glasgow	5633	901	16%
Lanark	5613	1459	26%
Renfrew	3850	1194	31%
Strathclyde	23643	5911	25%
National	51889	12972	25%

Table 10 gives the numbers and the average percentages entering higher education in each of the four divisions. An examination of the percentages of higher education entrants from both the Summer School and the non-Summer School schools revealed that whilst none of the Summer School schools had percentages on or above the average for the division in which the school was located, eleven of the non-Summer School schools were on or above these averages (HMI, 1993). This result indicates that the Summer School schools remained those schools that should be targeted for participation in the Summer School on the whole. It also reinforced the hypothesis that the non-Summer School schools may be only "roughly" comparable. In other words, in selecting a control group of non-Summer School schools, it is not possible to ensure a like-with-like matching.

3.6 Comparisons of the percentages entering higher education from the Summer School and the non-Summer School schools.

This section examines the two groups of schools by Clothing % rank and Higher Education % rank. From this it is possible to observe where the two groups of schools fit into the

[1] Argyll & Bute and Ayr Divisions are not given in Table 10 as they were not used in the thesis. Their numbers, however, are included in the total numbers for Strathclyde. The reader will note, therefore, that the sum of the total number of leavers for the four divisions given does not add up to the total number for Strathclyde.

pattern of the whole group of 62 Summer School and non-Summer School schools. Similarly both the number entering the University of Glasgow (1993 entrance) and the percentages of the total entering higher education from these schools can be determined. This calculation gives an indication of whether or not Summer School schools favour the University of Glasgow. It is stressed again that figures are for one year only and that percentages are based on very small samples. What is being offered here are indicators not conclusive results.

There are some points of note pertaining to Table 11 which the reader should be aware of. These are:-

- As previously, Summer School schools (SS) appear in Table 11 in bold type and non-Summer School schools (NSS) are shown in plain type.

- In Column Three, % entering higher education, where the result 'low%' appears this refers to the point made previously in Section 3.5 that the Audit Unit Report uses three asterisks to signify between one and four pupils. As it was not possible to calculate a percentage, and therefore apportion a rank, ranks were apportioned based on the percentages entering further education. This at least gives a rough indication of percentages staying on in some form of education.

- In Column Six, where the figure is given as ≤n this is a maximum possible number which has been estimated from Column Three, where entrance to higher education is merely given as "low".

- In Column Seven, "no. to GU" (numbers entering the University of Glasgow), the subheadings denote the following:-
  - n - did not attend Summer School, either from Summer School schools or non-Summer School schools
  - u - attended Summer School and entered university on the basis of school-based qualifications
  - a - attended Summer School and entered university on the basis of Summer School performance.
  - tot - total of the other three subheadings

Table 11 Ranking (r_4) by % of leavers entering higher education (HE) compared with Clothing % rank (r_1) for the combined group of 62 schools (31 Summer School (SS) and 31 non-Summer School (NSS)) 1992/1993 (note that (u) and (a) do not arise for the non-Summer School schools).

Summer School and non-Summer School schools	Clo.% rank r_1	% entering HE	HE% rank r_4	r_1-r_4	no. enter HE	no. to GU n	u	a	tot	% of HE to GU
Castlemilk H(G)	**1**	**12**	**26**	**-25**	**12**	**1**	**2**	**2**	**5**	**42**
Lochend SS(G)	**2**	**low%; 10%FE**	**8**	**-6**	**≤6**	**1**	**2**	**1**	**4**	**67**
St Augustine's SS(G)	**3**	**5**	**14**	**-11**	**7**	**0**	**0**	**0**	**0**	**0**
St Leonard's SS(G)	**4**	**low% 10%FE**	**8**	**-4**	**≤4**	**0**	**1**	**1**	**2**	**50**
St Margaret Mary's SS(G)	**5**	**low% low%FE**	**1.5**	**3.5**	**≤4**	**0**	**0**	**0**	**0**	**0**
St Roch's SS(G)	**6**	**low% 9%FE**	**5.5**	**0.5**	**≤4**	**0**	**0**	**1**	**1**	**25**
Garthamlock SS(G)	**7**	**7**	**19.5**	**-12.5**	**5**	**0**	**0**	**0**	**0**	**0**
John Bosco SS(G)	8	low% 26%FE	12	-4	≤2	2	-	-	2	100
Smithycroft SS(G)	**9**	**low% 19%FE**	**11**	**-2**	**≤5**	**0**	**0**	**0**	**0**	**0**
Springburn A(G)	**10**	**low% 11%FE**	**10**	**0**	**≤4**	**0**	**0**	**0**	**0**	**0**
John Street SS(G)	**11.5**	**low% 9%FE**	**5.5**	**6**	**≤2**	**0**	**0**	**0**	**0**	**0**
St Gerard's SS(G)	**11.5**	**7**	**19.5**	**-8**	**6**	**0**	**0**	**2**	**2**	**33**
Merksworth H(R)	**13**	**low% low%FE**	**1.5**	**11.5**	**≤2**	**0**	**0**	**0**	**0**	**0**
Drumchapel H(G)	**14**	**low% 5%FE**	**3**	**11**	**≤5**	**0**	**0**	**0**	**0**	**0**
St Andrew's SS(G)	**15.5**	**8**	**22.5**	**3**	**9**	**0**	**0**	**0**	**0**	**0**
Crookston Castle SS(G)	15.5	7	19.5	-4	7	0	-	-	0	0
Bellarmine SS(G)	**17**	**low% 10%FE**	**8**	**9**	**≤5**	**0**	**1**	**0**	**1**	**20**
Wellington A(R)	**18**	**14**	**33**	**-15**	**16**	**0**	**0**	**0**	**0**	**0**
All Saints' SS(G)	**19**	**0 6%FE**	**4**	**15**	**0**	**0**	**0**	**0**	**0**	**0**
Govan H(G)	**20**	**5**	**14**	**6**	**5**	**0**	**0**	**0**	**0**	**0**
St Mirin's H(R)	**21**	**16**	**35.5**	**-14.5**	**6**	**0**	**1**	**0**	**1**	**17**
Victoria Dr SS(G)	22	7	19.5	2.5	7	3	-	-	3	43
Whitehill SS(G)	23.5	6	16.5	7	9	0	-	-	0	0
Braidfield H(D)	**23.5**	**8**	**22.5**	**1**	**10**	**1**	**1**	**3**	**5**	**50**
North Kelvinside SS(G)	25	13	29	-4	12	1	-	-	1	8
St Mungo's A(G)	**26**	**6**	**16.5**	**9.5**	**10**	**0**	**2**	**3**	**5**	**50**
Braidhurst H(L)	27	19	40	-13	13	0	-	-	0	0
Greenock H(R)	**28**	**13**	**29**	**-1**	**11**	**0**	**0**	**0**	**0**	**0**
St Stephen's H(R)	**29**	**23**	**51**	**-22**	**37**	**5**	**2**	**3**	**10**	**27**
Woodside SS(G)	30	23	51	-21	24	14	-	-	14	58
Clyde Valley H(L)	31	22	47.5	-16.5	28	6	-	-	6	21
Eastbank A(G)	32	14	33	-1	25	6	-	-	6	24
Rosehall H(L)	33	28	58.5	-25.5	22	1	-	-	1	5
John Ogilvie H(L)	**34**	**21**	**44**	**-10**	**29**	**3**	**6**	**2**	**11**	**38**
Knightswood SS(G)	35	5	14	21	5	2	-	-	2	40
St Margaret's H(L)	36	20	41.5	-5.5	46	8	-	-	8	17
Bellahouston A(G)	37	9	24	13	12	0	-	-	0	0
St Columba's H(D)	**38**	**13**	**29**	**9**	**24**	**2**	**5**	**0**	**7**	**29**
Port Glasgow H(R)	**39.5**	**17**	**37**	**2.5**	**23**	**0**	**1**	**0**	**1**	**4**
Columba H(L)	39.5	13	29	10.5	22	0	-	-	0	0
Notre Dame H(G)	41	22	47.5	-6.5	29	10	-	-	10	34
St Columba's H(R)	42	26	55.5	-13.5	41	11	-	-	11	27
St Thomas Aquinas SS(G)	43	13	29	14	13	3	-	-	3	23
Notre Dame H(R)	**44**	**22**	**47.5**	**-3.5**	**22**	**3**	**2**	**3**	**8**	**36**
John Paul A(G)	45	21	44	1	26	8	-	-	8	31

Barrhead H(R)	**46**	**11**	**25**	**21**	**12**	**1**	**0**	**0**	**1**	**8**
Our Lady's H(L)	47.5	32	61	-13.5	44	0	-	-	0	0
Bellshill A(L)	47.5	16	35.5	12	24	2	-	-	2	8
Airdrie A(L)	49	26	55.5	-6.5	58	7	-	-	7	12
Linwood H(R)	50	23	51	-1	14	2	-	-	2	14
Clydebank H(D)	51.5	18	38.5	13	29	6	-	-	6	21
Hillhead H(G)	51.5	36	62	-10.5	38	7	-	-	7	18
Blantyre H(L)	**53**	**18**	**38.5**	**14.5**	**32**	**0**	**3**	**1**	**4**	**13**
Cardinal Newman H(L)	54	30	60	-6	67	8	-	-	8	12
Our Lady's and St Patricks' (D)	55	26	55.5	-0.5	63	19	-	-	19	30
Trinity H(G)	56.5	21	44	12.5	38	4	-	-	4	11
Brannock H(L)	56.5	14	33	23.5	15	0	-	-	0	0
Castlehead H(R)	58	24	53	5	49	13	-	-	13	27
Penilee SS(G)	59	28	58.5	0.5	37	7	-	-	7	19
Cleveden SS(G)	60	22	47.5	12.5	28	11	-	-	11	39
St Luke's H(R)	**61**	**26**	**55.5**	**5.5**	**24**	**2**	**0**	**0**	**2**	**8**
Glennifer H(R)	**62**	**20**	**41.5**	**20.5**	**30**	**5**	**2**	**1**	**8**	**27**

From Table 11 the 62 schools can be divided into three categories:-

1. $|r_1-r_4| \leq 10$, where entry to higher education is roughly what would be expected by the indicator of deprivation, i.e., the Clothing %.
2. $r_1-r_4 < -10$, in which entry to higher education is greater than would be expected by the Clothing %.
3. $r_1-r_4 > 10$, where entry to higher education is less than would be expected by the Clothing %.

The Spearman rank correlation coefficient was calculated initially for the 62 schools. This was given as:-

$$r_S = 1 - \frac{6 \times 8240}{62 \times 3843} \approx 0.79 > 0.25 .$$

The critical value for 62 pairs is 0.25. Therefore, it is observed that there is a strong correlation between the two indicators used. Furthermore, for the 34 schools with $|r_1-r_4| \leq 10$, when re-ranked 1 to 34, the Spearman rank was $r_S=0.94$, which is considerably greater than the critical value of 0.33 for 34 pairs and so indicates a high correlation.

The numbers of schools, Summer School and non-Summer School, in each of the categories are given below:-

Table 12 The 62 schools by the ranking categories

i) $\lvert r_1-r_4\rvert \leq 10$			ii) $r_1-r_4<-10$			iii) $r_1-r_4>10$		
SS	NSS	tot	**SS**	NSS	tot	**SS**	NSS	tot
19	15	34	**6**	7	13	**6**	9	15

The breakdown of the three categories for the 31 Summer School schools is approximately the same as the corresponding break down for the 31 non-Summer School schools. The majority of schools, Summer School and non-Summer School, are in the category, $\lvert r_1-r_4\rvert \leq 10$, where entrance to higher education is what would be expected by the indicator of deprivation used, i.e., the percentage of that school's pupils receiving a clothing allowance.

It is of interest, however, to examine briefly the schools where entry is much greater or much lower than would be expected. These are outlined below:-

Table 13 Schools with $r_1-r_4 \leq -15$, where entry to higher education is much greater than would be expected from Clothing %.

SS	r_1-r_4	NSS	r_1-r_4
Castlemilk H(G)	**-25**	Woodside SS(G)	-21
Wellington A(R)	**-15**	Clyde Valley H(L)	-16.5
St Stephen's H(R)	**-22**	Rosehall H(L)	-25.5

Table 14 Schools with r_1-$r_4 \geq 15$, where entry to higher education is considerably lower than would be expected from Clothing %.

SS	r_1-r_4	NSS	r_1-r_4
All Saint SS(G)	**15**	Knightswood SS(G)	21
Barrhead H(R)	**21**	Brannock H(L)	23.5
Gleniffer H(R)	**20.5**		

The schools in Tables 13 and 14 have been identified to indicate that there are some schools which display exceptional characteristics and not to indicate which are the 'best' and 'worst' schools in the research. Reasons for the uncharacteristic behaviours of some of the schools can only be anecdotal. No formal research has been done on this. There are certain contextual factors, however, which may effect individual schools such as:-

- location of schools may require leavers to travel long distances or live away from home to attend higher education institutions.
- There may be strong or weak traditions to either stay on or leave early.
- The year examined might be of particularly high or low ability academically.
- Either attractive or no employment prospects, at that point in time, may affect decisions to stay on or not in education (HMI, 1993)
- The influences of teachers, peer groups, standards of teaching and learning, ethos of the school, discipline etc are all further factors which could effect entrance to higher education from particular schools.

Many of the contextual factors, outlined above, affecting entrance to higher education are qualitative and as such cannot be correlated alongside quantitative measures such as those used in this chapter.

This section has examined the relationship between deprivation and entry to higher education using school-based criteria. It has indicated that overall, for the 62 schools, there

is indeed a relationship between the percentage of pupils receiving clothing allowance in a given school and the percentage of pupils from that school entering higher education. The more extreme cases were indicated in Tables 13 and 14.

In relation to entry to higher education there is a close similarity in the predictive performance between the Summer School schools and the non-Summer Schools schools. In other words, entry to higher education for both the Summer School schools and the non-Summer schools schools is largely what would be expected by the indicators used. However, as hypothesised, the Summer School schools are weighted towards the 'worse' end of the rankings. This is shown clearly in Table 11 where the sum of the Clothing % ranks for the 31 Summer School schools is 691.5 (low rank means higher deprivation), whereas the sum of the ranks for the 31 non-Summer School schools is almost double that at 1261.5. This disparity is also shown by the sum of the ranks entering higher education for both groups. The Summer School schools have a sum of ranks for higher education of 681.5 (low rank means lower entry rate to higher education) and the non-Summer Schools have a sum of 1266. Therefore, it is concluded that, as would be anticipated from the percentages receiving clothing allowances, the percentages entering higher education from the Summer School schools are indeed lower than those of the non-Summer School schools - further evidence that the control group of non-Summer School schools is not an exact match of the participating schools.

3.7 Students entering the University of Glasgow in October 1993 from the 62 Summer School and non-Summer School schools

In Table 11 the number of students entering higher education in October 1993 (with maximum estimates where figures indicated between one and four students) is given (refer to column "no. enter HE"). The column "no. to GU" in the same table identifies the types of students entering the University of Glasgow by the subheadings (n), (u) and (a). These subheadings indicate the following:- n - did not attend Summer School; u - attended Summer School and entered university on the basis of school-based qualifications; and a - attended Summer School and entered university on the basis of Summer School performance. The column "% of HE to GU" expresses the percentage of higher education entrants who went to the University of Glasgow.

Table 15 below gives information on the number of higher education students who entered the University of Glasgow from the 62 schools. This exercise was undertaken to assess whether or not the location of the Summer School within the University of Glasgow produces a bias towards the University from these schools. At the same time, this analysis could also be used to measure whether the element of access built into the Summer School had succeeded.

Table 15 Numbers of higher education students

SS schools						NSS schools			**SS** + NSS schools		
HE no.	GU					HE no.	GU		HE no.	GU	
	n	u	a	tot	%		no.	%		no.	%
371	24	31	23	78	21	847	161	19	1218	239	20

Under the subheading (a) for the Summer School schools, 23 of the total number of 78 who entered the University of Glasgow had assisted places from the Summer School. In other words, these 23 students would not have been able to enter the University if they had not successfully completed the Summer School.

The percentage of higher education students gaining admission to the University of Glasgow from the Summer School schools is slightly higher but not considerably higher than the percentage coming to the University from the non-Summer School schools (21% as against 19%). However, if we remove the 23 students who had used the Summer School as a means of access through the assisted places scheme from the tabulations, then the 31 Summer School schools would have provided 55 for the University of Glasgow students out of a total of 348 higher education students. Consequently the percentage going to the University of Glasgow from these schools would have dropped from 21% to 16%. This is a finding in favour of the aspect of the Summer School which aims to promote access.

It must also be remembered, as has previously been observed by William Dunn, the Director of the Summer School, that students without a tradition of higher education in their background have a tendency to find 'older' universities, such as the University of Glasgow, intimidating (Dunn, 1987b). Barriers to entry are built up through, amongst other things, images of prestige and esteem held by staff in the schools. The perception often is that the more traditional the university, the higher the entrance tariffs, and, therefore, the less accessible to non-traditional students. Given the above points, it can be observed from these figures that the Summer School, by being located in the University, has gone some considerable way towards breaking down barriers to entry.

The three columns in Table 11 "no. enter HE", "no. to GU" and "% of HE to GU" offer more detailed information on schools both "favouring" the University of Glasgow and not. This is outlined below.

Table 16 Schools "favouring" the University of Glasgow, i.e., schools with ≥5 students entering the University of Glasgow and such that ≥10% of their higher education output enter the University of Glasgow

SS	ratio	%	NSS	ratio	%
Castlemilk H(G)	5/12	42%	Woodside SS(G)	14/24	58%
Braidfield H(D)	5/10	50%	Clyde Valley H(L)	6/28	21%
St Mungo's A(G)	5/10	50%	Eastbank A(G)	6/25	24%
St Stephen's H(R)	10/37	27%	St Margaret's H(L)	8/46	17%
John Ogilivie H(L)	11/29	38%	Notre Dame H(G)	10/29	34%
St Columba's H(D)	7/24	29%	St Columba's H(R)	11/41	27%
Notre Dame H(R)	8/22	36%	John Paul A(G)	8/26	31%
Gleniffer H(R)	8/30	27%	Airdrie A(L)	7/58	12%
			Clydebank H(D)	6/29	21%
			Hillhead H(G)	7/38	18%
			Cardinal Newman H(L)	8/67	12%
			Our Lady & St Patrick's(D)	19/63	30%
			Castlehead H(R)	13/49	27%
			Pennilee SS(G)	7/37	19%
			Cleveden SS(G)	11/28	39%

(schools are listed by Clothing % rank order, r_1)

For the schools in Table 16 the totals and percentages of the higher education entrants who entered the University of Glasgow are as follows:-

SS		NSS		**SS & NSS**	
no.	%	no.	%	no.	%
(59/174)	34	(141/588)	24	(200/762)	26

The figures show a strong bias in favour of the University as the higher education institution of choice from the Summer School schools, as compared with the non-Summer School schools.

There were also a number of schools which clearly did not favour the University of Glasgow. Details of this analysis are indicated in Table 17.

Table 17 Schools with "poor" University of Glasgow uptake, i.e., those with ≥15 students entering higher education and <10% choosing the University of Glasgow

SS	ratio	%	**NSS**	ratio	%
Wellington A(R)	0/16	0%	Rosehall H(L)	1/22	5%
Port Glasgow H(D)	1/23	4%	Columba H(L)	0/22	0%
St Luke's H(R)	2/24	8%	Our Lady's H(L)	0/44	0%
			Bellshill A(L)	2/24	8%
			Brannock H(L)	0/15	0%

The average percentages for the schools in Table 17 are given below.

SS		NSS		**SS & NSS**	
no.	%	no.	%	no.	%
(3/63)	5%	(3/127)	2%	(6/190)	3%

Expressed in percentages, it can be observed again that even with poor uptake of the University of Glasgow the Summer School schools still indicate a slight bias towards the University.

3.8 Summary and conclusions

The Chapter undertook initially to select a control group of the same number of similarly deprived schools as the 31 Summer School schools. This was required in order to assess the academic 'success' of the school leavers who had come through the Summer School in comparison with school leavers from similar backgrounds. The results of the analysis of their academic performance are discussed in the following chapter.

In order to select a control group it was first necessary to review the Summer School schools themselves on the basis of new indicators, the original methods used by Strathclyde Regional Council being now outdated. This review and the subsequent selection of the non-Summer School schools were carried out using the following indicators: the percentage in the schools receiving clothing allowances; the percentage attendance at school on a daily basis; and the percentage attainment in SCE Highers, grades A-C. Through the use of the Spearman Correlation Test it was possible to correlate the ranked sets of data for suitable pairs of the indicators. This was undertaken, initially, for the Summer School schools only in order to determine the characteristics of these schools. From this it was then possible to select 31 non-Summer School schools with reasonably similar characteristics.

As has been observed in Section 3.5.1, which gave a divisional breakdown of the average percentages entering higher education, none of the Summer School schools were above the average for the four divisions, whereas eleven of the non-Summer School schools were. Furthermore, during the selection of the 31 non-Summer School schools concern was raised over the precise nature of any comparison between the Summer School schools and

the non-Summer School schools. It was established that the most deprived of the entire group of 62 schools ranked by the indicator of deprivation, Clothing %, were heavily represented by the Summer School schools and the least deprived were sparsely represented by these schools. These observations raised the hypothesis that the non-Summer School schools were merely roughly similar in nature and not the same. It was considered that this rough comparison might then have an effect on the analysis of the academic performance of all the school leavers.

As a result of concern about the comparability of the schools, it was decided to assess whether the percentages entering higher education were similar for the Summer School schools and the non-Summer School schools. Thus, prior to this, it became necessary to examine the correlation between the percentages receiving clothing allowances and the percentages entering higher education from the entire group of 62 schools.

This analysis indicated that there is indeed an observable correlation between the percentage of pupils in a given school receiving clothing allowances and the percentage entering higher education. The majority of the 62 schools fell within the category $|r_1-r_4|<10$ (r_1 being Clothing % and r_4 Higher Education % rank), which means that academic performance is largely what would be predicted by the indicator of deprivation. There were a few schools which would be considered exceptions where the percentage entering higher education was considerably higher or lower than would be expected. Details were given in Section 3.6.

Having concluded that there was indeed a correlation between the percentages receiving clothing allowance and the percentages entering higher education, it was then possible to

assess whether the percentages entering higher education from the non-Summer School schools were higher than those of the Summer School schools.

The sum of the ranks entering higher education for leavers from the 31 Summer School schools was 681.5 (Table 11). A similar sum for the non-Summer School schools was 1266. As low rank meant low percentage entry to higher education, this indicated that lower percentages entered higher education from the Summer School schools. This result supported the hypothesis that the non-Summer School schools are only roughly comparable. The Summer School group is weighted towards the lower end of the scale. A further indication of this was the fact that the combined ranks of the percentages receiving clothing allowance for the Summer School schools was 691.5 as opposed to 1261.5, where low rank implies greater deprivation.

Finally, it was shown that the Summer School had produced a bias towards the University of Glasgow through the assisted places scheme. Those who had entered through this scheme accounted for 29% of all entrants to the University from the Summer School schools. This was seen as a positive result for the Summer School in that it had broken down barriers and increased access to students who would otherwise have been refused admission.

The points outlined above indicate the main conclusions of this chapter. It is important to remember that the figures referring to entrance to higher education and to the University of Glasgow were for one year only and that the percentages were based on very small figures. The results do, however, provide indicators which suggest that there are indeed differences between the Summer School schools and the comparative group of non-Summer School

schools. These differences are likely to be reflected in the analysis of performance. At the same time, it is argued that the methods used, the choice of indicators and the correlations between ranked sets of data by the Spearman Correlation Test, were the most appropriate and reasonable available for this selection procedure.

Chapter Four

The academic performance of the school leavers from the Summer School schools and the comparative non-Summer School schools

Chapter Four

The academic performance of the school leavers from the Summer School schools and the comparative non-Summer School schools

4.1 Introduction : Orientation of the chapter

This chapter analyses the academic performance of the students from the 62 schools (31 Summer School schools and 31 non-Summer School schools) who entered the University of Glasgow between 1986 and 1993. It further distinguishes those students from the Summer School schools who attended the Summer School from those who did not attend.

Before the above analysis is detailed, some of the conceptual issues which underpin this type of study are outlined. Within the background sections the concept of equality of educational opportunity is examined and how this concept has changed in more recent times. Some of the literature on the links between social factors and educational achievement is then reviewed, as are some of the criticisms of this kind of research. Within this context, the methodology of the analysis is then outlined.

The chapter then focuses on the analysis. It initially identifies the numbers and percentages from each group of schools in each category of performance. It then examines in further

detail the comparisons between the two groups of 31 schools, focusing on the numbers and percentages of drop-outs, non-drop-outs and graduates. Finally, analysis is undertaken of the relationship between the percentage receiving clothing allowance (deprivation indicator) and the percentage of non-drop-outs (achievement indicator) and of the relationship between the percentage receiving clothing allowance and the percentage who have graduated.

4.2 The concept of equality of opportunity

The discussion of education and social class has been the most prolonged educational issue of the twentieth century. In the 1930s and 1940s, it was closely related to psychology and psychological views of intelligence. However, from the 1950s onwards, it became the central concern of the sociology of education (Silver, 1973). The discussion of education and social class always leads back to the concept of 'equality' or 'equality of opportunity'. The definition of the concept brings the debate into the field of the philosophy of education and notions of 'justice' and 'democracy'.

The definition of equality of opportunity has altered greatly over this century and in particular from the 1950s and 1960s onwards. This Section aims, briefly, to examine the changes in this definition.

In pre-industrial Europe, a child's occupation and class was generally the same as the father's. There was virtually no mobility. The extended family provided the 'welfare state'. However, changes in the United States at the end of the nineteenth century meant that the public schools became the common schools, with almost all children attending them except

for the upper classes, native Americans and southern black Americans. In Britain the class system continued to manifest itself through the schools. The 'board schools' became the schools of the labouring classes, with sharply different curricula from the 'voluntary schools' which served the middle and upper classes. The division was such that the schools required different examination boards. Only the curricula and examinations of the 'voluntary schools' would allow access to higher education (Coleman, 1973).

As early as the 1890s in Britain, there were pressures from the labour movement to restructure the education system established by the 1870 Education Act on more democratic lines. However, it was not until the 1920s that R.H. Tawney and the Hadow Committee established a new consciousness of the relationship between social justice and the existing education system. The Hadow Committee recommended wider access for working class children to grammar schools and the creation of a new kind of secondary school.

Reforms after the Second World War, through the 1944 Education Act, brought compulsory secondary education and the introduction of secondary modern and grammar schools within the same system. Theoretically there was mobility between the two types of school. Equality at this stage was defined in terms of the curriculum, not the school, and the community. The main principles of equality were free education, a common curriculum, and access to the same type of school. In other words, it was possible that students from all backgrounds could attend the same school.

Changes in society in the 1950s and 1960s meant that a critique of social myths and beliefs acquired a significant role; social science information became important. Also a general transformation in human society was shaping social development. This was seen as a

significant break with the past. It was particularly evident in the United States where a combination of political, economic and social events led to an unprecedented national commitment to restructuring society.

The philosophical view of 'equality' makes clear the context within which society today views the definition of equality of opportunity. Moore states:-

> If we take the 'equality' principle in its strict sense, in that all children are the same, or that they should all be treated alike in any substantial sense, the absurdity of the suggestion is obvious.
> ..... For what is really required is not equal treatment but fair treatment, appropriate treatment, a fair consideration of children's different needs and requirements, in other words educational justice.....
> Equality in education, then, will not do as a theory. At best it is a muddled way of calling for justice. Justice in education, however, involves differential treatment for pupils, to suit their different requirements, and the organisation and provision of education is to be judged, not by the extent to which it promotes equality or equal opportunity, but by the extent to which it deals with children fairly in what it has to offer them.
> ...An 'equal' society of 'equal' men would not meet our common standards of morality and appropriateness, a just society would (Moore, 1982:pp120+122).

The definition of equality of opportunity altered greatly over the last century. The shift was from equality of access to equality of attainment over this period, with strong notions of social justice and fair, not equal, treatment. It, therefore, became of great importance to both economists and sociologists to determine whether equality of outcomes did exist. The following section examines some of the research which has been undertaken in this field.

4.3 Review of the literature on equality of opportunity

One of the most crucial pieces of research to be undertaken in the 1960s was the Coleman Report, 'Equality of Educational Opportunity', in 1966(Coleman et al, 1966). The Report was a product of the prevailing atmosphere of social change and was the most important effort of its kind undertaken in the United States. The Civil Rights Act of 1964 provided that the United States Office of Education should undertake the survey and report within two years. Overall 570,000 pupils were tested and information provided on 60,000 teachers and 4,000 schools. The remit was to examine the lack of availability of equal educational opportunities. The survey was headed by James Coleman and released on the fourth of July 1966.

There were two main findings of the Coleman Report. These are given as:-

1. The most important factor in educational achievement is family background. The strong relation of family economic and educational background to achievement does not diminish over the period of school and may even increase over the elementary years.

2. The variation in student achievement lies within the same school not really between schools, the implication being that family background differences account for much more variation in achievement than do school differences.

Even differences between achievement in schools were found to be almost wholly due to social environment. Per pupil expenditure, books in libraries and a host of other facilities and curricular measures showed virtually no relation to achievement, if the 'social' environment of the school and the educational backgrounds of other students were held constant. Coleman states:-

> Altogether, the sources of inequality of educational opportunity appear to lie first in the home itself and the cultural influences

> immediately surrounding the home; then they lie in the schools' ineffectiveness to free achievement from the impact of the home, and in the schools' cultural homogeneity which perpetuates the social influences of the home and its environs (Coleman, 1966:p73-74).

The factors in the school which did matter were identified as the social class of other children and teachers. However, teachers' scores on vocabulary tests, their own level of education and years of experience showed little relationship to achievement of white students. They did show some relation for black Americans and increasingly with higher grade levels (Mosteller and Moynihan, 1972).

Similar findings were emerging in the United Kingdom at the same time. The Robbins Report of 1963 showed that the proportion of children from non-manual backgrounds to manual backgrounds reaching degree level was about eight to one. At the extreme ends children with fathers in professional and managerial occupations were twenty times more likely to enter higher education than those with fathers in semi- and unskilled jobs (Robbins, 1963).

Robbins found that, as children grew up, their measured ability was more and more affected by their accumulated experience. The middle class environment was in many ways more favourable than that of the working class. On the whole, middle class parents took more interest in education, the children attended better primary schools, families were smaller and housing conditions better. These factors overlapped but it was shown that each had an independent influence on the measured ability of children, even within the same social class (Robbins, 1963).

Douglas, in 1964, set the attainment scores of a large sample of primary children against a number of social factors. Douglas's results indicated, among other findings, that, whilst 11% of lower manual children obtained grammar school places, 54.3% of upper-middle class did so. Furthermore, only 4.8% of the children in a poorly assessed lower-working class school, as opposed to 53.2% of those in a highly assessed upper-middle class school, obtained places in grammar school (Douglas, 1964).

Willms (1986) found that the correlation between school mean attainment and school mean socio-economic status was high. However school effects were also substantial. The difference for a pupil with nationally average characteristics was the difference between three General Certificate of Education (GCE) O levels and none. He argued that this could mean the difference between a job and no job.

The importance of home variables was also stressed by Wiseman in the 'Manchester Survey', where he found that home variables had twice the weight of neighbourhood and school variables put together (Plowden Report, 1967). Research indicating the importance of the relationship between the home and school continued to identify similar findings to those of the Coleman and Robbins Reports (Burnhill, 1981, Davie et al, 1972, Wedge and Prosser, 1973).

Burnhill (1981) examined the relationship between examination performance and social class amongst Scottish school leavers. He observed that, at each level of achievement, the percentage passing declines across the social classes from I to IV. At the extremes, 95% from Class I left school with at least some qualification and 58% had three or more SCE

Higher passes, compared to 45% and 4% respectively of those children from social class V.

Reid (1992) also identified a clear over-representation of the middle class in higher education. He found that the middle class make up 35% of the population but 80% of university undergraduates. On the other hand, the working class make up 65% of the population but 19% of undergraduates. These figures were only slightly less pronounced for further education. At the extremes, 22% of university undergraduates were from social class I and 1% from social class V, despite the latter being a larger percentage of the population, 7% compared to 5%.

Section 4.3 has outlined just some of the considerable literature which exists on the relationship between socio-economic status and educational achievement. Attempts were made to focus on the most significant findings which have emerged. This literature has had far-reaching consequences in that most of the compensatory educational policies, such as the affirmative action policies in the United States and Educational Priority Areas (Areas of Priority Treatment in Scotland) which arose from the Plowden Report in Britain, have been based on the above research. Furthermore, as indicated in Chapter Two, the Summer School itself arose through the identification of the worst Areas of Priority Treatment in Strathclyde Region.

4.4 Criticisms arising from the literature

From the 1960s onwards, then, considerable literature exists supporting the view that the links between the family and educational attainment are powerful. Only some of this has

been touched on in Section 4.3. However, at the same time, substantial conflicting research also exists which questions the strengths of the link between children's socio-economic status and their achievements.

The Coleman Report has been criticized as having serious flaws in its basic research into the educational process. It was argued that it does not provide reasonable tests of the hypotheses and shows systematic errors of measurement (Hanushek and Kain, 1972). Armor (1972) argued that school characteristics were not measured properly nor were educational processes. Furthermore, Smith (1972) argued that there were mechanical errors in creating the tables which led Coleman to overestimate the amount of differences in achievement explained by individual home background and that definitions of achievement were too vague. Sampling errors led to errors in home background measures which resulted in these overestimates.

Hanushek and Kain state:-

> The large and systematic differences between the *Report's* implied conceptual model and its actual statistical models of the educational process are its most damaging analytical shortcomings. Thus, while serious interpretative problems are raised by the specialized analysis of variance procedure used in the *Report*, its principal failing is found in its inadequate statistical models of the educational process. This inadequacy arises in large part from using poor or incomplete data that bias the empirical results toward overstating the effect of family background and student-body input and understating the effect of school inputs (Hanushek and Kain, 1972:p137).

These criticisms may call into question the validity of the findings; however, it is still the case that a wealth of literature exists supporting the view that socio-economic status has effects on educational outcomes. The debate then moves on to the question of the strengths

of these effects. White et al (1993) reviewed the results of the main researchers in the field. From this review they discovered that differences in the strength of this relationship focus on the use of the data at individual student level or at aggregate school level. They argued that in using a large sample of students the aggregate data were shown to overstate the influence of socio-economic status by a factor of four.

Alternatively, Gray et al (1983) ascertained that variations in school effectiveness owed much more to social and intellectual compositions of pupil intake than differences in schools themselves. Jencks (1972) and Jencks et al (1973) similarly found that differences in primary schools had only minor effects and less in secondary schools.

However, Gray et al (1983) criticise Coleman and Jencks on four main issues:-

1. The studies were mainly cross-sectional and lacked information on how things changed over time.

2. The studies employed psychometric tests of basic skills to measure outcomes; outcomes like public examinations were largely ignored.

3. Narrow measures of cognitive ability were usually employed.

4. The studies were thought to have measured the wrong aspects of schools. Factors such as pupil-teacher relationships and ethos were ignored.

Much of the confusion has arisen because of differences in contextual factors. Researchers use different definitions of socio-economic status, measure student achievement in different ways, study a variety of age groups, use different analytic methods, and use both aggregate and individual data. Therefore, it is to be expected that different contexts will produce different results.

4.5 The methodology of the analysis

Within the context of Sections 4.3 and 4.4, which have reviewed some of the existing literature, it became necessary to explicate the methods used in the current analysis.

White (1982) examined the results from the major studies in the field. He found that the correlation between socio-economic status and achievement varied from 0.22 on an individual basis to 0.73 on an aggregate basis. In Chapter three, Section 3.6, the correlation between the indicator of deprivation used in the thesis, Clothing %, and the indicator of achievement, Higher Education %, was calculated for the 62 schools, using the Spearman Rank Coefficient (Beyer, 1966, Cadogan and Sultan, 1994, Colton, 1974, Kendal, 1955). This correlation was calculated as 0.79, a finding which was consistent with White's findings for schools on an aggregate basis.

Whilst it is acknowledged that it does appear that aggregate results over-emphasis the relation between socio-economic status and achievement, the schools-based methodology was the most appropriate for the thesis for the following reasons:-

1. The Pre-University Summer School targets its school leavers on an aggregate basis by attendance at nominated schools. It is therefore appropriate to examine achievement on the same basis. In contrast the Access Summer School, University of Dundee, targets by individual deprivation, therefore in that case individual analysis would be more appropriate.

2. Due to aggregate targeting the Pre-University Summer School does not keep records of individual deprivation. It would therefore not have been possible, in a reasonably large-scale analysis such as this, to have collected sufficient data on individual disadvantage.

It is acknowledged that the indicator of deprivation used in the thesis is oversimplified. Reid (1992), for example, discovered sixteen family characteristics related to educational

success and to 'middle-classness'. Also, that detailed analysis revealed that a small number of working class children (defined by father's occupation) had more of these characteristics than middle class children. These were among the most successful of all the children he examined and the most successful working class children. Coleman et al (1966) used at least six measures of family background. These were urbanism, parental education, structural integrity (single parents), home items, number of reading items, and number of siblings.

Nevertheless, the use of Clothing % as the sole indicator of deprivation can be defended on two counts:-

1. However crude, Clothing % has been shown previously in Chapter Three, both in the selection of schools and its correlation with entry to higher education, to be a strong predictor of disadvantage and attendant lower ratios of entry to higher education.

2. Clothing % was the indicator first identified by the Chief Research Officer at Strathclyde Regional Education Department as being the most valid predictor used by the Department. It therefore placed the analysis in context by using the same predictor.

In summary it is accepted that there were a considerable number of alternative methods which could have been used to undertake the analysis in this thesis. However, for the reasons given above, it is argued that the methods used were the most appropriate to the study.

4.6 The analysis of the performance of the students from the 62 schools, Summer School and non-Summer School, at the University of Glasgow

The data for the analysis was obtained from the Continuous Student Records at the University of Glasgow's Registry Office. This entailed interrogating two separate data

bases, the 'historical' and the 'current'. There were considerable difficulties in obtaining the data required for the analysis. These difficulties were exacerbated by changes in the Registry computer systems and shortage of staff available to assist with research questions.

The records were then ordered through use of school codes used by UCAS to identify which schools the students had attended. By reviewing the results from both data bases simultaneously it was possible to produce a one-line academic record for each student. For the 31 Summer School schools, these records were then ordered into three categories: the students who attended the Summer School but gained entry to the University of Glasgow through their previous qualifications (unassisted); the students who used the Summer School as a means of entry (assisted); and the other category of students who came from the 31 Summer School schools but did not attend Summer School. This task of categorising the students was undertaken through the use of the Summer School records. Performance in degree examinations was then graded for all of the students from the 62 schools, Summer School schools and non-Summer School schools, for each year The grading used was:-

- exemption in June
- pass in June
- pass in September
- fail in June and/or September
- status at end of academic year

Performance was then categorised by the following:-

- D - drop-out for whatever reason including transfer, withdrawal etc.
- ord - ordinary - obtained a degree at ordinary level
- hon - honours - obtained a degree at honours level
- G - good standing - still studying for degree, progressing above minimum progress regulations as outlined by the faculty

- M - minimum standing - still studying for degree, progressing on or below minimum progress regulations

Some examples of records would appear as follows:-

1. Example One - 92: 0300G) 0101G)
2. Example Two - 90: 0102M) 0002D)

1. Example One above shows a student who first matriculated in 1992, had no exemptions, three passes in June, no passes in September and no fails, and was in good standing in the academic year 1992/93. The student had no exemptions, one pass in June, no passes in September and one fail June/September in 1993/94, and was in good standing at the end of second year.

2. Example Two shows a student who first matriculated in 1990, had no exemptions, one pass in June, no passes in September and two fails in the academic year 1990/91 The student had no exemptions, no passes in June, no passes in September and two fails June/September in 1991/92 and then dropped-out.

The records were then categorised by faculty, year of entry and Summer School/non-Summer School status. From this it was possible to build up patterns of performance for the various groups.

Tables 18 and 19 present information on the performance of the students from all 62 schools (31 Summer School schools (SS) and 31 non-Summer School schools (NSS)) who entered the University of Glasgow between 1986 and 1993. The students who came to the University through the 31 Summer School schools fall into three categories:-

1. those who attended Summer School but entered University on the basis of their SCE Higher results (unassisted).

2. those who attended Summer School and gained entry to the University through the assisted place scheme, that is, did not have sufficient entry qualifications through SCE Highers (assisted).

3 those who did not attend Summer School and gained entry on the basis of their SCE Higher results (n).

None of the students from the 31 comparative non-Summer School schools attended Summer School.

Table 18 gives the numbers and percentages of the students in each category by faculty and academic status, whilst Table 19 offers a more detailed break-down of performance by year. There are some points of explanation which should be noted:-

For the group of Summer School schools the following subheadings applied:-

u - unassisted entry to University
a - assisted entry through the Summer school
t - u+a (unassisted + assisted)
n - did not attend Summer School

The Column headings are as follows:-

D - drop-out, for whatever reason
ord - graduated with ordinary degree
hon - graduated with honours degree
G - proceeding with degree above progress regulations
M - proceeding with degree on or below minimum progress regulations

The heading 'Other Faculties' refers to all other faculties apart from Science, Arts and Social Sciences.

Summer School schools are denoted by 'SS' and non-Summer School schools are denoted by 'NSS'.

Table 18 Performance of students at the University of Glasgow from the 62 schools (31 Summer School schools (SS)+31 non-Summer School schools (NSS)) entering during the period 1986-1993.

Group of SS schools

	numbers						percentages				
Faculty	D	ord	hon	G	M	Tot	D	ord	hon	G	M
Science											
u	18	4	17	20	4	63	28.6%	6.3%	27.0%	31.7%	6.3%
a	9	3	1	10	3	26	34.6%	11.5%	3.8%	38.5%	11.5%
t(u+a)	27	7	18	30	7	89	30.3%	7.9%	20.2%	33.7%	7.9%
n	25	22	47	30	2	126	19.8%	17.5%	37.5%	23.8%	1.6%
t+n	52	29	65	60	9	215	24.2%	13.5%	30.2%	27.9%	4.2%
Arts											
u	3	3	11	15	4	36	8.3%	8.3%	30.6%	41.7%	11.1%
a	5	3	3	10	6	27	18.5%	11.1%	11.1%	37.0%	22.2%
t(u+a)	8	6	14	25	10	63	12.7%	9.5%	22.2%	39.7%	15.9%
n	18	22	45	21	2	108	16.7%	20.4%	41.7%	19.4%	1.9%
t+n	26	28	59	46	12	171	15.2%	16.4%	34.5%	26.9%	7.0%
Soc Sci											
u	1	1	5	3	0	10	10.0%	10.0%	50.0%	30.0%	0.0%
a	3	2	4	5	2	16	18.8%	12.5%	25%	31.3%	12.5%
t(u+a)	4	3	9	8	2	26	15.4%	11.5%	34.6%	30.8%	7.7%
n	3	2	9	6	0	20	15.0%	10.0%	45.0%	30.0%	0.0%
t+n	7	5	18	14	2	46	15.2%	10.9%	39.1%	30.4%	4.3%
Other Fac.											
u	4	4	8	14	0	30	13.3%	13.3%	26.6%	46.7%	0.0%
a	1	0	1	2	0	4	25.0%	0.0%	25.0%	50.0%	0.0%
t(u+a)	5	4	9	16	0	34	14.7%	11.8%	26.5%	47.1%	0.0%
n	22	29	33	15	1	100	22%	29.0%	33.0%	15.0%	1.0%
t+n	27	33	42	31	1	134	20.1%	24.6%	31.3%	23.1%	0.7%
Overall tot											
u	26	12	41	52	8	139	18.7%	8.6%	29.5%	37.4%	5.8%
a	18	8	9	27	11	73	24.7%	11.0%	12.3%	37.0%	15.1%
t(u+a)	44	20	50	79	19	212	20.8%	9.4%	23.6%	37.3%	9.0%
n	68	75	134	72	5	354	19.2%	21.2%	37.9%	20.3%	1.4%
t+n	112	95	184	151	24	566	19.8%	16.8%	32.5%	26.7%	4.2%

Group of 31 NSS schools

	numbers						percentages				
Faculty	D	ord	hon	G	M	Tot	D	ord	hon	G	M
Science	54	65	108	129	16	372	14.5%	17.5%	29.0%	34.7%	4.3%
Arts	15	45	51	74	4	189	7.9%	23.8%	27.0%	39.2%	2.1%
Soc Sci	7	11	15	22	2	57	12.3%	19.3%	26.3%	38.6%	3.5%
Other Fac.	27	45	66	77	5	220	12.3%	20.5%	30.0%	35.0%	2.3%
Overall tot	103	166	240	302	27	838	12.3%	19.8%	28.6%	36.0%	3.2%

Table 19 Students at the University of Glasgow from the 31 SS schools and 31 NSS schools by year, 1986-93 and by categories and faculties

Group of 31 SS schools

SS	Science					Arts					Soc Sci					Other Fac					totals					year total
u	D	ordhon		G	M	D	ordhon		G	M	D	ordhon		G	M	D	ordhon		G	M	D	ordhon		G	M	
1986	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-	-	3
1987	1	1	4	-	-	-	-	1	-	-	-	-	1	-	-	-	1	1	-	-	1	2	7	-	-	10
1988	1	1	2	1	-	-	1	5	-	1	-	-	1	-	-	-	1	-	-	-	1	3	8	1	1	14
1989	2	2	5	-	-	2	1	3	-	-	-	1	-	-	-	2	1	3	-	-	6	5	11	-	-	22
1990	6	-	4	1	1	-	1	2	-	-	-	-	3	-	-	1	-	3	-	-	7	1	12	1	1	22
1991	2	-	-	3	2	-	-	-	1	1	-	-	-	-	-	-	1	-	6	-	2	1	-	10	3	16
1992	2	-	-	6	-	1	-	-	3	2	1	-	-	2	-	1	-	-	1	-	5	-	-	12	2	19
1993	4	-	-	9	1	-	-	-	11	-	-	-	-	1	-	-	-	-	7	-	4	-	-	28	1	33
totals	18	4	17	20	4	3	3	11	15	4	1	1	5	3	-	4	4	8	14	-	26	12	41	52	8	139
a																										
1986	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	3
1987	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	–	–	–	–	2	-	-	-	-	2
1988	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	–	1	–	–	1	1	3	-	-	5
1989	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	-	-	5
1990	-	1	1	-	-	1	-	-	-	-	-	2	2	-	-	-	-	-	-	-	1	3	3	-	-	7
1991	1	-	-	2	-	2	1	-	1	1	-	-	-	-	1	-	–	–	1	-	3	1	-	4	2	10
1992	3	-	-	4	3	1	-	-	-	1	2	-	-	4	-	-	-	-	-	-	6	-	-	8	4	18
1993	1	-	-	4	-	-	-	-	9	4	1	-	-	1	1	-	–	–	1	-	2	-	-	15	5	22
totals	9	3	1	10	3	5	3	3	10	6	3	2	4	5	2	-	-	1	2	-	17	8	9	27	11	72
n																										
1986	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	-	-	2
1987	5	7	15	-	-	3	2	14	-	-	-	-	-	-	-	2	6	6	-	-	10	15	35	-	-	60
1988	2	3	12	-	-	7	3	14	-	-	-	2	1	-	-	5	2	9	1	-	14	10	36	1	-	61
1989	8	8	12	-	-	1	8	16	1	-	-	-	3	-	-	6	14	11	-	-	15	30	42	1	-	88
1990	6	4	7	-	-	2	5	1	2	-	2	-	4	-	-	3	6	7	-	-	13	15	19	2	-	49
1991	3	-	-	11	-	4	4	-	6	2	1	-	-	1	-	5	1	-	7	-	13	5	-	25	2	45
1992	1	-	-	9	-	2	-	-	6	-	-	-	-	3	-	1	-	-	4	-	4	-	-	22	-	26
1993	-	-	-	10	2	-	-	-	6	-	-	-	-	2	-	-	-	-	3	1	-	-	-	21	3	24
totals	25	22	47	30	2	18	22	45	21	2	3	2	9	6	-	22	29	33	15	1	69	75	134	72	5	355
u+a+	52	29	65	60	9	26	28	59	46	12	7	5	18	14	2	26	33	42	31	1	112	95	184	151	24	566

Group of 31 NSS schools

NSS	Science					Arts					Soc. Sci.					Other Fac.					totals					year
	D	ordhon	G	M		D	ordhon	G	M		D	ordhon	G	M		D	ordhon	G	M		D	ordhon	G	M		tot.al
1986	1	1	-	1	-	1	-	2	-	-	-	-	-	-	-	-	1	-	-	-	2	2	2	1	-	7
1987	6	11	21	-	-	1	9	13	-	-	2	3	4	-	-	2	11	16	-	-	11	34	54	-	-	99
1988	6	16	35	1	-	1	9	13	1	-	1	1	2	-	-	3	8	18	-	-	11	34	68	2	-	115
1989	15	9	29	2	-	2	8	15	2	1	1	4	1	1	-	7	11	15	-	1	25	32	60	5	2	124
1990	4	23	23	4	1	1	13	8	2	-	-	2	7	1	-	2	6	17	3	-	7	44	55	10	1	117
1991	5	5	-	33	4	2	6	-	18	1	2	1	1	2	-	6	8	-	17	-	15	20	1	70	5	111
1992	9	-	-	35	1	3	-	-	26	-	1	-	-	5	-	3	-	-	21	-	16	-	-	87	1	104
1993	8	-	-	53	10	4	-	-	25	2	-	-	-	13	2	4	-	-	36	4	16	-	-	127	18	161
totals	54	65	108	129	16	15	45	51	74	4	7	11	15	22	2	27	45	66	77	5	103	166	240	302	27	838

The total numbers for each year are given as:-

	SS schools	NSS schools
1986	8	7
1987	72	99
1988	80	115
1989	115	124
1990	78	117
1991	71	111
1992	63	104
1993	79	161
total	566	838

The main results arising from Tables 18 and 19 can be summarised:-

1. The two sets of data indicate that, with the exception of the Faculty of Science, the performance of the three groups of students from the Summer School schools as a whole is reasonably comparable with that of the non-Summer School schools. From Table 18, the Summer School students who have performed particularly well in comparison with non-Summer School students are those who attended the Summer School unassisted (u). For example, the drop-out rate for this group in Arts was 8.3% as opposed to 7.9% for the non-Summer School schools; the drop-out rate was 10% for Social Sciences as opposed to

12.3% for the non-Summer School schools (NSS) and 13.3% for Other Faculties as opposed to 12.3%, NSS. Indeed, the combined drop-out rate for those who attended Summer School (u+a=t) was lower in both Arts and 'Other Faculties' than the rate for those who did not attend (n), the rate was roughly the same for Social Sciences. These findings indicated that in these cases the "weaker" students actually outperformed the "less at risk" students.

2. The Faculty of Science attracted the largest number of students from both groups of schools. There were 215 of 566 (38.0%) from the Summer School schools and 372 of 838 (44.4%) from the non-Summer School schools. The drop-out rate was highest, for both groups, in this Faculty. Here the students from the Summer School schools performed somewhat worse. The poorest performance came from the group who had had assisted entry (a) through the Summer School. Their drop-out rate was given as 34.6%, however this was not particularly higher than that of the unassisted students (u), 28.6%. Both rates were, however, higher than those for the students who did not attend the Summer School (n), 19.8%, and those from the comparative schools (NSS), 14.5%. Possible explanations might lie in the following two hypotheses:-

- Students who study science subjects on the Summer School are given a false sense of confidence as to the levels of difficulty of these subjects in first year university. They are therefore not sufficiently prepared for the Faculty.

- Students who attend Summer School are generally 'weaker' academically and in particular may be attracted to the Faculty of Science as the faculty entrance requirements are lower than most of the other faculties at the University of Glasgow.

3. Overall, the percentages of students who had already graduated, either with Ordinary or Honours degrees, were very similar for both groups of schools, Summer School and non-

Summer School. These percentages were 49.3% for the Summer School schools and 48.4% for the non-Summer School schools. The lowest percentages graduating with Honours were within the assisted (a) group. However, the percentages gaining Honours degrees were higher for the unassisted (u) group than the non-Summer School schools in both Arts and Social Science.

4. Of those who have not yet completed degrees, 26.7% from the Summer School schools are in good standing compared with 36% from the non-Summer School schools. The respective figures for those in minimum standing are 4.2% and 3.2%. Although overall the figure is 26.7% for those in good standing from the Summer School schools, the figure for those in good standing who also attended Summer School (both assisted and unassisted) is 37.3% as opposed to 20.3% who did not attend. This can be explained by the fact that fewer students were entering the University from the 31 schools without attending Summer School in the later years.

5. Through examining Table 19, the year-by-year table of entrants, it can be noted:-

- The numbers from the Summer School schools who attended Summer School and entered the University of Glasgow have increased from six in 1986, to twelve in 1987, to 55 in 1993. At the same time the numbers of students from these schools who did not attend Summer School rose to a maximum in 1989 of 88 students and have since fallen to 24 in 1993. The increase in the numbers attending Summer School is partly explained by the increase in the number of schools participating since 1986 but also indicates that attendance at Summer School is increasingly viewed as worthwhile by both staff and students in the schools.

- The number of students from the non-Summer School schools entering the University of Glasgow increased up to the year 1989 (124 students) then decreased until 1992 (104) students. This number then rose to 161 in 1993. Overall considerably more students have come from this group of schools. It is argued, in the light of the relevant literature (Sections 4.2 to 4.4), that the disparity of numbers, 838 non-Summer School as opposed to 566 Summer School, is largely explained by the weighting in the level of disadvantage, as measured by the percentage in the school receiving clothing allowance (Chapter Three, Section 3.6),

in that higher disadvantage leads to lower participation in post compulsory education.

In summary, a disparity, between the two groups (Summer School and non-Summer School), lies in the overall drop-out rate. This rate is 19.8% for the Summer School schools and 12.3% for the non-Summer School schools. The disparity is explained by the problems with the Faculty of Science students and the fact that the majority of students in both groups were in this Faculty. The disparity then skewed the overall percentages. With this exception the performance of the students from the Summer School schools was reasonably comparable. In particular the unassisted students who attended the Summer School compared very favourably with the non-Summer School students.

4.6.1 Year one performance of the non-completing students from the 62 schools, Summer School and non-Summer School

Overall there have been 213 students who have withdrawn from their degree courses (drop-outs), 110 from the Summer School schools and 103 from the non-Summer School schools. Table 20 below indicates the numbers of passes in year one obtained by the students who dropped-out (D). In "Other Faculties", where more than three subjects were studied in year one the number of subjects, for the purposes of the Table, has been reduced to three by proportion.

Table 20 Number of passes in first year for the drop-out students

category		0 passes	1 pass	2 passes	3 passes	total	total no. of students per category
SS	u	9(36%)	8(32%)	4(16%)	4(16%)	25	139
	a	12(70.6%)	3(17.6%)	2(11.8%)	0(0%)	17	73
	t(u+a)	21(50%)	11(26.2%)	6(14.3%)	4(9.5%)	42	212
	n	17(25.0%)	16(23.5%)	24(35.3%)	11(16.2%)	68	354
	t+n	38(34.5%)	27(24.5%)	30(27.3%)	15(13.6%)	110	566
NSS		33(32.0%)	23(22.3%)	30(29.1%)	17(16.5%)	103	838

From Table 20 it can be seen that the performance of the students from the Summer School schools, as a whole, is largely similar to that of the non-Summer School schools. Closer investigation reveals that the "weakest" group was the assisted (a) group where 70.6% of this group received no passes at all in first year and 0% received three. Also of interest is the high number of the non-attending Summer School students (n) who received two or more passes in first year yet still dropped-out. This appears to indicate that these students were reasonably strong academically yet for apparently non-academic reasons gave up their courses.

4.6.2 Year one performance of graduating honours and ordinary students from the 62 schools, Summer School and non-Summer School

It was decided to also examine the number of passes gained by the graduating students in first year. Table 21 examines the number of passes gained by those with Honours degrees and Table 22 examines this number for Ordinary graduates. Again the number of subjects for those in "Other Faculties" was reduced to three proportionately, in both cases.

Table 21 Number of passes in first year for Honours graduating students

category		1 pass	2 passes	3 passes	total	total no. of students per category
SS	u	1(2.5%)	2(5%)	37(92.5%)	40	139
	a	0(0%)	2(25%)	6(75%)	8	73
	t(u+a)	1(2.1%)	4(8.3%)	43(89.6%)	48	212
	n	1(0.7%)	13(9.6%)	122(89.7%)	136	354
	t+n	2(1.1%)	17(9.2%)	165(89.7%)	184	566
NSS		1(0.4%)	29(12.1%)	210(87.5%)	240	838

The results of Table 21 indicate that the performance of the students from both groups is very similar. Clearly a full set of passes in first year is a very strong predictor of students' likelihood of gaining an honours degree. There were no students from either group with no passes in first year.

The percentage of students gaining three passes in the unassisted category (u) was the highest overall (92.5%), whereas the percentage with three passes in the assisted (a) category was the lowest (75.0%). It is noted that the actual number of students in the assisted category was also low, eight out of 73. The largest number from the Summer School group came from the non-attending category (n); however, with the shift in the numbers attending Summer School in the later years examined, it is thought likely that this situation will be reversed in future years.

Table 22 Number of passes in first year for Ordinary graduating students

category		0 passes	1 pass	2 passes	3 passes	total	total no. of students per category
SS	u	0(0%)	2(16.7%)	5(41.7%)	5(41.7%)	12	139
	a	0(0%)	2(22.2%)	6(66.7%)	1(11.1%)	9	73
	t(u+a)	0(0%)	4(19.0%)	11(52.4%)	6(28.6%)	21	212
	n	0(0%)	7(9.3%)	18(24.0%)	50(66.7%)	75	354
	t+n	0(0%)	11(11.5%)	29(30.2%)	56(58.3%)	96	566
NSS		1(0.6%)	5(3.0%)	56(33.7%)	104(62.7%)	166	838

The results for the Summer School schools are again very similar to those of the non-Summer School schools. The exception here is that of the group of students who gained only one pass in first year where a higher percentage of students from the Summer School schools eventually graduated with Ordinary degrees. The first year pass level was not as high as that for Honours. Around 60% have three passes as against the roughly 90% leading to Honours. The probability of graduating with one or two passes is about three times more likely to lead to Ordinary degrees as against Honours.

4.7 Comparison of the two groups of schools

In this Section a comparison of the two groups of 31 schools is drawn. Table 23 ranks the schools by Clothing %.(r_1) It then gives information on the following:-

- "no. to GU" - the number of students from each school entering the University of Glasgow
- "no. of D" - the number of drop-outs from that school
- "% of non-D" - the percentage of non-drop-outs
- "no. of grad" - the number of graduates
- " % of grad" - the percentage of graduates

(For full details of faculties and performance categories by school see Appendix V)

Table 23 Comparison of schools with regard to University of Glasgow performance

(Summer school schools are given in bold type)

SS schools							NSS schools						
school	Clth % r_1	no to GU	no. of D	% of non-D	no. of grad	% of grad	school	Clth % r_1	no. to GU	no. of D	% of non-D	no. of grad	% of grad
Castlemilk	1	9	1	88.9	3	33.3	John Bosco	8	9	2	77.8	4	44.4
Lochend	2	17	4	76.5	9	52.9	Crookston Castle	15.5	4	1	75.0	1	25.0
St Augustine's	3	9	6	33.3	0	0	Victoria Dr	22	6	0	100	3	50.0
St Leonard's	4	18	4	77.8	9	50.0	Whitehill	23.5	4	1	75.0	2	50.0
St Margaret Mary's	5	11	2	81.8	6	54.5	North Kelvinside	25	13	7	46.2	6	46.2
St Roch's	6	14	4	71.4	5	35.7	Braidhurst	27	2	0	100	2	100
Garthamlock	7	21	7	66.7	11	52.4	Woodside	30	50	11	78.0	21	42.0
Smithycroft	9	10	2	80.0	6	60.0	Clyde Valley	31	13	2	84.6	5	38.5
Springburn	10	1	1	0	0	0	Eastbank	32	16	2	87.5	7	43.8
John Street	11	3	1	66.7	2	66.7	Rosehall	33	13	3	76.9	8	61.5
St Gerard's	12	10	2	80.0	7	70.0	Knightswood	35	15	1	93.3	9	60.0
Merksworth	13	15	1	93.3	12	80.0	St Margaret's H	36	56	6	89.3	33	58.9
Drumchapel	14	11	3	72.7	7	63.6	Bellahouston	37	23	2	91.3	17	73.9
St Andrew's	15.5	54	11	79.6	39	72.2	Columba H(L)	39.5	19	2	89.5	9	47.4
Bellarmine	17	4	0	100	2	50.0	Notre Dame(G)	41	50	4	92.0	30	60.0
Wellington	18	2	0	100	2	100	St Columba's(R)	42	39	4	89.7	16	41.0
All Saints'	19	8	3	62.5	4	50.0	St Thomas Aquinas	43	14	3	78.6	4	28.6
Govan	20	4	1	75.0	3	75.0	John Paul	45	43	4	90.7	18	41.9
St Mirin's	21	2	0	100	0	0	Our Lady's H	47.5	1	0	100	1	100
Braidfield	23.5	28	8	71.4	13	46.4	Bellshill	47.5	13	0	100	8	61.5
St Mungo's	26	30	3	90	11	36.7	Airdrie	49	47	9	80.9	18	38.3
Greenock	28	12	6	50.0	6	50.0	Linwood	50	8	0	100	4	50.0
St Stephen's	29	20	1	95.0	7	35.0	Clydebank	51.5	37	4	89.2	22	59.5
John Ogilvie	34	30	4	86.7	14	46.7	Hillhead	51.5	53	8	84.9	27	50.9
St Columba's H (D)	38	38	9	76.3	12	31.6	Cardinal Newman	54	61	4	93.4	36	59.0
Port Glasgow	39.5	28	8	71.4	13	46.4	Our Lady and St Patrick's	55	47	3	93.6	18	38.3
Notre Dame(R)	44	53	6	88.7	28	52.8	Trinity	56.5	35	5	85.7	18	51.4
Barrhead	46	16	1	93.8	10	62.5	Brannock	56.5	6	0	100	3	50.0
Blantyre	53	34	6	82.4	15	44.1	Castlehead	58	60	7	88.3	23	38.3
St Luke's	61	16	3	81.3	8	50.0	Penilee	59	37	4	89.2	14	37.8
Gleniffer	62	38	4	89.5	15	39.5	Cleveden	60	44	4	90.9	19	43.2
total		566	112	80.2	279	49.3	total		838	103	87.7	406	48.4
Averages (rounded)		18.3 18	3.6 4		9		Averages (rounded)		27.0 27	3.3 3		13.1 13	

Remarks arising from the comparison of schools:-

1. The percentage of non-drop-outs columns, "% of non D", cover the numbers of students who have either graduated (Honours or Ordinary) or whose courses are incomplete and are still in good standing (G) or minimum standing (M), according to the relevant faculty regulations. In these columns, 0% means that all students from that school have dropped out. In fact only Springburn Academy was in that category and indeed only one student had entered the University from this school. At the same time, 100% means that none of that school's students have dropped out. There are nine schools in this category, three Summer School and six non-Summer School. These are as follows:- Summer School -Bellarmine Secondary (4 students), Wellington Academy (2 students), St Mirin's High (2 students); non-Summer School - Victoria Dr Secondary (2 students), Braidhurst High (2 students), Our Lady's High (1 student), Bellshill Academy (13 students), Linwood High (8 students), Brannock High (6 students).

2. Overall, seventeen schools provided less than ten students each to the University of Glasgow, nine of these were Summer School schools and eight were non-Summer School schools. It is considered that it is unlikely that the small numbers entering the University were related entirely to locality in that eleven (seven Summer School and four non-Summer School) were in Glasgow Division. Of the others, one is in Dunbarton Division (non-Summer School), two in Lanark Division (both non-Summer School) and four in Renfrew Division (two Summer School and two non-Summer School). The Clothing % ranks for these schools in Glasgow Division ranged from $r_1=1$ to $r_1=23.5$ and for the non-Glasgow schools ranged from $r_1=18$ to $r_1=56.5$. It is, therefore, argued that the poor take-up rates from these schools could be explained by two separate factors. These factors could be either disadvantage leading to under-representation as identified by the Clothing % rank or locality of schools where schools are located in divisions other than Glasgow Division.

3. The average percentage of non-drop-outs for the group of 31 Summer School schools was 80.2%. Fourteen of the 31 schools had a non-drop-out percentage rate greater than 80.2% and seventeen had a rate less than 80.2%. The corresponding percentage for the group of 31 non-Summer School schools was 87.7%. There were nineteen schools with a non-drop-out percentage rate greater than 87.7% and twelve with less than 87.7%. Although the results were similar, the non-Summer School schools were performing somewhat better on the average.

4. The Summer School schools provided, on average, eighteen (rounded from 18.3) students each to the University. There were twenty schools with below average numbers and eleven above the average. The largest number was 54. The non-Summer School schools had a corresponding average of 27 (rounded from 27.0) students per school. There were fifteen schools below the average and sixteen above. The largest number was 61. This result confirms the notion that the schools weighted towards the top end of the scale by Clothing %, i.e., a higher percentage in the school receiving clothing allowances (largely the Summer School schools), show clearer signs of under-representation.

5. The percentage of graduates for the whole group of 31 Summer School schools was 49.3%; eighteen schools had a percentage less than 49.3% and thirteen had a percentage higher than the average. The corresponding percentage for the 31 non-Summer School schools was 48.4%; here sixteen schools had a percentage greater than 48.4% and fifteen had a lower percentage.

4.7.1 The 62 schools, Summer School and non-Summer School, by non-drop-out and graduate ranks

In order to illustrate how the 62 schools (31Summer School and 31 non-Summer School) were performing in relation to the Clothing % ranking (r_1), it was decided to compare this ranking with those of "Non-drop-out % rank" (r_5) and with "Graduate %" rank (r_6). The ranks are given as follows:-

1. Clothing % (r_1) - low rank denotes high percentage of pupils in that school receiving a clothing allowance.

2. Non-drop-out % (r_5) - low rank denotes low non-drop-out percentage, in other words, a higher drop-out rate.

3. Graduate % (r_6) - low rank denotes low graduate percentage, in other words, fewer pupils graduating.

Table 24 The 62 schools by Clothing % rank (r_1), Non-drop-out % rank (r_5) and Graduate % rank (r_6)

SS schools						NSS schools					
school	r_1	r_5	r_6	r_1-r_5	r_1-r_6	school	r_1	r_5	r_6	r_1-r_5	r_1-r_6
Castlemilk	1	36	7	-35	-6	John Bosco	8	18.5	23	-10.5	-15
Lochend	2	16	42	-14	-40	Crookston Castle	15.5	13	4	2.5	11.5
St Augustine's	3	2	2	1	1	Victoria Dr	22	58	33	-36	-11
St Leonard's	4	18.5	33	-14.5	-29	Whitehill	23.5	13	33	10.5	-9.5
St Margaret Mary's	5	27	43	-22	-38	North Kelvinside	25	3	24	22	1
St Roch's	6	9	9	-3	-3	Braidhurst	27	58	61	-31	-34
Garthamlock	7	6.5	40	0,5	-33	Woodside	30	20	19	10	11
Smithycroft	9	23.5	48	-14.5	-39	Clyde Valley	31	29	15	2	16
Springburn	10	1	2	9	8	Eastbank	32	33	21	-1	11
John Street	11	6.5	54	4	-43	Rosehall	33	17	50.5	16	-17.5
St Gerard's	12	23.5	55	-11.5	-43	Knightswood	35	48.5	48	-13.5	-13
Merksworth	13	48.5	59	-35.5	-46	St Margaret's H	36	39	44	-3	-8
Drumchapel	14	11	53	3	-39	Bellahouston	37	46	57	-9	-20
St Andrew's	15.5	22	56	-6.5	-40.5	Columba H(L)	39.5	40.5	28	-1	11.5
Bellarmine	17	58	33	-41	-16	Notre Dame(G)	41	47	48	-6	-7
Wellington	18	58	61	-40	-43	St Columba's(R)	42	42	17	0	25
All Saints'	19	5	33	14	-14	St Thomas Aquinas	43	21	5	22	38
Govan	20	13	58	7	-38	John Paul	45	44	18	1	27
St Mirin's	21	58	2	-37	19	Our Lady's H	47.5	58	61	-10.5	-13.5
Braidfield	23.5	9	25.5	14.5	-2	Bellshill	47.5	58	50.5	-10.5	-3
St Mungo's	26	43	10	-17	16	Airdrie	49	25	13	24	36
Greenock	28	4	33	24	-5	Linwood	50	58	33	-8	17
St Stephen's	29	53	8	-24	21	Clydebank	51.5	37.5	46	14	5.5
John Ogilvie	34	32	27	2	7	Hillhead	51.5	30	38	21.5	13.5
St Columba's H (D)	38	15	6	23	32	Cardinal Newman	54	50	45	4	9
Port Glasgow	39.5	9	25.5	30.5	14	Our Lady and St Patrick's	55	51	13	4	42
Notre Dame(R)	44	35	41	9	3	Trinity	56.5	31	39	25.5	17.5
Barrhead	46	52	52	-6	-6	Brannock	56.5	58	33	-1.5	23.5
Blantyre	53	28	22	25	31	Castlehead	58	34	13	24	45
St Luke's	61	26	33	35	28	Penilee	59	37.5	11	21.5	48
Gleniffer	62	40.5	16	21.5	46	Cleveden	60	45	20	15	40

Remarks arising from Table 24:-

1. The schools with less than ten students can effectively be ignored. This is because such small samples risk not being valid. There are no regular pattern of differences between

Clothing % and Non-drop-out %, r_1-r_5, and Clothing % and Graduate %, r_1-r_6. These schools are given as:-

school	no. of stdnts	r_1	r_5	r_6	r_1-r_5	r_1-r_6
SS						
Castlemilk	9	1	36	7	-35	-6
St Augustine's	9	3	2	2	1	1
Springburn	1	10	1	2	9	8
John Street	3	11	6.5	54	4	-43
Bellarmine	4	17	58	33	-41	-16
Wellington	2	18	58	61	-40	-43
All Saints'	8	19	5	33	14	-14
Govan	4	20	13	58	7	-38
St Mirin's	2	21	58	2	-37	19
NSS						
John Bosco	9	8	18.5	23	-10.5	-15
Crookston Castle	4	15.5	13	4	2.5	11.5
Victoria Dr	6	22	58	33	-36	-11
Whitehill	4	23.5	13	33	10.5	-9.5
Braidhurst	2	27	58	61	-31	-34
Our Lady's(L)	1	47.5	58	61	-10.5	-13.5
Linwood	8	50	58	33	-8	17
Brannock	6	56.5	58	33	-1.5	23.5

For the remainder of this section the schools all have at least ten students at the University of Glasgow.

2. The schools with the difference between Clothing % and Non-drop-out % numerically less than or equal to twenty, i.e., $|r_1-r_5| \leq 20$, and also with the difference between Clothing % and Graduate % numerically less than or equal to twenty, i.e., $|r_1-r_6| \leq 20$, are given below. The limiting value twenty has been choosen here because 27 of the 45 schools with more than ten students have at least one numerical difference greater than twenty The numbers of students are given in brackets.

SS	**St Roch's(14)**	NSS	Woodside(50)	Bellahouston(23)
	Braidfield(28)		Clyde Valley(13)	Columba(L)(19)
	St Mungo's(30)		Eastbank(16)	Notre Dame(G)(50)
	John Ogilvie(30)		Rosehall(13	Bellshill(13)
	Notre Dame(R)(53)		Knightswood(15)	Clydebank(37)
	Barrhead(16)		St Margatet's(56)	Cardinal Newman(61)

These schools are regarded as having Non-drop-out % ranks and Graduate % ranks reasonably in line with their Clothing % ranks.

3. Of the remaining 27 schools, the following have either the difference between Clothing % and Non-dop-out % less than minus 30, i.e., $r_1-r_5<-30$, or the difference between Clothing % and Graduate % being less than minus 30, i.e., $r_1-r_6<-30$ (30 is chosen here since many of the differences are numerically much larger than 30 and the number of schools involved is reasonably large). These are:-

school	no. of students	r_1	r_5	r_6	r_1-r_5	r_1-r_6
SS						
Lochend	17	2	16	42	-14	-40
St Margaret Mary's	11	5	27	43	-22	-38
Garthamlock	21	7	6.5	40	0.5	-33
Smithycroft	10	9	23.5	48	-14.5	-39
St Gerard's	10	12	23.5	55	-11.5	-43
Merkworth	15	13	48.5	59	-35.5	-46
Drumchapel	11	14	11	53	3	-39
St Andrew's	54	15.5	22	56	-6.5	-40.5

(There are no non-Summer School schools (with ≥10 students at the University of Glasgow) with either $r_1-r_5<-30$ or $r_1-r_6<-30$)

The most important finding here is the large negative values of r_1-r_6, namely that the Graduate % rank is higher than would be expected from the Clothing % rank. This, however, may have to be balanced against a small value of $|r_1-r_5|$, which indicates that

Non-drop-out % rank is along the lines that would be expected. An example of this is St Andrew's Secondary School (Summer School), where, of the 43 non-drop-out students, 39 have already graduated leaving only four still at the University. It is worth noting that none of the non-Summer School schools appear in this category. In other words none of them have exceptionally higher non-drop-out and graduate rates than would be expected by the clothing allowance percentage.

4. Of the nineteen schools remaining, the following eleven have either the difference between Clothing % and Non-drop-out % greater than 30, i.e., $r_1-r_5>30$, or the difference between Clothing % and Graduate % greater than 30, i.e., $r_1-r_6>30$. These are:-

school	no. of stdnts	r_1	r_5	r_6	r_1-r_5	r_1-r_6
SS						
St Columba's(D)	38	38	15	6	23	32
Port Glasgow	28	39.5	9	25.5	30.5	14
Blantyre	34	53	28	22	25	31
St Luke's	16	61	26	33	35	28
Gleniffer	38	62	40.5	16	21.5	46
NSS						
St Thomas Aquinas	14	43	21	5	22	38
Airdrie	47	49	25	13	24	36
Our Lady and St Patrick's	47	55	51	13	4	42
Castlehead	60	58	34	13	24	45
Penilee	37	59	37.5	11	21.5	48
Cleveden	44	60	45	20	15	40

The result here is that a large positive value of r_1-r_6 indicates that Graduate % rank is lower than would be expected from Clothing % rank. This can be balanced against a Non-drop-out % rank that is closer to expectation. Examples of this are:-

• Gleniffer High (Summer School), which had fifteen graduates but also had nineteen still at the University

• Airdrie Academy (non-Summer School), which had eighteen graduates but also had twenty still at the University

• Our Lady's and St Patrick's (non-Summer School), which had eighteen graduates but also had 26 at the University

In summary, the detailed analysis by category, faculty, year and the various performance headings (drop-out, Ordinary, Honours, good standing and minimum standing) for the group of 31 Summer School schools and the comparison group of 31 non-Summer School schools indicates that, in many respects, the Summer School schools are not overshadowed by the non-Summer School schools. Indeed, there is evidence to suggest that in some cases the students who attended Summer School actually out-performed those groups who did not. The steady increase in the numbers of students entering the University of Glasgow from the Summer School schools who had also participated in the Summer School reflects well on the Summer School itself.

4.8 Summary and conclusions

This chapter provided the results of the detailed analysis of the performance of the students from the 62 schools, 31 Summer School schools and 31 non-Summer School schools, at the University of Glasgow, 1986 to 1993. It undertook to do this within the context of the wider debate on the relationship between social factors and educational achievement. Some discussion of the main findings is given below.

1. The analysis undertaken in the Chapter was on an aggregate basis, i.e., schools based as opposed to individually based. The correlation between the indicator of deprivation used (Clothing %) and entry to higher education was found to be highly similar to the correlation between social class and educational achievement found in most other aggregate research (White, 1982). It was considered that this confirmed the value of the use of Clothing % as the predictor of disadavantage used in the thesis.

2. There was evidence to indicate that the Summer School had produced academic benefits for its past students. Given that the students who attend Summer School are on the whole the "weaker" students, in that very few students who hold unconditional offers for university attend, it was found that in some cases these students performed better than the comparative groups. The students in the unassisted category (u) compared highly favourably with both those who did not attend Summer school (n) and those from the non-Summer School schools. The unassisted students had similar drop-out rates to those of the non-Summer School schools and better rates than the non-attending group (n) in all faculties other than the Faculty of Science. Also the unassisted group had the lowest drop-out rate for the Faculty of Social Sciences. The unassisted group also had the highest honours graduate rate for the Faculty of Social Science of all groups.

3. The group that performed worst overall was the assisted (a) group. These students had gained entry to the University on the basis of their Summer School performance, having been unsuccessful for entry through their SCE Higher results. The poorer performance here was to be anticipated given that these were undoubtedly the 'weakest' of all the students. However, at the same time, 55 of the 73 (75.3%) students in this category had either graduated or were still attending the University. In view of the fact that these students

would not have gained access to the University through General Entrance Requirement and faculty entrance requirements, this can be seen as highly favourable to the Summer School.

4. Where the students from the 31 Summer School schools performed worse than the 31 non-Summer School schools was in the Faculty of Science. Further, the students from the Summer School schools who had attended Summer School (u+a) performed worse than those who had not (n). The drop-out rates for those who attended Summer School were 28.6% (u) and 34.6% (a) as opposed to 19.8% (n) and 14.5% (NSS). Possible explanations might lie in differences between levels of teaching within the Summer School and within first year University Science subjects. Alternatively the results might be based on the fact that many students are attracted to the Faculty of Science due to lower faculty entrance requirements and thus the Faculty may have more "weaker" students who are less likely to succeed. It is considered that this is an area in which the Summer School has been found deficient and necessitates further investigation for future teaching on the Summer School.

5. The overall drop-out rate was higher within the group of 31 Summer School schools than the non-Summer School schools. This was largely explained by the fact that the Faculty of Science attracted the largest number of students and by the differences in drop-out rates as expained above.

6. Through examining the differences between ranks, Clothing % and Non-drop-out % (r_1-r_5) and Clothing % and Graduate % (r_1-r_6), it was identified that schools with large negative values of r_1-r_6 were those where the percentage graduating was higher than would be expected by the percentage in that school receiving a clothing allowance. There were

eight Summer School schools in this category and no non-Summer School schools. At the same time, of the schools with a large positive value of r_1-r_6, where Graduate % was lower than would be expected from Clothing % rank, there were six non-Summer School schools in this category as opposed to five Summer School schools. Both of these results indicated more favourable outcomes for the Summer School schools given the relative levels of disadvantage.

The above summary of the results concludes the Chapter on the analysis of the performance of students from the 62 schools. This chapter, as with the previous chapter, has focused extensively on the 62 schools. In Chapter Three the original methods used to select the 31 Summer School schools were examined historically. These schools were then re-assessed by new indicators using different methods. From this it was possible to select the 31 comparative non-Summer School schools. The schools were then ranked again by the new indicator, Higher Education%, and the ratios entering the University of Glasgow were calculated. From the processes employed in Chapter Three, it was concluded that the non-Summer School schools were only roughly similar and that indeed the schools being targeted for participation on the Summer School were still largely the correct ones in terms of disadvantage.

The schools analysis looked at the performance of all of the students from the 62 schools. From the analysis it was possible to conclude that in many respects the students who attended Summer School were performing considerably better than would be predicted by the levels of deprivation in these schools. The main exception here was found to be those students in the Faculty of Science.

Chapter Five

Scottish Wider Access Programme students at the University of Glasgow, both Summer School and non-Summer School

Chapter Five

Scottish Wider Access Programme students at the University of Glasgow, both Summer School and non-Summer School

5.1 Introduction: Orientation of the chapter

This chapter investigates the academic performance of some of the adults who attended the Summer School, namely the Scottish Wider Access Programme (SWAP) students, and then entered the University of Glasgow. Approximately half of the total number of students who have entered the University with such qualifications since SWAP began have also attended the Pre-University Summer School. The comparative academic performance of both those who attended the Summer School and then entered the University of Glasgow and those who entered the University without the benefit of this preparation is assessed. If it could be shown that those who had attended Summer School performed better academically than those who did not, this would be supporting evidence for the "success" of the Summer School.

The chapter initially examines the inception and development of SWAP since it began in 1987, focusing in particular on the West of Scotland Consortium of which the University of Glasgow is a member. It then outlines the structures and aims of the Programme and

some of the facts and figures available. It also traces the connections between the Summer School and the West of Scotland Consortium. A short section of the chapter is devoted to reviewing Her Majesty's Inspectorate's (HMI) inspection of SWAP which took place in 1991/1992. The chapter also looks at some of the more recent developments in SWAP since funding from the Scottish Office Education Department (SOED) ceased in 1994.

The sections outlined above (Sections 5.2 to 5.6) offer mainly an exposition of the background and provision of SWAP since 1987 with little emphasis on critical analysis. This approach has been taken because it was considered necessary to the analysis of the performance of SWAP students at the University of Glasgow for the reader to be aware of the contexts from which such students enter higher education.

After outlining the Scottish Wider Access Programme, the chapter (Section 5.7 onwards) then focuses on the analysis of the academic performance of the students at the University of Glasgow. It examines, initially, the entire group of students by numbers and by faculties entered. It then separates the groups of students into those who also attended Summer School and those who did not in order to determine what effects, if any, attendance at the Summer School had on academic performance.

5.2 The Scottish Wider Access Programme

In 1987 pilot programmes in Access to Science and Technology were mounted. In the West of Scotland these took place at Stow College and Langside College. The courses were designed jointly by staff of further education colleges and higher education institutions, called receiving bodies. These pilots were in response to the 1987 White Paper 'Higher

Education: Meeting the Challenge' (HMSO, 1987) which set out the government's support for widening access to higher education. Primarily there were three main reasons for this governmental commitment:-

1. The demographic decline in school leavers meant that higher education would have to draw its student body from a wider catchment.

2. There was an increasing demand for a better qualified work force from industry and commerce.

3. There was a perceived need for social equality and justice.

In April 1988 Malcolm Rifkind, then Secretary of State, used the occasion of the official opening of the new SCOTVEC (Scottish Vocational Education Council) offices in Glasgow to announce the inception of the SWAP initiative (McKinney, 1988). Education Authorities were invited to take the lead in forming consortia which would promote wider access to higher education. The consortia were to consist of the Education Authorities, which would include the further education colleges and careers services within the authorities, and the higher education institutions within the same geographical areas. This development was unique in the United Kingdom in that it encompassed all the further education colleges and higher education institutions in Scotland, whereas elsewhere the pattern was generally of local initiatives involving small numbers of institutions (Robinson, 1992).

The four consortia mounted were divided geographically into the following areas: North of Scotland, Mid Scotland, South East and West Scotland. They were made up of all the

publicly funded education bodies in the areas, that is, universities, colleges of education, central institutions (now the new universities) and further education colleges. At the same time the interests of schools, community education, careers services and regionally supported voluntary agencies were represented by the regional authorities. The four consortia were later rationalised in 1990 in three:-

1. NORSWAP - North of Scotland Access Consortium, which included Grampian and Highland Regions and the Islands.

2. ESAC - East of Scotland Access Consortium, including Borders, Lothian, Fife and Tayside. ESAC was an amalgamation of South East and Mid Scotland Consortia.

3. WSAC - West of Scotland Access Consortium, which included Dumfries and Galloway, Central and Strathclyde Regions.

Consortia have their own areas of special interest, e.g., NORSWAP is involved in establishing distance learning programmes whilst WSAC has a special interest in social disadvantage.

Funding for the Consortia was set at £1m over three years from the Scottish Education Department (SED) and the Training Agency for the period up to March 1991 and then was to be considerably reduced over the following three years. The cost of delivery of courses was to be largely met by regional reallocation of existing resources and higher education's contribution was to be largely in kind.

5.2.1 The aims of the Scottish Wider Access Programme

The overall aim was to establish permanent mechanisms to encourage adults to enter vocationally relevant higher education (latterly the emphasis on vocational education was altered to a certain extent to reflect the needs and interests of the students). Education Authorities were to take the lead in establishing the consortia, using the following objectives:-

1. To implement long-term arrangements to facilitate progression from further education to higher education.

2. To identify and support potential candidates including those currently under-represented.

3. To improve arrangements for guidance and counselling before and after entry.

4. To adjust course design, taking into account the needs of those with non-standard entrance qualifications.

5. To provide staff development in both further education and higher education to enable staff to adjust to the needs of those with non-standard qualifications (Robinson, 1992).

Some further discussion on each of the objectives is now given in order to indicate areas which were to be developed as part of the Scottish Wider Access Programme.

1) Long-term arrangements to facilitate progression from further education to higher education.

The aim was to provide a one-door approach to both further and higher education from basic or informal education through to higher education. This would expand access by establishing a continuum of educational provision, including operating clearing houses at each stage. The organisational structure was to include development in the areas of

Accreditation of Prior Learning and Assessment of Work Based Learning, both of which are devised to give credit to prior knowledge and experience (SWAP, 1988b).

Furthermore, the facilitation of progress to higher education was to be promoted through offering guaranteed places to those who completed Access courses. The guaranteed place is at the heart of the ethos of SWAP (Snaith, 1993). The place is not necessarily guaranteed at the student's first choice of higher education institution but is guaranteed at one of that consortium's institutions. In other words, a student might indicate their first choice, for example, as the Faculty of Science, University of Glasgow, but if a place were not available they could be offered the same course, or a lesser course, i.e., HND, at one of the other higher education institutions in the West of Scotland Consortium.

2) Identify and support potential candidates including those currently under-represented

Positive discrimination was to be given to the following groups:-

- women in areas where they were currently under-represented in the labour force
- ethnic minorities
- adults and school leavers from socially, educationally or economically disadvantaged areas
- the disabled
- those in employment who aimed to return to studies.

Students were to be identified through regional careers guidance networks, community education, further education colleges, schools guidance networks, continuing education, Gateway and voluntary agencies.

3) Arrangements for guidance and counselling

Guidance and counselling were to be dealt with through the Gateway Unit. It was recognised that students would need considerable support and guidance and this was to take the form of:-

- Pre-entry guidance - covering such things as course content, guaranteed places, SCOTVEC modules and assessment and selection
- On-going guidance - focusing on preparation for higher education and progress on Access courses

From 1989 onwards Guidance modules have been part of Access programmes. Elaine McLaren, Access Officer Stow College states:-

> The aim of the Guidance programme now is to use the module to help students to take a more active role in assessing their progress, planning for improvement and evaluating the success of their plans. This is still conducted in the context of preparation for Higher Education (McLaren, 1992:p11).

- Pre-exit Guidance - provided mainly on demand to students who are experiencing difficulties as most are reasonably confident about their progress at this stage.

Guidance and counselling - additional to the Guidance programme.

McLaren (1992) points out that, as WSAC became increasingly successful at targeting disadvantaged groups, many students with serious problems socially, domestically and financially required support.

4) Adjust course design taking into account the needs of those with non-standard qualifications.

It was recognised that the needs of adults with non-standard qualifications would require specific course design. Courses are based on SCOTVEC modules. There are 2,500 modules available. Programmes usually consist of 22 to 24 modules, 40 hours per unit, with clear learning outcomes. They are competency-based and there is no grading. The modules are nationally recognised, are internally assessed and externally validated. They concentrate on 'process' and are therefore considered 'content light'. In other words the processes of learning are emphasised as opposed to emphasis on the subject matter. Modules can be academic as well as vocational. The typical structure of programmes is:-

Core - communication, numeracy, computing, learning skills, guidance.

Programme - modules related to the broad area of study.

Electives - options related to the specific needs of particular areas of study, scope for further study to meet a student's special interests.

Examples of courses available are Primary Teaching, Secondary Teaching, Science and Technology, Built Environment, Food Science, Hotel and Catering Management, Health Studies and Nursing.

5) Provision of staff development in both further education and higher education to enable staff to adjust to the needs of those with non-standard qualifications.

The main objectives of staff development associated with WSAC are given as being representative of the developments in each of the Consortia. The developmental areas are given as:-

- develop student-centred approaches
- teach staff to understand how adults learn
- teach staff to appreciate the 'problems' of adults with non-standard entry qualifications, in particular the need to review existing curriculum and assessment procedures
- develop an awareness of the aims of Access Programmes for those involved in student guidance
- establish a commitment to Accreditation for Prior Learning and Work Based Accreditation in order to provide a 'fast lane' and act as a motivating factor.

The West of Scotland Consortium recognised that the interface between higher and further education might present particular problems for mature students arising from differing teaching methods, assessment techniques, levels of guidance and support and intellectual demands made of the students. It is stated:-

> The obvious danger is that innovative student centred/criteria referenced Access courses will lead mature students into traditional lecturer-centered/norm referenced Higher Education courses. This change in philosophy between FE based Access courses and degree/HND courses may prove to be the major stumbling point for many adults (SWAP, 1988a:p4).

This problem of the move from competence-based, criterion-referenced assessed, further education to norm-referenced assessment in higher education with the emphasis on grading and passing exams is indeed a major problem for SWAP students. Munn et al (1994b) found that students themselves worried about this on three fronts:-

- the pass/fail criterion-referenced assessment of Access courses left them unsure of their own abilities

- the pressure of continuous assessment during Access courses led them to doubt their understanding and long-term recall

- they worried that the university examination system would find them unprepared.

The argument is that ideologically the "older" universities have and continue to operate "elite" models. Munn et al state:-

> Britain has its own 'ivy league' institutions, venerated as centres of academic excellence where abstract, and theoretical knowledge is valued and students' attainments are assessed by end-of-year, norm-referenced examinations. These institutions typically have a preponderance of undergraduates from economically and socially advantaged backgrounds. There is emerging in higher education, however a rather different curriculum philosophy. This philosophy values applied practical knowledge, stresses modular learning, criteria-referenced assessment and continuous assessment. This philosophy is most frequently to be found in the 'newer' universities and in advanced level courses, such as HND and HNC offered in further education colleges and elsewhere (Munn et al, 1994a:p17).

However Munn et al (1994a) accept that staff in higher education criticise modules as qualifications for entry for degree courses. They outlined three main areas of criticism:-

- modules are fragmentary in nature and this is incompatible with degree courses which demand that you can see the links between topics and develop conceptual frameworks

- modules are superficial in that they do not demand an understanding of theories nor teach knowledge as tentative or contested

- modules do not provide a coherence and progression, e.g., Mathematics modules were particularly criticised in that students knew some areas at very advanced levels but also had gaps in basic knowledge.

There are arguments, therefore, from both higher education staff and from Access students, for developing closer links between degree courses and Access programmes and indeed new Access courses are being developed which aim to link the two types of course provision more closely together.

5.2.2 Structures of the West of Scotland Access Consortium

The West of Scotland Consortium is co-ordinated by a member of staff from Strathclyde Regional Council. The institutions and authorities participating in the Consortium are Strathclyde Regional Council, Dumfries and Galloway Regional Council, Universities of Glasgow, Strathclyde, Glasgow Caledonian and Paisley, the Glasgow School of Art, The Royal Scottish Academy of Music and Drama, West of Scotland Agricultural College, Craigie College, Jordanhill and St Andrew's Colleges of Education. There are also the further education colleges which accommodate the Access courses (nineteen in 1995).

The main groups which administer the Consortium are the Policy Group and the Management Group. The Policy Group's remit is to offer general direction on policy for the Consortium and to receive consultative papers and recommendations from the Management Group. The Policy Group comprises a representative from each member of the Consortium, SOED assessors, a representative from SCOTVEC, two industrial representatives and the Consortium co-ordinator. The Management Group consists of one member each from Strathclyde Regional Council, Dumfries and Galloway Regional Council, the Universities of Glasgow, Strathclyde, Caledonian and Paisley, Jordanhill College, the project co-ordinator and a secretary.

Staffing of the Access Programme was to be filled, initially, by secondment. In practice this has remained the case throughout. The Project Co-ordinator is seconded from further education and has the remit of co-ordinating all the activities of all the agencies involved in seeking to establish permanent arrangements aimed at giving wider access to higher education to disadvantaged groups and those mentioned as requiring positive discrimination in section 5.2.1 (SWAP, 1988b).

A brief examination of the levels of funding for the three years to 1991 for WSAC gives an indication of the costs involved:-

SED/SOED		£ 170,000 per annum
Regional Councils' Contribution	1988-89	£1,029,000
	1989-90	£1,302,000
	1990-91	£1,302,000
Consortium members		£ 235,000 per annum

(it should be recalled that the Region's contributions were largely through reallocation of existing resources)

5.3 The West of Scotland Access Programme - some facts and figures 1987-1994

In order to place in context the scale and size of WSAC, it is useful to examine a few facts and figures (All statistics in section 5.3 were reproduced with the permission of Dr Brian Knights, Monitoring Officer, WSAC).

1. Course Provision - The number of colleges of further education offering Access courses grew from three in 1987 to nineteen in 1994. There has also been a similar growth in the

number of Access Programmes available from two in 1987 to eighteen in 1994. These eighteen Programmes represent 51 courses at further education colleges.

2. Demographic details - A total of 5,136 students, 2,727 male and 2,409 female, have attended Programmes in the West of Scotland from 1987 to 1994. The age ranges are given below:-

age range
< 21 = 388
21 -30 = 2586
31 -40 = 1480
>40 = 577
total = 5,031 (the data for 105 students was missing)

3. Destinations, 1987-93 - The numbers and percentages of the 4394 students for the years 1987-1993 (no information for 1994) for the various destinations on leaving Access courses are given below:-

Destinations	Number	% of total 4394
university	1292	29.4%
primary ed	432	9.8%
secondary ed	61	1.4%
nursing college	366	8.3%
further education	676	15.4%
employment	78	1.8%
other(inc not known)	412	9.4%
drop-out from Access	1077	24.5%
total	4394	

(Knights, 1994:p6)

By examining the destinations of the students it is possible to conclude that the largest group of Access students progressed to university. Of those who progressed to university 16.5% entered the University of Glasgow.

4. Students who withdrew from Access courses - Almost a quarter of students did not complete Access courses (24.5%). Knights followed up these students in order to determine the reasons for non-completion:-

reasons for withdrawing 1987-1993 (1077 students, 24.5% of total,)

finance	235
domestic	192
employment	156
lost interest	106
too difficult	137
ill health	257
other	76
not known	188

(more than one answer could be given)
(Knights, 1994:p7)

Previous qualifications and correlations with withdrawing from Access courses.

Between 1987 and 1993, 1,039 students entered Science and Technology Access courses, including Biological Sciences and Technological Education courses. These are considered to be the courses that students would be most likely to have difficulties with. However an examination of the non-completion rate for this group indicates that they withdrew from courses at a rate only slightly higher than other courses. Knights also examines the relationship between previous qualifications and non-completion of Access course:-

Table 25 The previous qualifications of withdrawing students (the proportion of withdrawals against the total number of students in that category)

year	Nos. of withdrs.	Nos. with no quals.	Nos. with O/Std Grade Maths	Nos. with H Grade Maths	Nos. qualified but no Maths **A + B**	Nos. **A** at least O/Std Grade English	Nos. **B** some other non-SCE non Maths quals.
1987	20	10/19	3/22	0/8	7/19	4/11	3/8
1988	41	13/20	5/35	3/10	20/67	13/37	7/30
1989	127	53/163	20/122	3/14	51/272	30/155	21/117
1990	152	58/200	18/107	2/18	74/413	38/226	36/187
1991	196	69/195	32/160	3/17	92/516	46/279	46/237
1992	261	113/277	35/239	1/24	112/522	55/287	57/235
1993	280	91/229	66/247	4/14	119/445	52/265	67/180
total	1077	407/1103 36.9%	179/932 19.2%	16/105 15.2%	475/2254 21.1%	238/1260 18.9%	237/994 23.8%

From these results it is concluded that at least some previous qualification is advantageous towards completing Access courses. There is an advantage in having some qualification in mathematics, especially at Higher SCE Grade. For those without Mathematics, a qualification in English at SCE O/Std Grade, at least, is helpful (see Column "Nos. **A** at least O/Std Grade English").

A growing volume of research exists on the reasons for non-completion of Access courses (Cullen, 1994; Munn et al; 1992, 1993, 1994b; SOED, 1993a, 1993b). Much of this literature steers the reader away from the traditional attempts, in non-completion studies, to "pin-point" a single reason for drop-out but rather identifies multi-faceted problems. Cullen states:-

> The research showed that most people left due to a combination of reasons and that often the reason given at the time was only either the last straw or the least threatening reason to reveal. I felt strongly that the literature on reasons for 'drop-out' had over-simplified the matter and had not done justice to the adults involved (Cullen, 1994:p5).

Munn et al (1992) found that students who withdrew did not stand out in any way in terms of characteristics such as age, gender or previous qualifications from students who were successful. They found that the reasons that students withdrew were a mixture of personal circumstance and academic reasons.

5.4 Links between the West of Scotland Access Programme and the Pre-University Summer School

The connection between the West of Scotland Access Programme and the Pre-University Summer School has been established since the pilots of 1987. In 1988 eleven students entered the University of Glasgow with SWAP previous qualifications and one of these students attended the Summer School. WSAC's proposal for funding submitted to the SED in 1988 mentions, as part of its existing Consortium, provision of university 'Summer Schools' to top up the academic qualifications of school leavers and adults from areas of financial and social disadvantage (SWAP, 1988a).

This connection was established through CUES, the Colleges and University Entrance Scheme, itself established as a result of the pilot Pre-University Summer School of 1986. The WSAC proposal lists as part of the administrative arrangements the areas which were to be co-ordinated by CUES:-

- assessing the acceptability of further education courses for higher education

- monitoring of access courses in further education and higher education
- identifying assured 'places' in higher education
- operating a 'clearing house'

This connection was part of WSAC's commitment to adopt all possible areas of 'good practice' possible and is at the same time linked closely with its commitment to target socially and economically disadvantaged groups. Robert McKinney, then Project Co-ordinator, stated that the Summer School was part of pre-higher education aimed at those with entry qualifications but lacking certain personal skills or knowledge essential for survival in higher education (McKinney, 1988). In fact, although completion of the Scottish Wider Access Programme guarantees a place in higher education, it is still the case that some students who have successfully completed Access programmes require a Summer School report for "assisted entry" through the assisted places scheme as part of the Summer School. In other words, it is necessary for the students to pass all four courses studied during Summer School (see Chapter One, Section 1.2.4). For example, the Faculty of Arts at the University of Glasgow often makes as a condition of offer to SWAP students "successful completion of the Summer School". The disregarding of the 'guaranteed' place scheme is justified by the Faculty of Arts in so much as the competition for places within the Faculty is so intense that the admissions officers can afford to set conditional offers at the levels that they consider appropriate. On the other hand, the Faculty of Science is prepared to accept SWAP students on the basis of their Access qualification.

This section has indicated that the link between WSAC and the Pre-University Summer School has been in existence since WSAC was still in the funding proposal stage. These links remain in place at the time of writing and the Summer School is considered an integral step in the 'one door' approach to education for many SWAP students.

5.5 Her Majesty's Inspectorate's Inspection of the Scottish Wider Access Programme

A brief exposition of the findings of the HMI (Her Majesty's Inspectorate) (SOED, 1993b) inspection of the three Consortia is given in this section. The section was included to indicate to the reader areas which were found to be either commendable or deficient through the evaluation exercise.

Funding for SWAP was originally set for three years from 1988. In 1991 government ministers agreed to extend pump-priming for a further three years to March 1994 at the levels of £419,000, £511,000 and £519,000 per year, for the three Consortia. The HM Inspectors were requested to carry out an inspection task during 1991/92 to evaluate the policies and strategies of the three Consortia.

Overall the conclusions of the HM Inspection team were positive. Areas which were considered particularly commendable were identified:-

- attracting new clients
- establishing networks especially between further and higher education
- enrolment, course completion and progression rates
- monitoring and evaluation
- developing programmes to be less prescriptive and more generic
- providing appropriate preparation for higher education including basic skills and how to learn
- offering guidance and support

However the inspectorate team also identified some deficiencies:-

- many students still faced a range of personal and financial obstacles in assessing and maintaining progress on SWAP courses

- reliance on SCOTVEC modules was too inflexible. The HMI suggested instead that more emphasis should be put on placings in HND/HNC 'fast track' programmes
- they identified that higher education institutions were still not convinced of the validity and rigour of modularised, competence-based, approaches with the emphasis on continuous assessment. (An example of this point is given in section 4.0 above where admissions officers in the Faculty of Arts require SWAP students to successfully complete Summer School as well as completing their Access courses.)

It can be observed that, in line with the potential concerns identified by WSAC and the research findings of Munn et al (1994a) (see section 5.2.1), the Inspectorate also identified problems with the criterion-referenced modular provision of SWAP courses. They state:-

> Some students reported adversely on the difference between the criterion-referenced assessments inherent in modules and the norm-referenced forms of assessment frequently encountered in he. Fe lecturers should remain sensitive to the need to give students a range of experience in assessment (SOED, 1993b:p13).

The dichotomy between methods and processes of teaching and learning in further and higher education largely remains today, despite the fact that the reduction of this problem was one of the main original objectives of WSAC (section 5.2.1, objective 5).

5.6 Recent developments in the Scottish Wider Access Programme

The decision to cease funding for SWAP by the SOED was announced by the Secretary of State for Scotland in March 1994 and funding ended in July of that year. In response to this Gavin Ross, Principal of the Robert Gordon University, at the SWAP conference 'Shaping the Future', May 1994, identified the funding problem as having arisen from a mismatch of numbers predicted by government statisticians. Statisticians had predicted a rise in numbers in higher education to 725,000 by the year 2000. However by 1991 the number had

already reached 1,170,000. This mismatch led to a policy of consolidation which on the surface appears incompatible with widening access through programmes such as SWAP (Ross, 1994).

The unanticipated success of expansion has created a funding crisis. Ross, however, points out that "widening" and "expanding" are not necessarily synonymous and that there is room within the current system to widen access through targeting specific groups, e.g., socially and economically disadvantaged, without significantly increasing numbers. However, the point which is not addressed by Ross is that of the effect of the "input/output" model. That is, that funding in higher education depends currently on filling, but not oversubscribing, the places available. This is not dependent on the results of those students who have gained places. It is envisaged in a competitive climate that the performance of the students in terms of "output" will become increasingly an issue in higher education. Non-traditional students are unlikely to compete successfully in such a climate and could therefore become the first groups to be passed over by admissions officers.

Woodley et al (1992) identified the students most likely to succeed when examining the factors affecting non-completion in Scottish universities. These students were those school leavers with GCE A levels or a combination of A levels and SCE Highers or SCE Highers and CSYS (sixth year studies). They state:-

> At the other end of the scale, older entrants with Scottish qualifications and mature students in general were most likely to leave without a degree. People entering university direct from S5 were more successful than those entering from S6, unless the latter had CSYS passes (Woodley et al, 1992:p7).

They found that there was a strong relationship between SCE Highers point scores and non-completion, that is, the lower the point score, the more likely is the student not to complete. Thus, their findings indicated that not only were mature students more likely to drop out than school leavers but also that the more points obtained in SCE Highers point scores in the shortest time the more likely the students were to complete. The implications of their findings for policy makers operating on "output" models would be to select students from groups most likely to complete degrees, e.g., direct leavers from S5, non-Scottish students with GCE A levels, S6 leavers with CSYS passes. The students least likely to be offered places would be non-traditional adults.

New funding procedures also discriminate against non-traditional students. Evidence exists to indicate that a major barrier to participation for adults is financial constraint (Benjamin, 1994; Cullen, 1994; Knights, 1994; Munn et al, 1993). In January 1995 the SOED stated that from September/October 1995 the Mature Students' Allowance would cease. At the time of writing no provision has been made for additional borrowing from the Students' Loan Company. In real terms this means a reduction in income for students aged 26 yrs of £310 per year, aged 27yrs of £550 per year and 29yrs plus of £1070 per year. Those under 26yrs are not affected, nor are single parents, and mature students with dependants continue to be able to claim Dependants Allowance. This concerns new students from 1995, not students who commenced studies before this time.

There are also potential funding problems for students whilst on Access courses. During Access courses students can claim further education bursaries from the region in which they reside. The reorganisation of Strathclyde Region will affect these bursaries. As yet no decision has been made as to what form bursaries will take after reorganisation, although it

is likely that they will continue to exist. However, bursaries are discretionary whereas other provision such as primary/secondary school funding is compulsory. Therefore bursaries are of lower priority. Other issues such as residence in one authority whilst attending college in another and central/local administration have not yet been addressed (SWAP, 1995).

Furthermore, it is argued that the disestablishment of the Council for National Academic Awards (CNAA) in 1992 has adversely affected non-traditional students. The CNAA embraced within its ethos the concepts of widening access and of refuting performance indicators such as SCE Higher and GCE A level scores. In the post-1992 climate of conformity and consolidation, emphasis is more likely to be placed on normative assessments and league tables of results, neither of which are advantageous to higher education institutions targeting non-traditional students.

The West of Scotland Access Consortium continues to operate, without SOED funding. The burden of costs and administration is now shared amongst the Consortium members and the Regions. At the conference of May 1994, suggestions were made for forming a national forum to exchange good practice and information, (Ross, 1994); however as yet this has not been implemented and the Consortia carry on autonomously. It is to be hoped that links amongst the three will remain in place in order that the unique provision of uniformity of Access programmes in Scotland continues into the future.

5.7 Introduction to the analysis

Sections 5.1 to 5.6 of this Chapter have largely focused on an exposition of the background and provision of SWAP since 1987. It was considered necessary that the reader was aware of this background information before the analysis could be discussed. In particular the recent changes of policy in higher education from expansion to consolidation, including the funding issues, are likely to have wide-reaching consequences for SWAP students. At the same time reorganisation of Strathclyde Region could also affect funding for the Pre-University Summer School and the groups of students that it targets, in the context of changes in the ethos of higher education from expansion to entrenchment. This contextual factor, coupled with the fact that previously monitoring of SWAP students has primarily focused on progress in further not higher education (Cullen, 1994, Mordaunt, 1990, Munn et al, 1992 1993, 1994a, SOED, 1993a, 1994a) indicates that the performance of SWAP students in higher education is of particular interest for future policy.

5.7.1 The focus of the analysis

The analysis focuses initially on identifying the total number of students who have entered the University of Glasgow from 1988 to 1993 through SWAP. It outlines the numbers by year and faculty and divides the students into those who also attended the Pre-University Summer School and those who did not. It then examines the academic performance of the various groups of students, Summer School and non-Summer School, by faculty. The analysis also focuses on the first year performance of some of the groups of students who have completed degrees, those still not completed and those who have dropped out.

5.7.2 Scottish Wider Access Programme students at the University of Glasgow by years, number and faculty

Before discussion of the performance of SWAP students, it is helpful to examine the numbers who entered both by year and by faculty as well as a breakdown between those who attended Summer School and those who did not. This information is given below in Table 26.

Table 26 SWAP students by year, faculty and attendance at Summer School

Faculty	Status	1988	1989	1990	1991	1992	1993	**Total**
Sci	SS u	1		12	10	22	5	50
	SS a		1			1		2
	NSS	4	3	11	7	8	19	52
	tot	5	4	23	17	31	24	104
Arts	SS u					2		2
	SS a				1	5	4	10
	NSS					1	1	2
	tot	0	0	0	1	8	5	14
Soc Sci	SS u		1	6	2	8		17
	SS a			2		1	1	4
	NSS		3	3	8	2	13	29
	tot	0	4	11	10	11	14	50
other	SS u				2	1		3
	SS a					1		1
	NSS	4	1	1	1	3	7	17
	tot	4	1	1	3	5	7	21
TOTAL		9	9	35	31	55	50	**189**

Status:-
SS u - attendance at Summer School, entry based on SWAP qualification
SS a - attendance at Summer School plus entry based on assisted places scheme
NSS - non-attendance at Summer School
'other' - any other faculty apart from Science, Arts or Social Sciences

From Table 26 it is possible to observe that a total of 189 SWAP students have entered the University of Glasgow since 1988. This figure is based on records available at the Registrar's Office, University of Glasgow. There is some mismatch between this figure

and that of WSAC. However for the purpose of the analysis all figures are based on the Registrar's Office data. Of the 189, 89 (47.1%) have also attended Summer School. Seventeen (19.1%) of the 89 Summer School participants have had assisted places, i.e., entry based on their Summer School performance. As noted previously, the concentration of assisted places is seen in the Faculty of Arts due to the competition for places available rather than "weakness" of students.

The criteria for SWAP students attending the Pre-University Summer School are:-

1. Attendance at any of the Science and Technology or Engineering Access courses allows eligibility to attend Summer School.

2. As a condition of offer from the University, primarily Arts applicants or those unable to complete all SWAP modules.

3. Through identification by Access Officers at colleges of further education as having possible subject weaknesses.

4. Dependent on availability of places on Summer School, given that school leavers are given priority as most SWAP students already have guaranteed places.

It is important to note that by the nature of recommendation by Access Officers, as to attending Summer School, it is largely the "weaker" SWAP students who do so. Students who would benefit more from having summer employment or might experience child care problems and do not need the "top-up" preparation are not encouraged to attend to the same extent (Personal interview with Elaine McLaren, Access Officer Stow College, 1995).

5.8 The performance of Scottish Wider Access Programme students at the University of Glasgow

As in the collection of data for the school leavers, there were considerable difficulties encountered in obtaining the data required for the analysis. These difficulties were exacerbated by changes in the Registry computer systems and shortages of staff available to assist with research questions. Ultimately academic records were obtained by interrogating two separate data bases in the Continuous Student Records at the Registrar's Office, University of Glasgow. These were the 'historical' and 'current' data bases used by the University to store students' records. From these two sets of information it was possible to produce a one-line entry for each student giving full academic record. Performance in degree examinations was graded, as for school leavers, for each year by the following:-

- exemption in June
- pass in June
- pass in September
- fail June and/or September
- status at end of academic year

Performance was then categorised by the following:-

- D - drop-out for whatever reason including transfer, withdrawal etc.
- ord - ordinary - obtained a degree at ordinary level
- hon - honours - obtained a degree at honours level
- G - good standing - still studying for degree, progressing above minimum progress regulations as outlined by the faculty
- M - minimum standing - still studying for degree, progressing on or below minimum progress regulations

An example of a records would appear as follows:-

Example - 91: 0300G) 0110G) 1200 ord)

The example above shows a student who first matriculated in 1991, had no exemptions, three passes in June, no passes in September and no fails, and was in good standing in the academic year 1991/92. The student had no exemptions, one pass in June, one pass in September and no fails in 1992/93, and was therefore in good standing at the end of second year. The student then had one exemption and two passes in June in 1993/94 and graduated with an ordinary degree after three years.

By combining all of the academic records and grouping them by those students who did not attend Summer School (NSS) and those who did (SS), it was possible to build up patterns of performance. Tables 27 and 28 below outline academic performance.

Table 27 SWAP Summer School (SS) 1988-1993

SS							
		drop-out (D)	ord	hon	good stand (G)	min stand (M)	**TOTAL**
Sci	u	22	5	4	18	1	50
	a	0	1	0	1	0	2
	tot	22	6	4	19	1	52
Arts	u	1	0	0	1	0	2
	a	3	0	0	7	0	10
	tot	4	0	0	8	0	12
Soc Sci	u	4	1	4	5	3	17
	a	1	1	0	2	0	4
	tot	5	2	4	7	3	21
other	u	0	0	1	2	0	3
	a	0	0	0	0	1	1
	tot	0	0	1	2	1	4
combined	u + a	27+ 4=**31**	6+ 2=**8**	9+ 0=**9**	26+ 10=**36**	4+ 1=**5**	72+ 17=**89**

Table 28 SWAP Non-Summer School (NSS) 1988-1993

NSS	drop-out (D)	ord	hon	good stand (G)	min stand (M)	TOTAL
Sci	21	10	5	13	3	52
Arts	0	0	0	2	0	2
Soc Sci	6	4	3	13	3	29
other	8	0	0	6	3	17
combined	**35**	**14**	**8**	**34**	**9**	**100**

One measure of success is to determine whether or not there are any differences in the percentage of students dropping out, amongst those who attended Summer School and those who did not. The percentages of drop-outs from each group by faculty are given below in Table 29.

Table 29 Drop-out percentages of the SWAP students, SS and NSS

(In Table 29 the drop-outs are expressed by percentages and the ratios are given below since in some cases the actual numbers are very few)

Drop-out percentages

	All SWAP students	Sci	Arts	Soc Sci	other
SS	34.8% (31/89)	42.3% (22/52)	33.3% (4/12)	23.8% (5/21)	0% (0/4)
NSS	**35.0% (35/100)**	**40.4% (21/52)**	**0% (0/2)**	**20.7% (6/29)**	**47.1% (8/17))**
SS + NSS	**34.9%** (66/189)	**41.3%** (43/104)	**28.6%** (4/14)	**22.0%** (11/50)	**38.1%** (8/21)

The results of examining the percentage drop-outs of the two groups, i.e., Summer School SWAP students and non-Summer School SWAP students (when the numbers are greater than zero), indicate that there are few differences between them. To the uninformed reader

this might be taken as an indication that the Summer School has produced no beneficial effects for its SWAP students. However there are three factors which must be taken into account:-

1. The main criterion of success for the Summer School is that its past students perform academically as well as an average (i.e., typical) group of students. The non-Summer School SWAP students here represent an average group of students who entered university with SWAP qualifications.

2. As mentioned previously Access Officers tend to recommend attendance more vigorously to their 'weaker' students and less so to those whom they consider likely to succeed anyway.

3. No account has been taken of the fact that seventeen (19.1%) of the 89 students who attended Summer School gained entry to the University of Glasgow through assisted places scheme. In other words they would not have been offered places at the University of Glasgow had they not successfully completed Summer School.

The non-completion rates for the groups of adults examined in this thesis are considerably higher than the average at the University of Glasgow. For example, Woodley et al (1992) give the overall non-completion rates for the three Faculties of Science, Arts and Social Sciences as 20.1%, 17.5% and 15.2% respectively. This figure was derived from averaging the rates for the three years intake 1981-1983. The figures for SWAP students examined in this thesis are 41.3%, 28.6% and 22.0% for the three Faculties.

5.8.1 An examination of graduating Scottish Wider Access Programme students

This thesis focuses on past students from the years 1986 to 1993; many of these students have not yet graduated but are still studying for degrees. Therefore, there are three types of category, i.e., those who have graduated, those with as yet incomplete records and those who have dropped out. Section 5.8.1 offers some discussion of the group who have

already graduated. Table 30 indicates the graduating percentages, Honours and Ordinary combined, of the Summer School and the non-Summer School SWAP students.

Table 30 Percentages of SWAP students graduating - Honours and Ordinary combined

	All SWAP students	Sci	Arts	Soc Sci	Other
SS	19.1% (17/89)	19.2% (10/52)	0% (0/12)	28.6% (6/21)	25.0% (1/4)
NSS	22.0% (22/100)	28.8% (15/52)	0% (0/2)	24.1% (7/29)	0% (0/17)
Total SS + NSS	20.6% (39/189)	24.0% (25/104)	0% (0/14)	26.0% (13/50)	4.8% (1/21)

Table 30 indicates that 20.6% of the SWAP students have already graduated from the University of Glasgow. As yet there have been no graduates from the Faculty of Arts as none of the students entered until 1991. By referring back to Table 26 it is possible to deduce that the reason that the overall percentage of graduates is low is that SWAP students did not begin to enter the University in large numbers until 1990. Students are usually given a maximum of six years in which to graduate. However, it was not possible to follow that model within this thesis as there were insufficient numbers of students who had first matriculated more than six years ago.

5.8.2 First year performance of graduating honours and ordinary Scottish Wider Access Programme students

The examination of the graduating students, with both Honours and Ordinary degrees, raised the question of whether it would be possible to identify trends which could be used

to predict the level of success in academic performance likely to be achieved by students based on first year examination results. It was, therefore, decided to take an in-depth examination of the first year performance of both groups of students, that is, those who obtained Honours degrees and those who obtained Ordinary degrees.

Table 31 indicates the academic results in first year examinations for those SWAP students who gained Honours degrees. These are given in the form in which they were originally transcribed using the code explicated in section 5.8, i.e., entries for exemption, June pass, September pass, fail over June and September, and status (in this case class of honours degree given in brackets, in other words, (3) equals third class, (2/2) equals lower second class, (2/1) equals upper second class, and (1) equals first class).

Table 31 First year performance in degree examinations of the seventeen SWAP students who have graduated with Honours degrees, non-Summer School and Summer School

Science		**Arts**	**Social Science**		Other	
SS	NSS	SS/ NSS	SS	NSS	SS	NSS
2 0 1 0 (3) 0 2 0 1 (2/2) 1 2 0 0 (3) 3 0 0 0 (2/1)	1 2 0 0 (3) 2 0 1 0 (2/2) 1 2 0 0 (2/2) 0 2 1 0 (2/2) 0 2 1 0 (2/2)	none	3 0 0 0 (1) 0 3 0 0 (2/2) 0 2 1 0 (2/2) 0 3 0 0 (2/2)	2 1 0 0 (2/1) 2 1 0 0 (2/2) 1 2 0 0 (2/1)	0 8 0 0 (2/2)	none

Some discussion of the results can now be given:-

1. All of the students, with the exception of one Faculty of Science Summer School student, passed all subjects in the first year. Therefore the "worst" performance was one fail June and September.

2. Those with two or more exemptions in first year obtained at least second class honours degrees, with the exception of one student in the Faculty of Science, who obtained a third class degree.

3. The average number of passes in June, or by exemption, was 2.5. This result was assessed excluding the one student in the "other" Faculty, where there are more than three first year subjects.

The performance in first year of the group of students who graduated with Ordinary degrees was also assessed using the same coding system, with the exception of the status category as no class is awarded to ordinary degrees at the University of Glasgow.

Table 32 First year performance in degree examinations of the 22 SWAP students who have graduated with Ordinary degrees, Summer School and non-Summer School

Science		**Arts**	**Social - Science**		**Other**
SS	NSS	SS/ NSS	SS	NSS	SS/ NSS
0 2 0 1	1 1 1 0	none	0 1 0 2	0 3 0 0	none
0 3 0 0	0 2 0 0		0 3 0 0	1 2 0 0	
0 1 1 1	0 2 1 0			0 3 0 0	
0 0 1 2	0 1 0 2			0 2 1 0	
1 0 1 1	1 2 0 0				
0 1 0 1	0 0 1 2				
	0 3 0 0				
	0 3 0 0				
	0 1 1 1				
	0 1 0 2				

Some points of contrast can be observed between the groups of students graduating with Honours degrees (Table 31) and those graduating with Ordinary degrees (Table 32):-

1. Only four out of the 22 students graduating with Ordinary degrees had an exemption in first year and none of the students had more than one exemption. In contrast ten of the seventeen honours graduates had at least one exemption and six of these had two or more.

2. Of the 22 Ordinary graduates, ten had failures in the first year, five had one failure and the other five failed two subjects. However only one of the honours graduates had a failure in the first year.

3. The average number of passes in June, or by exemption, for the Ordinary graduates was 1.9 which was significantly lower than the average for Honours graduates of 2.5.

The examination of the first year performance of the graduating SWAP students offers some tentative conclusions as to the possible predictors of likely levels of success to be obtained by students who have not yet graduated. It is stressed that these results are not conclusive, given the size of the samples, and merely form the basis for a hypothesis which could be tested on a larger scale.

5.8.3 Year by year performance of Scottish Wider Access Programme students in good standing

As mentioned in Section 5.8.1, many of the SWAP students have not yet graduated, therefore, their academic records are incomplete to date. There are a total of 84 students in this category, 41 of whom are Summer School students and 43 have not attended Summer School. Overall 70 are in good standing (above progress regulations) and fourteen in minimum standing (on or below progress regulations). Given the tentative results of Section 5.8.2, which indicate the possible predictive nature of investigating first year examination results of students who have already graduated, it is argued that many of the SWAP students currently in good standing are likely to graduate. This is illustrated by focusing on those students in the Faculty of Science.

There are currently 36 SWAP students progressing through the Faculty of Science, 32 are in good standing and four are in minimum standing, at the time of writing. The academic records of the 32 students in good standing are given below both to illustrate the point above that many are likely to graduate and to show that a considerable number of these are

likely to gain Honours degrees. This is based on the facts that seventeen of the 32 had at least one exemption in first year and 25 of them had no fails in that year.

Table 33 SWAP students in good standing in the Faculty of Science

SS(19 students)	NSS(13 students)
90: 1101G) 0210G) 0210G) 0100G)	91: 0300G) 0012G) 0202G)
91: 0300G) 0012G) 0202G)	92: 2100G) 1300G)
91: 2100G) 0200G) 0101G)	92: 1200G) 0300G)
91: 2100G) 1100G) 0100G)	92: 1200G) 0111G)
92: 0201G) 0211G)	92: 1200G) 0200G)
92: 2001G) 2100G)	93: 0300G)
92: 3000G) 1100G)	93: 0300G)
92: 1110G) 1100G)	93: 0300G)
92: 0120G) 1100G)	93: 0210G)
92: 0201G) 0201G)	93: 0210G)
92: 0300G) 0101G)	93: 2100G)
92: 0210G) 0101G)	93: 0210G)
92: 1101G) 0111G)	93: 1200G)
92: 3000G) 1000G)	
93: 1200G)	
93: 1200G)	
93: 0111G)	
93: 2100G)	
92: 0003M) 2010G) (repeated 1st year)	

5.8.4 Year one performance of the non-completing Scottish Wider Access Programme students

Overall there have been 66 non-completing/drop-out SWAP students, 31 of whom were Summer School and 35 were non-Summer School students. The drop-out rate for the Summer School students was 34.8% and that for non-Summer School students was 35.0%. Whilst the percentages for the two groups are largely the same there is evidence to indicate that those who had attended the Summer School in fact had better academic records than those who did not. This is indicated in two ways:-

1. by considering the students who gained no examination passes in first year.

2. by investigating the performance of those who did obtain some passes in first year examinations

Table 34 Drop-outs who obtained no passes in first year examinations

SS	NSS
12 Science (12/22)	17 Science (17/21)
1 Arts (1/4)	0 Arts (none)
1 Social Science (1/5)	5 Social Science (5/6)
0 Other faculties (none)	3 Other faculties (3/8)
14 total (14/31) i.e. 45.2%	**25 total (25/35) i.e.71.4%**

Table 34 indicates the number for each group by faculty who obtained no passes in first year. Below the numbers are the ratios of drop-outs with no passes to total number of drop-outs in that group. From this it is possible to observe, for example, that seventeen of the 21 drop-outs from the Faculty of Science who did not attend Summer School (NSS) left with no passes in first year whilst only twelve of the 22 drop-outs who attended Summer School had no passes in first year from the same Faculty. Of note also is the number of non-Summer School students who entered the Faculty of Social Science and had no passes in first year, five out of six drop-outs, as opposed to those who attended Summer School, one out of five drop-outs. Thus overall, of the 35 non-Summer School drop-outs, 71.4% had made no progress in first year whilst, of the 31 Summer School drop-outs, only 45.2% had made no such progress. This result indicates that exposure to Summer School gave at least some academic help towards completion of first year. It is stressed again that it is largely the "weaker" students who are recommended to attend Summer School by Access officers. The result then raised the question of whether, if the Summer School can provide academic assistance in first year as a pre-entry mechanism, it

could be adapted to assist students to stay on course by offering short courses between first and second year or by offering remediation when and where necessary.

Table 35 Year one performance profiles of drop-outs who obtained at least one pass in first year

SS		NSS	
Science	1201G) 0102M) 0102M) 0102M) 1110G) 0102M) 0012M) 1201G) 0201G) 1101G)	Science	0102M) 0102M) 1201G) 0111G)
Arts	0300G) 0101M) 0102M	Arts	none
Social Sciences	0102M) 0030G) 0110G) 0201G)	Social Science	1011G)
Other faculties	none	Other faculties	0104M) 0013M) 0113M) 0104M) 0313M)

From Table 35 it is possible to observe that there were seventeen Summer School drop-outs with at least one pass and ten non-Summer School drop-outs with at least one pass in first year. An examination of the Table indicates that nine out of the seventeen (52.9%) Summer School students were in good standing (G) at the end of the first year whereas only three out of the ten (30.0%) non-Summer School students were in good standing (G) at the end of that first year. As with the results from Table 34, the indication is again that SWAP students who attend the Summer School are likely to perform better academically in their first year. It is still the case that the Summer School students dropped out at

approximately the same rate as those who did not attend. However, it could be argued that their academic performances were better than those who did not attend. The evidence points to the fact that the Summer School did indeed assist its students academically in higher education.

5.9 Summary and conclusions

This chapter has outlined the historical developments of the Scottish Wider Access Programme (SWAP) from inception in 1987 to the present day. One of the main issues for the future of SWAP is that of funding, both for the three Consortia and for their students. Funding from the SOED has ceased and the Mature Students' Grant has been cut from October 1995. These funding problems have arisen in the context of a period of consolidation in education and concerns are raised for the possibility of widening access within this climate. Furthermore, during times of consolidation the focus of providers shifts towards outputs and results. The performance of students with SWAP qualifications at 'older' universities such as Glasgow does not compare favourably with the results of traditional students.

One of the reasons that SWAP students are less successful at the University of Glasgow than traditional students is that the processes of learning on their Access courses are often highly dissimilar to the processes of learning employed at the University. The dichotomy between criterion-based, continuously assessed modules and norm-referenced assessments at universities presents in itself a serious barrier to successful participation. However it is apparent from the results of the analysis in this Chapter (Sections 5.7 to 5.8.4) that exposure to the Pre-University Summer School does in some ways make a difference to

performance. Students at Summer School study for eight weeks the subjects that they intend to take in first year at university, and also attend a short study skills course. Courses are taught by university lecturers at first year university levels. The intention is that Summer School students will find themselves familiar with some of the first year's work. Although it can be seen that this assistance in itself is not sufficient to avoid student drop-out, it does seem to provide sufficient support to assist students to gain more passes in first year degree examinations than those who do not attend the Summer School. It can therefore be argued that further work in the area of retention of students through expanding and adapting courses such as the Summer School could indeed make significant differences in the performance of students with SWAP qualifications. Such students will of course always have problems of a non-academic kind, involving factors such as confidence, motivation, finance, health and family commitments.

Chapter Six

The non-SWAP adults and a summary of the academic performance of the Summer School students

Chapter Six

The non-SWAP adults and a summary of the academic performance of the Summer School students

6.1 Introduction : Orientation of the chapter

This chapter is the last chapter presenting the quantitative research findings of the thesis. The quantitative research has been focusing on the academic performance of the students who have entered the University of Glasgow through the Pre-University Summer School, 1986-1993. It has also examined control groups of students whose performances have been reviewed by the same methods. The groups of students examined have been school leavers from the 31 Summer School schools, including those who came from these schools but did not attend Summer School; a control group from 31 comparative non-Summer School schools; SWAP (Scottish Wider Access Programme) students who attended the Summer School; and SWAP non-Summer School students.

There is, however, a third group of students who attended Summer School. These are adults who had a variety of qualifications which are other than SWAP qualifications. The homogeneity of this group is that they are all adults who have been in some sense educationally disadvantaged; however they are heterogeneous in terms of qualifications. It

was therefore considered inappropriate to attempt to select a comparative control group for assessment of their academic performance.

This chapter examines the academic performance of the third group of Summer School students, hereafter termed non-SWAP adults. After this analysis is outlined, the chapter summarises the performance of all three groups of Summer School students together, the school leavers, the SWAP students and the non-SWAP adults.

Prior to the analysis sections, the contextual aspects of the chapter are discussed. The context is that of positive discrimination and compensatory education. As will be explicated, it is argued that there are key elements inherent in Summer School provision which are also primary to positive discrimination. The contextual sections examine the background to positive discrimination and focus on some of the criticisms of the programmes. Some of the issues surrounding positive discrimination in higher education are also discussed.

6.2 The background to positive discrimination

Positive discrimination in education can exist at any level of provision from pre-primary to postgraduate. Positive discrimination is usually taken to mean selecting a particular group, generally a minority by race, gender or social class, and discriminating towards that group in a favourable way. This could be through increased access or additional education. The discrimination is undertaken in order to compensate for disadvantages experienced by such a group. Largely programmes have focused on the pre-primary and primary stages of education; however, it also exists in higher education. In order to place in context the

aspects of positive discrimination inherent in the Summer School, it is first necessary to examine the ways in which such programmes arose.

Compensatory education, or positive discrimination, dates back to the 1960s. It represents the ensuing policy programmes which arose from the research findings on equality of educational opportunity at that time (see Chapter Four). There was much debate about the strength of the relationship between educational attainment and socio-economic status; however, that this link existed was not denied. The main research findings which were accepted for the basis of policy were those of the Coleman Report , United States, 1966, and the Robbins Report, Britain, 1963. The Coleman Report found that the most important factor in educational attainment was family background and that variations in achievement lay within schools and not between them (Coleman et al, 1966). The Robbins Report found that the proportion of children from middle class backgrounds reaching degree level was eight times higher than those from working class backgrounds. Also the middle class environment was in many ways more favourable than the working class within the educational setting (Robbins, 1963).

The Plowden Committee was established largely as a result of the findings of the Robbins Report, to investigate the problems of deprivation and educational underachievement. The Plowden Report (1967) found that there had been no narrowing of the gaps between the least well off and the most wealthy since the Second World War. Connell (1994) argues that compensatory education programmes were designed in response to this specific historical situation, i.e., the failure of post-war educational expansion-despite its principle of equal access-to deliver substantive equality. Therefore the educational movement occurred within a broader context of social welfare reforms.

The Plowden Committee stated:-

> In deprived areas.....too many children leave school as soon as they are allowed to with no desire to carry their education further and without the knowledge to fit them for a job more intellectually demanding than their fathers' or their grandfathers'. Yet they face a future in which they must expect during their working life to have to change their job, to learn new skills, to adapt themselves to new economic conditions and to form new human relationships (Plowden Report, 1967:Vol 1, para 143).

The criteria used by the Plowden Report to identify deprivation in authorities were size of family, supplements in cash or kind from the state, overcrowding and the sharing of houses, poor attendance and truancy, proportions of retarded, disturbed or handicapped, incomplete families, and children unable to speak English (Plowden Report, 1967:Vol 1, para 151). This information was obtained from the National Census. The results of the review on deprivation were used to identify Educational Priority Areas (EPA). EPAs were identified as the most deprived areas by the indicators and the most viable units of action within which to target the most deprived schools and the children in them.

Through the identification of EPAs, action research teams were set up initially for three years in five cities in Britain. They entailed positive discrimination in favour of the educationally disadvantaged through nursery school expansion, increased resources for disadvantaged, greater emphasis on basic skills such as reading, and incentive payments for teachers in 'social priority' schools.

Within the context of the Plowden Report, the use of similar information from the National Census was made to identify the fourteen worst Areas of Priority Treatment in Strathclyde

Region. From this arose the targeting of the two worst areas of deprivation and later the involvement of the University of Glasgow, and the consequent inception of the Summer School.

In the United States compensatory education emerged with policies such as Project Head Start and Title I. The focus was on the child in the family and on local classroom relationships between teacher and child. Bernstein argues that compensatory education implies that something is lacking in the family and thus the child. As a result children are unable to benefit from school. The argument is that the school has to compensate for the background. He states:-

> The child is expected, and his parents as well, to drop their social identity, their way of life, its symbolic representations at the school gate. For, by definition, their culture is deprived and the parents are inadequate in both the moral and skill orders they transmit (Bernstein, 1970:p81).

Compensatory education was seen as a means of breaking a 'cycle of poverty'. This cycle was thought to revolve around low aspirations and poor support for children, which led to low educational achievement, which in turn led to labour market failure and poverty in the next generation.

6.3 Evaluation of compensatory education policies

A few years after policy implementation, the programmes such as Head Start and the EPAs were evaluated in both countries. It was generally acknowledged that the policies had been unsuccessful.

Shortly after the inception of the EPA projects in Britain in 1968, the Westinghouse-Ohio evaluation of Head Start appeared in the United States. This evaluation concluded that the gains children made (pre-school) largely disappeared after a year or two of formal schooling. The argument was that, if there was a link between educational practice and social inequality, it was too little understood to be readily translated into policy prescriptions. This result reflected the earlier findings of Coleman and Jencks, who both found that school differences had little effects on attainment. Jencks concluded that if positive discrimination was to make a difference, then policy makers must know how to boost educational attainment, and that there was little evidence that they knew how to do this (Gray, 1976).

Initially the reaction in Britain was that Head Start had failed but the EPAs would not. However, this attitude changed quickly to anticipation that EPAs would also fail. Connell (1994) outlined the design elements of positive programmes as follows: they target a minority of children, they select their children or their schools involving a poverty-line calculation, they are intended to compensate by enriching the educational environment, which they do by grafting something on to the existing school and pre-school system, and that they are generally administered separately from conventional school provision. However he argues that they are founded on a set of incorrect assumptions. These assumptions are:-

1. the problem concerns only a disadvantaged minority
2. the poor are distinct from the majority in culture or attitudes
3. correcting disadvantage in education is a technical problem requiring, above all, the application of research-based expertise.

Targeting a disadvantaged minority only involves cut-off points which determine deprivation, usually identifying a small minority, and assumes that the rest are the same. However, this is not what evidence shows. Regardless of measures used, there were gradients of advantage and disadvantage. Connell states:-

> The fundamental point is that class inequality is a problem that concerns the school system as a whole. Poor children are not facing a separate problem. They face the worst effects of a larger pattern. That the poor are not like the rest of us is a traditional belief of the affluent (Connell, 1994:p131).

This argument is developed by Garner where she concludes that traditionally resource allocation was targeted at areas or at institutions such as schools. However, because education disadvantage is experienced on an individual, personal basis, such targeting may miss the very individuals it aims to help. The problem with EPAs was that not all the children in the EPA schools were disadvantaged and that not all disadvantaged children lived in areas served by EPA schools. Garner states:-

> Area-based initiatives run the risk that the pupils who will benefit most from any positive discrimination are those most able to take advantage of any extra resources (in general, the least deprived in any area), while the disadvantaged who are not in the area are totally excluded from the benefits of the policy initiative (Garner, 1989:p30).

Garner, however, further expands on this point by indicating that this might appear to show that all policies of positive discrimination should be directed at individuals or families but individual, family, school and neighbourhood all contribute to educational performance and therefore individualistic policy cannot alleviate all educational disadvantage.

One of the major contributors towards the perceived failure of positive discrimination policies was the conflict between the astronomical ends and the miniscule means. The ends were seen as greater social equality and the means were the EPAs. Given that educational equality has been the focus of the major debate in education during this century, it is considered unlikely that small-scale local programmes could produce quantifiable positive results in such a short space of time.

At the same time there were changing contextual factors, after the Plowden Report, which had negative effects on positive discrimination. These are:-

1. from the mid 1970s local government faced increasing central control and financial stringency. Redistributive social policies such as positive discrimination were made difficult under such circumstances

2. restrictions on collective consumption in terms of resources led to defensive policies not developmental ones

3. school rolls began to fall, bringing cut-backs and school closures

4. an ethos of conservatism led to a critique of egalitarian social policy dominated by the mass media (Jencks, 1992). In other words the political climate altered from one of social consciousness to individualism and enterprise.

The debate became one of whether education could eradicate poverty or whether eradicating poverty through the redistribution of wealth would produce equality of opportunity. Halsey argued that positive discrimination could not be seen as a cure for poverty. He says:-

> Education, in itself, will not solve the problem of poverty. The social structure that generates poverty generates its own shabby education system to serve it; and while it is useful to attack the symptom, the disease itself will continually find new manifestations if it is not understood and remedied. The solution to poverty involves, of course, the redistribution of effective social power. Self-confidence, no less than material welfare, is a crucial lack of the poor, and both can only be won by effective joint action. More contentiously, it seems to us that educational

> provision alone cannot solve even the problem of educational poverty, if only, because in this sphere there are no purely educational problems (Halsey, 1972:pp344-345).

In summary, positive discrimination based on the lines of Head Start and EPAs largely became seen as ineffectual for the reasons given above in this Section. These reasons are summarised as follows:- that they were attempts to treat but not cure a major social problem; they were founded on debatable assumptions; and changes in the political climate rendered them less acceptable ways of allocating resources than had been envisaged.

6.4 Positive discrimination, higher education and the Summer School

Although positive discrimination has been most widely publicised at pre-school and primary levels it has also existed at tertiary stages since the 1960s. Affirmative action (positive discrimination) has been statutory in both employment and education in the United States since that time. One example of positive discrimination was evaluated by Smith (1972) at the College of Basic Studies, Boston University. This programme admitted marginal students who had been rejected for the four year degree programme into a two year compensatory programme. It was based on three assumptions. These are given as:-

1. rejected applicants do have the potential, which can be realised if educational advantages are available

2. team teaching, core curriculum and extensive guidance can provide these advantages

3. student enthusiasm, interest and motivation to learn are stimulated by opportunity for active student participation in group discussion and tutorial sessions and by sincere faculty interest in students' needs, scholastic effort and academic achievement.

The results of Smith's evaluation of this programme indicated levels of success. He found that 36% of those who started the two year programme went on to the four year degree programme and that 84% of those who went on graduated.

Herrnstein and Murray (1994) present the arguments against positive discrimination. They argue that the problem with affirmative action, in the United States, is that shortly after it became statutory in the 1960s it became racially based, targeting primarily blacks. Furthermore, by the early 1970s it became aggressive in its targeting policies, targeting blacks, women, latinos and disabled. They suggest that aggressive targeting is to the detriment of disadvantaged youths and that those who are disadvantaged should be given priority regardless of colour. They state:-

> Affirmative action creates antagonism partly because it affects the distribution of scarce goods - university places, scholarships, job offers and promotions - that people prize. But it is also problematic for reasons that reach into deeply held beliefs - most fundamentally; beliefs about the ideal of equal opportunity versus the reality of the historical experience of certain groups, pre-eminently blacks, in this country. As the rhetoric heats up, the arguments about affirmative action become blurred. Affirmative action raises different questions in different contexts. What, people ask, are the proper goals of affirmative action, the proper methods? Which groups are to be benefited? What are the costs of affirmative action, and who should bear them? Is affirmative action a temporary expedient to correct past wrongs, or must the American ideal of individualism be permanently modified for the collective needs of members of certain groups? (Herrnstein & Murray, 1994:pp448-449).

The argument is that aggressive policies have assigned an over-large premium to certain groups (minorities) to the detriment of others (non-minorities). Furthermore, it is argued that this is unreasonable in that it creates differences in academic talent within institutions that are not in anyone's best interests. Also, the more aggressive the recruitment of

minorities, the higher will be the average abilities of the non-minority students due to increased competition for fewer places. Thus the academic gap widens. Herrnstein and Murray illustrate this by pointing out that over the last decade black drop-out rates have been twice that of whites. This, they argue, is as discouraging for blacks as it was for whites (Herrnstein and Murray, 1994).

It is argued that the Scottish stance on positive discrimination in higher education is largely different from that described by Herrnstein and Murray for the following reasons:-

- provision is not statutory in that numbers and quotas are set by individual institutions of higher education
- social class and underachievement is a far larger issue than ethnicity, therefore it is more difficult to identify positive discrimination in action as it is not normally colour-based
- targeting policies are less overtly aggressive.

There are, however, two questions which are raised through reviewing the work of Herrnstein and Murray and which are examined:-

1. What level of academic success is required from the recipients in order that providers can justify positive discrimination?

The reader will recall that the criterion for 'success' on the Summer School is that students perform as well as an 'average' group of students. In other words, their non-completion rates should be similar to those of students from the same types of background. This proposition is reviewed again later in this chapter.

2. To what extent are providers prepared to exclude non-minority groups in favour of minorities?

The allocation of places operates in two ways through the Summer School at the University of Glasgow. Firstly, those students who have met General Entrance Requirements and have come from any one of the 31 Summer School schools have the letters CUES (Colleges and Universities Entrance Scheme) boldly stamped on their UCAS forms. This signifies to admissions officers that the students have come from schools which have a background of socio-economic disadvantage. The admissions officers will then, in many cases, look favourably on these applicants who may or may not be less well qualified than other non-CUES applicants. Secondly, those students who have not gained General Entrance Requirements but have successfully completed Summer School (assisted places) will gain entry on a quota basis. There are 50 places set aside on this basis that are over and above set numbers. Thus it cannot be argued that assisted place students (less well qualified) are denying more traditional students places at the University.

6.4.1 The principles of positive discrimination and the Summer School

It is argued that the Summer School embodies many of the principles of positive discrimination through its methods of provision. The principles and the illustrations from the Summer School are outlined below.

1. Principle of positive discrimination - targeting of disadvantaged groups

Summer School illustration - students are targeted as being primarily socially and economically deprived; however the Summer School also accepts students who are educationally disadvantaged.

2. Principle of positive discrimination - increased staff/student ratio

Summer School illustration - teaching is undertaken in small groups of 25 or fewer students on Summer School, whereas many first year ordinary classes have several hundred students in their lectures. The small group teaching also promotes staff-student contacts, which can be reassuring for students once they have entered the University.

3. Principle of positive discrimination - enriched environment

Summer School illustration - the students' confidence is boosted through focusing on their abilities to cope in higher education. The students are equipped with the skills and techniques to get by, such as study skills, using the library, knowing their way around, coping with academic and personal problems.

4. Principle of positive discrimination - increased exposure to the curriculum

Summer School illustration - the students study the three subjects which it is hoped that they will study in first year. Subjects are taught at first year university level by university staff. The aim is to have covered most of the first term's work by the end of Summer School.

5. Principle of positive discrimination - grafting on to existing provision

Summer School illustration - the Summer School is, in many senses, an add-on to existing university provision.

6. Principle of positive discrimination - intervention at the pre-provisional level

Summer School illustration - Although the main positive discrimination programmes were concentrated at nursery level, the main principle was that they were at pre-provision level. The Summer School embodies the same principle in that it is available to students in the summer before commencing university.

In conclusion, it can be observed that the Summer School embodies many of the same principles of positive discrimination used by some of the major programmes in both Britain and the United States. At the same time, it suffers from some of the same criticisms as these programmes, chiefly that areal targeting only identifies the disadvantaged in that area. However, as Garner (1989) points out, there are also inherent dangers in targeting individuals, by ignoring their families, schooling and backgrounds. In reality, the Summer School targets on an aggregate basis, through the schools, on a group basis through the SWAP students, and on an individual basis through the non-SWAP adults.

6.5 The non-SWAP adults on the Summer School

The third group of students who attended the Summer School before entering the University of Glasgow are termed the non-SWAP adults. This group was extremely diverse in terms of qualification and background. The underlying factors which grouped them together were

that they were adults and that they were educationally disadvantaged, often also socio-economically disadvantaged. This group has been positively discriminated towards on an individual basis, where each case was considered on its own merits. Due to the individual nature of targeting it is considered that this group would be highly "at risk" in higher education. This follows the arguments of both Connell (1994) and Garner (1989), who state that group targeting often misses the very people at whom it is aimed whereas individual targeting would focus on those who are most disadvantaged.

Before examining the academic performance of the non-SWAP adults it is first necessary to provide information on their previous qualifications, and this is given below in Table 36. The students are divided into two groups, those who were unassisted entrants (u), and those who had used the Summer School as a means of entry, assisted (a).

Table 36 Previous qualifications of the non-SWAP adults by year, 1986-1993.

unassisted(u) Qualifications	Year								
	1986	1987	1988	1989	1990	1991	1992	1993	total
SCE Highers		1	1	5	3	2	1	2	15
other access/modular			1	1			1		3
recommended by admissions officer				3	2	3	1	1	10
transfer from other uni						1		1	2
overseas									0
OU credits									0
CASCADE/FOLU							1		1
GCE A levels									0
HNC/HND				2			1		3
total unassisted	0	1	2	11	5	6	5	4	34

assisted(a) Qualifications	Year								
	1986	1987	1988	1989	1990	1991	1992	1993	total
SCE Highers				9	5	2	6	1	23
other access/modular			1	6	2		5	1	15
recommended by admissions officer				2	2	3	2		9
transfer from other uni					1			1	2
overseas								1	1
OU credits						1			1
CASCADE/FOLU				2	4	1	2		9
GCE A levels						1	1	2	4
HNC/HND				1	2		1	2	6
no formal quals				1					1
total assisted	0	0	1	21	16	8	17	8	71
total unassisted & assisted	0	1	3	32	21	14	22	12	105

From Table 36 it is possible to observe that the non-SWAP adults had came from ten different routes of entry. There are some further details on the various qualifications which should be explicated:-

- SCE Highers - adults are not normally required to have the same number of SCE Highers as school leavers for entry to the University of Glasgow. Those who had assisted places would not have reached General Entrance Requirements for mature students (38/105 students, unassisted(u) + assisted(a))

- other access/modular - refers to modular access courses which are not SWAP courses. The lengths of these courses ranged from a few months to one year (18/105 students,u+a)

- recommended by admissions officers - these are students who have given concern to admissions officers over their abilities/qualifications and are requested to complete Summer School, in order to qualify for acceptance (19/105 students, u+a)

- transfer - this category refers to students who transferred from other universities (4/105 students, u+a)

- overseas - students from abroad (1 student, a)

- OU credits - a number of Open University credits (1 student, a)

- CASCADE/FOLU - this category refers to students who either came through Castlemilk Adult Education or Ferguslie Park Open Learning Unit. Both of these

routes involve a combination of SCE Highers and learning support/study skills courses (10/105 students, u+a)

- GCE A levels - as with the SCE Higher category, students had conventional qualifications yet insufficient for entry (4/105 students, a)

- HNC/HND - these students had Higher National Certificates or Diplomas or modules towards the completion of these courses (9/105 students, u+a)

- no formal qualifications - there was one student who gained entry through the Summer School who had no formal qualifications (1 student, a)

In summary, the diverse nature of the non-SWAP adults' previous qualifications can be observed above. Although slightly more than half the students had SCE Highers or equivalent, the others were more scattered across the qualification categories. Currently the Registry Office at the University of Glasgow codes students by their entry qualifications; however these codes do not correspond to the ones used here on the Summer School. It was therefore decided that attempts to select a stratified control group would be inappropriate and could not produce a representative sample.

6.5.1 The academic performance of the non-SWAP adults from the Summer School

Although the non-SWAP adults are diverse in terms of qualifications, the analysis here examines their performance at the University of Glasgow as a whole group, and not by previous qualification. The analysis was conducted as in Chapters Four and Five where data was collected (for school leavers and SWAP students) from two separate data bases in the Registry Office, University of Glasgow. The examination results were then translated for each student on a year by year basis. For each year, performance was recorded under the headings:-

- exemption in June
- pass in June
- pass in September
- fail June and September
- status at end of academic year.

Performance overall was then categorised by the following:-

- D - drop-out for whatever reason including transfer, withdrawal etc.
- ord - ordinary - obtained a degree at ordinary level
- hon - honours - obtained a degree at honours level
- G - good standing - still studying for degree, progressing above minimum progress regulations as outlined by the faculty
- M - minimum standing - still studying for degree, progressing on or below minimum progress regulations.

Students were further separated into those who had had unassisted entry (u) and those who had used the Summer School for assisted entry (a). Students not in the Faculties of Science, Arts and Social Sciences were categorised together in "Other Faculties".

Tables 37 and 38 offer information on the performance of the group of non-SWAP adults from 1987 to 1993 (there were no students in 1986).

Table 37 Performance of the non-SWAP adults by faculty, numbers and percentages

Faculty	numbers D	ord	hon	G	M	Tot	percentages D	ord	hon	G	M
Science											
u	8	3	1	5	3	20	40%	15%	5%	25%	15%
a	5	1	0	6	0	12	41.7%	8.3%	0%	50%	0%
t(u+a)	13	4	1	11	3	32	40.6%	12.5%	3.1%	34.4%	9.4%
Arts											
u	3	1	2	1	1	8	37.5%	12.5%	25%	12.5%	12.5%
a	13	5	8	8	0	34	38.2%	14.7%	23.5%	23.5%	0%
t(u+a)	16	6	10	9	1	42	38.1%	14.3%	23.8%	21.4%	2.4%
Social Sciences											
u	2	0	0	0	1	3	66.7%	0%	0%	0%	33.3%
a	8	3	5	5	0	21	38.1%	14.3%	23.8%	23.8%	0%
t(u+a)	10	3	5	5	1	24	41.7%	12.5%	20.8%	20.8%	4.2%
Other Faculties											
u	1	0	2	0	0	3	33.3%	0%	66.7%	0%	0%
a	2	1	1	0	0	4	50%	25%	25%	0%	0%
t(u+a)	3	1	3	0	0	7	42.9%	14.3%	42.9%	0%	0%
Overall Totals											
u	14	4	5	6	5	34	41.2%	11.8%	14.7%	17.6%	14.7%
a	28	10	14	19	0	71	39.4%	14.1%	19.7%	26.8%	0%
t(u+a)	42	14	19	25	5	105	40%	13.3%	18.1%	23.8%	4.8%

Table 38 Year by year performance, 1987-1993 (no students in 1986), of the non-SWAP adults, by category and faculty

year	Science					Arts					Soc Sci					Other Fac					total					year tot
u	D	ord	hon	G	M	D	ord	hon	G	M	D	ord	hon	G	M	D	ord	hon	G	M	D	ord	hon	G	M	
1987	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
1988	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	2
1989	4	1	1	-	1	-	1	1	-	-	-	-	-	-	-	1	-	1	-	-	5	2	3	-	1	11
1990	1	2	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2	2	1	-	-	5
1991	1	-	-	1	-	1	-	-	1	-	1	-	-	-	1	-	-	-	-	-	3	-	-	2	1	6
1992	-	-	-	2	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1	-	-	2	2	5
1993	-	-	-	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	4
totals	8	3	1	5	3	3	1	2	1	1	2	-	-	-	1	1	-	2	-	-	14	4	5	6	5	34
a																										
1987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0
1988	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1
1989	1	-	-	-	-	3	1	7	-	-	2	-	4	-	-	1	1	1	-	-	7	2	12	-	-	21
1990	3	1	-	-	-	4	2	1	-	-	2	1	1	-	-	1	-	-	-	-	10	4	2	-	-	16
1991	-	-	-	-	-	2	1	-	1	-	2	2	-	-	-	-	-	-	-	-	4	3	-	1	-	8
1992	1	-	-	4	-	3	-	-	4	-	1	-	-	4	-	-	-	-	-	-	5	-	-	12	-	17
1993	-	-	-	2	-	1	-	-	3	-	1	-	-	1	-	-	-	-	-	-	2	-	-	6	-	8
totals	5	1	-	6	-	13	5	8	8	-	8	3	5	5	-	2	1	1	-	-	28	10	14	19	-	71
t(u+a)																										
1987	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
1988	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	1	-	-	3
1989	5	1	1	-	1	3	2	8	-	-	2	-	4	-	-	2	1	2	-	-	12	4	15	-	1	32
1990	4	3	-	-	-	5	2	2	-	-	2	1	1	-	-	1	-	-	-	-	12	6	3	-	-	21
1991	1	-	-	1	-	3	1	-	2	-	3	2	-	-	1	-	-	-	-	-	7	3	-	3	1	14
1992	1	-	-	6	1	3	-	-	4	1	2	-	-	4	-	-	-	-	-	-	6	-	-	14	2	22
1993	-	-	-	4	1	2	-	-	3	-	1	-	-	1	-	-	-	-	-	-	3	-	-	8	1	12
totals	13	4	1	11	3	16	6	10	9	1	10	3	5	5	1	3	1	3	-	-	42	14	19	25	5	105

Salient facts from Tables 37 and 38 can be summarised as follows:-

1. The largest number of students, unassisted and assisted, entered the Faculty of Arts, the number being 42 of the 105; after that 32 of the 105 entered the Faculty of Science, and 24 entered the Faculty of Social Sciences. This represents a difference between the non-SWAP adults and the other two groups of Summer School students, where, in both of the other groups, the majority of students entered the Faculty of Science.

2. A closer examination of the unassisted and assisted non-SWAP adults shows that 58.8% of the unassisted students entered the Faculty of Science (20/34) and 23.5% of them entered the Faculty of Arts (8/34). However the assisted students were divided as follows: 47.9% entered the Faculty of Arts (34/71), 29.6% entered the Faculty of Social Sciences (21/71) and only 16.9% entered the Faculty of Science (12/71). This result was the same as for the Summer School group as a whole where most assisted entry was in the Faculties of Arts and Social Sciences, the entry requirements being more stringent for these Faculties than for Science.

3. There were 71 students who had had assisted places (a) through the Summer School. This was approximately double the number of unassisted entrants (u), of whom there were 34. This result represented a difference from the other two groups of Summer School students where double the number of school leavers were unassisted, and over 80% (72/89) of SWAP students were also unassisted. This is taken to indicate the high level of educational disadvantage within the non-SWAP adult group.

4. The drop-out rate throughout, where the numbers were not trivial, was approximately 40%. The figures were very similar for both the unassisted and assisted students across faculty, with the rate being 41.2% for the unassisted students and 39.4% for the assisted students. It could be argued that this was an indication of success for the Summer School in that those who had used the Summer School as a means of access, the assisted students, were able to perform as well as those who had sufficient previous qualifications for entry. There is evidence to support this position in both the Faculty of Science and the Faculty of Arts where the drop-out percentages were highly similar for the unassisted and assisted students.

5. The percentages of students who have already graduated, either Honours or Ordinary, are as follows:-

Science	15.6%
Arts	38.1%
Social Sciences	33.3%
Other Faculties	57.1%
combined total	31.4%

The relatively large percentage (57.1%) for "Other Faculties" has to be balanced against the fact that no non-SWAP students entered these faculties after 1990.

6. The percentages of students whose courses were incomplete at the time of analysis but were in Good Standing, according to the relevant Faculty progress regulations, are:-

Science	34.4%
Arts	21.4%
Social Sciences	20.8%
Other Faculties	0%
combined total	23.8%

The 0% for "Other Faculties" indicates that there are no non-SWAP adults in these Faculties from the years, 1987-1993, still on course. The percentage in Minimum Standing (M), i.e., below progress regulations, is for Other Faculties also 0%.

7. By examining Table 38, which gives the data on a year by year basis, it can be observed that the number of non-SWAP adults entering the University of Glasgow reached a

maximum in 1989 of 32 and oscillated between twelve and 22 over the following four years.

6.5.2 Year one performance of the non-completing non-SWAP adults

In order to gauge how the students who dropped out (D) were performing academically, it is useful to examine the number of passes which they obtained in their first year of study. This gives an indication of whether or not the students were experiencing academic problems. Where there were more than three subjects studied in year one, the numbers of subjects was reduced to three by proportion to simplify the recording of the data.

Table 39 Number of passes in first year for the non-completing non-SWAP adults

category	0 passes	1 pass	2 passes	3 passes	total of Ds	total no. of students per category
u	5(35.7%)	1(7.1%)	2(14.3%)	6(42.9%)	14	34
a	9(32.1%)	8(28.6%)	8(28.6%)	3(10.7%)	28	71
t(u+a)	14(33.3%)	9(21.4%)	10(23.8%)	9(21.4%)	42	105

It is of interest to note that two-thirds of the dropping-out non-SWAP adults had at least one pass in first year. At the same time 42.9% of the unassisted students had a full set of three passes in year one. These results indicate that in many cases coping with the academic work does not appear to be the main reason for these students leaving the University.

6.5.3 Year one performance of graduating Honours and Ordinary non-SWAP adults

Following the pattern of Section 6.5.2 it was decided to also examine the number of passes gained by the graduating students in year one. Table 40 examines the number of passes gained by those with Honours degrees and Table 41 examines this number for Ordinary graduates. As before, the number of subjects for those in "Other Faculties" was reduced to three proportionately in both cases.

Table 40 Year one performance of graduating Honours non-SWAP adults

category	1 pass	2 passes	3 passes	total	total no. of students per category
u	0	0	5	5	34
a	1	2	11	14	71
t(u+a)	1	2	16	19	105

There were no Honours graduates without any passes in year one and only three of the students failed to have a full set of passes. It is of interest that these three students were all in the assisted category, indicating that the students might have been slightly weaker, at least initially.

Table 41 Year one performance of graduating Ordinary non-SWAP adults

category	0 passes	1 pass	2 passes	3 passes	total	total no. of students per category
u	1	0	0	3	4	34
a	0	2	2	6	10	71
t(u+a)	1	2	2	9	14	105

Expressed in percentages, 64.3% (9/14) of the graduating Ordinary students had a full set of passes in year one. This figure can be compared with the percentage of Honours graduates. Here 84.2% (16/19) of the Honours students had a full set of passes. As with the findings on number of passes for graduating school leavers and SWAP students, clearly a full set of passes in first year is a strong predictor of graduating with an Honours degree.

6.6 Summary of the performance of the non-SWAP adults

In summary, the question of how to evaluate the 'success' of the non-SWAP adults must be addressed. These students were positively discriminated towards on an individual basis and as such were possibly the most educationally disadvantaged of all the students who attended the Summer School. This was illustrated by the fact that approximately two-thirds of the non-SWAP adults entered the University of Glasgow with assisted places. They were therefore the most "at risk" and thus the least likely to succeed. This recalls the question raised in Section 6.4 of what level of success is required in order to justify positive discrimination.

It could be argued that a 40% non-completion rate is unacceptable and that non-SWAP adults should be excluded from both the Summer School and the University on the basis that places should be made available to those most likely to succeed, especially when the financial implications for both the student and the institution are taken into account. However, conversely, it could be argued that a 60% completion/continuance rate is a high level of success for this group of students, particularly for those with assisted places who would not have gained entry otherwise, especially given that the assisted students performed

at least as well as the unassisted students. This argument would surely be supported by Herrnstein and Murray, where they state:-

> It is time to return to the original intentions of affirmative action: to cast a wider net, to give preference to members of disadvantaged groups, whatever their skin color, when qualifications are similar. Such a change would accord more closely with the logic underlying affirmative action, with the needs of today's students of all ethnic groups, and with progress towards a healthy multiracial society (Herrnstein and Murray, 1994:p448).

The absence of a comparative control group for the non-SWAP adults leaves the question of their 'success' open to debate. Woodley et al (1992) in examining non-completion rates in Scottish universities, identified several categories of non-standard students. The two groups that corresponded most closely to the non-SWAP adults were 'mature entrants' and 'other qualifications'. These groups were found to have non-completion rates respectively of 26.7% and 19.9% for the University of Glasgow, 1981-1983. There would, however, be dangers in using these figures for comparison. For example, their 'other qualifications' category includes graduates, certificates of education, HNC/HNDs, ONC/ONDs, other UK qualifications, other overseas qualifications, other commonwealth qualifications and those with no qualifications. They state:-

> There was a great deal of variation in non-completion rates between the sub-categories. A quarter or more of those with ONC/OND's or with no formal qualifications failed to gain a degree compared with less than one in ten of those who held a UK degree or "Other Commonwealth qualifications" (Woodley et al, 1992:p66).

Furthermore, the years examined by Woodley et al were entry cohorts 1981-1983, whereas the years examined in the thesis include those of the late 1980s and early 1990s, which has

been a time of greatly increased access to higher education, with a far higher proportion of the population participating. In other words, the contextual factors are such that they render this type of comparison inappropriate.

This Section then completes the analysis of the performance of the non-SWAP adults who have attended the Summer School, 1987-1993, within the context of positive discrimination. The non-SWAP adults were the final of the three Summer School groups to be analysed separately.

6.7 The three groups of Summer School students, 1986-1993, at the University of Glasgow

In this final short summary of the quantitative results of the thesis the data for the three groups of students attending the Summer School are drawn together. This is done, again, within the context of positive discrimination. It has been shown that the Summer School students have been discriminated towards on an aggregate basis, a group basis, and on an individual basis. The three groups examined here are the school leavers (SL) from the 31 schools, the SWAP students (SWAP) and the non-SWAP adults (NSWAP). Each group is divided into categories of unassisted entry (u) and assisted entry (a). Table 42 below gives the numbers by faculty, 1986-1993.

Table 42 Faculty numbers of Summer School students, 1986 to 1993

category	Science	Arts	Soc Sci	Other Facs.	total
SL					
u	63	36	10	30	139
a	26	27	16	4	73
t(u+a)	89	63	26	34	212
SWAP					
u	50	2	17	3	72
a	1	10	4	2	17
t(u+a)	51	12	21	5	89
NSWAP					
u	20	8	3	3	34
a	12	34	21	4	71
t(u+a)	32	42	24	7	105
total by fac.					
u	133	46	30	36	245
a	39	71	41	10	161
t(u+a)	172	117	71	46	406

From Table 42 it is possible to observe that 42.4% (172/406) of the total number of students entered the Faculty of Science, the next highest percentage entrance being the Faculty of Arts, 28.8% (117/406) of the total. Slightly more than half, 54.3% (133/245), of the unassisted students entered the Faculty of Science, whereas the most frequently entered Faculty for assisted students was Arts, 44.1% (71/161). The second highest entrance number for the assisted students was Social Sciences with 25.5% (41/161). The unassisted category of SWAP students displayed a particularly high preference for the Faculty of Science, with 69.4% (50/72) of these students entering this faculty.

The results above are explained by several factors:-

1. The largest single percentage entered the Faculty of Science.

The General Entrance Requirements for both the Faculties of Arts and Social Science are higher at the University of Glasgow than those for the Faculty of Science and therefore this renders the Faculty of Science a more popular choice of application.

2. The majority of SWAP students entered the Faculty of Science.

Scottish Wider Access Programmes have a strong emphasis on Science and Technology and thus most of these students will have undertaken these types of Access courses and will therefore be aiming for science degrees. The 'Guaranteed' place which is at the heart of SWAP operates as was intended in the Faculty of Science at the University of Glasgow for the SWAP students, whereas admission to the Faculty of Arts is often based on performance at Summer School.

3. Most assisted students entered the Faculties of Arts and Social Sciences.

It is more difficult for marginal students to attain the requirements made for entry to the Faculties Arts and Social Science and therefore many more of these students have to rely on the assisted places scheme from Summer School.

4. The non-SWAP adults show a marked preference for the Faculties of Arts and Social Sciences.

This result could be explained by lack of background knowledge in the Sciences. Through their levels of educational disadvantage it is likely that they have missed out on much of

formal post-compulsory schooling, rendering subjects which rely more heavily on "life experiences" more attractive.

6.7.1 Non-completion amongst the three groups of Summer School students

As the debate in this chapter has largely centered on acceptable levels of 'success' within the groups who have been positively discriminated towards, it is crucial to examine the drop-out rates within these three groups of Summer School students. Table 43 below gives information on the numbers and percentages from each faculty who have dropped out. The percentages are those relative to the category numbers involved. For example, in "u-Science", where a 28.6% drop-out rate is recorded, this means that there were eighteen drop-outs from the number of students in that category, namely 63 as given in Table 42 above.

Table 43 Drop-out numbers of the Summer School students

category	Science	Arts	Soc Sci	Other Facs.	total	total no of students
SL						
u	18(28.6%)	3(8.3%)	1(10%)	4(13.3%)	26(18.7%)	139
a	9(34.6%)	5(18.5%)	3(18.8%)	1(25%)	18(24.7%)	73
t(u+a)	27(30.3%)	8(12.7%)	4(15.4%)	5(14.7%)	44(20.8%)	212
SWAP						
u	22(44%)	1(50%)	4(23.5%)	0(0%)	27(37.5%)	72
a	0(0%)	3(30%)	1(25%)	0(0%)	4(23.5%)	17
t(u+a)	22(43.1%)	4(33.3%)	5(23.8%)	0(0%)	31(34.8%)	89
NSWAP						
u	8(40%)	3(37.5%)	2(66.7%)	1(33.3%)	14(41.2%)	34
a	5(41.7%)	13(38.2%)	8(38.1%)	2(50%)	28(39.4%)	71
t(u+a)	13(40.6%)	16(38.1%)	10(41.7%)	3(42.9%)	42(40%)	105
total by fac.						
u	48(36.1%)	7(15.2%)	7(23.3%)	5(13.9%)	67(27.3)	245
a	14(35.9%)	21(29.6%)	12(29.3%)	3(30%)	50(31.1%)	161
t(u+a)	62(36.0%)	28(23.9%)	19(26.8%)	8(17.4%)	117(28.8%)	406

From Table 43 it is possible to verify the following facts:-

1. The overall drop-out rate for the three groups were: school leavers 20.8%, SWAP students 34.8%, and non-SWAP adults 40%. These figures gave a combined drop-out rate of 28.8% for all the students who attended the Summer School over the period considered, 1986-1993.

2. The most "successful" group were the school leavers, unassisted, with an overall drop-out rate of 18.7%. The unassisted school leavers were somewhat more successful than the assisted school leavers, who had a rate of 24.7%. This situation was, however, reversed in both the other groups where the assisted SWAP and non-SWAP students had lower drop-out rates than the unassisted students. These rates were SWAP unassisted 37.5%, SWAP assisted 23.5%; non-SWAP unassisted 41.2%, non-SWAP assisted 39.4%. In both these cases, where numbers were other than trivial, this result was due to the numbers in the Faculty of Science. In other words, even though a SWAP or non-SWAP student was assisted with entry, their performance was "better" than being unassisted in the Faculty of Science. An example of this is that 22 of the 27 SWAP unassisted students who dropped out were in the Faculty of Science.

3. Generally, regardless of category, unassisted or assisted, the least 'successful' students were from the Faculty of Science. The drop-out rates here were 36.1% for unassisted students, 35.9% for assisted students, with an overall total of 36.0% for the two groups. Problems with Summer School students in the Faculty of Science had previously been identified in Chapter Four where the school leavers from Summer School performed significantly worse than non-Summer School school leavers. The result here again

highlights the need for the Summer School to investigate its methods of teaching and preparation for university science courses for its students.

6.7.2 Ordinary and Honours graduates within the three groups of Summer School students

This section examines the numbers of students from the three groups of Summer School students who have already graduated with an Ordinary or an Honours degree from the University of Glasgow.The results are given in Tables 44 and 45 below.

Table 44 Summer School students who have graduated with Ordinary degrees, 1986 to 1993

category	Science	Arts	Soc Sci	Other Facs.	total	total no of students
SL						
u	4	3	1	4	12(8.6%)	139
a	3	3	2	0	8(11.0%)	73
t(u+a)	7	6	3	4	20(9.4%)	212
SWAP						
u	5	0	1	0	6(8.3%)	72
a	1	0	1	0	2(11.8%)	17
t(u+a)	6	0	2	0	8(9.0%)	89
NSWAP						
u	3	1	0	0	4(11.8%)	34
a	1	5	3	1	10(14.1%)	71
t(u+a)	4	6	3	1	14(13.3%)	105
total by fac.						
u	12	4	2	4	22(9.0%)	245
a	5	8	6	1	20(12.4%)	161
t(u+a)	17	12	8	5	42(10.3%)	406

From this table of data for the students who graduated with Ordinary degrees, the following facts arise:-

1. Roughly 10%(42/406) of all the students who attended Summer School have, so far, graduated with Ordinary degrees for the three groups of students, school leavers, SWAP and NSWAP together.

2. A higher percentage of non-SWAP adults have graduated with Ordinary degrees compared with the two other groups. The percentages for the school leavers and the SWAP students were largely similar to each other.

3. The percentages of assisted students graduating with Ordinary degrees are higher than those for unassisted students for all three groups. It is argued that this result would be anticipated given that the assisted students would be expected to be 'weaker' and so would be more likely to have an Ordinary degree rather than an Honours degree. This will be reviewed again when the data for Honours graduates has been presented.

Table 45 Summer School students who have graduated with Honours degrees, 1986 to 1993

category	Science	Arts	Soc Sci	Other Facs.	total	total no of students
SL						
u	17	11	5	8	41(29.5%)	139
a	1	3	4	1	9(12.3%)	73
t(u+a)	18	14	9	9	50(23.6%)	212
SWAP						
u	4	0	4	1	9(12.5%)	72
a	0	0	0	0	0(0%)	17
t(u+a)	4	0	4	1	9(10.1%)	89
NSWAP						
u	1	2	0	2	5(14.7%)	34
a	0	8	5	1	14(19.7%)	71
t(u+a)	1	10	5	3	19(18.1%)	105
total by fac.						
u	22	13	9	11	55(22.4%)	245
a	1	11	9	2	23(14.3%)	161
t(u+a)	23	24	18	13	78(19.2%)	406

Some results from Table 45, on Honours graduating students are:-

1. As expected, an overall higher percentage of unassisted students as opposed to assisted students have graduated with Honours degrees. This trend is particularly noticeable in the case of the school leavers group where 29.5% of the unassisted students gained Honours degrees as opposed to 12.3% of the assisted students.

2. In contrast to the overall trend, a higher percentage of the non-SWAP adults, assisted, graduated with Honours degrees (19.7%) than the unassisted group (14.7%) and almost all of these were in the Faculties of Arts or Social Science. This result is consistent with the results for Ordinary graduates, assisted non-SWAP students, but inconsistent with the overall trend. It can be explained by referring back to Table 37 where more unassisted non-SWAP adults were in Minimum Standing than were the assisted students. The result again highlights the 'success' of the Summer School with the assisted non-SWAP adults.

6.7.3 Students in Good Standing from the three groups of Summer School students

In order to assess the position of the three groups of students whose courses were still incomplete at the time of analysis, Table 46 gives the numbers of students who were still in Good Standing (G), according to relevant faculty progress regulations. The small numbers in Minimum Standing (M) have been ignored.

Table 46 Summer School students in Good Standing

category	Science	Arts	Soc Sci	Other Facs.	total	total no of students
SL						
u	20	15	3	14	52(37.4%)	139
a	10	10	5	2	27(37.0%)	73
t(u+a)	30	25	8	16	79(37.3%)	212
SWAP						
u	18	1	5	2	26(36.1%)	72
a	1	7	2	0	10(58.8%)	17
t(u+a)	19	8	7	2	36(40.4%)	89
NSWAP						
u	5	1	0	0	6(17.6%)	34
a	6	8	5	0	19(26.8%)	71
t(u+a)	11	9	5	0	25(23.8%)	105
total by fac.						
u	43	17	8	16	84(34.3%)	245
a	17	25	12	2	56(34.8%)	161
t(u+a)	60	42	20	18	140(34.5%)	406

Overall 34.5% (140/406) of the students who attended the Summer School are still in Good Standing (G). The percentages, for groups of students together, are largely the same for the unassisted and assisted students. Generally being in Good Standing (G) in, e.g., Arts or Social Sciences, would mean having two or more passes after first year and four or more passes after second year, in degree exams. By referring back to the tables on the number of passes in first year in the various analysis sections in this Chapter and in Chapters Four and Five, it can be predicted that most of the students in Good Standing (G) will graduate with either an Honours or an Ordinary degree.

6.8 Summary and conclusions

One of the major problems with the main programmes of positive discrimination of the 1960s and 1970s was that they were not seen to be working quickly and effectively enough. This raised the question within the Chapter as to what levels of 'success' would be required to justify positive discrimination such as that found on the Summer School. The "success"

level set within the Summer School is that its students should perform as well as average groups of students from the same educational backgrounds. The drop-out rates (taken as low rate means high success) for the Summer School students cannot be used for the three groups as a whole to assess their 'success', as they are three distinct groups and not really homogeneous. Their homogeneity lies in socio-economic and educational disadvantage. However, the Summer School group contains school leavers with traditional qualifications, SWAP students with modular qualifications and non-SWAP adults with a variety of qualifications. This diversity is further compounded by the fact that some of the students were qualified for entry to the University of Glasgow (unassisted) whilst others were not (assisted). These factors meant that the three groups had to be examined separately.

It was determined that it was not possible to select a comparative group for the non-SWAP adults against whom to assess their "success" levels. However, it was a positive result for the Summer School that the assisted students performed better than the unassisted students (see Sections 6.5 to 6.6 of this chapter). This indicated that the Summer School's policy of targeting these adults, who would not have been admitted to university on the basis of their previous qualifications, had proved successful in that these students performed at least as well as those who would have been admitted whether or not they attended the Summer School.

Also within the context of positive discrimination, much of the debate has focused on targeting, with the thrust of the argument being that positive discrimination should be targeted towards the most deprived (Connell, 1992; Garner, 1989; Herrnstein and Murray, 1994) and that group targeting often misses those who need it most. The Summer School students were targeted by three methods: aggregate targeting (school leavers); group

targeting (SWAP students); and individual targeting (non-SWAP adults). It is argued that the positive discrimination shown on the Summer School followed many of the patterns identified in the literature in the earlier sections of this chapter. The three drop-out rates were 20.8%, 34.8% and 40.0% respectively. If it were possible to put aside educational background and differences between "traditional" and "non-traditional" students for a moment, it would be possible to see that the performances of the three groups of students have largely followed the positive discrimination targeting debate, where those targeted on an aggregate basis performed best and on an individual basis worst, with those targeted on a group basis being in the middle. This statement can merely be taken as an anecdotal observation given the group differences.

Chapter seven

Longitudinal study of non-completing students who attended the Summer School

Chapter Seven

Longitudinal study of non-completing students who attended the Summer School

7.1 Introduction: Orientation of the chapter

This chapter presents the results of the qualitative research undertaken as part of this thesis. A longitudinal study was undertaken with a group of 57 students from the 1992 cohort who attended the Pre-University Summer School, and then entered the University of Glasgow. The study consisted of a series of seven semi-structured interviews spread over a period of two-and-a-half years.

The analysis of the interviews produced results for each of the 57 participants individually, over the entire two-and-a-half year period. By this method it was possible to produce case studies for each of the participants. The overall aim of the case studies was to examine the problems encountered by each participant and to focus on the differences and similarities between those who dropped-out and those who persisted with degree courses. This was done in order to attempt to understand why the Summer School students had succeeded or failed academically.

Before the results of the case studies could be discussed, it was first necessary to examine some of the existing research on the phenomenon of student drop-out from higher education. There were, initially, three main approaches identified. These were the "philosophical" or "theoretical" approach (7.3), the "descriptive" or "problem" approach (7.3.1), and the "predictive" approach (7.3.2). Although the case studies had originally been undertaken using the descriptive/problem approach, a combination of the review of the literature and of the results of the case studies indicated that it was not useful to rely solely on this approach. The main finding indicated that the differences between the dropping-out students and the continuing students lay in personality, motivation and commitment and not especially in the problems encountered. It then became necessary to further review theories of motivation (7.6.1) before the conclusions could be drawn.

7.2 Introduction to the concept of student drop-out

Research into student withdrawal from higher education has been growing steadily over the past three decades. The majority of the early work was undertaken in the United States. However the topic has become of increasing interest in this country in more recent years.

Originally concerns over student drop-out were seen in terms of loss of potential talent to the nation, waste of institutional time and money and personal distress to the student (Heilbrun, 1965). However, there have been major changes more recently which have altered the focus of the argument. The major changes have been in the levels of participation, with large increases in the numbers of students, including non-traditional students, and in the structures of higher education institutions. The binary line between colleges/polytechnics and universities was, theoretically, abolished in 1991 through the

White Paper, 'Higher Education: A new framework' (HMSO, 1991) and in fact abolished in 1992 in England and Wales and in 1993 in Scotland. With these changes came new arrangements for the auditing and assurance of quality in higher education institutions.

The development of a single Funding Council, for each of England, Scotland and Wales, to reflect local differences, for the 'new' and 'old' universities, meant that institutions competed for funds and students on an equal basis (Adams, 1995).

The new Higher Education Quality Council is now responsible for quality assessment, which is concerned with the quality of educational provision and the standard of student performance. Therefore, non-completion rates have become of interest nationally and not just on an individual institutional level.

At the same time there have been developments in the area of Student Charters. The National Union of Students launched its own charter in 1992. It refers to students' rights, not entitlements, and aims to prevent declines in the quality of education. The role of students is now that of clients or consumers, towards whom universities have legislative responsibility.

Thus, in this country the focus of student withdrawal has shifted from being the concern of individual, reasonably autonomous institutions to being a nationwide higher education issue. As institutions compete to attract students and students become increasingly responsible for their own funding and gain rights as consumers, withdrawal rates becomes a high profile issue.

Marsh (1966) described the three main research approaches which are generally undertaken in attempting to understand withdrawal behaviour. The first approach is referred to as philosophical or theoretical. This approach refers to the complexity of the problem and focuses largely on longitudinal studies and the development of more efficient research techniques towards the production of a theory of student drop-out.

The second approach is referred to as 'descriptive' studies. It describes the students in terms of what they bring to the university, how they live at university and their reasons for leaving. The approach focuses mainly on the identification of problems (Marsh, 1966).

The third approach is that of predictive studies. These studies look for correlations, usually between variables such as pre-university qualifications and student withdrawal.

The three approaches as described by Marsh are examined in the following Sections.

7.3 Philosophical or theoretical models of student withdrawal

The main theoretical models of retention in the United States have been those of Spady (1970) and Tinto (1975). These models were drawn from the work of Durkheim (1951) (cited in Spanard, 1990) in the study of suicide. Durkheim found that people were less likely to commit suicide if they shared common values with others. Spady built on this argument by stating that students would be more likely to withdraw if they did not identify with others. Spady proposed that students would be likely to desire to leave the group with which they had conflicting values in much the same way that a person would attempt to

remove himself/herself from the environment through suicide if that person's values were in conflict with those around them.

Spady (1970) identified student attrition as a longitudinal process - a student's past experiences, i.e., values and experiences learned prior to reaching college, and the student's current interaction with the new environment would all play a role in the student desire to leave.

Tinto (1975) built on Spady's work. Tinto's model was also longitudinal and was based on the degree of fit between the student and the college environment. Tinto's 1975 model was that students enrol with a range of background characteristics, such as race, secondary school achievement, academic aptitude, and family socio-economic levels. These background traits lead to initial commitments to the goal of graduation as well as commitment to the institution. Background traits and initial levels of commitment jointly influence integration into the academic and social systems of a given institution. Other things being equal, the greater the individual's level of social and academic integration, the greater the subsequent level of both institutional commitment and commitment to graduation. These subsequent commitments, in turn, have a direct influence on persistence (Bean & Metzner, 1985; Braxton et al, 1988; Pascarella & Chapman, 1983; Pascarella & Terenzini, 1983; Stage, 1989; Tinto, 1975).

This model implies that student problems exert little or no influence on decisions to persist. Students encounter various problems, e.g., not being able to take desired courses, not being able to enrol in courses at convenient times, difficulties balancing academic workloads with demands at home or employment, personal problems, financial problems.

Such problems represent financial, personal and psychological costs. However, the influence of these problems is outweighed by subsequent commitments (Braxton et al, 1988).

In 1982 Tinto re-examined his theory and discovered four important issues which had not previously been explored. These were the determinants of persistence at two-year colleges (as opposed to the normal four-year colleges in the United States), the role of finances in withdrawal, group-specific (gender, race and social status background) differences, and determinants of different voluntary withdrawal behaviours (Mallette & Cabrera, 1991; Tinto, 1987).

Furthermore, Tinto (1987) concluded that academic integration stemmed not only from the students' academic performance but also from their interactions with faculty and staff, while social integration reflected the students' participation in and satisfaction with extracurricular activities and peer group relations (Mallette & Cabrera, 1991, Tinto, 1987).

Tinto's model of retention has generally been accepted as being potentially useful and therefore has been the focus of growing research as to its validity. The results of this research generally confirm its validity, although the research usually emphasizes one or other aspect of the model. Some of this research can now be discussed.

Munro (1981) concluded that commitment to the goal of completion was the strongest positive reason for a decision to remain. She also found that her research differed from Tinto's in that integration into the academic system of the college most directly affects goal commitment and integration into the social system most directly affects institutional

commitment. In Munro's study, educational aspirations of parents and students had a greater effect on goal commitment than academic integration. Academic integration was much stronger than social integration. However her findings had supported Tinto's notion of goal commitment having the strongest effect on persistence.

Pascarella and Terenzini (1983) also tested Tinto's model. They found that background and initial commitments explained relatively little variation in persistence. Their results suggested that what happened to the students after they arrived on campus was far more important than background and initial commitments. They concluded that Tinto's model did have reasonable predictive power and that persistence/withdrawal behaviour was essentially the result of a longitudinal process of person-environment fit. However, they also determined that there were differences for male and female students in academic and social integration, in that social integration had a stronger direct effect for women than academic integration and that the opposite was true for male students. Pascarella and Terenzini also found a compensation effect, in that high academic integration could compensate for low social integration and high commitment to the goal of graduation could compensate for low commitment to the institution and vice versa.

Pascarella and Chapman (1983) extended Tinto's model in a multi-institutional study. Their results indicated that social and academic integration, while not directly influencing persistence, did have an indirect effect through influence on institutional commitment (social integration) and both institutional and goal commitment (academic integration). Also, they found that student background variables as well as institutional factors, such as size of the institution, had mainly indirect effects on persistence. Institutional commitment was highest in four-year residential colleges and lowest in two-year commuter colleges.

Although they accepted that Tinto's model was a potentially useful framework, they added a cautionary note. They state:-

> Perhaps a major portion of persistence/withdrawal behaviour is so idiosyncratic, in terms of external circumstances and personal propensities, that it is difficult to capture in any rational explanatory model (Pascarella & Chapman, 1983:p99).

Bean (1985) defined what he called "dropout syndrome". This model was a three-stage process of intent to leave, discussing leaving, and actual attrition. He found that the intervening variables - college grades, institutional fit and institutional commitment - were important predictors of attrition. He developed the notion of institutional fit, which, he said, assumed that students who feel they fit in are likely to value and thus maintain their membership of a college. Feeling one does not fit produces cognitive dissonance, which may be the grounds for withdrawal. High levels of academic integration should increase a student's institutional fit, as do perceived utility of one's own education, faculty contacts and social life. Bean states:-

> It is further assumed that students who feel they fit in do so either because they brought with them values, attitudes, norms, beliefs, and so forth, similar to others at the school or they developed these attributes after arriving. The more important the effects of faculty contact and social life on institutional fit, the more likely institutional fit is the result of socialisation and not selection (Bean, 1985:p39).

Bean adds that there are three environmental variables which reduce levels of fit. These are lack of finance, perceived opportunity to transfer, and wanting to be with a significant other outside college.

Bean and Metzner (1985) tested Tinto's model with non-traditional students. They determined that the chief difference between attrition processes of traditional and non-traditional students was that non-traditional students were more affected by the external environment than by social integration. When both academic and environmental variables were good the non-traditional student persisted and when they were both poor, the student left. However when the environmental variables, such as child care, family and employers, were good but the academic support was poor, the non-traditional student persisted, but not when the academic support was good and the environmental variables were poor. Therefore they concluded that Tinto's model had important uses for non-traditional students but that social interactions had only a minimal effect for these students.

Finn (1989) developed the participation-identification model for high school students from Tinto's integration model. In Finn's model the likelihood of completing was maximised if the student maintained multiple expanding forms of participation in school-relevant activities. Failure to participate had negative effects on completing high school. This model is at the opposite end of the spectrum from Bean and Metzner's model and could imply that the younger the student, the greater the need for social integration.

Stage (1989) accepted that Tinto's model explained the attrition/persistence process in general but not for individual students. He says that Tinto's model implies that theoretically for students from two similar schools with the same levels of initial commitment a higher degree of integration into the system for students from one school would mean greater subsequent commitment to the institution and to the goal of completion. However, this ignores student motivations. Stage identified three types of motivations towards studying in students - Certification (attending for practical reasons), Cognition (primarily academic

reasons), and Community (gaining skills to help others). Of these groups of students the Cognition subgroup least resembled Tinto's model and the Community subgroup fitted best with the integration model. He therefore concluded that the constructs of Tinto's model varied with individual characteristics and motivations.

Lyons (1991) tested Tinto's model on college undergraduates over a four-year period. His results supported the model. He found a relatively high level of institutional integration for the majority of students who persisted and this was reflected in their educational goals and commitment to degree completion. Lyons affirms:-

> In this regard, despite financial and personal life situations which often result in stop out behaviour, most fourth years expressed satisfaction with the institution, indicated they would re-enrol, and anticipated enhanced educational and career opportunities subsequent to graduation. Overall, findings corroborated the need to integrate a variety of qualitative and quantitative data to understand more fully the salient aspects of student attrition (Lyons, 1991:p17).

In summary, this Section has discussed some of the philosophical and theoretical approaches to withdrawal behaviour. Tinto's model of attrition (and its revisions) has dominated this method of examining withdrawal/ persistence in higher education. Largely researchers have accepted the model as being valid. However, some differences were determined. For example, Pascarella and Terenzini (1983) determined that levels of social and academic integration could compensate for each other. Furthermore, Bean and Metzner (1985) and Finn (1989) respectively determined that levels of social integration were both less important for older non-traditional students and vital for younger students. Stage (1989) argued that the model did not take into account individual motivations and was more valid for some groups than others based on these motivations.

7.3.1 Descriptive studies of withdrawal

The second main method of withdrawal research is referred to by Marsh (1966) as descriptive studies. These studies generally focus on describing the student in terms of what they bring to university, how they live, and their reasons for leaving. It is a problem-oriented approach.

Marsh (1966) states that the validity of a reason given for dropping-out of college could be questionable because of the way in which it is obtained. He argues that a student who is about to leave is more anxious to terminate the relationship than to focus on self-evaluation. This could also hold true for follow-up questionnaires. The underlying factor is that the student seeks socially acceptable reasons rather than true feelings. He does, however, list the more outstanding reasons, which are finances, academic difficulties, dissatisfaction with the curriculum and college, marriage, military service, and illness (personal or within immediate family).

Cooke (1989), in her unpublished thesis, investigated student problems. She identified 152 independent items which related to a wide spectrum of problems. These items were categorised into the following groups - social/relationship problems, personality problems, course/study problems, family problems, psychiatric problems, adjustment problems, sexual problems, substance abuse problems, and other miscellaneous problems. Seventeen of the 152 items were listed frequently by the participants. Of these, eight related to study difficulties and examination worries; five related to motivational difficulties and anxieties about achieving in an academic environment, and four were largely individual items relating

to financial worries, weight gain and mood. She, therefore, concluded that academic and study problems were the most distressing to the students.

Cullen (1994) examined case studies of discontinuing Access students. She identified a list of reasons for leaving and classified these for each student as "main" and "additional". The reasons were course dissatisfaction, change/trouble in personal life, ill-health; finances, house move, better option materialised, pressure of juggling roles, loss of confidence in ability, lack of group support, difficulty with child care, class, and age. Cullen concluded that the course itself was often the most important reason for leaving. However, at the same time she determined that students often left for a combination of reasons and that attempts to identify one main reason were over-simplifying the situation.

Munn et al (1993) examined the problems encountered by both Access students on Access courses and Access students in higher education. They determined that the main problems for access students were financial and time management. However, they also found that nearly half of their sample who were in higher education also had academic problems and that a third admitted to personal problems. Although financial problems were the most pervasive and often given as the main reason for leaving, all of the withdrawing students that they interviewed had several other problems which fell into either academic or personal problem areas, or both. They concluded that:-

> Information from the discontinuing access students supports the idea that those with several problems found it difficult to see the way ahead. In the main access sample, there were people with several problems in different combinations. However, almost all of these people claimed to be coping with the course. Whether this feeling will last until the new academic year starts is a moot point. Judging by other work in progress with access students some at least will have second thoughts about being able to cope with the long haul of a degree course (Munn et al, 1993:p30).

In other words, the problems were largely the same for those on Access courses as for those now in higher education and the same reasons given by the students who withdrew from both courses.

This lack of clarity on the problems encountered by withdrawing and persisting students is also identified by Hayes (1977). She states that drop-outs should not be considered a group with homogeneous characteristics that differentiate them from persisting students. Hayes argues that in some ways there are greater differences between subgroups of drop-outs than between drop-outs and persisting students. Furthermore, she adds a caveat to the descriptive-problem approach when she states:-

> Students' self-reported "reasons" for withdrawal are, however, an unreliable source of data, because of the possibility of rationalisation and distortion on the part of the dropout, and problems of interpretation on the part of the researcher. It has been shown that there is little difference between dropouts' purported reasons for withdrawal, and the difficulties encountered by persisting students, particularly with respect to dissatisfaction with the educational institution (Hayes, 1977:p142).

Szuleka et al (1987) looked at general health, psychiatric vulnerability and withdrawal from university. They determined that withdrawal from university was found to be related to a high score on the health questionnaire or an unsatisfactory relationship with parents or previous psychological investigation. In other words, they determined that the main problems for withdrawing students lay in the areas of health and personal welfare.

Metcalf (1993), in a literature review of non-traditional students' experience of higher education, determined, that although non-traditional students responded positively towards

higher education, they experienced more problems than younger students in the areas of finance, child care, family stresses, and coping academically. Also lack of confidence affected many more mature students.

The descriptive/problem approach has been used extensively both in the United States and here in Britain. Although researchers identify a morass of problems encountered by students, they largely relate to the same loosely defined areas. These are academic, financial and personal problems. There are many difficulties in the descriptive/ problem approach. These concern assessing the validity of the students' responses, self-reported reasons for leaving which are often unreliable, identifying differences in problems encountered by withdrawing and by persisting students, and understanding the interrelation and complexity of the problems encountered. However, these difficulties do not render the approach invalid but are contextual factors which researchers must take into account. If the contextual factors are taken into account, this approach could be of value in developing programmes designed to reduce withdrawal from higher education in that the approach is student-centred and it brings to the fore the nature of the problems encountered whilst in higher education. The identification of problems could then be used as the basis for improved guidance and counselling services.

In summing up, a quote is taken from Braxton et al:-

> Understanding the influence of student problems in withdrawal decisions and explanations for their use by students would assist in the design and implementation of attrition-reduction programmes. Design and implementation of such programmes are necessary not only for enrolment management but also for improvements in the quality of student life at colleges and universities (Braxton et al, 1988:p252).

7.3.2 Predictive studies of withdrawal

Marsh (1966) refers to the third method of withdrawal research as predictive studies. These studies aim to predict which students will withdraw and which will persist. They usually focus on correlations between two factors, such as entry qualifications and academic progress.

Powell (1973) explained that the necessary condition for success in any predictive work is that there should be a relationship between the predictor and what is to be predicted. He examined four possible predictors for selection to Scottish universities. These were performance in SCE Highers, teachers' prior estimates of performance, overall assessment by headteachers, and score on a Scholastic Aptitude Test. He found that only a maximum of 25% of variance in performance was accounted for by the predictors. Furthermore, the Scholastic Aptitude Test scores were poorer predictors than SCE Higher results. Powell also found that there was no evidence to show that headteachers' assessments or teachers' estimates were useful predictors either alone or in combination with other predictors. He concluded:-

> SCE examination is a reasonably good measure of academic performance, but one that is in practice asked to perform a predictive function that no academic measure could by itself fulfil (Powell, 1973:p50).

Nisbet and Welsh (1976) attempted to identify students at risk of failure on the basis of their first term's examination results at Aberdeen University. Those at risk were identified as those who were in the bottom third of the class in examination results. They determined that 76% of those identified as at risk at that time recovered successfully and that 40% of

failing students were missed by this procedure. Thus they concluded that the identification of students at risk of failure through poor results in first term's class examinations had proved unproductive.

Some of the predictive work has focused on differences between students with GCE A levels and SCE Highers as previous qualifications. Quinault and Diamond (1973) determined that GCE A level students found the work at the University of St Andrews easier than did SCE Highers students. McPherson (1975) expanded on the work of Quinault and Diamond and discovered that academic achievement was higher for GCE entrants than SCE entrants at the University of Edinburgh. The finding was that the higher qualified the entrant, the better their performance. This finding was also backed up by Barnett and Lewis (1963) who determined that GCE A levels together with age could predict performance in 40-45% of the cases examined.

Woodley et al (1992) examined non-completion rates in Scottish universities. They identified three possible predictors - previous educational background; personal characteristics such as age, motivation and socio-economic status; and university-associated characteristics such as courses. For the predictor of previous educational background they determined that the research findings were not consistent, but that some early university performance and non-completion could be more closely related. However, those with GCE A levels performed better in Scotland than those with SCE Highers. This finding was consistent with earlier studies (McPherson, 1975; Quinault & Diamond, 1973). However, they also discovered that personal background characteristics such as age and socio-economic status did have an important effect, and that non-completion varied according to subject studied. They determined that the relationship between SCE Highers score and non-

completion could be strongly identified and that this held true for gender and subject studied. They concluded that the best predictor of non-completion was the SCE Higher results, and that the best variable to add to this was gender (women were more likely to graduate than men). Those whose SCE Highers scores suggested that they would not have gained entry to university had they been studying GCE A levels were more likely not to complete. In making this statement they point out that A level candidates came from a much narrower band of achievement with many more Scottish school leavers having SCE Highers.

Astin (1975) conducted a longitudinal and multi-institutional study for the four years, 1968 to 1972. The predictors examined were ability, secondary school grades, socio-economic status, educational aspirations, and students' own predictions about their chances of finishing college. From these he attempted to define "drop-out-proneness". He was able to identify drop-out-prone characteristics as being those with poor academic records in high school, having low aspirations, poor study habits, relatively uneducated parents, and small town backgrounds. Dropping-out was also associated with being older, having Protestant parents, having no religious preference, and being a cigarette smoker. Women who planned to marry were also at risk, although men were not. Astin states:-

> By far the greatest predictor is the student's past academic record and academic ability. Next in importance are the student's degree plans at the time of college entrance, religious background, and religious preference, followed by concern about college finances, study habits, and educational attainments of parents. Except for study habits, where there were some unexpected findings, this pattern of predictors is generally consistent with patterns in earlier drop-out studies (Astin, 1975:p45).

Johnes and Taylor (1989b) identified characteristics which could be used as predictors. These were academic ability, work experience prior to entering university, school background, location of home in relation to the university, and gender. They found that a vast improvement in prediction could be made by using first year examination results rather than A levels. However, their main conclusions were that GCE A levels were the best predictors and that having a full-time job before entering university reduced chances of failure. Conversely students who lived close to the university were more likely to fail. Their overall conclusion was that, even when all the characteristics (academic and non-academic) were taken into account, the degree of certainty with which potential non-graduates could be predicted was small. Johnes states:-

> There is a wide variety of reasons for withdrawal. Non-graduates are not a homogeneous group of individuals. More specifically, the determinants underlying distinct types of wastage could be very different, and more success in predicting non-graduates might be obtained by looking at each group separately (Johnes, 1990:p97).

The overwhelming evidence from the literature reviewed here, and from other studies such as those by Cope et al (1976) and Johnes (1990) on predictive methods, is that the only consistent predictor of success in higher education is pre-university qualifications such as SCE Higher or GCE A levels. Other variables such as age, sex and educational aspirations do correlate with success in some of the studies but generally they are additional variables not primary predictors. However, although previous educational qualifications was the best predictor identified, the levels of prediction based on this were only at best about 40-45% of cases examined (Barnett & Lewis, 1963).

7.3.3 Summary of the three methods of drop-out research and links to the study

The three methods of drop-out research identified at this stage are those of philosophical or theoretical studies, descriptive studies and predictive studies.

The theoretical studies are largely based on the work of Spady (1970) and Tinto (1975), who produced models of attrition-retention. These models focused on integration theories and were mostly found to be valid. Criticisms arose from the varying levels of social and academic integration which were determined in the studies and the fact that they did not take into account individual motivations.

The descriptive studies focused on the problem approach, attempting to identify problems most frequently identified by dropping-out students. The lists of problems were wide and varied but could mainly be categorised into academic, financial and personal problems. Difficulties arose with this approach in that the validity of the students' responses was questioned and at the same time many persisting students experienced the same types of problems.

Predictive studies focused on the correlations between variables and attempted to produce profiles of the groups of students most likely to succeed. The strongest predictor identified by the studies was that of previous educational qualifications. The higher the level of previous qualification the better the level of success at university. However, the overall levels of prediction found were not high enough to recommend use as admissions policies.

They also ignore many other factors, such as problems encountered and levels of integration.

Classifying studies as theoretical, descriptive or predictive does not imply that these are rigid classifications. A theoretical study would usually have descriptive elements and vice versa. All studies have a predictive element in that they attempt to identify the factors which contribute towards success and failure. One problem is that researchers in the field tend to focus on proving or disproving one or other approach. It is argued that drop-out research could equally be conducted using a combination of approaches.

Initially the case studies in the thesis were to be conducted using the descriptive/problem approach as it was deemed most appropriate, prior to conducting the interviews. The reader will recall that the main aim had been to examine the problems encountered by the students and to focus on the differences and similarities between those who dropped-out and those who persisted. However, a review of the literature, outlined in the previous sections, together with the preliminary results of the case studies, indicated that this approach was merely the first step in attempting to understand drop-out behaviour. For example, there were a number of background characteristics such as qualifications, family history of higher education, and initial expectations/aspirations which could be tested as predictors of success. More importantly, it was found that the differences between the dropping-out and persisting students did not lie in the problem areas on the whole, but in the areas of attitude and commitment (Section 7.5.3).

Therefore, the study, which can now be presented, was reviewed in the light of all three of the approaches outlined and, indeed, ultimately further relied on a fourth approach, theories

of "motivation" (Section 7.6). The justification for this multi-method approach was that the overarching purpose was to understand drop-out behaviour and not to prove or disprove a theory.

7.4 The study of non-completing students

The study of the students who dropped out was longitudinal and took place between July 1992 and December 1994. During this time 57 students, school leavers, SWAP and non-SWAP adults, who attended the Pre-University Summer School in 1992 and then entered the University of Glasgow in that year were tracked. The students were interviewed seven times over this period. Interviews were semi-structured and questions open-ended.

The outcome of the interviews was the production of case studies for each of the 57 participants. The overall aim of the production of these studies was, as stated previously, to examine the problems encountered by each participant and to focus on the differences and similarities between those who dropped out and those who persisted. To this end, academic progress was assessed and recorded at each interview. Personal problems were also discussed and recorded. Furthermore, financial statuses were established, including part-time jobs, numbers of hours worked per week, summer jobs and Student Loans.

7.4.1 The selection of the sample group

The sample group of 57 students was selected randomly from the total group of 113 Summer School students of 1992 who indicated that the University of Glasgow was their first choice of higher education institution at the commencement of that year's Summer

School. The 57 represented approximately half of that group. In fact, in October 1992, only 100 of these 113 students entered the University, the others being rejected or deciding to return to school for another year. The sample was selected by numbering the names alphabetically and selecting every second name.

It would have been possible to select a stratified sample which would have ensured that the sample was representative; however, it was considered that random selection would avoid bias as the students were already previously known to the researcher through pre-Summer School interviews.

Before examining the case studies it is necessary to address the question of how representative the sample in fact was. This is done by reviewing the distribution of the entire group of Summer School students, 1986-1993, and at the same time the distribution of the 1992 students, in terms of proportions of assisted and unassisted students and of school leavers, SWAP and non-SWAP students.

Distribution of the Summer School students, 1986-1993, who entered the University of Glasgow (total number 406 students).

category	school leavers	SWAP	NSWAP
unassisted	139	72	34
assisted	73	17	71
total	212(52.2%)	89(21.9%)	105(25.9%)

From the above figures it can be observed that 52.2% of the total were school leavers, 21.9% were SWAP students and 25.9% were non-SWAP adults. The distribution of the sample group of students can now be examined.

Distribution of the sample group of students, 1992 (total number 57 students).

category	school leavers	SWAP	NSWAP
unassisted	10	18	1
assisted	10	5	13
total	20(35.1%)	23(40.4%)	14(24.6%)

An examination of the above distribution would appear to indicate that the sample was not particularly representative with there being too few school leavers, 35.1% as opposed to 52.2% of the total group, and too many SWAP students, 40.4% as opposed 21.9%. However a further examination of the entire 1992 Summer School/University of Glasgow group indicates that this was not the case.

Distribution of the entire Summer School group who entered the University of Glasgow, 1992, (total number 100 students).

category	school leavers	SWAP	NSWAP
unassisted	19	33	5
assisted	18	8	17
total	37(37%)	41(41%)	22(22%)

This indicates that the sample group of the 57 students was in fact highly representative of that year. The stratified numbers in the three categories would have been 21, 23, and 13 as against the actual numbers of 20, 23, and 14 used in the study. The difference between 1992 and other years was that fewer school leavers had applied to attend Summer School and it was decided to offer places to more than the usual number of SWAP students. This was an exceptional circumstance which was not replicated the following year.

In summary, it was considered that random selection removed the possibility of bias and has also been shown to have produced a reasonably representative sample.

7.4.2 The interviews

The students attended seven interviews over a two and a half year period. The interviews were semi-structured and took place following a particular time scale. The first three interviews took place in July, August and September of 1992, during the Summer School and between Summer School and entering the University. These interviews were timed to assess the students both while they were attending Summer School and before they entered University. This was done to gain insight into the academic, financial and personal lives of the students. The students were interviewed again in December 1992, at the end of the first term of the first year at University, which was timed to coincide with their first formal assessments in class examinations. The fifth interview was conducted in May 1993, shortly before the students sat their first degree examinations, when they had largely completed their first year and, therefore, had had considerable experience of University The students were next seen in December of 1993, during their second year of study. This interview was timed in order that the results of first year degree examinations could be recorded and to gain an insight into the experiences of the students in second year at University. The seventh and final interview was undertaken in October 1994 after the students had commenced the third year of their degree courses. This interview was timed to enable the researcher to record the results of second year degree examinations and to determine how the students were progressing in the third year of their degree courses.

Each interview was scheduled to last for 30 minutes. However, in practice the timing ranged from fifteen minutes to an hour and a half, depending on the nature of the students' problems. Students who dropped out usually attended additional interviews or discussed problems during telephone interviews. The results of any additional interviews were added to the case studies.

Interviews took place in the researcher's room at the Department of Education, University of Glasgow. The location of the interviews was considered to provide a familar environment for the students in that they had all become acquainted with the researcher and the room even before they had commenced Summer School, through pre-Summer School interviews. It was considered that the familiarity of the surroundings was a crucial factor in the interviews in that it enabled the students to relax and allowed them to discuss problems of a more personal nature.

The full schedule of each of the interviews is given in Appendix V, however, the structures of the seven interviews were:-

1. Interview One July 1992 Summer School

   Recording of previous educational qualifications, family history of higher education, academic and personal concerns/expectations, reasons for selecting the University of Glasgow, self-assessment of academic future.

2. Interview Two August 1992 Summer School

   Academic progress in Summer School, ease/difficulty of subjects studied, self-assessed academic weaknesses, subject interests, non-academic worries/ difficulties.

3. Interview Three September 1992 Summer School/University of Glasgow

Current levels of confidence in higher education, academic worries and difficulties, levels of satisfaction with course/subjects, personal worries, career aspirations.

4. Interview Four December 1992 University of Glasgow

Views on University of Glasgow, academic progress, academic worries/difficulties, current levels of satisfaction with course/subjects, personal/social life, personal problems, financial problems, part-time jobs, including type of employment and number of hours worked per week.

5. Interview Five May 1993 University of Glasgow

Academic progress in class work, academic problems, financial situation, part-time jobs, personal problems, self-assessment of first year of study at university.

6. Interview Six December 1993 University of Glasgow

Review of performance in first year degree examinations, including exemptions and resits, progress in second year; degree aspirations, honours/ordinary degrees, academic problems, current finances, employment, summer job/part-time job, uptake of student loan, personal problems, levels of social activity in the University.

7. Interview Seven October 1994 University of Glasgow

Review of performance in second year degree examinations, including exemptions and resits, current academic aspirations, career aspirations, financial situations, employment, summer job/part-time job, personal problems, assessment of value obtained from studying for degree, including benefits and disadvantages, identification of three biggest problems encountered during the period of study, Summer School to third year of degree course.

After completion of all seven interviews, each of the participant's responses in each of the interviews was drawn together to create individual case studies. As with much qualitative research, the dangers of subjectivity on the part of the researcher were considered. In order

to reduce subjectivity, it was decided to enlist the assistance of an educational researcher to independently review the interviews and subsequent case studies. It was considered that this process cross-validated the research.

7.4.3 The preliminary results of the interviews

Attempts were made to assess whether or not it would have been possible to predict which students would have succeeded or failed based on the information gathered. Some of this work is now, briefly, outlined below.

1. After the two and a half years had elapsed eighteen of the 57 students had dropped-out. One of the indicators examined was whether there had been a history of higher education in the families of the students.

History of higher education in the family

Category	no history of he	some history of he	total
drop-out students	13(72.2%)	5(27.8%)	18
continuing students	25(64.1%)	14(35.9%)	39
total	38(66.7%)	19(33.3%)	57

Overall two thirds of the sample had no family history of higher education, a result which would have been anticipated given the nature of the students' backgrounds. The percentage of the drop-out students with no history of higher education was somewhat greater than that of the continuing students, but not considerably so.

2. Another possible indicator examined was that of initial expectations/aspirations. It was determined that the initial expectations/aspirations of all of the students were high. Most

indicated that they were aiming for Honours degrees and postgraduate qualifications in the first interviews. No discernible differences were determined between the drop-out group and the continuing group.

3. Previous educational qualifications were examined by the numbers who were unassisted and assisted with entry to the University through the Summer School. The figures are given below.

Previous educational qualifications

category	school leavers	SWAP	NSWAP	total
drop-out				
unassisted	3	8	0	11(61.1%)(11/18)
assisted	2	1	4	7(38.9%)(7/18)
% drop-out of total sample	25.0%(5/20)	39.1%(9/23)	28.5%(4/14)	31.6%(18/57)
continuing				
unassisted	7	10	1	18(46.2%)(18/39)
assisted	8	4	9	21(53.8%)(21/39)
total	20	23	14	57

The figures indicate that for the drop-out group a higher percentage were unassisted as against assisted, whereas for the continuing group the percentage of assisted students was larger than that of the unassisted. These percentages were somewhat distorted by the fact that SWAP students who entered the Faculty of Science had "guaranteed" places, but were also found to be "at risk" at University (see Chapter Five). This method of examining the students was also not considered especially helpful, in that in some cases there were considerable differences between the levels of qualifications within the assisted group of students. For example, two of the assisted students who dropped out with SCE Highers as previous qualifications were found to be very weak academically, based on SCE Highers results. However, conversely, some of the students with assisted places were clearly well

qualified, missing entry tariffs by perhaps only one point. These differences reflected differences in admissions policies between faculties. Thus it was not possible to predict success or failure based on whether the student had had an assisted place or not. Closer inspection of previous qualifications by, for example, points gained in SCE Highers proved inconclusive.

The percentages of students who dropped-out were compared with the overall percentages for the entire group of Summer School students, 1986-1993. These were:-

	%	nos
Percentage of school leavers in sample dropping-out	25.0%	(5/20)
Percentage of total school leavers dropping-out	20.8%	(44/212)
Percentage of SWAP students in sample dropping-out	39.1%	(9/23)
Percentage of total SWAP students dropping-out	34.8%	(31/89)
Percentage of non-SWAP adults in sample dropping-out	28.6%	(4/14)
Percentage of total non-SWAP adults dropping-out	40.0%	(40/105)
Total percentage of students dropping out in sample	31.6%	(18/57)
Total percentage of students dropping out, 1986-93	28.8%	(117/406)

An examination of the above percentages indicates that slightly higher percentages of school leavers and SWAP students dropped out from the sample group than from the total group examined, 1986-1993, whereas lower percentages of non-SWAP adults dropped-out. This could be explained by the small numbers in the sample, where the difference of one or two students could make large percentage differences.

No obvious differences in background information between the students who dropped-out and those who continued were discerned through examining the information recorded in the interviews at this stage. It was thus concluded that no one factor had emerged as a possible predictor of which students could have been identified as likely to succeed or fail from the outset. This result would support the findings of Pascarella and Terenzini (1983), where they determined that background and initial commitments had relatively little effect on persistence. It was, therefore, decided to concentrate on the main problem areas encountered by the students over the period of the study.

7.5 The analysis of the case studies

The purpose of the analysis, initially, was descriptive in that it aimed to identify the main problem areas. Its purpose was then, further, to identify and expand on the differences and similarities between the students who dropped out and those who persisted in order to isolate the characteristics, by a process of comparing and contrasting, which underlie drop-out behaviour.

From reviewing the full set of interviews for the 57 participants, it was possible to determine twelve main problem areas. A thirteenth category, which was not a problem area but referred in a positive sense to students who were identified as highly motivated, was added to the original twelve, after initial analysis.

These thirteen categories, twelve on the problem areas and one on the positive area of motivation, form the basis for Tables 47 and 48 below. However, it is first necessary to explicate the categories before analysing the results shown in the Tables. The twelve

problem categories correspond to columns five to sixteen and the motivation category to columns eighteen in Tables 47 and 48. The columns in Tables 47 and 48 can be described as follows:-

Column Five Time Out (TO)

Refers to outside commitments which involve the student in having to spend large amounts of time on non-academic, non-university related activities.

Column Six Unsuitable (US)

Refers to students deemed unsuited to academic life due to attitudes, lack of interest, lack of ability to study.

Column Seven Health

Refers to health problems which were sufficiently severe to interfere with academic studies and possibly necessitate taking time off studies.

Column Eight Gaps

Refers to perceived gaps in knowledge between previous education and first year university degree courses, sufficiently severe to constitute a problem.

Column Nine No motivation (no mot)

Refers to students who were not motivated towards academic studies nor to the goal of graduation.

Column Ten Attitude (attit)

Refers to students who were deemed (by the interviewer) to have an 'attitude problem', in that they displayed negative attitudes towards the University, faculties, departments or staff or peers.

Column Eleven Children (child)

Refers to problems encountered with children, primarily child care problems, children's illness or behavioural problems.

Column Twelve Finances (fin)

Refers to financial problems.

Column Thirteen Job

Part-time employment of sufficient hours to reduce available study time, generally ten plus hours per week.

Column Fourteen Relationships (relat)

Refers to relationship problems; with a partner, parent or other close family; including death of a close relative or friend.

Column Fifteen Academic problems (ac pr)

Refers to academic problems of sufficient magnitude to constitute concern.

Column Sixteen Wrong course (wr co)

Refers to incorrect choice of course. This could be one subject or more, or indeed a wrong choice of faculty.

Column Eighteen Motivation (mot)

A positive category which refers to high motivation towards study and to succeed on degree course.

There are a further six columns which should be explicated before examination of Tables 47 and 48.

Column One Group and category

This gives the type of student, school leaver, SWAP or non-SWAP adult, and whether they were unassisted(u) or assisted(a) with entry.

Column Two Status

In Table 47 this refers to the year of study in which the student left and in Table 48 it refers to academic status: hon=honours, ord=ordinary, M=minimum standing, yo=year out, 2yr=2nd year (having repeated), and t=transfer (there were no students categorised as being in good standing (G)).

Column Three Critical problem area (C)

Where the entry in a column is ticked and underlined, combined with 'C'(√C) this refers to an area where a student has experienced a problem in that was considered critical to their progress in the university. (a plain text tick(√) refers to a problem which was less critical).

'y' in Column Three indicates that there was at least one critical problem and 'n' indicates that there were no critical problems.

Column Four Faculty (fac)

Faculty within which the student was studying.

Column Seventeen Total

The total number of problem areas which affected that student.

Having explicated the problem areas and identified the categories used in the analysis, it is now possible to present the findings of the case studies in Tables 47 and 48.

Table 47 The problem areas, including critical problems, encountered by the students who dropped out

1 Group & cat	2 sts	3 C	4 fac	5 TO	6 US	7 hlth	8 gaps	9 no mot	10 attit	11 chld	12 fin	13 job	14 relat	15 ac pr	16 wr co	17 tot	18 mot
School																	
u	2	y	art	√C	√							√		√		4	
u	2	n	eng					√						√	√	3	
u	2	y	art	√				√			√	√	√C		√	6	
a	2	y	art	√		√C	√									3	
a	1	n	sci		√		√					√		√		4	
SWAP																	
u	2	y	sci	√		√C	√C									3	
u	1	y	sci	√	√		√		√	√C	√C	√	√C	√		9	
u	1	y	sci	√			√	√			√C	√C		√		6	
u	1	y	sci	√	√		√	√	√		√C	√C		√		8	
u	1	y	sci	√		√	√			√C	√C	√C	√C		√	8	
u	1	y	sci		√		√	√					√C	√		5	
u	1	y	sci	√	√		√	√	√		√C	√C	√		√	9	
u	2	y	soc	√	√	√C	√		√		√C	√C	√	√		9	
a	2	y	art	√				√			√C		√C			4	
NSWAP																	
a	1	y	sci	√	√						√C	√C	√C	√		6	
a	2	y	soc	√	√	√C		√	√	√	√	√	√C	√		10	
a	2	y	art			√					√C	√	√C			4	
a	2	y	art			√C			√							2	

Table 47 above indicates the problem areas encountered by students who dropped out. By way of a summary the average number of problem areas for each group of these students, with no special emphasis on the critical areas at this stage, are given below.

Average number of problem areas (from the twelve prescribed) for each group of the students who dropped out.

	school leaver	SWAP	NSWAP
unassisted(u)	4.3	7.1	no students
assisted(a)	3.5	4.0	5.5
overall	4.0	6.8	5.5

The process of examining the problem areas can now be replicated for the continuing students.

Table 48 The problem areas, including critical problems, encountered by the continuing students

1 Group & cat	2 sts	3 C	4 fac	5 TO	6 US	7 hlth	8 gaps	9 no mot	10 attit	11 chld	12 fin	13 job	14 relat	15 ac pr	16 wr co	17 tot	18 mot
School																	
u	hon	n	acc									√				1	√
u	yo	n	sci						√					√		2	√
u	hon	y	sci										√C			1	√
u	M	y	sci	√				√			√			√	√C	5	
u	hon	y	sci									√C				1	√
u	ord	n	art									√				1	√
u	hon	y	art	√								√	√C			3	√
a	M	y	sci	√		√C	√	√			√	√	√	√	√	9	
a	M	y	art	√		√C			√			√		√	√	6	
a	hon	n	soc	√								√				2	√
a	ord	y	soc	√		√C	√				√	√	√C			6	√
a	hon	n	soc								√	√				2	√
a	hon	n	sci													0	√
a	2yr	n	sci					√	√					√		3	√
a	hon	n	sci			√					√					2	√
SWAP																	
u	hon	n	sci													0	√
u	t	y	sci	√			√	√			√C	√C	√C	√	√	8	
u	hon	y	sci	√							√C	√C				3	√
u	hon	y	sci	√								√C			√	3	√

u	hon	y	sci	√			√				√C	√	√C			5	√
u	M	y	sci		√		√C	√						√		4	
u	ord	y	sci	√			√			√C	√	√C		√	√	7	√
u	2yr	y	sci	√		√C	√							√		4	√
u	hon	y	soc			√C						√				2	√
u	ord	n	soc								√				√	2	√
a	hon	y	art	√		√C					√C	√				4	√
a	hon	y	art	√			√				√C	√	√C			5	√
a	hon	y	art					√		√	√		√C			4	
a	hon	y	art	√							√C	√C		√		4	√
NSW AP																	
u	M	n	sci	√	√		√	√				√		√		6	
a	ord	y	art	√		√				√C	√C	√	√C			6	√
a	2yr	y	art	√		√C						√	√	√		5	√
a	hon	n	soc								√	√				2	√
a	hon	y	art	√									√C			2	√
a	hon	y	art	√					√	√C	√C		√C			5	√
a	hon	y	sci			√					√	√	√C			4	√
a	hon	n	sci			√					√	√				3	√
a	ord	n	soc											√		1	√
a	ord	y	art	√		√C				√C	√		√C	√		6	√

As with the drop-out group, the average number of problem areas, with no special emphasis on the critical areas at this point, for each group of the continuing students is summarised below.

Average number of problem areas (from the twelve prescribed) for each group of continuing students.

	school leaver	SWAP	NSWAP
unassisted(u)	2.0	3.8	6.0
assisted(a)	3.8	4.3	3.8
overall	2.9	3.9	4.0

The lowest average number of problem areas, both for the drop-outs and for the continuing students, was recorded among the school leavers, although one of the school leavers in the continuing group was recorded as having nine problem areas (see Table 48). This student was also found to be in minimum standing and obviously did not appear to be performing well academically; this number of problems was three more than the number for any other school leaver. The highest average number of problem areas for the six groups of students

was found amongst the dropping-out SWAP students (6.8), although the average number of problems for the continuing SWAP students was somewhat lower (3.9). In the continuing group the non-SWAP adults were found to have roughly the same average as the SWAP group (4.0 as opposed to 3.9); however the non-SWAP adults who dropped out displayed fewer problem areas (5.5) than the SWAP students who dropped out(6.8).

There are two reasons to explain the fact that the school leavers were reported to have fewer problem areas.

1. The school leavers were found to show more reticence in discussing problems with the researcher than the adults.

2. The school leavers in fact displayed, generally, fewer problems than the adults, perhaps because they usually lived at home with parents, none of them had children nor were married. Their financial situations were normally less critical than those of the adults.

The differences between the average number of problem areas for the SWAP and non-SWAP drop-outs could be explicated by possible individual differences of problems encountered by those in the sample. However, it could also be explained by the fact that the SWAP students had received considerable guidance and counselling on their Access courses and thus found problems easier to discuss.

Tables 49 and 50 below amalgamate the problem areas for both the drop-outs and the continuing students, for each of the three groups, in order to highlight the group similarities and differences. At this stage the 'critical' status of problems is still ignored.

Table 49 The amalgamation of the problem areas, plus motivation category (mot), for the students who dropped out in the three groups, school leavers, SWAP and non-SWAP adults

Group & cat	tot stud	TO	US	health	gaps	no mot	attit	child	fin	job	relat	ac pr	wr co	mot
School														
u	**3**	2	1	0	0	2	0	0	1	2	1	2	2	0
a	**2**	1	1	1	2	0	0	0	0	1	0	1	0	0
total	**5**	3	2	1	2	2	0	0	1	3	1	3	2	0
SWAP														
u	**8**	7	5	3	8	4	4	2	6	6	5	5	2	0
a	**1**	1	0	0	0	1	0	0	1	0	1	0	0	0
total	**9**	8	5	3	8	5	4	2	7	6	6	5	2	0
NSWAP														
u	**0**	0	0	0	0	0	0	0	0	0	0	0	0	0
a	**4**	2	2	3	0	1	2	1	3	3	3	2	0	0
total	**4**	2	2	3	0	1	2	1	3	3	3	2	0	0
all DOs														
u	**11**	9	6	3	8	6	4	2	7	8	6	7	4	0
a	**7**	4	3	4	2	2	2	1	4	4	4	3	0	0
total	**18**	13	9	7	10	8	6	3	11	12	10	10	4	0
%		72.2 %	50%	38.9 %	55.6 %	44.4 %	33.3 %	16.7 %	61.1 %	66.7 %	55.6 %	55.6 %	22.2 %	0%

Table 50 The amalgamation of the problem areas, plus motivation category (mot), for the continuing students by the three groups, school leavers, SWAP and non-SWAP adults, plus the combined problem areas for all 57 students

Group & cat	tot stud	TO	US	health	gaps	no mot	attit	child	fin	job	relat	ac pr	wr co	mot
School														
u	**7**	2	0	0	0	1	1	0	1	4	2	2	1	6
a	**8**	4	0	4	2	2	2	0	4	5	2	3	2	6
total	**15**	6	0	4	2	3	3	0	5	9	4	5	3	12
SWAP														
u	**10**	6	1	2	5	2	0	1	5	6	2	4	4	8
a	**4**	3	0	1	1	1	0	1	4	3	2	1	0	3
total	**14**	9	1	3	6	3	0	2	9	9	4	5	4	11
NSWAP														
u	**1**	1	1	0	1	1	0	0	0	1	0	1	0	0
a	**9**	5	0	5	0	0	1	3	6	5	6	3	0	9
total	**10**	6	1	5	1	1	1	3	6	6	6	4	0	9
all conts														
u	**18**	9	2	2	6	4	1	1	6	11	4	7	5	14
a	**21**	12	0	10	3	3	3	4	14	13	10	7	2	18
total	**39**	21	2	12	9	7	4	5	20	24	14	14	7	32
%		53.8 %	5.1%	30.8 %	23.1 %	17.9 %	10.3 %	12.8 %	51.3 %	61.5 %	35.9 %	35.9 %	17.9 %	82. 1%
Combin ed DO+ cont														
u	**29**	18	8	5	14	10	5	3	13	19	10	14	9	14
a	**28**	16	3	14	5	5	5	5	18	17	14	10	2	18
total	**57**	34	11	19	19	15	10	8	31	36	24	24	11	32

The results of the analysis are:-

1. The problem areas mentioned least frequently for the combined group of 57 drop-outs and continuing students were those of being unsuitable for academic study (US), not motivated towards study (no mot), 'attitude problem' (attit), child-related problems (child), and incorrect choice of course (wr co).

2. The problem areas recognised most frequently by the combined group of 57 students were those of outside commitments (TO), financial problems (fin), and part-time employment (job).

3. Those areas which were recognised at intermediate levels were health, gaps between previous education and university courses (gap), relationship problems (relat), and academic problems (ac pr).

4. The areas where the unassisted (u) and the assisted (a) students differed were also highlighted. These were the areas of - unsuitable for academic study (unassisted greater than assisted (u(8) & a(3)), health (unassisted less than assisted (u(5) & a(14)), gaps in knowledge (unassisted greater than assisted (u(8) & a(5)), no motivation (unassisted greater than assisted (u(10) & (5)), and incorrect choice of course (unassisted greater than assisted (u(9) & a(2)).

The unexpected result here was that the unassisted students perceived greater gaps in their previous knowledge than the assisted students. However, a review of Tables 49 and 50 indicates that thirteen of these fourteen unassisted students (combined drop-out and continuing) were SWAP students. This was taken as an indication that this group of students did not perceive themselves to be well prepared for university courses.

5. The differences and similarities between the drop-out and continuing students in the problem areas.

Differences

Problem area	% drop-out	% continuing
outside commitments(TO)	72.2%(13)	53.8%(21)
unsuited for academic study(US)	50.0%(9)	5.1%(2)
gaps in knowledge(gaps)	55.6%(10)	23.1%(9)
not motivated(no mot)	44.4%(8)	17.9%(7)
'attitude problem'(attit)	33.3%(6)	10.3%(4)
relationship(relat)	55.6%(10)	35.9%(14)
academic problems(ac pr)	55.6%(10)	35.9%(14)

Similarities

Problem area	% drop-out	% continuing
health problems(health)	38.9%(7)	30.8%(12)
children(child)	16.7%(3)	12.8%(5)
finances(fin)	61.1%(11)	51.3%(20)
part-time employment(job)	66.7%(12)	61.5%(24)
incorrect choice of course(wr co)	22.2%(4)	17.9%(7)

The differences were largely to be expected in that the main areas of difference lie in attitudes, lack of motivation and unsuitability for academic study. There were also some reported differences in levels of outside commitments and in relationship problems. The reader will note that there was also an apparent area of difference in 'gaps in knowledge'. This is one associated mainly with SWAP students and their Access courses, in that, of the nineteen students listing 'gaps in knowledge', fourteen were SWAP students (eight of the fourteen were drop-outs). It was considered that this was a particular problem for this

group of students which had already been referred to in Chapter Five (Sections 5.5 and 5.9) and was, therefore, ignored here.

It is argued that the result of the examination of the differences between drop-out and continuing students follows that of Tinto's (1975) model of retention where a student must be academically and socially integrated in order to produce subsequent commitment to the institution and to the goal of graduation in order to persist. For the adult students this integration will be primarily academic (Bean & Metzner, 1985). Here the drop-out students clearly showed little sign of integration.

The similarities were also largely to be expected. Where a student has, for example, a child care or health problem, this is a problem area which could be encountered by withdrawing or persisting students alike. Unexpected was the level of financial problems encountered by both the drop-outs and the continuing students. This indicated that financial problems are encountered by all students and, although often given as a primary reason for leaving also severely affected students who continue. A further unanticipated result was that roughly the same percentage of continuing and withdrawing students felt that they had chosen the wrong course.

7.5.1 Part-time employment during term-time

One area that requires particular attention is that of part-time term-time employment. During Interview Four, December 1992, it was discovered that 33 (57.9%) of the interviewees had part-time employment during term-time. Many of these were working more than 20 hours per week. Only one of the participants had employment which might be considered to relate

in any way to their university course. Of the 33 students with employment at that time, 21 said that they were still experiencing financial difficulties despite employment. Hardship had often arisen through using grant cheques to repay previous debts or through paying for expensive text books. Twenty of the working students indicated that they were having academic problems at that time. Often this related to just one subject but frequently more general grounds were cited - difficulty in adjusting to the pace of learning at university, problems in coping with the amount of work, falling behind and not knowing how to catch up, and tiredness.

The numbers with part-time employment rose throughout the study, with 63.2% working at the time of completion. This figure is higher than those from other surveys examined, such as that of the University of Strathclyde's Welfare Office (1993), and the Guardian newspaper Gallup poll (Meikle, 1994), the results of both these surveys indicating a rate of approximately 25% working. Sorenson and Winn (1993) found rising levels of employment throughout the duration of the period of study, this figure culminating at a level of 33.6% in their survey.

It is considered of particular concern that so many of the group of students in this survey were in employment as these students had already previously been identified as being at risk in higher education, in that they had attended the Summer School, and as such could be considered to be less likely to be able to spare valuable study time for employment. However the disproportionately high number of working students was to be expected given that most had come from backgrounds of low incomes and therefore other family members were unlikely to be in a position to assist financially. At the same time the group was heavily represented by mature students who had dependants, rents and mortgages to be

provided for. Earnings from part-time employment were considered to be a financial necessity.

Some extreme examples of employment commitments emerged from the case studies, just three of these are cited here.

• one student, who worked as a doorman at a night club, worked until 4am on the same morning that he had a Mathematics class examination at 9.30am.

• another student, with dependants, worked as a nurse on night shift three/four nights per week and then attended lectures on the following days.

• a third student worked 35 plus hours per week as a hotel receptionist.

Part-time employment is a problem area for both drop-outs and continuing students alike. This situation is likely to increase as the cuts in grants continue. In the following section, which reviews the 'critical' areas, the question of whether it was more of a 'critical' problem for the drop-outs will be addressed.

7.5.2 The 'critical' problem areas

The 'critical' problem areas were shown in Tables 47 and 48, being represented by underlined ticks with capital 'C'($\underline{\surd C}$). These were areas where students had experienced problems to the extent that they were considered critical to their progress in the University.

There were four main 'critical' problem areas which received more than six responses. These areas were health, finance, job and relationships. These problems were highlighted by both the drop-outs and the continuing students. Table 51 below gives the ratios and percentages for the responses to these four areas that were deemed 'critical' by the three groups.

Table 51 'Critical' problem areas that were found to be so by more than six students

'critical' problem areas √C	drop-outs	continuing students	total
health	71.4%(5/7)	66.7%(8/12)	68.4%(13/19)
school leavers	1/1	3/4	4/5
SWAP	2/3	3/3	5/6
NSWAP	2/3	2/5	4/8
finance	81.8%(9/11)	40.0%(8/20	54.8%(17/31)
school leavers	0/1	0/5	0/6
SWAP	7/7	6/9	13/16
NSWAP	2/3	2/6	4/9
job	50.0%(6/12)	25.0%(6/24)	33.3%(12/36)
school leavers	0/3	1/9	1/12
SWAP	5/6	5/9	10/15
NSWAP	1/3	0/6	1/9
relationships	80.0%(8/10)	85.7%(12/14)	83.3%(20/24)
school leavers	1/1	3/4	4/5
SWAP	4/6	4/4	8/10
NSWAP	3/3	5/6	8/9

The results of the examination of the 'critical' problem areas can now be discussed.

1. Of the 36 students who had had a problem with part-time employment and full-time study, twelve of these had had a 'critical' problem in this area. These problems were highlighted by the examples given in the previous section, Section 7.5.1, on part-time employment, for example, working most of the night before class examinations or tutorials.

2. Similarly, of the 31 students who had found finance a problem area, only seventeen of these (54.8%) had found the problem to be 'critical'. However, Table 51 indicates that more drop-outs found this to be a 'critical' problem than continuing students. For the drop-out students, nine out of the eleven responses were 'critical'. It was, therefore, concluded that although similar percentages of both groups had had financial problems, a 'critical' problem was more likely to be a contributory factor towards drop-out.

3. One-third of the combined sample (19/57) had had a problem with health and for thirteen of these (68.4%) it had been a 'critical' problem. None of the groups, school leavers, SWAP or non-SWAP adults, had been immune from this whether they were drop-outs or continuing students. As with the findings above for the problem areas, it was concluded that health and 'critical' health problems affect drop-outs and continuing students alike and these problems do not seem particularly linked to drop-out behaviour.

4. Of the combined group of students, 24 (42.1%) had been found to have had relationship problems and a large proportion of these, 20 of the 24 (83.3%), had perceived these problems to be 'critical'. This problem affected drop-outs and continuing students alike, with a slightly higher percentage of continuing students perceiving the problem to be 'critical'. Thus it was concluded that relationship problems were generally serious for all students and did not appear to contribute towards dropping-out.

5. Apart from the four 'critical' problems examined in Table 51, the only other problem area with more than two 'critical' responses was the "child" category. Of the eight reponses in this problem area which came from the SWAP and non-SWAP adults (none of the

school leavers had children), six were 'critical', three from the SWAP students and three from the non-SWAP adults. The percentages for the drop-outs and the continuing students were highly similar (11.1% and 10.3%); therefore, it was concluded that this was not an exclusive problem for the students who dropped out.

In conclusion the main 'critical' problem areas were health, finance, job and relationships. The three 'critical' areas of health, job and relationship was found to be fairly evenly distributed among the drop-out and continuing students. However, the 'critical' area of finance was determined to be a problem which affects more students who dropped out. Thus it was concluded that, despite the fact that similar percentages from the two groups had perceived this to be a problem area, (see Section 7.5.1), 'critical' problems in this area were a contributory factor towards drop-out. This finding supports that of Munn et al (1992) where they found that financial problems were the most pervasive problems encountered and often given as the main reason for leaving.

7.5.4 Conclusions on the problem areas

In line with much of the research work outlined in Section 7.3.1 on descriptive/problem approaches to student withdrawal (Cullen, 1994; Hayes, 1977; Munn et al, 1992), it was determined that both drop-out students and continuing students experience problems during the period of their studies. Some of these problems are deemed to be critical and others not so severe. With the exception of the 'critical' area of finance, there were few differences in the other 'critical' areas between drop-outs and continuing students. As stressed by Hayes (1977), drop-out students are not a homogeneous group and indeed within this study there were three distinct groups, school leavers, SWAP and non-SWAP students, quite apart

from the personality characteristics within these groups. Furthermore, it is likely that there are few distinctions between the problems that students as a group experience as opposed to non-students, in that most adults experience problems at some points in their lives with finance, health and relationships. Given that degree studies last for three or four years, it is to be expected that students as individuals will experience problems of some type.

Apart from the 'critical' financial problems, the main areas of difference between the drop-outs and the continuing students lay in attitudes, lack of motivation and unsuitability for academic study. It was considered that this finding was crucial in the understanding of drop-out behaviour in that it indicated that the differences lay in personality, motivation and commitment.

7.6 Motivation amongst the drop-outs and the continuing students

The remaining category in Tables 47 to 50 which has not been discussed to date is the final column, Column Eighteen, in each of the Tables. It represents a positive category of those students who were found to be highly motivated towards study. The results of this review of the Tables indicates, arguably, the most important finding of the study and relates to the differences determined between the students who dropped-out and who continued.

It is conceded that the classifying of students as highly motivated or otherwise could be subjective and therefore open to question as regards validity. For this reason 'highly motivated' was rigidly defined as those cases where it was found that, despite difficulties encountered in the main problem areas, students had continued to persist with their studies and to commit themselves to the goal of completion. Furthermore, all case studies were

reviewed both by the researcher and by an educational researcher with considerable experience in this area. It was considered that the two procedures, adhering to the definition of 'highly motivated' together with the cross-validation of the educational researcher's independent review acted in combination to increase the validity of the results found here.

Using the two processes above, none of the eighteen students who dropped-out were found to be highly motivated whereas 32 of the 39 continuing students were found to be so. The situation where students were found to overcome problems and commit themselves to the goal of completion is succinctly summarised by one of the case studies:-

> I found motivation a problem and I realised that part of the problem was that I was actually blaming personal/financial situations for my poor academic performance. I corrected the problem by stopping part-time work and putting more effort into my studies (Case Study, October 1994).

Of the seven continuing students who were not found to be highly motivated, one was an intending Honours degree student, one was aiming for a transfer and the other five were in minimum standing. In other words, with the exception of the one honours student, none of these students was performing well academically.

7.6.1 Theories of motivation

In order to understand the result that the motivation of the continuing students was the most important single finding of the study, it is helpful to briefly review some of the methods of identifying motivation and theories of motivation.

Cross (1981) identified four basic designs of research on motivation. These were depth interviews; statistical analysis of motivational scales; survey questionnaires; and, hypothesis testing.

Depth interviews generally identify types of motivation towards learning. Houle (1961) (cited in Cross, 1981) identified three types of learners, who were goal-oriented (using learning to gain specific objectives), activity-oriented (learning primarily for the activity), and learning-oriented (pursuing learning for its own sake). Houle found that most students were goal-oriented and that they were usually responding to periods of transition.

Statistical analysis of motivational scales usually entails factor analysis of educational participation scales. The factors could be social relationships, external expectations, social welfare, professional advancement, or cognitive interest.

Survey questionnaires usually check possible lists of reasons for participation and ask which ones motivate people towards learning whereas hypothesis testing usually relies on theoretical models.

Boshier (1973) argues that motivation for learning is a function of the interaction between psychological factors and external environmental variables. He concludes:-

> Participation and drop-out can be understood to occur as a function of the magnitude of the discrepancy between the participant's self-concept and key aspects (largely people) of the educational environment. Nonparticipants manifest self/institution incongruence and do not enroll (Boshier, 1973:p260).

The incongruencies are between self and ideal self, self and other students, self and teacher, self and institutional environment (Boshier, 1973). These are additive, i.e., the greater the sum, the greater the likelihood of nonparticipation or drop-out. In other words, if individuals feel uncomfortable with themselves, fellow students or the educational environment, they have higher potentials to drop out.

Hackman and Dysinger (1970) determined that almost all problems reported by students who left college as reasons for withdrawal were shared by the large numbers of students who did not withdraw. They argued that the difference was in the level of commitment that students or their families had. This sense of commitment was also identified by Goodenow and Grady (1993), where they found that a sense of belonging had a direct influence on academic motivation, engagement and participation, especially among students at risk of dropping-out. "Belonging" was significantly associated with several motivation-related measures, such as expectancy of success, valuing academic work, general institutional motivation and self-reported effort. They state:-

> There is a growing consensus that academic motivation is not a purely individual, intrapsychic state; rather, it grows out of a complex web of social and personal relationships (Goodenow & Grady, 1993:p60).

Marsh (1991) determined that academic self-concept was important in success. Marsh talked about the 'Big Fish Little Pond Effect', where equally able students had lower self-concepts in institutions which accept higher qualified entrants. She states:-

> An individual's belief that he or she is academically capable is posited to promote appropriate task choice, motivation, sustained effort and persistence, and eventual success in academic settings. This academic success then reinforces subsequent self-perceptions of academic capabilities. Even

> among equally able students, there are differences in self-perceived capabilities and these differences influence subsequent academic outcomes (Marsh, 1991:p452).

Kowalski and Cangemi (1983) identified the characteristics of non-persisting students as poor motivation, inadequate work habits, uncertain goals, general lack of interest, immature attitudes and perceptions, low level status and achievement drives, lacking initiative, financial difficulties, indecisive and disorganised, lacking in intellectual independence, procrastinating when faced with academic responsibility, often unable to identify with or become involved in college life and activities. More positively, they argue that these characteristics can change over time in that students can be motivated or not motivated at certain times and that these can change.

7.7 Summary and conclusions

The chapter attempted to set the longitudinal study within the context of the main methods of approaching drop-out research. These were the theoretical/philosophical theories of integration and commitment, the descriptive studies which focused on the identification of problems, the predictive studies which looked for correlations between variables, and motivation theories, which were closely linked to the integration theories but sought personal characteristics which would lead towards integration and commitment. This multi-method approach was undertaken with the main aim of understanding drop-out behaviour.

It was determined through the study that successful students could not have been predicted from the commencement of the longitudinal study based on previous qualification, background traits such as family history of higher education or initial commitments.

The problem approach proved useful in that it identified that dropping-out students have more 'critical' problems in the area of finance than continuing students. It also determined that the main differences between drop-outs and continuing students lay in the areas of lack of motivation, unsuitability for academic work and attitudes. However most of the other problem areas were experienced by dropping-out and continuing students alike. The findings indicated that the descriptive/problem approach proved a useful first step towards understanding drop-out behaviour.

Furthermore, the most important finding was that successful students were found to be highly motivated towards study whereas none of the drop-outs were. This finding in itself produced problems in that methods of determining or indeed fostering motivation are unclear. There is no doubt from the evidence that however motivation is required for integration and for commitment to the goal of graduation, and that if integration and commitment are there, then students are considerably more likely to succeed in higher education.

Kapur (1972) argues that there is no single cause of dropping-out. He states:-

> The phenomenon of failure and drop-out is multidimensional, a number of intellectual, educational, motivational, social and psychological characteristics of the students interact with the characteristics of the university, faculty and the department to determine the outcome (Kapur, 1972:p354).

If attitudinal and behavioural characteristics could be determined, then there would be a basis for identifying students at risk and for improving the academic environment to reduce this risk. Bryk and Thum (1989) suggest that institutions should focus on the environment required to foster integration and commitment through increased faculty contacts or small

group teaching and emphasis on academic pursuits. Jabobi (1991) also argues for improving the academic environment and suggests that this should be done through mentoring. She argues that the mentoring function of direct assistance could show the strongest links to involvement and thereby academic success. For example, in her model, faculty mentors could promote integration by providing students with challenging assignments, coaching or advising them about educational activities, or sponsoring students for special educational opportunities. On the other hand, peer mentors might promote integration through role modelling or by demonstrating, through their own activities, the benefits of integration.

Finally, it was concluded that drop-out behaviour was indeed highly complex and that the most appropriate approach towards understanding this behaviour was a synthesis of the main methods outlined through the literature reviews. The most conclusive result to emerge from the longitudinal study undertaken here was that drop-out/continuing behaviour is closely related to motivation and integration into the institution as well as commitment to the goal of graduation.

Chapter Eight

Conclusions and recommendations

Chapter Eight

Conclusions and recommendations

8.1 Introduction: Orientation of the Chapter

The thesis was undertaken in order to evaluate the Pre-University Summer School and its effects on student performance. The students who attend the Summer School are socio-economically and/or educationally disadvantaged and they are traditionally under-represented in higher education. The Summer School is a course that provides preparation and access for this type of non-traditional student. The institution within which the investigation took place was the University of Glasgow and the years examined were 1986 to 1993.

It was argued in the Introduction that such an investigation is particularly relevant in view of the current issues in higher education. These issues revolve around: questions of quality, that is, quality of provision and quality of outcome; funding, that is, funding for courses/institutions and for individual students. The climate in higher education has altered from one of expansion, actively targeting less traditional groups of students, to that of consolidation (Ross, 1994). Thus the position of such students in higher education becomes of increasing interest to policy makers and course providers.

The central research question of the investigation was that of how the 'success' of the Summer School could be evaluated. The criterion of 'success' had already been established by the Director, William Dunn, namely that Summer School students should perform as well as 'average' groups of students. By 'average' groups of students was meant similar groups of students who had not attended the Summer School. This concluding chapter focuses on that central research question. There were further research questions which were raised by the central question (Introduction, Section i); however these questions were secondary and have been previously answered through the analysis (Chapters Two to Six), therefore, they are not referred to specifically in this chapter.

In essence, attempts to answer the central research question focused primarily on the academic performance of the various groups of students, concentrating on a comparison and contrast of their progress and completion rates. The conclusions which are presented here in Sections 8.3 to 8.6 are based on this analysis. However, it was considered that the quantifying of the numbers and percentages of dropping-out and continuing students merely provided factual information and was insufficient for an understanding of why students discontinue their studies. For example, it is not sufficient to state that non-traditional students perform less well in higher education without offering explanations. Therefore, the conclusions of the longitudinal qualitative study discussed in Chapter Seven are also presented in this chapter (Sections 8.7 & 8.8). The qualitative study examined the main problem areas encountered by a sample of past Summer School students and identified the differences and similarities between the drop-out and continuing students.

This chapter provides a series of recommendations based on the conclusions of the quantitative study and also on the conclusions of the qualitative study. It is argued that

drawing recommendations from both sets of conclusions affords a more comprehensive overview of the position of the Summer School and provides a stronger foundation upon which to build future initiatives.

8.2 The characteristics of the groups of students investigated

Prior to presenting the conclusions it might be helpful to remind the reader of the various groups of students who were investigated. It was determined from the outset of the thesis that the students who attend the Summer School are not a homogeneous group. It, therefore, became necessary to identify the characteristics of the students before comparative groups could be sought. It emerged that there were three distinct groups of students:-

1. School leavers from the 31 schools in areas of greatest socio-economic deprivation in Strathclyde Region.

2. Adults from certain Scottish Wider Access Programme courses (SWAP), primarily in Science and Engineering.

3. Adults with a variety of non-SWAP qualifications ranging from SCE Highers to HNCs and various other modular qualifications (NSWAP).

The diversity was further compounded by the fact that some of the students had entered the University by meeting General Entrance Requirements and/or faculty regulations, unassisted (u), whilst others had gained entry through their performance on the Summer School, assisted (a), having failed to reach the normal University entrance requirements (Introduction, Section iiia, & Chapter One, Section 1.2.4).

After determining the characteristics of the Summer School students, it became necessary to attempt to select similar groups of students, where possible. The groups selected were:-

1. School leavers from the same 31 schools who did not attend Summer School, non-attenders (n).

2. School leavers from a group of 31 similar schools in Strathclyde Region (NSS) (see Chapter Three).

3. Adults with SWAP qualifications who did not attend Summer School (NSS).

Due to the diversity of previous qualifications held by the non-SWAP adults who had attended Summer School, it was not possible to identify a valid comparative group. Therefore, the performance of the non-SWAP adults who had entered the University through their previous qualifications but had also attended the Summer School (unassisted) was compared with that of the non-SWAP adults who had entered on the basis of their performance at Summer School (assisted).

8.3 Conclusions on the performance of the school leavers

Before discussing the 'success' of the school leavers who attended Summer School in comparison to that of those who did not attend, it is necessary to explicate an important contextual factor which emerged in carrying out the research. Although it was considered that the most appropriate methods available were used to select a control group of 31 non-Summer School schools (Chapter Three, Sections 3.3.2 to 3.3.6), it was ultimately concluded that the 31 Summer School schools, as a whole group, were more deprived than the non-Summer School schools.

In attempting to identify 31 similarly deprived schools in Strathclyde Region, it was discovered that the methods originally used to identify area-based deprivation were now outdated. The Summer School schools had originally been selected due to the fact that they fell within the fourteen 'worst' areas of deprivation in Strathclyde Region. These areas had been identified by being given average factor scores on a number of indicators, such as the percentage of unemployment in the area, the percentage of overcrowded houses, long-term sick etc. However, it was determined that there were now problems with this selection method. The problems were as follows:-

1. In 1993 the Region reviewed the notion of Areas of Priority Treatment (APT) and moved away from the concentration on area-based multiple deprivation to deprivation on individual indicators. Thus, the original areas within which the Summer School schools lay had now been re-zoned. It was, therefore, no longer appropriate to examine the schools by their location in APTs as these areas did not exist in the same form.

2. Although the Education Scotland Act (1981) included parental choice of school, it was not until the early 1990s that heightened parental awareness, through bodies such as school boards, led to parents sending their children to schools other than those in their local catchment areas. This meant that it was no longer viable to examine deprivation in schools on area-based criteria.

3. De-regionalisation in April 1996 of Strathclyde Region would have soon rendered any area-based method of selecting schools inappropriate and irreplicable.

For these three reasons it was decided to use the same methods to identify the 31 comparative schools as are presently used by Strathclyde Regional Council's Education Department. When examining deprivation in schools, the Region's Education Department now focuses on the characteristics of the individual school and not on the area within which it is situated. An example of indicators of deprivation in an individual school might be the percentage of pupils receiving a clothing allowance or the percentage of pupils receiving free school meals. Having decided to adopt a method other than that used originally to identify the Summer School schools, it became necessary to re-examine the original 31 schools using the same indicators as used to identify the comparative schools. The indicators used were:

1. Clothing %, i.e., the percentage of students in the school receiving a clothing allowance, a Government grant to unemployed and low income families to help provide school clothing.

2. Attendance %, the percentage of students attending the school on an average daily basis, an indicator of the level of truancy in the school.

3. Attainment %, the percentage of school leavers with three or more SCE Highers at grades A-C..

The Summer School schools were ranked by each of these three indicators and the correlations between suitable pairs of these ranks were quantified through use of a statistical device known as the Spearman Rank Correlation Test (see Chapter Three). From

this it was possible to identify the characteristics of the Summer School schools and thus select a comparative group of 31 non-Summer School schools with similar characteristics.

The results of this exercise determined that, although the comparative schools were the closest available for selection in Strathclyde Region, they were not as deprived as the Summer School schools on the whole. The link between percentage entry to university from the schools and Clothing % was also correlated. The result of this was consistent with the major findings in most of the existing literature from both the United States and the United Kingdom (see Chapter Four, Section 4.2 to 4.4). It was shown that there was indeed a strong link between deprivation and underachievement. It was, therefore, anticipated that the school leavers from the Summer School schools, who were from more deprived backgrounds, would not perform as well as the school leavers from the 31 non-Summer School schools.

The evidence for the conclusion that the Summer School schools were more deprived than the control group derives from several points:

• The most deprived schools by the rank indicator, percentage receiving clothing allowance (Clothing %), were heavily represented by Summer School schools and the least deprived were sparsely represented by these schools. The sum of the ranks for the Summer School schools for Clothing % rank was 691.5 (low rank equals high deprivation) whilst the sum for the non-Summer School schools was 1261.5. This represented a considerable difference in terms of deprivation as measured by the indicator (Chapter Three, Section 3.6).

• There was a high correlation between the rank by percentage receiving clothing allowance, Clothing %, and the rank by percentage entering higher education, Higher Education % (low rank here equals low percentage entrance to higher education). In other words, performance was largely what would be expected by deprivation. This was further indicated by the sum of the ranks for the percentage entering higher education. The sum for the Summer School schools was 681.5 and 1266 for the non-Summer School schools. These sums were closely in line with those of the Clothing % sums (Chapter Three, Section 3.6).

• An examination of the percentage of higher education entrants from each of the 31 Summer School schools indicated that none of these schools had percentages on or above the average for any of the Strathclyde Region Divisions in which the particular schools were located. This result was taken as an indication of under-representation (Chapter Three, Section 3.5.1) in higher education.

• The same examination of the percentages entering higher education from the non-Summer School schools indicated that eleven of the 31 comparative schools were on or above the average for the Divisions in which they were located. This result meant that, in this sense, approximately one-third of the non-Summer School schools were in fact not under-represented in higher education (Chapter Three, Section 3.5.1).

From the above evidence it can be concluded that the Summer School schools were more deprived, as a group, and that the non-Summer School schools were only roughly similar. It was considered that this would have direct effects on the analysis of the performance of the school leavers in that there were differences in the degree of deprivation and the levels

of representation in higher education. In fact, selection of a comparative group of schools that would provide a like-with-like comparison is essentially impossible. Nevertheless, an examination of the performances of the two groups of 31 schools covered by the investigation has been of considerable value.

Results (school leavers)

The conclusions in this and the following three sections (8.3 to 8.6) lay out, initially, the findings that provide evidence against the 'success' of the Summer School, i.e., negative findings, and, thereafter, present the findings which support the argument that the Summer School has been 'successful', i.e., positive findings. Prior to presenting the findings it is helpful to remind the reader of the categories used:-

u = unassisted with entry

a = assisted with entry through the Summer School

n = attended a Summer School school but did not attend Summer School

NSS = attended one of the 31 comparative non-Summer School schools

Negative findings (school leavers):-

1. The students from the 31 Summer School schools performed significantly worse than those from the 31 non-Summer School schools in the Faculty of Science. Further, those who had attended the Summer School (u+a) from the 31 Summer School schools also performed worse than the non-attenders (n) from those schools. The Faculty of Science drop-out rates were as follows: Summer School unassisted (u) 28.6%; Summer School

assisted (a) 34.6%; Summer School unassisted plus assisted 30.3%; Summer School non-attenders (n) 19.8%; and non-Summer School (NSS) 14.5%. The explanations might lie in the level and amount of work covered in Science subjects in the Summer School compared with the level and amount needed for first year University Faculty of Science subjects. It might also be the case that "weaker" students are attracted to the Faculty of Science due to the use of entrance tariffs lower than those for most other faculties. It must be concluded that this is an area where the Summer School appears to be deficient and requires investigation by Summer School staff (Chapter Four, Section 4.8).

2. The overall drop-out rate was higher for the 31 Summer School schools than the 31 non-Summer School schools. The overall rates were as follows: Summer School unassisted (u) 18.7%; Summer School assisted (a) 24.7%; Summer School unassisted plus assisted (u+a) 20.8%; Summer School non-attender (n) 19.2%; and non-Summer School 12.3% (NSS) (Chapter Four, Table 18, Section 4.6). However, it should be noted that the Faculty of Science attracted the largest number of students (there were 215 out of 566 (37.9%) from the Summer School schools and 372 out of 838 (44.4%) from the non-Summer School schools) and that the drop-out rates in the Faculty of Science were lower for the non-Summer School schools.

Positive findings (school leavers):-

1. The students from the Summer School schools displayed a bias towards the University of Glasgow through the assisted place scheme (a). Those who had entered through this scheme in 1993 accounted for 29.5% (23/78) of all entrants to the University from the Summer School schools (u+a+n) in that year. These students would not have been

admitted under General Entrance Requirements. This can be viewed as a positive result for the Summer School in that it has broken down barriers and increased access to students who would otherwise have been refused admission (Chapter Three, Section 3.7).

2. The school leavers in the unassisted category (u) from the Summer School schools compared highly favourably with both those from these schools who did not attend (n) and those from the non-Summer School schools (NSS). They had similar drop-out rates to those of the non-Summer School school students and lower rates than the non-attenders for all faculties except the Faculty of Science. Furthermore, they had the lowest drop-out rate of all groups for the Faculty of Social Science. The drop-out figures for the Faculty of Social Science were as follows: Summer School unassisted (u) 10.0%; Summer School assisted (a) 18.8%; Summer School unassisted plus assisted (u+a) 15.4%; Summer School non-attenders (n) 15.0%; non-Summer School (NSS) 12.3% (Chapter Four, Table 18, Section 4.6).

3. The unassisted Summer School students had the highest Honours graduation rates for the Faculty of Social Science of all of the groups. The rates were: Summer School unassisted (u) 50.0%; Summer School assisted (a) 25.0%; Summer School unassisted plus assisted (u+a) 34.6%; Summer School non-attenders (n) 45.0%; non-Summer School (NSS) 26.3%. This result is favourable to the Summer School and in particular to the unassisted students (Chapter Four, Table 18, Section 4.6).

4. The school leavers in the Summer School assisted (a) category performed worst overall. They were indisputably the "weakest" of all the school leavers. However, 55 of the 73 (75.3%) had either graduated or are still attending the University of Glasgow, at the time of

writing. Given that these students only gained access to the University through the assisted place scheme, having been unsuccessful through their SCE Highers results, this was concluded to be highly positive for the Summer School (Chapter Four, Section 4.8).

5. Through correlating the ranks for Clothing % (deprivation) and Graduation % for all 62 schools, Summer School and non-Summer School, it was determined that for the majority of the 62 schools the academic performance of the students at University agreed more or less with what would be expected from the level of deprivation in the school. However, eight of the Summer School schools, but none of the non-Summer School schools, had a considerably higher percentage graduating from the University than would be predicted by the level of deprivation. Also, six of the non-Summer School schools were underachieving, i.e., producing fewer graduates than would be expected, as opposed to only five Summer School schools. These results together reflect favourably on the Summer School schools in view of the relative levels of deprivation (Chapter Four, Section 4.7.1).

Conclusions for school leavers:-

The evidence indicates that the Summer School schools are still largely the schools which should be targeted for participation on programmes such as the Summer School, i.e., initiatives aimed at socio-economically and educationally disadvantaged groups and individuals. There is, however, a case for considering some of the 31 non-Summer School schools as schools that should be invited to participate in the Summer School, in that some of these schools were highly similar to the Summer School schools in characteristics. It is, nevertheless, clear that from a comparison of the two sets of schools that, on the whole, the Summer School schools are markedly more deprived.

Given the high levels of deprivation displayed within the group of 31 Summer School schools, the Summer School has proved highly effective in that:

- substantial and successful groups of students have entered the University through the assisted places scheme (a)

- there was a strong academic performance at University by the unassisted (u) school leavers

- overall drop-out rates were reasonable when the Faculty of Science students were omitted.

The one caveat which must be entered is that the students from the Summer School schools who entered the Faculty of Science did not, on the whole, perform well.

8.4 Conclusions on the performance of the SWAP students

The 'success' of the Summer School was tested here by examining the academic performance of the SWAP students who attended Summer School in comparison with the performance of those SWAP students who did not attend. The non-attending SWAP students were taken as being the 'average' group of students. Two contextual factors have to be taken into account.

1. Access Officers tend, as gleaned from interviews, to recommend attendance at Summer School more strongly to the "weaker" SWAP students. The main reason for this is that most adult students need to take summer employment through financial necessity and are reluctant to attend Summer School, unless it is deemed academically necessary.

2. Account has to be taken of the fact that seventeen (19.1%) of the 89 SWAP students who attended Summer School (1987-1993) required assisted places in order to gain entry to the University. There were no non-Summer School students who did not meet General Entrance Requirements (Chapter Five, Section 5.8).

Results (SWAP)

As in the previous section, the findings are listed under "negative", i.e., findings not favourable to the Summer School, and "positive", i.e., findings establishing success for the Summer School.

Negative findings (SWAP):-

1. Overall, for the two groups of SWAP students, Summer School (SS) and non-Summer School (NSS), where numbers were not insignificant, the worst drop-out rates were found in the Faculty of Science. The percentages were: Summer School 42.3%; non-Summer School 40.4%; overall SS +NSS 41.3%. It is likely that the differences in the processes of learning between Access courses and University Faculty of Science subjects were less easily overcome than the corresponding differences in the Faculties of Arts and Social Sciences (Chapter Five, Section 5.9). The one-year SWAP course involves an interactive,

almost tutorial, approach to teaching and learning. The environment is one that is highly supportive of individual students. Students undertake modules in small groups and are assessed on learning outcomes. Those who do not meet the learning outcomes at the first assessments have the opportunity to be reassessed until they have satisfactorily met these outcomes. The emphasis is on the process of learning and not on the content of the subject matter. The teaching methods are closer to the teaching methods in the Faculties of Arts and Social Sciences than to the methods used in the Faculty of Science. For example, the key skills involved in Arts and Social Sciences degrees are skills such as analysis of texts, formulation of rational argument, and critical thinking; these are processes of learning which can be readily transferred between subjects. In comparison, the key skills involved for many Science degrees are knowledge, retention and understanding of factual information. Much of this information relies on prior knowledge which is built into the curricula of the SCE Highers but not necessarily into the curricula of the SWAP courses. The short Summer School course does not appear to overcome the difficulties involved in the transition from a SWAP Science course to University Science courses in that the Summer School had made no difference to the drop-out rate. However, in the positive findings given below, there is evidence to indicate that the Summer School had provided some benefits for SWAP Science students but these were insufficient to affect drop-out rates.

Positive findings (SWAP):-

1. The drop-out rates for the Summer School SWAP students and the non-Summer School SWAP students were very similar. These were: Summer School (SS) 34.8%; and non-Summer School (NSS) 35.0%. This can be seen as a successful result in that the Summer

School students had performed at least as well as the 'average' students in this case and, as explicated previously, it is often the weaker students who attend the Summer School.

2. Despite the fact that the overall drop-out rates between the SS and NSS SWAP students were very similar, there is some evidence to suggest that the SWAP students who attended the Summer School in fact performed better academically than those who did not attend. This is to be found in the number of passes gained in degree examinations by the dropping-out students. It was noted that 25 of the 35 (71.4%) non-Summer School drop-outs made no progress at all in first year, i.e., passed no degree examinations, whereas only fourteen of the 31 (45.2%) Summer School drop-outs made no such progress (Chapter Five, Section 5.8.4).

3. Despite the fact that the Summer School made no difference to the drop-out rate in the Faculty of Science, an investigation of the degree examinations results of SWAP students in this Faculty indicates that the Summer School has gone some way to preparing SWAP students for first-year work. Whilst seventeen of the 21 (80.9%) non-Summer School drop-outs from this Faculty left with no degree examination passes, only twelve of the 22 (54.5%) Summer School drop-outs from the Faculty were in the same position. This is an important finding in that there were obvious problems for all of the SWAP students in the Faculty of Science. The Summer School has gone at least some way towards combating these difficulties (Chapter Five, Table 35, Section 5.8.4).

4. Evidence to further demonstrate the 'success' of the Summer School is also shown in the Faculty of Social Sciences. Here, five out of the six (83.3%) non-Summer School drop-outs left with no passes in degree examinations, whereas only one out of the five

(20.0%) Summer School drop-outs from this Faculty had no passes (Chapter Five, Table 35, Section 5.8.4).

5. Across all faculties there were ten non-Summer School drop-outs with at least one pass in first year and seventeen Summer School drop-outs in the same position. At the end of that first year, three out of the ten (30.0%) non-Summer School drop-outs were in good standing academically, i.e., above minimum progress regulations. In contrast, nine out of the seventeen (52.9%) Summer School drop-outs were in good standing academically (Chapter Five, Table 36, Section 5.8.4).

Conclusions for SWAP students:-

The overall drop-out rates for the two groups of SWAP students were highly similar. In some senses this was considered a 'success' for the Summer School in that its students performed as well as the comparative group (Summer School SWAP students are considered more likely to be academically "weaker" than non-Summer School SWAP students). However, the real benefit of attendance on the Summer School can be seen by analysing the number of passes in degree examinations gained by the students who dropped out. It was demonstrated that the students who had attended Summer School consistently out-performed the students who had not attended. This was evidence that the Summer School had enabled its students to pass more degree examinations than those who did not attend. The problem - and the regret - is that this factor is not sufficient to alter radically the drop-out rate. Nevertheless, given the contextual factors outlined at the beginning of this section, i.e., the "weaker" students and the numbers on assisted places, this is seen as supporting evidence in favour of the Summer School.

8.5 Conclusions on the performance of the non-SWAP adults

The non-SWAP adults were extremely diverse in terms of qualifications and background. The factors which grouped them together were that they were adults and that they were all educationally disadvantaged, many being also socio-economically disadvantaged. This was the only Summer School group which was targeted on an individual basis and its members were thus considered to be highly "at risk", in that students who are positively discriminated towards on an individual basis are generally more deprived than those who are discriminated towards on an aggregate or group basis (Chapter Six, Section 6.5). Due to the diversity of this group of students it was not possible to select a control group for comparison purposes, thus the performance of the unassisted (u) students was compared with that of the assisted (a) students.

Results (non-SWAP adults)

As in Sections 8.3 and 8.4, "negative" and "positive" findings are listed.

Negative findings (non-SWAP adults):-

1. The overall drop-out rate for the non-SWAP adults was higher than the rates for the other two groups of Summer School students. The rates were: Summer School school leavers (u+a) 20.8%; Summer School SWAP students (u+a) 34.8%; and Summer School non-SWAP adults (u+a) 40% (Chapter Six, Table 43, Section 6.7.1). This result clearly

indicated that the non-SWAP adults are indeed the 'weakest' of all of the Summer School students.

Positive findings (non-SWAP adults):-

1. The drop-out rate for the assisted (a) non-SWAP adults was very slightly lower than that of the unassisted (u) students. These rates were: non-SWAP assisted (a) 39.4%; and non-SWAP unassisted (u) 41.2%. This was concluded to be a positive finding in that, as before, the assisted students, of whom there were 71, would not have been able to enter the University of Glasgow had it not been for the assisted place scheme of the Summer School (Chapter Six, Section 6.5.1).

2. There was further evidence to indicate that the assisted non-SWAP adults had been more successful than the unassisted non-SWAP students at the University. Higher percentages of the assisted students graduated with both Ordinary and Honours degrees than the unassisted students. The percentages were Ordinary graduation, assisted students 14.1% and unassisted students 11.8%; Honours graduation, assisted students 19.7% and unassisted students 14.7% (Chapter Six, Tables 44 and 45, Section 6.7.2). The results here were consistent with the findings for the other groups of Summer School students, school leavers and SWAP, for Ordinary graduation where higher percentages of assisted students graduated with Ordinary degrees than unassisted students. However, the non-SWAP adults were the only group where higher percentages of assisted students graduated with Honours degrees than unassisted.

3. The 'success' of the assisted non-SWAP adults is further demonstrated by comparing the percentages of assisted students who were still progressing in minimum standing, i.e., on or below progress regulations, with the same percentages for the unassisted students. These percentages were: assisted non-SWAP adults 0%; and unassisted non-SWAP adults 14.7%. Although the numbers in this example were not statistically significant, none of the 71 assisted students was in minimum standing but five of the 34 unassisted students were in this position. This does at least offer tentative evidence of the success of the assisted students (Chapter Six, Table 37, Section 6.5.1).

4. The non-SWAP adults were the only Summer School group where the drop-out rate in the Faculty of Science was not considerably worse than the other faculties. The rates were: Faculty of Science 40.6%; Faculty of Arts 38.1%; Faculty of Social Science 41.7%; Other Faculties 42.9%; the overall total being 40.0% (Chapter Six, Table 37, Section 6.5.1). It was, therefore, concluded that, although their overall rates were higher than the other two groups, the non-SWAP adults did not experience the same particular problems with Science subjects as the other two groups.

5. It is certainly satisfactory that over 60.0% of the assisted non-SWAP adults had either graduated or were still on course to do so, at the time of writing. It was explained through the contextual aspects of Chapter Six, Sections 6.2 to 6.4.1, that targeting students such as the non-SWAP adults on an individual basis is likely to produce the most disadvantaged students. Furthermore, the fact that these students were only qualified for entry to the University through the Summer School further strengthens the argument that, in context, these students were indeed successful.

Conclusions for non-SWAP adults:-

The non-SWAP adults were the "weakest" of all of the Summer School groups of students. Targeting disadvantaged students on an individual basis necessarily produces the most disadvantaged students as it excludes those who would otherwise be included through group membership. An example of this situation would be non-disadvantaged school leavers who attended disadvantaged schools and are thus eligible to attend Summer School whereas, if these students were targeted on an individual basis by deprivation, they would be excluded. It was, therefore, to be anticipated that the drop-out rate for the non-SWAP adults would be high. The most positive aspect of the results of the performance of this group of students was that the assisted students performed better than the unassisted students. It is argued that a success rate of over 60.0%, including no students in minimum standing, for students who would not normally be considered for admission at the University of Glasgow is another indicator in favour of the Summer School.

8.6 Conclusions on the whole group of Summer School students

Looking at the data gathered in this comparative study of the three groups of Summer School students, school leavers, SWAP students and non-SWAP adults, there are at least five major conclusions that can be drawn:-

1. Generally, regardless of group membership, unassisted or assisted, the least 'successful' students were those from the Faculty of Science. The drop-out rates in this Faculty were: unassisted students (u) 36.1%; assisted students (a) 35.9%; and unassisted combined with assisted (u+a) 36.0% (Chapter Six, Section 6.7.1). Problems with Science

subjects were particularly evident within the group of school leavers. They performed considerably worse than the non-attenders (n) from the Summer School schools and the non-Summer School students (NSS) (Chapter Four, Section 4.8). This is the most negative aspect of the results pertaining to the Summer School which this study has revealed. The poor performance of the SWAP students in the Faculty of Science relates to the difference in emphasis between process and content of learning previously explained in Section 8.4. The drop-out rate for the non-SWAP adults in the Faculty of Science was similar to the drop-out rates for these students in the other Faculties and, therefore, needs no further explanation. However, the poor performance of the school leavers who attended Summer School indicates that these students were not sufficiently prepared by their schools for studying Science subjects at university level and that the Summer School did not compensate for this. This poor performance was found despite the fact that the unassisted school leavers, as well as some of the assisted school leavers, had suitable passes in SCE Higher Science subjects for entry to university and, therefore, should have been prepared for studying Science subjects. It could be that pupils and teachers in schools in the most deprived areas have other problems to overcome, such as discipline, attendance and lack of motivation, and that dealing with these problems detracts from effective teaching and learning in the classroom.

2. Although 28.8% of all of the Summer School students analysed in the quantitative study have dropped out, 71.2% have either graduated or are continuing with their studies (Chapter Six, Section 6.7.1). This was concluded to be a positive result in view of the fact that many of the students were either non-traditional or non-standard in their qualifications and/or background.

3. Overall 29.5% of the past Summer School students have already graduated with either Ordinary or Honours degrees. Of particular significance is the fact that 26.7% of the assisted students have graduated to date. This result is seen as highly positive in that these students would not normally have been admitted under other circumstances (Chapter Six, Tables 44 and 45, Section 6.7.2).

4. The position of the assisted place students throughout the three groups, school leavers, SWAP and non-SWAP adults, was determined to be 'successful'. For example, the overall drop-out rate for all the students in the investigation was given as 28.8% but the rate for the assisted group was not considerably higher at 31.1%. In fact the drop-out rates for the SWAP and the non-SWAP adults were lower for the assisted students than those of the unassisted students (Chapter Six, Table 43, Section 6.7.1). It is again stressed that these students would not have been at the University of Glasgow at all had it not been for the Summer School.

5. The position of the assisted students in good standing again highlights their 'success'. There are currently 34.8% assisted students in good standing in comparison to 34.3% unassisted students (Chapter Six, Table 46, Section 6.7.3). This means that these students are meeting or exceeding progress regulations. From the analysis (Chapter Four, Section 4.6.2, Chapter Five, Sections 5.8.1, 5.8.2 & 5.8.3, and Chapter Six, Section 6.5.3) of the number of passes in degree examinations in first year it is predicted that most of these students will graduate with Ordinary or Honours degrees.

8.7 The longitudinal qualitative study

As in Section 8.2, it is helpful to remind the reader of the details of the longitudinal study before presenting the conclusions. A group of past Summer School students were interviewed between July 1992 and December 1994. During this time 57 students, school leavers, SWAP and non-SWAP adults, who attended the Summer School in 1992 and then entered the University of Glasgow, were tracked. The students were interviewed seven times over this period. Interviews were semi-structured and open-ended.

The overall aim of this study was to examine the problems encountered by each participant and to focus on the differences and similarities between those who dropped out and those who continued with their studies (Chapter Seven, Section 7.4). This was undertaken in order to attempt to understand drop-out behaviour for wider application.

The sample group was selected randomly from the total group of 100 Summer School students of 1992 who indicated that the University of Glasgow was their first choice of destination and were accepted for that university. However, a review of the distribution of the sample group revealed that they were in fact highly representative of the 1992 year group, although less so of the entire group of Summer School students. The reason for this was that 1992 was an exceptional year where many more adults were accepted than in other years (Chapter Seven, Section 7.4.1).

8.8 Qualitative conclusions on the dropping-out students

The conclusions here offer explanations towards an understanding of drop-out behaviour. They do not specifically support or refute the premise that the Summer School has been a 'success'. For this reason the results are given as a whole and not in the previous format of "negative" and "positive" findings.

1. Attempts were made, initially, to assess whether or not it would have been possible to predict which students would have succeeded or failed based on a number of background characteristics. The characteristics examined were family history of higher education, initial expectations/aspirations; and previous educational qualifications of those who were assisted with entry and those who were unassisted. No single factor emerged as a possible predictor of success or failure in higher education (Chapter Seven, Section 7.4.3). It was, therefore, concluded that it would not have been possible to predict from the outset which students were more likely to drop out than others.

2. Twelve main problem areas were identified. The average number of problem areas, both for drop-outs and continuing students, was lower for school leavers than for adults. School leavers averaged 4.0 problem areas for drop-outs and 2.9 for continuing students. The highest average number of problems experienced was among the SWAP students who dropped out (6.8) although the average number for the continuing SWAP students was somewhat lower (3.9). The continuing non-SWAP adults were roughly the same as the continuing SWAP students (4.0 as opposed to 3.9). However, the non-SWAP students who dropped out were found to have fewer problem areas than the SWAP students who

dropped out (5.5 as opposed to 6.8). It was concluded that these results were partly based on a number of factors.

- school leavers show more reticence in discussing problems
- school leavers in general display fewer problems than adults, having fewer outside responsibilities and commitments
- SWAP students, having had considerable guidance and counselling on their access courses, find problems easier to discuss than some of the non-SWAP adults (Chapter Seven, Section 7.5).

3. The problem areas encountered most frequently by the combined group of 57, drop-outs and continuing students together, were outside commitments; financial problems; and problems with part-time employment. The problem areas recognised least frequently were unsuitability for academic study; lack of motivation towards study; 'attitude' problems; child-related problems; and incorrect choice of course (Chapter Seven, Section 7.5).

4. The main areas of difference between the drop-out and the continuing students lay in attitudes, lack of motivation and unsuitability for academic study (there were also a difference found in the area of 'gaps in knowledge', but as explained in Chapter Seven, Section 7.5, this was ignored since the result was explained by the high reponse from the SWAP students) This was concluded to be crucial in understanding drop-out behaviour in that the differences lay in personality, motivation and commitment. There were also some reported differences in levels of outside commitments and in relationship problems. The drop-out students showed less signs of social integration and commitment than the continuing students (Chapter Seven, Sections 7.5 & 7.5.3).

5. The main areas of similarity in the problem areas lay in child care and health problems for both the drop-outs and the continuing students. It was concluded that these are problems which could be encountered by all students, drop-outs and continuing. The level of financial problems was found to be high among both groups of students. A further unanticipated finding was that roughly the same percentage of continuing and drop-out students felt that the had chosen the wrong course (Chapter Seven, Section 7.5). This finding appeared to indicate that choosing the wrong subjects or courses did not necessarily result in dropping-out. Some students were able to continue studying by putting the mistake behind them and either carrying a subject to the next year or continuing with a subject or course that they did not enjoy whilst others were not able to do so.

6. It was discovered that a large percentage of the students, drop-out and continuing, had part-time employment. The percentage of students working was 57.9% in December 1992 and 63.2% by the time of completion of the study in October 1994. It was concluded that it was a point of concern that so many of the students in the survey were in part-time employment, given that they had previously been identified as being "at risk" in higher education. It was considered that such students were less likely to be able to spare valuable study time for employment (Chapter Seven, Section 7.5.1) The disproportionately high number of working students was a result which was expected. Many of the students come from low-income families and it is therefore unlikely that other family members would be in a position to assist financially. Also there were a considerable number of adults in the sample group, many of whom had dependants, rents and mortgages to pay for. Earnings from part-time employment were thus considered to be a financial necessity.

7. The longitudinal study also identified 'critical' problem areas. These were defined by the researcher as areas where students had experienced problems considered critical to their academic progress in the university. There were four such main 'critical' problem areas: health; finance; employment; and relationships. These 'critical' areas were highlighted by both drop-out and continuing students. However, a considerably higher percentage of the drop-out students (81.8%) experienced 'critical' financial problems than the continuing students (40.0%). It was, therefore, concluded that although a similar percentage of the two groups had had financial problems, a 'critical' problem in this area is a contributory problem towards dropping-out (Chapter Seven, Table 51, Section 7.5.2).

8. Motivation was defined as cases where it was found that, despite difficulties encountered in the main problem areas, the student had continued to persist with their studies and commit themselves to the goal of completion. None of the eighteen drop-outs was found to be highly motivated in this sense whereas 32 of the 39 continuing students were found to be so. This was considered to be the single most important finding of the study in that it indicated clear differences between the drop-out students and those who continued. Obviously students who are highly motivated can overcome most problems encountered whereas less motivated students are more likely to drop out However, there are problems with this approach in that methods of determining or indeed fostering motivation are unclear. It was conceded that the classifying of students could have been subjective, although efforts were made to reduce any subjectivity. Nevertheless, there is no doubt, from the evidence, that motivation is required for commitment to the goal of graduation and, further, that if commitment is there, then students are considerably more likely to succeed in higher education (Chapter Seven, Section 7.6).

9. It was concluded that drop-out behaviour was highly complex and that the most appropriate approach was a synthesis of the main methods: theoretical; descriptive; predictive; and motivational studies. However, the most conclusive results to emerge from the study were that 'critical' financial problems and lack of motivation towards the goal of graduation were the most likely factors to lead to drop-out behaviour (Chapter Seven, Sections 7.6 & 7.7).

8.9 Recommendations

After presenting the main conclusions, it now possible to make recommendations. The move from conclusions to recommendations is the change from the 'is', i.e., the facts, to the 'ought', that is, the value judgements, what ought to be done. It could be argued that this is philosophically unsound in that there is no logical foundation for the step from the 'is' to the 'ought'. In others words, in logic, you cannot get an 'ought' from an 'is'. However, it is generally accepted that when such a move is made, the 'ought' must bear a close relationship to the 'is'. That is, the recommendations must be closely linked to the conclusions. By referring to the conclusions in the previous sections it is anticipated that the relationship between the conclusions and the recommendations will be self-apparent.

The recommendations

1. Analysis of the structure of the present group of the 31 Summer School schools within the set of all Strathclyde Region's secondary schools leads to the recommendation that more schools should be invited to participate in the Summer School.

The schools most in need of this form of help can be fairly easily identified. Although the evidence indicated that, on the whole, the Summer School schools were more deprived than the non-Summer School schools selected as the control group, there was also evidence to indicate that some of the non-Summer School schools were highly similar in characteristics. It was shown that none of the Summer School schools produced percentages of school leavers entering higher education that were on or above the averages for the Divisions that the schools were located in, whereas one-third of the non-Summer School schools had percentages on or above the averages. However, this result also meant that two-thirds of the non-Summer School schools were below the Divisional averages and were thus under-represented in higher education.

Furthermore, it was shown that eight of the Summer School schools had produced considerably more graduates from the University of Glasgow than would be expected by their levels of deprivation whereas none of the non-Summer School schools had done so. At the same time, six of the non-Summer School schools had produced considerably fewer graduates than would be expected by their levels of deprivation whereas only five of the Summer School schools did so.

These results together indicate that, although the Summer School schools are on the whole the schools which should still be targeted to attend, there are other schools whose students would also benefit from participation in the Summer School.

2. A fuller investigation should be undertaken into the performance of secondary schools relative to the percentage level of deprivation.

This recommendation is based on the evidence which emerged from the review of the 62 schools, Summer School and non-Summer School.

The investigation should be expanded to include a wider range of characteristics than those used in this thesis. The indicators used in the thesis were the percentage in the school attending daily on the average; the percentage attaining three or more SCE Highers, grades A-C, from the school; and the percentage in the school receiving a clothing allowance. Other characteristics could include the percentage involved in school-based non-academic activities; level of parental involvement; level of staff teaching experience; staff expectations of pupils; strong competent leadership; emphasis on high academic achievement; staff commitment to school activities.

Schools could be considered in groups of similar levels of deprivation. Assessments of their performance relative to a variety of indicators would provide a fuller picture of the schools than is currently given through 'league tables'.

3. The Summer School subject provision aimed at students from the three target groups, school leavers, SWAP students and non-SWAP adults, who intend to enter the Faculty of Science should be examined in detail and redesigned, where appropriate.

This recommendation arises from the high drop-out rates and poor performance of the three groups of Summer School students in the Faculty of Science. In particular, the evidence from the 31 Summer School schools indicated that their school leavers performed considerably worse than the comparative students. This was so regardless of which status they had, unassisted or assisted with entry through the Summer School or indeed had not attended Summer School but had come from one of these schools. This result suggested that, regardless of formal qualification, in this case SCE Higher, the school leavers from the Summer School schools were less well prepared to study Science subjects at the University of Glasgow and that the Summer School had done little to compensate for their lack of preparation.

High drop-out rates were also found within the groups of SWAP and non-SWAP adults who attended Summer School and then entered the Faculty of Science. There was, however, some evidence to indicate that the drop-out SWAP students who attended Summer School were in a stronger position academically than the comparative SWAP students who had not attended Summer School. This conclusion derived from an examination of the number of passes gained in first year by the drop-out SWAP students in the Faculty of Science. It was determined that those who had attended Summer School had obtained considerably more passes in degree examinations than those who had not. Whilst seventeen of the 21 non-Summer School drop-outs left with no degree passes, only twelve of the 22 Summer School drop-outs made no such progress. This suggested that attendance at Summer School had gone some way towards assisting the SWAP students academically in their first year at university but not sufficiently to allow them to stay on course.

A full investigation of the academic problems encountered by non-traditional students in studying in the Faculty of Science should be undertaken from school/college to first year university and the Summer School provision redesigned appropriately in order to maximise the benefits for its students.

4. Provision of additional short courses should, where possible and with appropriate funding, be available to assist with transitions at university from, for example, first term to second term, first year to second year and from second to third year.

This recommendation arises from the benefits gained by attendance at Summer School for the transition from school/college to first year university. The evidence for this is seen with the unassisted school leavers attending Summer School who performed at least as well in graduation and drop-out rates as the comparative control groups in all faculties, except in the Faculty of Science. Further, it was shown that 71.4% of the non-Summer School SWAP students who dropped out made no progress what-so-ever in degree examinations as opposed to only 45.2% of drop-out SWAP students who did attend Summer School.

This recommendation is also based on the results of the longitudinal qualitative study undertaken where it was determined that one of the main characteristics of students who were most likely to drop out was lack of motivation towards the goal of graduation.

Short course provision for small groups, of the type provided by the Summer School, should be made available at critical periods of transition in order to update study skills and

subject specific knowledge. This would in turn stimulate motivation through increased confidence and commitment to studies.

5. More people should be given access to higher education through schemes such as the assisted place scheme of the Summer School, which allows a 'second chance' of entry through performance on criteria other than formal qualifications.

This recommendation arises from the results of the performance of the students who entered the University of Glasgow through the Summer School's assisted places scheme. These students were given access on the basis of their performance at Summer School. They had insufficient valid formal qualifications to enable them to reach General Entrance Requirements. The support for this recommendation is demonstrated by, for example, the performance of the assisted place school leavers where 75.3% of the school leavers who entered through the scheme had either graduated or were on course to do so.

Furthermore, the performance of the non-SWAP adults who had entered through the assisted places scheme was better than those who had been unassisted with entry. The drop-out rates were lower and the graduation rates, both Ordinary and Honours, were higher.

Overall, for all Summer School students together, the drop-out rate for the assisted students was only marginally higher than that for the unassisted students, 31.1% as opposed to

27.3%. Also, only slightly fewer, 26.7% of the assisted students as opposed to 29.5% of the unassisted students, had already graduated with either Ordinary or Honours degrees.

The evidence is that there are many more students, with insufficient formal qualifications, who could benefit from higher education given the type of preparation and support provided by courses such as the Summer School.

6. Special provision should be made for adult returners, taking into account their diverse previous qualifications and experience.

This recommendation is based on the high drop-out rates found amongst the non-SWAP adults and the SWAP students. These rates were 40.0% for the non-SWAP adults and 34.8% for the SWAP students. The rates are both considerably higher than averages for the University of Glasgow generally. However, the evidence from both the performance of the non-SWAP adults who were assisted with entry and the SWAP students who attended Summer School was that they had benefited from this type of provision. In particular the difference in the number of passes in degree examinations gained by the SWAP students who attended Summer School in comparison to those who had not attended indicated that this type of provision could be extremely valuable.

However, in order to reduce the drop-out rates for such adult returners significantly, it would be necessary to encourage more adult students to attend suitable support courses and to reorientate aspects of the provision to take into account any gaps in their subject knowledge and any possible difficulties in developing effective study patterns.

7. Students, in particular non-traditional students such as those who attend Summer School, should be given considerably more financial support and advice.

This recommendation is based on an examination of the 'critical' problems encountered by the Summer School students who took part in the longitudinal qualitative study. A review of these problem areas demonstrated that the main reason, other than lack of motivation, for dropping-out was that of 'critical' financial problems. It was determined that a considerably higher percentage of the drop-out students (81.8%) experienced 'critical' financial problems than the continuing students (40.0%).

Further, it is a point of concern that such a high percentage (63.2%) of the Summer School students interviewed were found to have part-time employment as well as studying full-time. It was considered that students of this type, in particular the adult students, both SWAP and non-SWAP, were already 'at risk' and as such were less likely to be able to spare time from studies for employment.

Students should be made more fully aware of the financial implications of full-time study before embarking on courses, in particular in the light of current financial cut-backs. They should also be made fully aware of additional funding, such as the University Hardship Allowance and the Access Fund, for which they might qualify. Further, they should be informed of where to go for advice and assistance with financial matters.

8.10 Summary and conclusions

This chapter set out to review the central research question of whether or not the Summer School could be considered to have been a 'success' by collating the main conclusions of this thesis. The conclusions were based on a comparison of the academic performance of the groups of students who attended the Summer School and then entered the University of Glasgow, 1986-1993, with that of similar groups of students, who had not attended Summer School. Further, conclusions about the reasons why students discontinue their studies were also reproduced from the research findings of this thesis, in this chapter. A number of recommendations based on the conclusions were presented. It is hoped that these recommendations could point the way for policy makers and providers of courses such as the Pre-University Summer School.

The researcher concludes that there is considerable evidence to indicate that the Pre-University Summer School has been a success in that it has produced 'change for the better' in the academic performance of many of its students. This evidence is shown through:-

• the performance of the students who entered the University through the assisted places scheme of the Summer School.from the three groups (school leavers, SWAP and non-SWAP) (the preparation and increased confidence given to these students enabled many of them to succeed at the University despite the fact that they were students who would not normally be given access to the University of Glasgow).

• the performance of the unassisted Summer School school leavers (these students showed a strong academic performance in comparison to the students from the 31 non-Summer School schools and the students from the 31 Summer School schools who did not attend Summer School. This was the case in all faculties except the Faculty of Science).

• the performance of the Summer School SWAP students (although the drop-out rate was the same for the Summer School SWAP students and the comparative group, the actual number of passes gained in degree examinations was markedly better for the Summer School SWAP students. This indicated that they were somewhat stronger academically).

Where the Summer School was found to be deficient was with the students from the three groups (school leavers, SWAP and non-SWAP adults) who entered the Faculty of Science. The academic performance here was generally poor and it was concluded that the Summer School had done little to compensate for this.

Finally, any research project should not only answer the research questions identified but also raise new questions and issues for debate. This thesis concludes with some of the issues which have arisen from the research:-

1. If the Summer School has been found to be largely but not wholly successful, what sort of summer school would be more effective?

In other words, having identified the areas where the Summer School has been found to be deficient, how could the Summer School be changed to combat these deficiencies?

2. Should there be separate summer schools for students who intend to undertake Science degrees?

It could be the case that the problems encountered by students who enter the Faculty of Science are so severe that these students require considerably more assistance than non-Science students and that this would merit separate and extended preparation.

3. What further developments should the Summer School make?

One new development which is an add-on to the Summer School is the Mentoring project. It ran as a pilot project from September 1994 to September 1995 and is running again this year. This project aims to improve links between the University of Glasgow and the seventeen schools in Glasgow Division which participate in the Summer School. This involves, for each of the seventeen schools, the appointment of a member of University staff to act as a mentor. The mentor is supported by two or more student mentors who are undergraduates (at the University of Glasgow) from the same school. The project aims to increase the numbers of students applying to universities and to improve the performance of students from these schools who are currently at university. At the time of writing it is too early to assess whether or not this project has been effective.

The mentoring approach could be widened and extended to involve SWAP and non-SWAP students as well as school leavers. It could also involve more Summer School schools and invite former students from the three groups to act as mentors under suitable supervision whether they were drop-outs or had succeeded in graduating. The experiences of such students could provide valuable insights.

4. What are the alternatives to summer schools?

Is the short course given in the summer before entering university the most effective form of provision? It could be that the difficulties encountered by the types of students who attend the Summer School would be better tackled over a longer but less intensive period of time. Alternatively, the Summer School type of provision could be made in short vacation mode over the holiday periods in the lead-up to leaving school/college.

Appendix I

Special Initiative Areas Strathclyde Region

1982/83 Review of APT's

Division	District	Area	Population
Ayr	Kyle and Carrick	1. Lochside/Whitletts Dalmilling/Braehead	10,075
Glasgow		2. Carnwadric/Kennishead/ Arden	10,208
		3. Castlemilk	28,757
		4. Drumchapel	24,602
		5. Easterhouse	19,762
		6. Gorbals/Oatlands	12,110
		7. Govan	23,245
		8. Greater Possil	14,807
		9. Milton	10,061
		10. Pollock	12,614
		11. Royston Corridor	13,895
		12. Springburn	15,287
Lanark	Hamilton	13. Blantyre	15,195
Renfrew	Renfrew	14. Ferguslie Park	7,617

Appendix II

Secondary Schools in Strathclyde Region by APT % and Clothing % 1992-93

Name	ROLL	CATCHMENT AREA		ALL PUPILS		CLOTHING %	GRANT NUMBER
		APT%	NO.APT	APT %	NO.APT		
WILLIAMWOOD HIGH	1156	0	0	0	0	4.1	47
GRYFFE HIGH	854	0	0	0	0	5.5	47
STRATHAVEN ACADEMY	972	0	0	0	0	6.8	66
MEARNS CASTLE HIGH	939	0	0	0	0	7.3	69
PARK MAINS HIGH ERSKINE	1509	0	0	0	0	7.7	116
LENZIE ACADEMY	1293	0	0	0	0	8.5	110
BOCLAIR ACADEMY	1099	0	0	5.2	57	9.7	107
BIGGAR HIGH	610	0	0	0	0	9.8	60
PRESTWICK ACADEMY	1055	0	0	0	0	9.8	103
TOBERMORY HIGH SCHOOL	173	0	0	0	0	10.2	18
BEARSDEN ACADEMY	1269	0	0	19.7	250	10.3	131
HERMITAGE ACADEMY	1431	0	0	0.1	1	10.5	150
KYLE ACADEMY	850	0	0	2.9	25	11.5	98
DOUGLAS ACADEMY	872	0	0	0.4	3	11.7	102
MARR COLLEGE	1525	0	0	0	0	12.1	185
EASTWOOD HIGH	952	0	0	0	0	12.4	118
LOCHGILPHEAD HIGH	467	0	0	0	0	12.6	59
GREENOCK ACADEMY	967	2.4	23	7.7	74	12.6	122
ST NINIANS HIGH	1283	7	90	9.3	119	13	167
LARGS ACADEMY	795	0	0	0	0	14.1	112
STEWARTON ACADEMY	849	0	0	0	0	14.2	121
ARRAN HIGH	300	0	0	0	0	14.4	43
CARLUKE HIGH	1431	0	0	0	0	14.6	209
ST BRIDES HIGH	838	0	0	0	0	15.2	127
BELMONT ACADEMY	1365	0	0	6.9	94	15.5	212
OBAN HIGH	1099	0	0	0	0	15.6	171
DUNCANRIG EAST KILBRIDE	884	0	0	0	0	15.8	140
PAISLEY GRAMMAR	1105	0	0	0.8	9	17	188
GOUROCK HIGH	545	0	0	2.9	16	17.1	93
CLAREMONT HIGH	1208	0	0	0	0	17.6	213
GREENFAULDS HIGH	1161	0	0	0	0	18.3	212
DALZIEL HIGH	865	0	0	0	0	18.4	154
TARBERT ACADEMY	145	0	0	0	0	18.8	27
CHRYSTON HIGH	713	0	0	0	0	19.3	138
HUNTER HIGH	647	0	0	0	0	19.5	126
ISLAY HIGH	261	0	0	0	0	20.3	53
ST NINIANS HIGH	746	0	0	0	0	20.6	154
UDDINGSTON GRAMMAR	1149	24.4	280	27.1	311	20.7	238
KILSYTH ACADEMY	844	0	0	0	0	21.1	178
KINGS PARKS SECONDARY	1186	0	0	14	166	21.3	253
TRINITY HIGH RENFREW	952	17.5	167	24.1	229	21.5	205
WOODFARM HIGH	1045	0	0	21.3	223	21.6	226
LOUDOUN ACADEMY	1010	0	0	0	0	21.7	219
JOHNSTONE HIGH	1202	0	0	0	0	21.7	261
HOLY CROSS HIGH	1551	16.4	254	21.9	340	21.7	337
KIRKINTILLOCH HIGH	840	0	0	0	0	22.1	186
HAMILTON GRAMMAR	1267	22.4	284	24.7	313	22.2	281
LANARK GRAMMAR	1096	0	0	0	0	22.4	246

Appendix II

Secondary Schools in Strathclyde Region by APT % and Clothing % 1992-93

Name	ROLL	CATCHMENT AREA		ALL PUPILS		CLOTHING %	GRANT NUMBER
		APT %	NO APT	APT%	NO APT		
ST AIDANS HIGH	1167	22.4	261	22.4	261	22.7	265
QUEEN MARGARET ACADEMY	699	9 8	69	9 8	69	23 1	161
ST MAURICE HIGH	1160	7	81	7	81	23.2	269
ABRONHILL HIGH	694	0	0	0	0	23.5	163
OUR LADY'S HIGH CUMBERNAULD	999	0	0	0	0	23 6	236
TURNBULL HIGH	881	17.6	155	17 6	155	24.2	213
ST ANDREWS HIGH PAISLEY	791	2.8	22	3.4	27	24.5	194
CARRICK ACADEMY	647	0	0	0 3	2	24 9	161
ST JOSEPHS ACADEMY	627	15.5	97	15.5	97	25 3	159
HYNDLAND SECONDARY	725	0	0	8	58	25.4	184
HOLYROOD SECONDARY	1940	11 1	215	14 8	287	25 5	495
DUNOON GRAMMAR	993	0	0	0	0	25.6	254
LESMAHAGOW HIGH	677	0	0	0	0	26	176
COLTNESS HIGH	926	0	0	19	176	26	241
CAMBELTOWN GRAMMAR	581	0	0	0	0	26.1	152
GRANGE ACADEMY	1038	24.7	256	27.6	286	26.1	271
ST AMBROSE HIGH	1097	25 3	278	26 3	289	26 2	287
GARNOCK ACADEMY	1114	0	0	0	0	26 6	296
RENFREW HIGH	970	9.8	95	12.6	122	27.3	265
LARKHALL ACADEMY	1108	0	0	0	0	27 3	302
STONELAW HIGH	1036	10.1	105	10 1	105	27.6	286
BALLERUP EAST KILBRIDE	761	0	0	0	0	28.2	215
ST BRENDAN'S SECONDARY	383	0	0	0	0	28 4	109
DUMBARTON ACADEMY	827	16.2	134	17 3	143	28.9	239
ST ANDREWS HIGH E. KILBRIDE	608	0	0	0	0	29.1	177
GIRVAN ACADEMY	647	0	0	0 2	1	29 2	189
KILWINNING ACADEMY	1147	0	0	1.3	15	29.3	336
CALDERHEAD HIGH	650	7.9	51	8.2	53	29.4	191
SHAWLANDS ACADEMY	1502	3 4	51	28 2	424	29 6	445
GREENWOOD ACADEMY	1257	0	0	1 8	23	30 2	380
COATBRIDGE HIGH	775	23.5	182	34.4	267	30.5	236
TIREE HIGH	52	0	0	0	0	30 8	16
BANNERMAN HIGH	1425	13.6	194	27.3	389	30.9	440
ST ANDREWS ACADEMY	765	30.8	236	30.8	236	31	237
ARDROSSAN ACADEMY	1346	13 6	183	18 4	248	31	417
AYR ACADEMY	581	22.4	130	22.4	130	31.2	181
ROTHESAY ACADEMY	424	11.8	50	11.8	50	31.6	134
CUMBERNAULD HIGH	762	0.4	3	0 4	3	31.6	241
EARNOCK HIGH	965	34.7	335	39.1	377	31 6	305
GLENIFFER HIGH	1079	9.3	100	9.8	106	31.9	344
ST LUKES HIGH BARRHEAD	507	9 1	46	9 1	46	32 2	163
VALE OF LEVEN ACADEMY	1192	32.6	388	32.6	388	32 5	387
JAMES HAMILTON ACADEMY	532	12.2	65	13.6	72	32.7	174
ST MICHAEL'S ACADEMY	863	4 5	39	4 5	39	33 4	288
CLEVEDEN SECONDARY	822	24.8	204	29.1	239	33 5	275
PENILEE SECONDARY	790	0.8	6	5.2	41	33.9	268
CASTLEHEAD HIGH	1215	11 9	145	12	146	34 3	417
BRANNOCK HIGH	734	0	0	2.5	18	34.6	118

Appendix II

Secondary Schools in Strathclyde Region by APT % and Clothing % 1992-93

Name	ROLL	CATCHMENT AREA		ALL PUPILS		CLOTHING %	GRANT NUMBER
		APT %	NO.APT	APT%	NO.APT		
TRINITY HIGH CAMBUSLANG	1167	16.4	191	18.7	218	34.6	404
CUMNOCK ACADEMY	958	0	0	0	0	34.8	333
OUR LADY AND ST PATRICK'S	1403	26.4	370	26.4	370	34.8	488
CARDINAL NEWMAN HIGH	1173	51.7	606	51.9	609	35	411
BLANTYRE HIGH	924	67.5	624	69	638	35.3	326
HILLHEAD HIGH	726	0	0	25.8	187	35.8	260
CLYDEBANK HIGH	1006	5.6	56	7.6	76	35.8	360
AUCHINLECK ACADEMY	962	0	0	0	0	36	346
LINWOOD HIGH	433	0	0	0	0	36.5	158
AIRDRIE ACADEMY	1232	28.8	355	28.8	355	36.6	451
TAYLOR HIGH	803	0	0	0	0	36.7	209
BELLSHILL ACADEMY	784	43.4	340	45.3	355	36.8	289
OUR LADY'S HIGH MOTHERWELL	843	18.6	157	18.6	157	36.8	309
BARRHEAD HIGH	648	13.6	88	13.9	90	37.3	242
KILMARNOCK ACADEMY	1206	20.4	246	25.8	311	37.3	450
JOHN PAUL ACADEMY	819	23.1	189	27.1	222	37.4	306
CALDERVALE HIGH	1117	22.3	249	22.8	255	37.9	423
ST ANDREW'S HIGH SCHOOL	612	51.5	315	53.5	327	39.3	241
NOTRE DAME HIGH GREENOCK	706	33.6	237	36.8	260	39.6	280
ST THOMAS AQUINAS SECONDARY	574	22.6	130	22.8	131	39.7	228
ST CUTHBERTS HIGH	464	18.3	85	18.3	85	40.9	190
ST CONVAL'S HIGH	179	0	0	0	0	41	73
ST COLUMBA'S HIGH GOUROCK	970	25.1	243	25.1	243	41.3	401
NOTRE DAME HIGH SCHOOL	719	4.9	35	22.7	163	41.7	300
CATHKIN HIGH	1250	25.6	320	25.8	323	41.8	523
PORT GLASGOW HIGH	766	8.8	67	8.9	68	41.9	321
BISHOPBRIGGS HIGH	933	0	0	26.7	249	41.9	391
COLUMBA HIGH COATBRIDGE	975	63.1	615	63.1	615	41.9	409
IRVINE ROYAL ACADEMY	1003	28.5	286	28.8	289	42.7	428
ST COLUMBA'S HIGH SCHOOL	1007	48.2	485	48.9	492	42.9	432
LOURDES SECONDARY	1156	14.7	170	25.8	298	43.4	502
DOON ACADEMY	329	34.6	114	34.6	114	43.6	143
BELLAHOUSTON ACADEMY	714	56.9	406	70.9	506	46.5	332
ST PATRICK'S HIGH COATBRIDGE	903	10.7	97	19.9	180	46.6	421
ST MARGARET'S HIGH AIRDRIE	1535	42.9	659	43.1	662	47.4	728
KNIGHTSWOOD SECONDARY	628	21.8	137	35	220	48.4	304
AUCHENHARVIE ACADEMY	629	62	390	62	390	48.4	304
JOHN OGILVIE HIGH	900	94.9	854	94.9	854	48.8	439
ROSEHALL HIGH	544	44.8	244	45.6	248	49.1	267
THOMAS MUIR HIGH	721	0	0	39.1	282	49.1	354
EASTBANK ACADEMY	1024	41.3	423	54.8	561	49.6	508
CLYDE VALLEY HIGH	933	42.9	400	42.9	400	50.1	467
HILLPARK SECONDARY	647	34.5	223	46.8	303	51.1	331
WOODSIDE SECONDARY	543	1.3	7	13.6	74	51.3	279
ST STEPHENS HIGH	864	20.5	177	20.5	177	51.7	447
GREENOCK HIGH	668	34.8	232	34.8	232	51.8	346
BRAIDHURST HIGH	500	17.6	88	18.4	92	53.5	261
ST MUNGO'S ACADEMY	1003	61.3	615	73.2	734	54.5	547

Appendix II

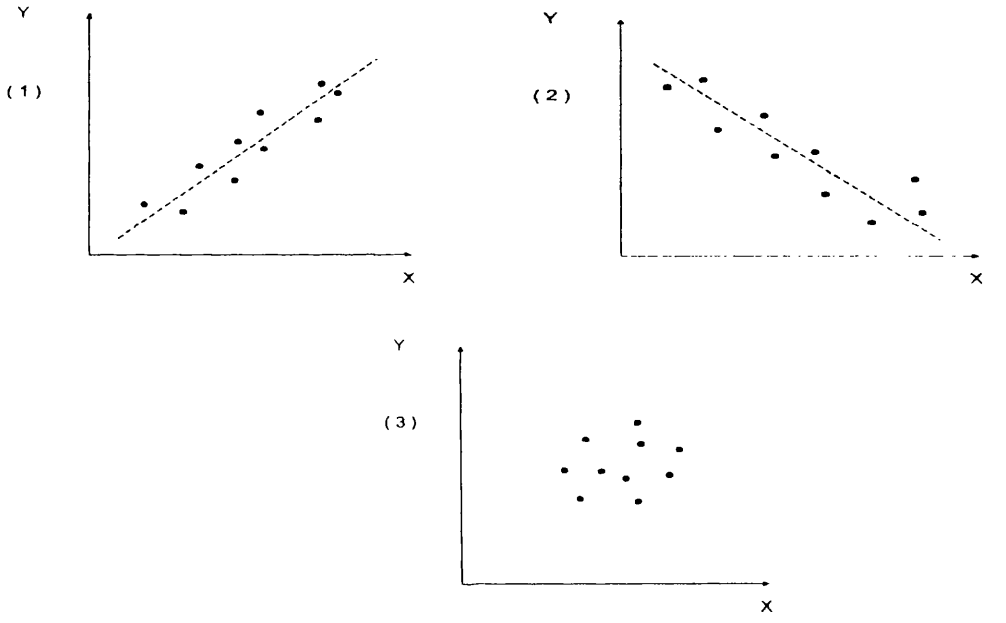
Secondary Schools in Strathclyde Region by APT % and Clothing % 1992-93

Name	ROLL	CATCHMENT AREA		ALL PUPILS		CLOTHING %	GRANT NUMBER
		APT %	NO.APT	APT%	NO.APT		
MAINHOLM ACADEMY	469	70.4	330	70.4	330	54.7	257
NORTH KELVINSIDE SECONDARY	434	51.6	224	51.6	224	55.1	239
BRAIDFIELD HIGH	631	52.3	330	56.3	355	55.9	353
WHITEHILL SECONDARY	872	28.8	251	43.6	380	55.9	487
VICTORIA DRIVE SEONDARY	470	22.4	105	24.8	117	56.1	264
ST MIRIN'S HIGH	334	43.1	144	43.1	144	56.2	188
QUEEN'S PARK SECONDARY	280	29.9	84	37.6	105	57.9	162
GOVAN HIGH	503	90.4	455	92.4	465	59.4	299
ALL SAINTS' SECONDARY	615	81.3	500	82.4	507	60.1	370
WELLINGTON ACADEMY	622	19.5	121	20.1	125	60.5	376
BELLARMINE SECONDARY	568	95.2	541	97	551	62	352
CROOKSTON CASTLE SECONDARY	798	85.1	679	86.1	687	62.3	497
ST ANDREW'S SECONDARY	832	79.6	662	79.6	662	62.3	518
DRUMCHAPEL HIGH	915	96.4	882	96.5	883	63.1	577
MERKSWORTH HIGH	425	59.5	253	64.4	274	63.7	271
ST GERARD'S SECONDARY	261	98.5	257	100	261	64	167
JOHN STREET SECONDARY	393	86.6	340	90.8	357	64	252
SPRINGBURN ACADEMY	560	82.8	464	82.8	464	64.3	360
SMITHYCROFT SECONDARY	662	74.7	495	80.5	533	65	430
JOHN BOSCO SECONDARY	278	96.8	269	97.6	271	66.5	185
GARTHAMLOCK SECONDARY	425	58.9	250	68.2	290	67.2	286
ST ROCH'S SECONDARY	593	61.1	362	68.1	404	68	403
ST MARGARET MARY'S SECONDARY	596	100	596	100	596	68.8	410
ST LEONARDS SECONDARY	538	92.3	497	92.3	497	71.3	384
ST AUGUSTINE'S SECONDARY	624	88.8	554	90.4	564	72	449
LOCHEND SECONDARY	747	93.1	695	96.9	724	72.8	544
CASTLEMILK HIGH	665	86.2	573	88.2	587	74	492

Appendix III

Mathematical Note on the Spearman Rank Coefficient

Correlation deals with situations where, for every measurement of a variable X (X_1, X_2, ... , ,X_n) there is a corresponding value of a second variable Y (Y_1, Y_2, ... , Y_n). The n pairs of variables (X_i , Y_i)(i = 1, 2, ..., n) can be represented by n points in the X, Y plane, forming a scatter diagram.



Sometimes, as in illustrations (1) and (2), the scatter diagram shows fairly clearly that there is a linear relationship between the sets of variables X and Y, but often as in (3) the nature of any relationship is not clear. A very useful quantity that is used to measure the spread of the points in the scatter diagram is the correlation coefficient.

Appendix III

It is given by the formula

$$r = \frac{\sum XY - n\overline{X}\,\overline{Y}}{\sqrt{((\sum X^2 - n\overline{X}^2)(\sum Y^2 - n\overline{Y}^2))}}, \qquad (I)$$

where, $\overline{X}$, $\overline{Y}$, are the means of X and Y, i.e. $\overline{X} = \frac{1}{n}(X_1 + X_2 + \ldots + X_n) = \frac{\sum X}{n}$,

$\overline{Y} = \frac{1}{n}(Y_1 + Y_2 + \ldots + Y_n) = \frac{\sum Y}{n}$, and all the sums involved are of the form $\sum_{i=1}^{n} X_i Y_i$,

i.e. over the n values involved. . From its definition, $-1 \le r \le 1$. Also,

for r close to 1, there is a linear relationship of positive gradient (as in (1) above),

for r close to -1, there is a linear relationship of negative gradient (as in (2)),

for r close to zero, there is no linear relationship (as in (3)) .

The Spearman rank correlation coefficient deals with the special case in which

$X_1, \ldots, X_n$ are the ranks 1, 2, ..., n and $Y_1, \ldots, Y_n$ are these same ranks in some order.

Here,

$\overline{X} = \overline{Y} = \frac{1}{2}(n+1)$, $\sum X^2 = \sum Y^2 = 1^2 + 2^2 + \ldots + n^2 = \frac{1}{6}n(n+1)(2n+1)$.

If the ranks X, Y, are denoted by r_1, r_2, then it can be checked algebraically that

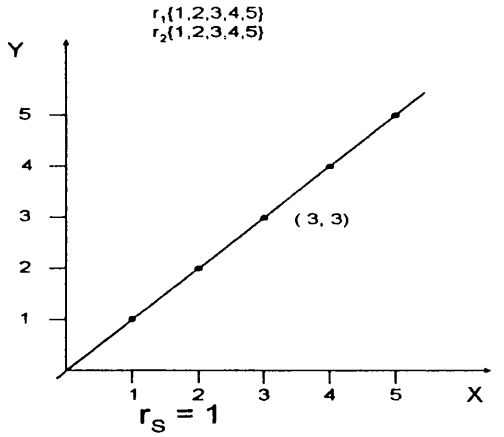
formula I becomes the Spearman Rank Correlation coefficient formula :

$$r_s = 1 - \frac{6\sum (r_1 - r_2)^2}{n(n^2 - 1)} . \qquad (II)$$

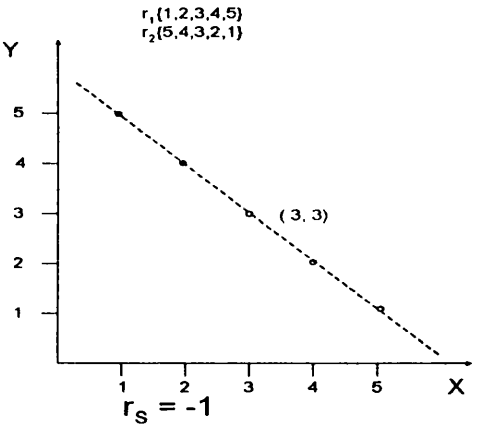
To illustrate how the coefficient reflects the nature of a scatter diagram, here are a

few correlations based on n = 5.

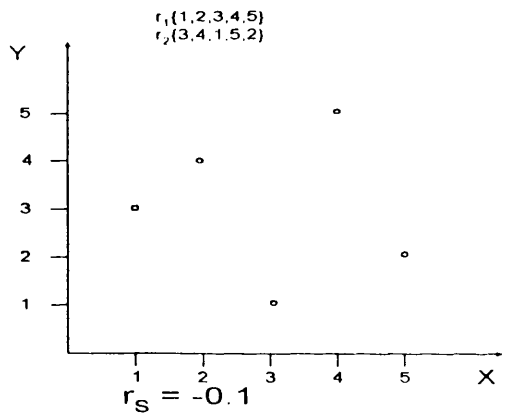
Appendix III



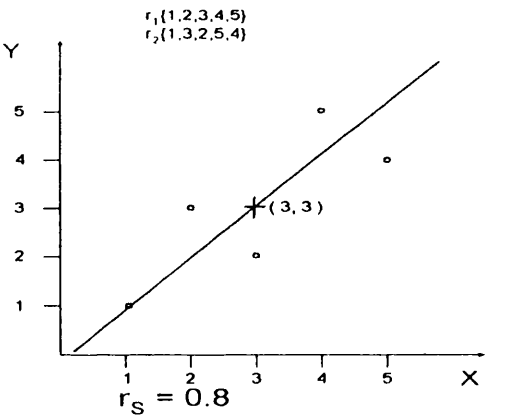
(positive correlation)



(negative correlation)



(no linear relationship)



(positive linear relationship)

In each case any line of best fit passes through the point $(\overline{X},\overline{Y})$, which for the Spearman setting is the point $\left(\frac{n+1}{2},\frac{n+1}{2}\right)$, giving the point (3, 3) when n = 5.

The correlation approach using ranks is especially useful when sources of data (e.g. schools) are best compared by their ranks relative to some measure (e.g. Clothing %, Attainment %, etc.) rather than by the measures themselves.

Appendix IV

Summer School schools with $|r_1-r_3|>5$

	old values			ranks for range 1 to 19		
Summer School schools	Clothing%	Attainment %		Clothing %	Attainment %	
	r_1	r_3	r_1-r_3	r_1	r_3	r_1-r_3
Castlemilk H(G)	1	15	-14	1	6	-5
St Margaret Mary's SS(G)	5	19. 5	-14. 5	2	9	-7
Springburn A(G)	10	3	7	3	1.5	1.5
St Gerard's SS(G)	11. 5	17. 5	-6	4	7.5	-3.5
Drumchapel H(G)	14	6	8	5	3	2
St Andrew's SS(G)	15. 5	23	-7. 5	6	10	-4
Bellarmine SS(G)	17	3	14	7	1.5	5.5
Wellington A(R)	18	24	-6	8	11	-3
All Saints' SS(G)	19	11	8	9	5	4
Govan H(G)	20	8	12	10	4	6
St Mirin's H(R)	22	73	-51	11	18	-7
St Mungo's A(G)	27	17. 5	9. 5	12	7.5	4.5
Greenock H(R)	29	43. 5	-14. 5	13	15	-2
St Stephen's H(R)	30	51	-21	14	16	-2
St Columba's H(D)	43	37. 5	5. 5	15	13	2
Port Glasgow H(R)	45	39	6	16	14	2
Notre Dame H(R)	52	75	-23	17	19	-2
Blantyre H(L)	64	25	39	18	12	6
Gleniffer H(R)	74	58. 5	15. 5	19	17	2

$$r_s=1-\frac{6 \times 329}{19 \times 360} \approx 1-0.29 = 0.71$$

The critical value for n=19 is 0.46 at the p=0.05 level

Appendix .V

Performance of Students at the University of Glasgow entering in the period 1986-93 from the 62 schools (SS + NSS)

Part 1 : 31 SS schools (Ranked by Clothing %)

(This code is used ; u - unassisted, a - assisted, t = u + a (total), n - did not attend SS :
(G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding, M - minimal standing)

School		D					ord					hon					G					M				
		Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total
Castlemilk H(G)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2					
	a	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	1	0	1					
	t	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	2	0	1	0	3	NONE				
	n	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2					
	t-n	1	0	0	0	1	0	2	0	0	2	0	0	1	0	1	3	1	1	0	5					
Lochend SS(G)	u	2	1	0	0	3	0	0	0	0	0	2	3	1	0	6	0	1	0	0	1	0	0	0	0	0
	a	0	0	0	0	0	1	0	1	0	2	0	0	0	1	1	1	1	0	0	2	0	0	0	0	0
	t	2	1	0	0	3	1	0	1	0	2	2	3	1	1	7	1	2	0	0	3	0	0	0	0	0
	n	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	t-n	2	2	0	0	4	1	0	1	0	2	2	3	1	1	7	1	2	0	0	3	1	0	0	0	1
St Augustines SS(G)	u	1	1	0	1	3					0					0					0	1	0	0	0	1
	a	1	1	0	0	2					0					0					0	1	1	0	0	2
	t	2	2	0	1	5			NONE		0			NONE		0			NONE		0	2	1	0	0	3
	n	0	0	0	1	1					0					0					0	0	0	0	0	0
	t-n	2	2	0	2	6					0					0					0	2	1	0	0	3
St Leonards SS(G)	u	2	0	0	0	2	1	0	0	0	1	2	2	0	2	6	2	1	0	0	3					0
	a	0	0	0	1	1	0	0	0	0	0	0	0	1	0	1	1	0	0	0	1					0
	t	2	0	0	1	3	1	0	0	0	1	2	2	1	2	7	3	1	0	0	4			NONE		0
	n	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1					0
	t-n	3	0	0	1	4	1	0	0	0	1	2	3	1	2	8	4	1	0	0	5					0
St Margaret Mary's SS(G)	u	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	1
	a	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
	t	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	1	0	0	1
	n	1	0	0	0	1	0	1	1	0	2	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
	t-n	2	0	0	0	2	0	1	1	0	2	0	4	0	0	4	1	0	1	0	2	0	1	0	0	1
St Roch's S (G)	u	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	t	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	1	0	0	1
	n	2	0	0	1	3	0	1	0	1	2	1	1	0	1	3	0	1	0	1	2	0	0	0	0	0
	t-n	2	0	1	1	4	0	1	0	1	2	1	1	0	1	3	0	2	0	2	4	0	1	0	0	1
Garthamlock SS (G)	u	2	0	0	1	3	1	1	0	1	3	3	1	1	1	6	2	0	0	0	2	0	1	0	0	1
	a	3	1	0	0	4	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0
	t	5	1	0	1	7	1	1	0	1	3	3	3	1	1	8	2	0	0	0	2	0	1	0	0	1
	n	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Appendix V

31 SS schools (Ranked by Clothing %)
(This code is used ; u - unassisted, a - assisted, t = u + a (total), n - did not attend SS :
(G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding, M - minimal standing)

School		D					ord					hon					G					M				
		Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total
Smithycroft SS (G)	u	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	a	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1					0
	t	0	0	0	1	1	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	NONE				0
	n	0	1	0	0	1	0	0	0	2	2	2	1	0	0	3	0	1	0	0	1					0
	t-n	0	1	0	1	2	1	0	0	2	3	2	1	0	0	3	0	1	1	0	2					0
Springburn A (G)	u	1	0	0	0	1					0					0					0					0
	a	0	0	0	0	0					0					0					0					0
	t	1	0	0	0	1	NONE				0	NONE				0	NONE				0	NONE				0
	n	0	0	0	0	0					0					0					0					0
	t-n	1	0	0	0	1					0					0					0					0
John Street SS (G)	u	0	0	0	0	0					0	0	0	0	1	1					0					0
	a	0	0	0	0	0					0	0	0	0	0	0					0					0
	t	0	0	0	0	0	NONE				0	0	0	0	1	1	NONE				0	NONE				0
	n	1	0	0	0	1					0	0	1	0	0	1					0					0
	t-n	1	0	0	0	1					0	0	1	0	1	2					0					0
St Gerard's SS (G)	u	0	0	0	0	0	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0					0
	a	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1					0
	t	0	0	0	0	0	1	0	0	0	1	1	1	1	0	3	0	1	0	0	1	NONE				0
	n	1	1	0	0	2	0	0	0	0	0	1	0	1	1	3	0	0	0	0	0					0
	t-n	1	1	0	0	2	1	0	0	0	1	2	1	2	1	6	0	1	0	0	1					0
Merksworth H(R)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1
	n	0	0	0	1	1	1	0	0	1	2	7	2	1	0	10	0	0	0	0	0	0	0	0	0	0
	t-n	0	0	0	1	1	1	0	0	1	2	7	2	1	0	10	1	0	0	0	1	0	0	1	0	1
Drumchapel H (G)	u	1	1	0	0	2	0	0	0	1	1	2	0	0	1	3					0	1	0	0	0	1
	a	1	0	0	0	1	0	1	0	0	1	0	0	1	0	1					0	0	0	0	0	0
	t	2	1	0	0	3	0	1	0	1	2	2	0	1	1	4	NONE				0	1	0	0	0	1
	n	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0					0	0	0	0	0	0
	t-n	2	1	0	0	3	1	1	0	1	3	2	0	1	1	4					0	1	0	0	0	1
St Andrew's SS (G)	u	2	0	0	0	2	0	0	0	0	0	2	1	0	0	3	0	0	0	0	0	0	1	0	0	1
	a	1	1	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
	t	3	1	0	0	4	0	1	0	0	1	2	1	0	0	3	0	0	0	1	1	0	1	0	0	1
	n	4	0	0	3	7	3	3	0	12	18	5	7	0	5	17	0	2	0	0	2	0	0	0	0	0

Appendix V

31 SS schools (Ranked by Clothing %)
(This code is used ; u - unassisted, a - assisted, t = u + a (total), n - did not attend SS :
(G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding, M - minimal standing)

School		D					ord					hon					G					M				
		Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total
Bellarmine S (G)	u					0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	a					0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	t			NONE		0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1
	n					0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
	t-n					0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	0	1	0	0	1
Wellington A (R)	u					0	0	0	0	0	0	0	0	0	0	0					0					0
	a					0	0	0	0	0	0	0	0	0	0	0					0					0
	t			NONE		0	0	0	0	0	0	0	0	0	0	0			NONE		0			NONE		0
	n					0	0	0	0	1	1	0	0	0	1	1					0					0
	t-n					0	0	0	0	1	1	0	0	0	1	1					0					0
All Saints	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0	0	0	0	0	0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0	0	0	0	0	0
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			NONE		0	0	0	0	0	0
	n	0	1	1	1	3	1	1	0	0	2	1	1	0	0	2					0	0	1	0	0	1
	t-n	0	1	1	1	3	1	1	0	0	2	1	1	0	0	2					0	0	1	0	0	1
Govan H (G)	u	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1					0					0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0					0
	t	1	0	0	0	1	0	0	0	0	0	1	0	0	0	1			NONE		0			NONE		0
	n	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0					0					0
	t-n	1	0	0	0	1	1	0	0	1	2	1	0	0	0	1					0					0
St Mirin's H(R)	u					0					0					0	0	1	0	0	1					0
	a					0					0					0	0	0	0	0	0					0
	t			NONE		0			NONE		0			NONE		0	0	1	0	0	1			NONE		0
	n					0					0					0	0	1	0	0	1					0
	t-n					0					0					0	0	2	0	0	2					0
Braidfield H(D)	u	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0
	a	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	1	0	0	0	1
	t	1	0	1	0	2	0	1	0	0	1	0	0	1	0	1	5	0	0	0	5	1	0	0	0	1
	n	2	0	1	3	6	1	2	0	0	3	5	2	0	1	8	0	0	0	0	0	0	0	0	1	1
	t-n	3	0	2	3	8	1	3	0	0	4	5	2	1	1	9	5	0	0	0	5	1	0	0	1	2
St Mungo's A(G)	u	0	0	0	0	0	0	0	1	1	2	1	0	0	2	3	2	4	1	1	8					0
	a	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	2	2	2	0	6					0
	t	0	0	1	0	1	0	0	2	1	3	1	0	0	2	3	4	6	3	1	14			NONE		0
	n	1	1	0	0	2	0	0	0	0	0	0	1	1	3	5	0	2	0	0	2					0

Appendix V

31 SS schools (Ranked by Clothing %)
(This code is used ; u - unassisted, a - assisted, t = u + a (total), n - did not attend SS :
(G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding, M - minimal standing)

School		D					ord					hon					G					M				
		Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total
Greenock H(R)	u	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0					0					0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0					0
	t	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0					0					0
	n	3	0	0	2	5	3	0	0	0	3	0	2	0	1	3	NONE				0	NONE				0
	t+n	4	0	0	2	6	3	0	0	0	3	0	2	0	1	3					0					0
St Stephen's H (R)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	1	4	0	0	1	0	1
	n	0	0	0	1	1	0	1	0	0	1	2	1	1	2	6	3	0	2	1	6	0	1	0	0	1
	t+n	0	0	0	1	1	0	1	0	0	1	2	1	1	2	6	3	2	3	2	10	0	1	1	0	2
John Ogilvie H (L)	u	1	0	0	0	1	0	0	0	0	0	1	0	1	1	3	3	3	0	0	6	1	0	0	0	1
	a	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	1	2	0	0	0	0	0
	t	1	0	0	0	1	0	0	0	0	0	2	0	1	1	4	3	4	0	1	8	1	0	0	0	1
	n	1	2	0	0	3	1	2	0	1	4	2	0	0	4	6	1	1	0	1	3	0	0	0	0	0
	t+n	2	2	0	0	4	1	2	0	1	4	4	0	1	5	10	4	5	0	2	11	1	0	0	0	1
St Columbas H (D)	u	1	0	0	0	1	1	0	0	0	1	0	1	0	0	1	3	1	0	1	5					
	a	1	1	1	0	3	1	0	0	0	1	0	0	0	0	0	1	1	1	0	3					
	t	2	1	1	0	4	2	0	0	0	2	0	1	0	0	1	4	2	1	1	8	NONE				
	n	3	1	0	1	5	0	2	0	1	3	2	3	0	1	6	3	4	0	2	9					
	t+n	5	2	1	1	9	2	2	0	1	5	2	4	0	1	7	7	6	1	3	17					
Port Glasgow H (R)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1					0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	NONE				0
	n	1	3	0	4	8	0	1	0	1	2	6	1	1	3	11	2	0	0	4	6					0
	t+n	1	3	0	4	8	0	1	0	1	2	6	1	1	3	11	2	1	0	4	7					0
Notre Dame H (R)	u	1	0	0	1	2	0	0	0	1	1	2	0	0	0	2	0	2	0	3	5	0	0	0	0	0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	4
	t	1	0	0	1	2	0	0	0	1	1	2	0	0	0	2	0	2	0	3	5	1	3	0	0	4
	n	2	2	0	0	4	5	3	0	3	11	3	6	1	4	14	8	1	0	1	10	0	0	0	0	0
	t+n	3	2	0	1	6	5	3	0	4	12	5	6	1	4	16	8	3	0	4	15	1	3	0	0	4
Barrhead H (R)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0
	n	1	0	0	0	1	2	1	0	0	3	1	3	0	3	7	2	1	0	2	5	NONE				0
	t+n	1	0	0	0	1	2	1	0	0	3	1	3	0	3	7	2	1	0	2	5					0

Appendix V

31 SS schools (Ranked by Clothing %)
(This code is used ; u - unassisted, a - assisted, t = u + a (total), n - did not attend SS :
(G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding. M - minimal standing)

School		D					ord					hon					G					M				
		Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total	Sc	Arts	SocSc	Other	Total
Blantyre H (L)	a	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3					0
	t	1	1	0	0	2	0	1	0	0	1	1	1	1	0	3	4	1	0	5	10			NONE		0
	n	0	2	0	2	4	1	1	0	2	4	3	2	0	2	7	2	0	0	1	3					0
	t-n	1	3	0	2	6	1	2	0	2	5	4	3	1	2	10	6	1	0	6	13					0
St Luke's H (R)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
	n	1	2	0	0	3	2	0	0	2	4	2	1	1	0	4	2	1	0	0	3	1	0	0	0	1
	t-n	1	2	0	0	3	2	0	0	2	4	2	1	1	0	4	2	1	0	0	3	2	0	0	0	2
Gleniffer H(R)	u	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0
	a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	t	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	1	0	0	1
	n	0	1	1	2	4	0	1	1	1	3	4	6	1	1	12	5	5	4	2	16	0	0	0	0	0
	t-n	0	1	1	2	4	0	1	1	1	3	4	6	1	1	12	5	5	4	4	18	0	1	0	0	1

Appendix V

Part 2 : 31 NSS schools (Ranked by Clothing %)
(This code is used ; (G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding, M - minimal standing)

	D					ord					hon					G					M				
School	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total
John Bosco S(G)	1	0	0	1	2	1	0	0	0	1	1	1	0	1	3	2	0	0	1	3	0	0	0	0	0
Crookston Castle SS(G)	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0
Victoria Drive SS(G)	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	2	0	1	0	3	0	0	0	0	0
Whitehill SS(G)	0	0	0	1	1	0	0	0	1	1	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0
North Kelvinside SS(G)	5	1	1	0	7	0	1	0	0	1	3	2	0	0	5	0	0	0	0	0	0	0	0	0	0
Braidhurst H(L)	0	0	0	0	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Woodside SS(G)	5	0	1	5	11	5	0	1	2	8	7	1	1	4	13	4	1	2	9	16	1	1	0	0	2
Clyde Valley H(L)	2	0	0	0	2	1	1	0	1	3	1	0	1	0	2	1	2	0	1	4	2	0	0	0	2
Eastbank A(G)	0	0	1	1	2	1	1	0	0	2	1	1	0	3	5	3	1	0	2	6	1	0	0	0	1
Rosehall H(L)	3	0	0	0	3	2	1	0	2	5	1	1	0	1	3	2	0	0	0	2	0	0	0	0	0
Knightswood SS(G)	0	1	0	0	1	1	0	0	2	3	6	0	0	0	6	2	0	1	0	3	2	0	0	0	2
St Margaret's H(L)	4	1	0	1	6	6	6	1	3	16	9	5	1	2	17	5	4	2	4	15	2	0	0	0	2
Bellahouston A(G)	1	0	1	0	2	2	1	0	3	6	5	2	2	2	11	2	1	0	1	4	0	0	0	0	0
Columba H(L)	2	0	0	0	2	2	1	0	0	3	3	1	0	2	6	6	1	0	1	8	0	0	0	0	0
Notre Dame H(G)	0	2	1	1	4	5	5	1	2	13	5	6	1	5	17	7	3	2	3	15	1	0	0	0	1
St Columba's H(R)	4	0	0	0	4	2	5	1	1	9	1	1	0	5	7	6	5	2	5	18	0	0	0	1	1
St Thomas Aquina's SS(G)	1	1	1	0	3	1	0	1	0	2	1	1	0	0	2	1	2	0	2	5	0	1	0	1	2
John Paul A (G)	3	0	0	1	4	2	4	1	2	9	4	1	1	3	9	10	5	0	3	18	3	0	0	0	3
Our Lady's H(L)	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
Bellshill A(L)	0	0	0	0	0	0	0	0	0	0	4	0	0	4	8	2	1	0	2	5	0	0	0	0	0
Airdrie A(L)	5	1	0	3	9	3	2	0	3	8	4	2	1	3	10	6	7	1	4	18	2	0	0	0	2
Linwood H(R)	0	0	0	0	0	0	0	0	2	2	2	0	0	0	2	1	3	0	0	4	0	0	0	0	0
Clydebank H(D)	1	2	0	1	4	5	0	0	0	5	10	4	1	2	17	5	4	0	2	11	0	0	0	0	0
Hillhead H(G)	4	1	0	3	8	6	1	1	2	10	7	4	1	5	17	4	3	1	8	16	1	0	1	0	2
Cardinal Newman H(L)	3	0	0	1	4	7	1	2	9	19	7	1	1	8	17	4	5	3	7	19	0	1	0	1	2
Our Lady's and St Patrick's (D)	2	1	0	0	3	4	2	0	2	8	3	4	0	3	10	8	10	3	5	26	0	0	0	0	0
Trinity H(G)	1	3	0	1	5	5	5	2	0	12	4	1	0	1	6	7	4	0	1	12	0	0	0	0	0

Appendix V

Part 2 : 31 NSS schools (Ranked by Clothing %)
(This code is used ; (G) - Glasgow, (D) - Dunbarton, (R) - Renfrew, (L) - Lanark(Strathclyde District);
D - drop-out, ord - ordinary degree, hon - honours degree, G - goodstanding, M - minimal standing)

School	D					ord					hon					G					M				
	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total	Sc	Arts	Soc Sc	Other	Total
Cleveden SS (G)	1	1	0	2	4	2	0	0	1	3	9	2	1	4	16	13	2	0	3	18	1	1	1	0	3
All 31 NSS Schools	54	15	7	27	103	65	45	11	45	166	108	51	15	66	240	129	74	22	77	302	16	4	2	5	27

Appendix VI

Interview schedules for the longitudinal study

Interview One **July 1992 Summer School**

Name: **Date:** **Age:**

School/college:

Intended course at university:

Personal background:

What previous qualifications do you hold?

Does anyone in your immediate family have a history of higher education?

Does anyone in your extended family/other have a history of higher education?

Academic:

What are your academic concerns?

What are your personal expectations?

What are your personal concerns?

Higher education:

Why have you selected the University of Glasgow as your first choice of university?

What is your self-assessment of your academic future?

How do you assess your involvement in university life - involved/not involved?

Interview Two **August 1992 Summer School**

Name: **Date:**

Personal background:

How are your your friends/family reacting to you being at university?

Academic progress:

How are you progressing on Summer School(details of progress)?

How would you assess the levels of ease/difficulty of the subjects you are studying?

Where would you say your academic weaknesses lie?

How satisfied are you with the course/subjects you are studying?

Have you made any changes of subjects since starting Summer School?

Non-academic:

Are you mixing socially?

Do you feel isolated?

Have you used the library/students' union/sports facilities?

Have you any unresolved worries(from Interview One)?

Higher education:

Is the University of Glasgow still your first choice of university?

Do you anticipate any new difficulties?

Interview Three **September 1992 Summer School/University**

Name: **Date:**

Personal background:

What would you say has been the biggest change in you since attending Summer School?

How are your friends/family reacting to you?

Academic:

What is your higher education destination?

What are your feeling about this course? Are you satisfied with your destination?

How confident are you about succeeding at university?

What are your academic worries/difficulties at the moment?

non-academic:

What are your personal worries/problems?

Where would you go for help? Within the University? Out with the University?

Career:

What are your career aspirations?

Why have you opted for higher education and not employment?

Interview Four **December 1992 University of Glasgow**

Name: **Date:**

School/SWAP/non-SWAP:

Faculty:

University of Glasgow:

What are the good things/bad things about the University?

Have there been any surprises?

Do you feel confident or do you feel an outsider?

What is the single most concerning thing about attending University?

Academic:

How are you progressing academically?(record details)

Do you have any academic worries/difficulties?

What are your current levels of satisfaction with your course/subjects?

Have you made any changes of subject?

Have there been any new post Summer School problems?

Personal:

Is University fun?

Have you achieved a balance between your academic and social life?

Have you had any personal problems? If so, how did you cope?

Did you ask a University source for help?

Financial:

Do you have any financial problems?

Do you have a part-time job?

What type of employment do you have?

How many hours do you work?

Interview Five **May 1993 University of Glasgow**

Name: **Date:**

School/SWAP/non-SWAP:

Faculty:

Academic:

How well have you been progressing on your course?(record details)

Will you be getting class tickets in all your subjects?

What are the main academic problems you have encountered?

Financial:

What is your financial position at present?

Do you have a part-time job? How many hours per week?

Is this situation a change from previously?

Personal:

Do you have any personal problems currently?(discuss nature)

Self-assessment of first year of study:

In which ways would you have approached your first year differently?

Interview Six **December 1993 University of Glasgow**

Name: **Date:**

School/SWAP/non-SWAP:

Faculty:

Academic:

Did you pass your first year examinations?(record exemptions/first time passes/resits/fails)

Which subjects are you studying this year?

How are you progressing?

Have their been any academic problems?

If so, how did you cope?

What are your degree aspirations currently?(Honours/Ordinary)

Finance:

How are your finances at the moment?

Do you have a part-time job? How many hours per week?

Did you have a summer job? Hours per week?

If so, were you able to save any money?

Have you taken a student loan?

Do you have a bank loan? loan from parents/friends?

Personal:

Have you had any personal problems?

If so, did you use a University source of help?

How socially active are you in the University?

Are you a member of a club/society?

Interview Seven **October 1994 University of Glasgow**

Name: **Date:**

School/SWAP/non-SWAP:

Faculty:

Academic:

Did you pass all of your 2nd year subjects?(record exemptions/first time passes/resits/fails?

What are you studying this year? At what levels? Hons/Ord?

What if any academic problems have you encountered since the last interview?

How did you cope with the problems you encountered?

What do you imagine your employment/postgraduate prospects will be?

Finances:

Do you have a part-time job currently? How many hours per week?

Did you have a summer Job? Hours per week?

Did you save any money over the summer?

How are your finances currently?

How much do you owe in total?

How much is your Student Loan?

Do you organise a weekly/monthly/termly budget? If so do you stick to it?

Personal:

Have you had any personal problems that have affected your academic work?

Have you discussed personal problems with any University source of help?

Are you socially active in the University? sports facilities/students' unions/societies?

Value added:

What do you think have been the benefits to you in studying for a degree?

Do these benefits outweigh the disadvantages of being a student?

Given the time again would you have used it differently? Different university/course/not studied?

Would you recommend undertaking a degree to your family/friends?

Summary:

State the three biggest problems/most awkward times over the last 2 years

How did you cope with them?

Could the University have done anything to prevent them?

What advice would you pass on now to a new student?

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