PATHWAYS TO WORK: A MICRO-STUDY OF YOUNG PEOPLE THROUGH POST-COMPULSORY EDUCATION TO WORK

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Abstract

Social background and gender have long been recognised as factors which shape the quality of post-school outcomes. The children of professional families and girls have stayed longer in school and achieved better than the children of non-professional families and boys. Governments, both in Australia and around the world, use policy to counter this persistent problem. The focus of these policies on preventing school dropout presumes that the longer a young person is engaged in school the better the post-school outcome. This is still not always the case.

One such policy was the Victorian Certificate of Education (VCE) which, amongst other things, increased the breadth of post-compulsory school curriculum to address the needs of an increasingly diverse student body and act as a conductor of relevant learning through these years.

The aim of this work is threefold

- A better understanding of both the pathways, including curriculum, taken through school taken by each of the members of the Class of ’95 and the work outcomes of the school experience, including academic achievement, of each of them.

- A better understanding the connection, if any, of these pathways and outcomes with individual family background and gender.

- An appraisal of the contribution of the school in neutralising social origin as a factor determining the quality of post-school outcomes.

In order to explore the quality of post-school outcomes this research follows the pathways through secondary school to work of one hundred and sixty-three young people who commenced their secondary school journey in Year 7 together at the same college. A longitudinal case study, this work explores the journey of these students for
thirteen years by which time all were established in work. The secondary education of this cohort was provided by a non-selective co-educational Catholic Regional College located in the outer urban fringe of Melbourne. The cohort was socially diverse and dominated by children from the families of non-professional white-collar workers. This dominance increased over time since students from this social background were the least likely to drop-out of school for work.

It was found that social background permeated all aspects of school experience from Year 7 to Year 12 academic achievement to the decision to stay on in school and choice of subjects in the post-compulsory secondary school years. The latter influenced competitiveness for university and TAFE course places. All in the cohort who stayed in school passed the VCE. But competitiveness for university and TAFE course places was again aligned on social and gender grounds which favoured the traditional users of education who studied the traditional VCE. This meant that school policy of providing a broad based curriculum aimed at meeting needs of the very diverse student population was in tension with the limiting policy of university course selectors.
Declaration

This is to certify that

i. the thesis comprises only my original work towards the PhD except where indicated in the Preface,

ii. due acknowledgement has been made in the text to all other material used,

iii. the thesis is less than 100,000 words in length, exclusive of tables, maps, bibliographies, footnotes and appendices.

Signature:

__________________________
Frances Antoinette Trembath
Acknowledgments

This is for Michael who was the first student I met at Soton College and the Class of ’95 for without their willingness to participate this research could not have been undertaken.

I wish to thank Professor Richard Teese for his guidance, advice and support throughout this research and staff from the Centre for Post-compulsory Education and Lifelong Learning, for their support over the years of this project.
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CHAPTER 1

Introduction

Equal school input—unequal school output, gender and social class

In contemporary Australia, government policy is directed at keeping young people in school for as long as possible with a view to giving the same young people skills that will both make them employable and serve as a basis for further education when needed over a life-time. Retention at school improved over the last quarter of the 20th Century. So too did the level of school achievement and tertiary study levels. However analysis reveals an educational policy that purports to provide equal opportunities for young people, regardless of aboriginality, gender, ethnicity, geographic location and socio-economic standing, but fails to produce equitable outcomes. This happens from system to system, school to school, and as this research will show, between students within each school.

Commentators such as Teese and Polesel (2003: pp 9 – 10) draw attention to the fact that in the mid-1990s in Australia growth in school retention almost stalled. James (2002) has showed that aspirations for post-school study declined during the same period. In a work climate in which industry was demanding higher credentials for entry, rapid technological change was forcing a work-force into a pattern of ongoing training and youth labour market shortages continued, students who failed to graduate secondary school, as well as those who did graduate but achieved poor grades and a low Tertiary Entrance Rank, were at risk of poor employment outcomes1. And this experience continues.

1 In reality the Tertiary Entrance Rank is simply a measure of relative academic position of a student in certain conditions and relates to the selection for university and TAFE courses. It is not a measure of employability nor was it ever meant to be. In practice, however, employers like the selection officers of university and TAFE courses have latched on to the single measure and incorporated it into selection procedures for jobs. Because of this the measure has been included as an indicator of school achievement in the above discussion.
When the Ministerial Review of Post-compulsory Education and Training Pathways in Victoria (the Kirby Report. 2000: pp 47-72) reflected on the outcome of the very significant changes to educational policy in Victoria in the 1990s, it found that high levels of early school leaving persisted in some regions and amongst some groups. And, in addition, even that some groups of completing school students faced a similar fate in the work place displaying a poor level of transition to further study.

The groups marginalised by their experience with education before the changes of the 1990s were, in fact, still suffering the same fate. This is a global problem and researchers throughout the world have shown that the suite of factors mentioned above, including those of family background and gender, continue to contribute to poor school to work transitions by young people.

But most of this research has focused on the analysis of large cohorts of students and consequent policy recommendations are for whole populations of students. In some cases in Australia there has been comment that the effect of low socio-economic background on academic achievement is declining (Marks, Fleming, Long & McMillan. 2000: p 8), although this would seem to be in contrast with the findings of the Kirby Report (2000).

In fact both socio-economic circumstance and gender continue to impact on both the decision to stay in school and academic success. Young people from professional families, Bourdieu’s (1979) inheritors, stay longer in school and are better at it than the group of young people at whom the drastic educational change of the 1990s was directed – the newcomers to education.² There is still significant influence on education exerted by social class, transmitted by way of Bourdieu’s cultural capital, and girls continue to be more inclined than boys to stay on in school longer and achieve better.

² Through this work the children of professionals will be termed inheritors and those of non-professional white-collar workers, tradesmen and unskilled manual workers will be termed newcomers.
Cultural capital and achievement in Australian secondary schools

It is now almost fifty years since Bourdieu expounded his thesis that academic outcome was related to the level of family cultural capital. He showed that social background, not just scholarship, determined who went to university and who did not. The successful university candidate was the child of “professionals” and university access rates declined as parental job status moved down the scale from professionals to unskilled manual workers—cited as farm workers by Bourdieu and Passeron (1979: p 2).

In Bourdieu’s France, access to university was impossible, possible, or natural depending on the social background of the student (Bourdieu and Passeron. 1979: p 3). Those who faced the greatest challenge to enter university were the children of unskilled workers and those with the greatest advantage were the children of the ruling classes—the socially elite—of France.

For Bourdieu, the answer to the dominance in tertiary education of those from elite families, in which many parents had already experienced a tertiary education, arose from the cultural capital such an education had brought to the household. He argued that the experience each of the children of this social group brought to the classroom from home had been shaped by exposure to literature, music and the arts of all kinds. It was a home in which there would be talk, debate and consideration of politics, philosophies, theories and opinions. There was an expectation by parents that their child would follow their pathway through education, including university, to work, and this was an attitude to life these families shared with each other and through their social and work networks.

Simply the level of familiarity of the student with university life was seen by Bourdieu and Passeron (1979: p5) as a support in choosing to study for a degree or not. There were other factors which increased academic inhibition as family social background declined but,
Of all the differentiating factors, social origin is doubtless the one whose influence bears most strongly on the student world, more strongly, at any rate, than sex or age (Bourdieu and Passeron, 1979: p 8).

Social origin shapes family cultural capital and the latter shapes the outcome of the interaction of a child with the educational system encountered.

For the daughters and sons of professionals, education is a vehicle they may use to travel through schooling to the career of their choice. The parents of these children had also trodden this path so its demands are known to parents and child alike. Children of non-professional workers also perceive education to be a vehicle they can take to travel the distance between childhood and professional work in adulthood. But these children are from families who have not trodden the path before. Even in circumstances where parents have, during their adulthood, undertaken further study, their experience has been of a different order. These parents have balanced adulthood and its responsibilities, and study. Their children are required to balance growing to maturity with study and in a context little experienced by the parents. No matter the level of parental empathy, these children are breaking new ground in education and in life.

Regardless of family background, parental motive is the same where support for a full education is present. But even in this case the parental driving force can vary. A parent who has followed a full length educational pathway is able to share that experience with her or his child. But the parent who left education before completion is not. Although the drive for education can often be filled with the disappointment that the parent did not complete it, there is a difference between the parent who encourages their child to stay in education through experience and the parent who drives their child to stay through unintentional guilt. “I know it is hard, I found it so” is different to “I didn’t have your opportunities—you make the best of them while you can so that you grow up to get a better job than mine”.

Both attitudes are well intentioned, both sets of parents want their children to use education to achieve occupational goals they themselves see as of value, but the
children of parents who have not gained a degree are, at some point in their secondary education, moving into an unknown education space often, with temerity engendered by their school experience. Indeed, this is the case for the cohort whose school experience forms the basis for this study: the Class of ’95 at Soton College, a Catholic co-educational school located on the urban fringe of Melbourne.\(^3\)

The school experience at Soton College is shaped by policy and programs which embolden all students to challenge themselves to achieve, both as citizens and academically. The college actively promotes social awareness amongst students and publicly lauds achievement in all student ventures including the academic program.

Social inclusion is a fundamental goal of Soton College, which is non-selective in its recruitment of students\(^4\). But even whilst espousing this policy it must be pointed out that being Catholic in itself creates a filter for students. Catholic students make up the majority of applicants and enrolments. Being other than Catholic does not exclude children from applying for a place, but parents who are non-Catholic would have to accept that the school’s religious values are not their own if they wanted their child to go to school at Soton College.

Simply being Catholic establishes a filter or selection mechanism of enrolments and some form of selection criteria imposed on enrolments. It distinguishes Soton College from non-Catholic schools and this in itself is a factor which shapes post-school outcomes.\(^5\)

A Catholic background forms part of the “big picture”, often unaddressed in the study of social advantage and school experience, but it does not modify socio-economic

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\(^3\) Soton College is the Catholic Regional College which is the centre of this work. The cohort of students who are the focus of this case study will be referred to throughout as the Class of ’95 which was their graduating year. All students in the cohort attended Soton College from Year 7 to the point at which they exited school for higher study or work.

\(^4\) Most enrolling students were at least nominally Catholic but the school did not only accept Catholic children. The number of non-Catholic students who were accepted was limited by guidelines set by the Archdiocese of Melbourne. Amongst the students in this cohort there were non-Catholic students, Catholic students whose previous education had been in non-Catholic schools and those for whom all schooling had been undertaken in Catholic schools.

\(^5\) This is a factor which attracts a word of caution from Lareau (2000: p 189) who sees this as a distinctive part of the social advantage experienced by one school compared to another.
differences that emerge in academic achievement. It will be shown that, despite a shared school experience, the achievement of the members of the Class of ’95 declined as family social class declined.

Differences in school achievement based on social class happen in contemporary Australian secondary schools, just as Laureau (2000) found that they occurred in American elementary schools. Bourdieu’s (1979) theory of cultural capital and its influence on academic opportunity and achievement was formed in an era of educational change in Europe. But almost half a century later and thousands of miles away in outer urban Melbourne this theory is still applicable. Cultural capital continues to delineate the scholastic achievement of inheritors from that of newcomers in full secondary education and influence early school leaving.

The mechanism by which levels of family cultural capital influence the quality of post-school outcomes might vary between countries and over time. Whereas Bourdieu related the influence to the home based exposure of each student to activities such as literature, music, art and theatre, Lareau (2000) has drawn on the American milieu to show that the school experience of American middle-class students is different from the school experience of working class Americans. Her investigation shows that although the cultural capital of the family background may vary from that identified by Bourdieu, middle-class American families interact differently from working-class parents with the institutions which shape their children’s learning. A consequence of this is unequal learning outcomes. Both Bourdieu (1979) and later Lareau (2000) have been able to tie the differences in home background to the perpetuation of educational disadvantage.

In Australia, however, Teese (2000) has been able to show that continuity of social privilege by the ruling classes emerges from their effective use of the educational system, which despite political and reformist rhetoric appears to be designed specifically for inheritors—albeit unintentionally. Teese (2000) shows that young people from working-class families and even those from the families of non-professional white-collar workers find it harder to effectively engage with the
curriculum and master the educational and university selection systems than do their inheritor counterparts.

Lareau (2000: p 190) talks of the need for analysis of social class and school outcomes to include “the bigger picture” or social and educational background in such analysis. In Australia the ‘big picture’ has been omitted from much of the analysis of school outcome differences and social class. For instance, although school type and system is usually taken into account between school differences are often neglected. Yet at Lareau points out, individual schools are not “benign or neutral” (2000: p 190) instead they provide the catalyst for learning to take place and some are more effective catalysts than others.

The system provides a social stratification of education, with the poorest performing students congregating in certain of the Government schools and the best performing students cloistered in the independent schools where superior resources couple with a high level of family cultural capital to generally buffer them from a poor school outcome. The academic performance of Catholic children in non-selective Catholic schools falls somewhere between that of government and independent schools. This tripartite system of schools contributes to the development of structural inequality in post-school outcomes for Australian youth.

How pernicious these inequalities are! They not only distinguish between the outcomes of school systems but penetrate into the classrooms themselves where curriculum filters the achievement of inheritors and newcomers. And, like a virus, the inequalities transcend any inhibiting educational barriers—and there are few—and survive from one educational change to the next. Sometimes, as in the first months of the Victorian Certificate of Education (VCE), a change will dampen the effects but it is only a matter of time before the new system is reshaped to allow a return to the old.

For instance, for a brief period only at the introduction of the VCE, the credential that was designed to even out the inequalities of post-compulsory education, there was some semblance of equal post-school opportunity for those who stayed on to complete the certificate. Achievement, although scaled, was treated equally across the full range
of VCE subjects and all that students achieved contributed on an equal basis to the university selection process (VTAC. 1992: pp 6 – 12).

But the period was brief and within two years of the first VCE subjects being introduced a new selection process known as the Tertiary Entrance Rank (TER) modified achievement by the subject in which it was gained and consequently either rewarded or discounted the study scores gained (VTAC. 1994b: pp 7-11).

It is also questionable that achievement reflected only the student’s abilities. As this study will show, it is likely that even in this period achievement in the VCE was strongly effected by socio-economic background at least. But in the initial stages of the VCE, there was some parity of post-school opportunity. This was mainly a consequence of the broad curriculum the certificate offered students.

This period was far too short lived to influence the outcomes of the students of this case study. By the time these young people, the Class of ’95, entered the post-compulsory phase of their secondary education, the education system had resettled itself into one which used curriculum to drive a wedge between the achievement of inheritors and that of the newcomers. The latter, having assessed the value of education in their future life, had almost naively trusted its promise and stayed to complete Year 12 with the intention of completing a university degree but found that the selection process increased the risk of missing out on a university place.

Equality of educational output and the Class of ’95

This case study will focus on the Class of ’95, a group of one hundred and sixty-three young people who all attended a Catholic Regional College in a southern suburb of Melbourne for the period of their secondary school life.

The detailed analysis of the progress of each member of the Class of ’95 will show that even when students are exposed to the same educational system, the same curriculum

6 In the Tertiary Entrance Score (TES) which preceded the Tertiary Entrance Rank each VCE study (subject) was “accorded equal weight” in the calculation VTAC. (1992: Section 4.2 p 6). This meant that choice of VCE subjects did not influence the TES although a successful tertiary course applicant would have to meet any demands for prescribed subjects to be eligible for a place.
and against an almost identical backdrop or big picture for each, the quality of academic achievement and outcome is strongly aligned with social background.


This too was the pattern of education displayed by the Class of ’95. Some inheritors left school before completion but a greater proportion of newcomers did the same. Of those who stayed, all but six (one inheritor and five newcomers), expressed an interest in a university course but inheritors were more likely than newcomers to have the “right” subjects to attract the more competitive Tertiary Entrance Rank (TER) 7.

The inheritors in the Class of ’95 gained a significantly higher aggregate study score than the newcomers. They gained a far more competitive TER than newcomers. In the mandatory English subject, inheritors gained a median study score 4 per cent higher than that of newcomers and they were almost twice as likely to choose at least the preparatory mathematics subject, Mathematical Methods 8. In other words they were more likely to successfully engage the curriculum that counted for university entrance than their newcomer classmates.

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7 The use, by university course selection officers, of the TER meant that successful applicants were those who gained appropriate study scores in those subjects deemed to be acceptable for university study. TERs were a function of achievement and VCE subjects studied.

8 Social background

<table>
<thead>
<tr>
<th>Median study score</th>
<th>Median TER</th>
<th>Median English score</th>
<th>At least preparatory mathematics</th>
<th>No Year 12 mathematics study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritors (N = 25)</td>
<td>172</td>
<td>76.67</td>
<td>64%</td>
<td>16%</td>
</tr>
<tr>
<td>Newcomers (N = 103)</td>
<td>160</td>
<td>59.35</td>
<td>33</td>
<td>37%</td>
</tr>
</tbody>
</table>
The effect of gender was also clear cut. If achievement is measured by the aggregation of VCE study scores, then a far greater proportion of girls to boys were found at the highest end of the scale. At the lowest end the converse was true and boys were present in a far higher proportion than girls. But this difference was even higher when gender and socio-economic background were combined.

Competitiveness for university places, measured by TER, followed a similar pattern at the higher end, with girls congregating in the highest quintile of ranks but at the lowest quintile there was little gender difference amongst the few members of the Class of ’95 at this level.

The contemporary Australian big picture in education

As Teese (2000) has noted, in contemporary Australia inheritors’ success with curriculum allows them to better dominate university access, a fact in keeping with the situation in France analysed by Bourdieu and Passeron (1979) decades ago.

Gaining a university place is a much sought after prize by some which leads to potential social power. Improved job access, job stability and higher incomes are the rewards of secondary school success followed by a university degree. But limited university places create a level of competition in which only the most academically resilient take the prize. And the academically resilient are more likely to be inheritors than newcomers. It is inheritors who can most effectively use the curriculum to elicit from it the least challenging pathway to social success. Newcomers seeking social mobility are placed in a level of steeper competition than are inheritors; their access to university degrees is restricted to a steeper gradient of learning than their inheritor classmates.

The privileged daughters and sons of professional people, moneyed people and those of the ambitious upper middle class are often successful students. In Australia, in which a tripartite education system supports social segregation, inheritors can access elite selective schools. The outcome of this is a privileged education. But this study will show that even in a school in which inheritors form a small part of the school
community they are able to dominate academic success through a more efficient use of curriculum.

This fact makes nonsense of the current Australian political rhetoric of educational change that focuses on removing unequal school outcomes by providing good teachers in good schools for children but ignores the discriminatory role of curriculum in post-school outcomes. Good teachers are effective conduits of subject content to all students they teach providing they have the freedom and the resources that allow them to interpret the needs of the curriculum to suit the needs of each student and not just the academically dominant social group—inheritors.

The drastic education reform in Victoria, through the VCE, has not achieved the equality in educational outcomes it was designed for because the intended focus of the credential has been modified and almost lost as universities have regained control over secondary school curriculum. By the time the Class of '95 reached the post-compulsory stage of their education universities exerted their control over the curriculum in two ways:

- They overtly dictated the VCE subjects to be studied by a successful applicant for each course. These subject prescriptions were published to Year 10 students engaged in choosing their subject pathway through the VCE, thus forcing students to choose VCE subjects demanded for university entrance that were not always those in which the student might be successful. In effect the university selection process commences at this point in a child’s school-life.

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9 VCE subjects prescribed by the universities are published two years prior to the end of Year 12 by the Victorian Tertiary Admissions Centre on behalf of the Victorian Vice-Chancellors Committee.

10 Universities must lose many potentially successful students at this point. Faced with overwhelming commitment to subjects of little interest students compromise career goals and choose what they like rather than all that is demanded. For example, a quite competent mathematician, a newcomer, who was not a member of the Class of '95 but of the Class of '96, chose Fine Art subjects in the first year of the VCE rather than preparatory mathematics. In the last term of his first year of the VCE he decided that he would study Geomatic Engineering when he left Soton College but he needed preparatory mathematics to do this. His success, which ended in a PhD in Geomatic Engineering, involved “catching-up” almost a year’s work in the higher mathematics. That he achieved this is an indication of both his commitment and the preparedness of his teacher to work with him on a one-on-one program in mathematics.
• They supported the introduction of a university selection process, the TER, which discriminated between VCE subjects in determining the relative eligibility of each applicant for a university course.

The use of both these discriminators in the selection of university course applicants meant that unwary VCE students could study a subject which was unwanted by a university course to which they applied and in which achievement was also discounted. This then reduced the student’s relative competitiveness for other courses in which the subject was acceptable for entry purposes.

These two actions by universities, both of which emerged in the early days of the VCE, effectively dictated the VCE subjects that could be offered by successful schools and inhibited the freedom of teachers to adapt curriculum to suit the needs of their students and not the demands of universities. As will be seen later in this work and on the brink of post-compulsory education, many students were forced to make a choice between travelling the VCE pathway via subjects they liked and in which they felt they had competence or challenging themselves to continue on in education in subjects in which they felt ill at ease and had already experienced poor results. (Deirdre, who was a newcomer from the Class of ’95, was one such student. Her story, which illustrates this point, is told on page 352 in this study)

At Soton College, inheritors from the Class of ’95 who had displayed success in the higher levels of mathematics and English as well as other subjects throughout the secondary school years to Year 10 did not find the above decision as confronting as newcomers. Newcomers amongst the Class of ’95 had displayed lower levels of success in the traditional subjects of English and higher level mathematics and therefore were more likely to be challenged by the choice of VCE subjects.

Analysis of the impact of curriculum on the ultimate success of secondary school education in gaining equitable outcomes for students regardless of social background must consider the effect upon all students. This effect is not just that between regions or from school to school, but at an individual level, because learning is an individual
action. It is the individual who learns or fails to learn and it is an individual who successfully achieves a positive post-school outcome or who does not.

There is also a strong relationship between gender and achievement and gender and the quality of post-school outcome. This would seem to be an independent factor affecting outcomes but it is more likely to be related to social background. Traditionally girls do better in areas of the curriculum like English and humanities than boys do. At the same time some boys do better than girls at mathematics and the physical sciences, but some boys don’t. (Collins, Kenway and McLeod. 2000: p 53). It is probably more accurate to say that school achievement by inheritor girls can be better than that of inheritor boys and that school achievement of newcomer girls is most likely to be better than that of newcomer boys. (Collins, Kenway and McLeod. 2000:pp 60-75). Certainly this is the pattern which emerges amongst the boys and girls of the Class of ’95. So gender based differences in academic achievement are qualified by social background.

But the factors that contribute to unequal post-school outcomes are somewhat ameliorated by the school environment of Soton College. Soton College is a Catholic Regional College. It is co-educational and situated in a suburb on the outskirts of the southern Melbourne metropolitan district. The students at Soton College are predominantly newcomers. They are usually the daughters and sons of middle level managers, clerical and retail workers, or their parents own and operate a small business. The children of blue-collar workers such as tradesmen and unskilled workers make up the second largest social group and the inheritors make up the smaller third social group.

But because they chose a Catholic school, newcomers’ parents could expect their children to improve their potential achievement. The so-called Catholic school effect of Coleman and Hoffer (1987) should influence the expected school outcome of newcomers. Regardless of social background, being educated in a Catholic school should mean that greater than expected numbers of newcomers will be accepted into university courses.
In Australia the extensive work of Flynn (2000) has tied the Catholic school effect to the ethos of the school. Certainly, at Soton College, there is a strong emphasis on the teachings of the Gospels, and recognition of the individual in society and faith commitment. There are also in-house programs aimed at affirming the worth of each person in the school community and this is another aspect of building a person centred school ethos.

In addition the college displays evidence of “functional community” as Coleman and Hoffer (1987 : p294) saw it, through its policies such as homework policy, tracking in mathematics, and disciplinary policy; even uniform policy was something that Flynn (2000) saw as an identifiable characteristic of a Catholic school community. Given that a functional community was seen as contributing to the Catholic school effect of improved school outcomes for those considered disadvantaged, then one of the key considerations of this research is the identification of post-school outcomes which reflect the effectiveness of Soton College in improving the social status of newcomers.

Parental expectations in choosing a Catholic school for their newcomer child were for social mobility through post-school aspirations centred on university access (Riordan, 1997: p 145). These parents were putting their trust in Soton College to provide a school experience which set their child on the pathway to university and a profession.

Did Soton College respond to parents’ wishes by providing the type of stewardship that guided children to aim for a university degree and to seek it out during their post-compulsory years? Did the Catholic school effect act to improve the social status of those amongst the Class of ’95 in greatest need?

These questions will be addressed as this case study considers the secondary school journey of the Class of ’95 as they move through secondary education and into work and further study. In the case study, the school experience of the Class of ’95 including school achievement patterns, VCE success and competitiveness for university and TAFE places, will be discussed in relation to socio-economic background and gender. In addition, the pattern of attrition from the Class of ’95 and the outcomes of dropping-out of school will be explored.
Organisation of the case study

The case study is organised in the following way:

Chapter 1: Equal school input – unequal school output, gender and social class.

Social inequality of post-school destinations

Chapter 2: A Review of the literature.

The role of the school in achievement, aspirations, attrition and post-school destinations, and their inter-relationship with social background, in Catholic secondary schools in Australia and the rest of the world.

Chapter 3: Methodology.

Chapter 4: Context of the journey through education.

An introduction to the school experience of the Class of ’95 and Soton College and education in Victoria in the 1990s.

Chapters 5 and 6: Achievement in English and mathematics between Year 7 and Year 10.

Emerging social patterns that divide achievement according to family background and gender in the first four years of secondary education.

Chapter 7, 8 and 9: The destinations of drop-outs from the Class of ’95.

Their social origins, gender, school achievements and post-school destinations

Chapters 10, 11, 12 and 13: The post-compulsory school years of those of the Class of ’95 who remained in school.

The pattern of their VCE success and the socially biased impact of tertiary selection policy on the Class of ’95 by social origin and gender.
Chapter 14: Stewardship of Soton College.

An evaluation of the success or otherwise of Soton College’s stewardship of the secondary education of the Class of ’95.

Chapter 15: Goal attained – going to university and work.

The social mobility of the Class of ’95

Chapter 16: Conclusion.

Student outcomes of the Soton College experience, social mobility through education and work and the success of the collaboration between students, their families and the school in bridging the gap for newcomers to a full secondary education.
CHAPTER 2

Review of the literature

The previous chapter introduced a study of how a school worked for a single cohort of students from entry at Year 7 to point of exit for work or further up to ten years after each child had left school. The school in this case study is a non-selective co-educational Catholic Regional College and so this work is the measurement of the effectiveness of such a school through a measurement of the experiences and success of a cohort of students from the college.

It is a genre in which few studies have been undertaken and of these many are decades old. This does not mean that the findings of these researchers have been devalued with time. They have not.

The definitive works of Coleman on the effectiveness of Catholic schools in the United States of America, although written during the 1980s, are still relevant to Australian schooling.\(^{11}\) There are similarities in the types of schools in Australia and the United States of America. The most numerous are the public schools, the less widely spread are religious schools (from which Coleman and Hoffer extracted Catholic schools) and the smallest in numbers are the independent schools.\(^{12}\)

Coleman’s first venture into school effectiveness was in 1966 and has since been much criticised and debated and in many ways his own later work totally changed his first

\(^{11}\) The original work of Coleman published in 1966 as \textit{Equality of Educational Opportunity} or the Coleman Report, concluded that schools had little influence over achievement, the latter being more reliant on socio-economic background. His work published in 1982, however, concluded differently and Coleman’s later work identified effective schools and their characteristics. For an interesting commentary on the debate over the effectiveness of schools see Flynn, \textit{The effectiveness of Catholic schools} (1985: pp 266 – 275).

\(^{12}\) In Australia the term Government schools is used for those known as public schools in the United States of America and independent schools can also be referred to as public schools.
findings. But Coleman (1966) at this time did provide an explanation of school effectiveness that holds nearly half a century later:

\[
\text{The effectiveness of the schools consists, in part, of making conditional probabilities less conditional – that is, less dependent upon social origins. Coleman. 1966: p 18 (Quoted in Riordan. 1997: p 158)}
\]

Working with Hoffer, Coleman (1987) built on earlier research to show that there was a difference in the effectiveness of different types of schools and that school ethos or culture was a key factor. In this research Coleman and Hoffer (1987) were able to identify two purposes of schools. The first was as a vehicle for social mobility and the second related to private schools only in that they were seen as reinforcing family values.

Catholic schools did this and were seen as much more successful than public schools in educating all students regardless of social background. In these schools academic achievement was found to be influenced by factors that, although they included social background, appeared to reduce any negative impact of the latter and enhance the effectiveness of the school in achieving its purposes (Coleman and Hoffer. 1987: pp 138 and 153). The researchers identified this positive factor as emerging from the culture of the Catholic school where the latter gave greater support to academic achievement than that in other types of schools.

They noted that, regardless of the socio-economic background of a family, the choice of a Catholic or independent school for their student child led to an increase in both tertiary level educational aspirations and fulfilment of those aspirations. This was not a

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13 It must be remembered that the initial work of Coleman in this field was with school and personal differences where the students were not simply divided socially by level of economic disadvantage but also by race. When Coleman carried out his initial work in school effectiveness it was against a backdrop of historic change in the United States as entrenched racial discrimination on all social levels was ripped down and a new order was being built for all. The turmoil of this period in education is recorded in history but the remnants of racial disadvantage which permeated the educational environment must have been a factor in Coleman’s initial findings and this is often overlooked in criticism of his first work. As Riordan (1997: p 121) rightly points out, Coleman’s work ushered in a totally new perspective of educational sociology about between school differences and school climate or culture.
totally school driven outcome. Coleman and Hoffer (1987: pp 154–156) also argued that in this case school intervention was one facet of support, others of which included parental support, particularly parental financial support. In other words the role played by Catholic schools in shaping a pathway to university was a collaborative one and included the child’s family.

Promoting and supporting university education as a post-school outcome was not the only influence of Catholic school culture identified by Coleman and Hoffer. These researchers also noted that there was an “exceedingly strong” effect of functional community on the holding power of Catholic schools (Coleman and Hoffer, 1987: p 214). They argued that staying on in Catholic schools was strongly related to a sense of “functional community” which arises from shared values of families and school, the latter which acts as an “outgrowth or agent of the community of which one is a member” (Coleman and Hoffer. 1987: p 214).

This is a crucial point of their work with Catholic schools because it focuses on the difference between what is offered in Catholic schools and in public high schools. It is a point that is particularly relevant to this case study, where the Catholic school which is the subject of the study is a Catholic Regional College (comprehensive) school. That is, it is a school which, like government or public schools, draws its school population from the immediate neighbourhood of the school and is academically non-selective in doing so.

Coleman and Hoffer (1987) saw functional community as emerging from the shared bond of being Catholic. But the Soton College functional community emerges from the school being Catholic and the students being neighbours. This exerts a strong influence on post-school outcomes and as Hoffer points out provides a “social capital that parents can draw upon to help steer their children in productive directions” (2000: p 95). Children come to it from a group of five partner primary schools so that parents do know each other at school and out of school at extra-curricula events such as sport in which their children participate. They meet at the school but they also meet at the supermarket and the doctor’s surgery, and those who are church goers meet at church.
They have married in the same churches and their children have been born in the same hospitals. In this case study functional community is made up of shared religious culture and shared geographic and residential environmental experience. Where residential location is added to the shared community of common life values then it can only enhance the recognition of community as a factor supporting a positive and productive level of school effectiveness.

In a previous study Coleman, Hoffer and Kilgore (1981) had argued that American Catholic schools were more effective in providing educational equity to their students than were American public or independent schools (in Bryk, Lee and Holland. 1993: p 272). Interested in this outcome Bryk et al. set about trying to identify the elements which made the outcomes of these Catholic schools different from other American high schools. They examined the functioning of seven Catholic High Schools over a period of ten years in order to identify features which were both distinctive and “supportive of social environments that promote academic achievement for a broad cross section of students” (Bryk et al. 1993: p ix).

Like Coleman and Hoffer, these researchers used a statistical analysis of the data from the update of the High School and Beyond Survey (conducted in 1982 by the National Center for Education Statistics). To this, however, they added observations taken during school visits which, they argued, allowed better interpretation of the data used in path analysis. In turn, this allowed the distinction of family and personal characteristics from school characteristics. Consequently, the researchers were able to determine the combined effect of student engagement with school, achievement and the outcomes of schooling.

The work of Bryk et al (1993) was extensive and their research analysed the interaction of a number of school based, personal and environmental factors with student achievement. Having observed that Catholic schools were particularly effective in educating students from diverse socio-economic background, these researchers intended to seek the “key organizational elements that produce the desired outcomes observed in Catholic high schools” (Bryk et al. 1993: p 326). Using a variety of
investigative and analytical techniques that included critical path analysis, participant observation and interviews over time, Bryk et al (1993) investigated the relationship between achievement and, inter alia:

- transition from elementary school to high school—a point at which there is a significant change in student life-style;

- the interaction of students’ personal characteristics with those of these Catholic high schools including the disciplinary, academic and religious climates together with the outcome of this interaction;

- how the schooling in each school was organised including school size, the identification and evaluation of any effect on achievement, any incidence of tracking (streaming) and the emphasis on enrolment in a band of academic courses;

- levels of teacher and student engagement with schools—which they had observed to be high.

This led to a finely detailed piece of research and all factors considered were found to positively contribute to Catholic high schools displaying effectiveness in both levels of achievement and holding power for their students regardless of social background.

Permeating these findings was culture. Bryk et al. (1993) found that Catholic high schools generated an educational environment that combined a strong emphasis on academic work with a caring ethos that demanded personal responsibility and good efforts of all participants (1993: p 327).

This environment springs from a deliberate focus on the rights of the individual and her or his role in social justice. Evidence of this policy thrust is most strongly found in the formal religion classes together with the Catholic rituals of prayer, liturgy and voluntary social work, all of which shape the school climate. But social justice is not limited to classes in religion alone. It is not compartmentalised but emerges in all
classroom and schoolyard situations as well as in the interaction of the school with the wider community (Bryk et al. 1993).

In the latter there are often tensions between the Catholic high school and the community in which it exists. These tensions arise from the need for the school to challenge impediments to a child’s progress that might arise through outside elements or even in a child’s family. Bryk et al. (1993: p 316) termed Catholic schools which bring children into a state in which they can function within a middle-class (American) way of life, regardless of initial social background, as bridging institutions.

So the work of Bryk et al (1993) did identify a difference in a Catholic high school education. In the post Vatican 11 Catholic school there was a strong commitment to developing each student as a “person-in-community”, which is a commitment to more than academic achievement (Bryk et al. 1993: p 289). Students from a low socio-economic background did move up the social ladder so that the outcome of their interaction with the school was an entrée into middle-class America. Part of the acquisition of this social ascendency lay in the structural differences between Catholic schools and other types of high schools and the specific nature of the evangelical mission of Catholic high schools in the inculcation of Catholic values.

The work of Coleman (1987) and that of Bryk et al. (1993) is not without its critics. Riordan challenged the finding that Catholic schools decreased the gap between the achievement of white and minority students in contrast to the widening of it in public schools on the grounds that there were different types of Catholic schools and this had not been addressed. Riordan was able to show that when Catholic schools were divided into single sex Catholic schools and co-educational Catholic schools, then the former group displayed Catholic school effects and the latter group did not (1997: p 147). This implies that for the Catholic school effects to apply a disadvantaged child needs to be in the right type of Catholic school which Riordan (1997) indicated was a single sex Catholic school.

Studies of school effectiveness have not been limited to Catholic schools nor to the United States and Australia only. Like Coleman’s work in the United States, that of
Rutter, Maughan, Mortimore, Ouston and Smith (1979) laid the foundations for the development of a British field of study of school effectiveness. Their work followed children from the end of primary school through the secondary schools they attended to the end of compulsory schooling, which was a journey of a little more than four years.

In their study Rutter et al. (1979, pp 176 - 205) found that the social climate and organisation of schools were important factors contributing to inter-school differences in outcomes. Achievement was enhanced for all students in a school in which there was a positive school climate. The Catholic school effect of Coleman (1987) and Bryk et al. (1993) emerged in a non-Catholic environment when conditions were right. For Rutter et al. (1979) worked with public schools in London.

Reynolds (1992: pp 10 -14) working in South Wales, with public schools, found that school organisation and the climate it generated contributed to the effectiveness of the schools. In these schools orderly classrooms where relaxed students were encouraged to share views and develop ideas through interaction led to positive social development of students. But in this work Reynolds considered a more homogenous group of students than would be expected in Catholic secondary schools in Australia. The students with whom Reynolds worked were all from disadvantaged families from the same neighbourhood. Those of Australian Catholic schools would usually be from more diverse social backgrounds even where they shared the same neighbourhood.

But as with Catholic high schools in the United States of America and those in Australia, Morris (1998) reports that Catholic secondary schools in Britain also display the Catholic school effect. Like Coleman and Hoffer, Bryk et al. (1993) and Flynn (1985 and 2002), Morris (1998) argues that Catholic schools display a, “high level of congruence between the values of the Catholic community and its schools” (1998: p 106). Interestingly Morris also argues that the strength of this congruence is increased by,

A traditional interdependence between parish, home and schools in community life and a strong sense of ownership and commitment towards its schools by the Catholic community that has its roots in the
Historically, in all three countries, there has been a common thread of antipathy towards Catholics and some opposition to the establishment of schools serving the Catholic communities of those countries. Grace terms this situation as creating Catholic schools which were, “defensive citadels for minority communities anxious to preserve the transmission of the Faith and of its spiritual and moral codes and symbols” (Grace. 1996: p 72). A consequence of this has been the direct involvement of Catholic families in the development of their schools and this according to Morris generates the sense of ownership of these schools which in turn contributes to the bonds with the community which are associated with school effectiveness (1998: p 106).

The above research shows that school effectiveness is not limited to Catholic schools and school differences occur in both the Catholic schools of the United States and the British comprehensive schools.

**What then is the Australian situation?**

There are great similarities and differences between the development of American and Australian Catholic schools. Similarities are largely based on historic events. In both countries the foundations of Catholic education lie amongst a strong Irish Catholic immigration pattern followed by more recent immigration from the Catholic countries of the Mediterranean region of Europe. Byk, Lee and Holland (1993: pp 15-54) provide a historical overview of the development of Catholic education in America. A similar overview of Australian Catholic educational change is provided by Dwyer (1993: pp 3–22) and Bourke in Jecks (1974: pp 245-265). Although Catholic educational development in both countries is separated by time there are some remarkable similarities in the historical factors which fueled and shaped the development. But it was the educationally conscious Irish Catholics who brought with them religious teaching orders and started the schooling systems in both countries.
The historic, visionary and yet revolutionary changes to Catholicism brought by Vatican 11 also had an impact on Catholic schools that was similar in each country. The most challenging was the decline in religious teachers, the increase in Catholic school costs and the need for increased levels of Government funding and the accountability that goes with it. But the message of Vatican 11—the reinforcement of the Catholic belief in recognition of the value of each student in the school community and through this recognition a sense of common good and social order—underlies all activity of the Catholic school. (Congregation for Catholic Education. 1988: n 27) Acceptance of this fundamental principle leads to knowing God, which is the common aim of Catholic schools.

In America Bryk, Lee and Holland (1993) regard these historical events as having shaped modern Catholic school culture. In Australia, at the same time, Flynn (1993) had arrived at the same conclusion about its influence.

Using a sample which comprised 50 Catholic secondary schools all located in New South Wales and the Australian Capital Territory, Flynn’s research in 1990 explored the culture of Catholic schools experienced by Year 12 students with respect to two dimensions of their adolescent world. These dimensions were their family and friends and their faith. Flynn’s sample of schools included those from his earlier work in 1972 adjusted to ensure that all types of Catholic secondary schools were represented. With a view to studying these schools for up to twenty years. He then added to them schools representative of the three types of schools in the Catholic secondary system. These were single sex boys and girls schools and co-educational schools. Data were collected by survey and the study that emerged drew on input from all direct stakeholders in each of the Catholic schools, i.e. parents, students and teachers.

During his initial work Flynn (1985) investigated the effect of home and school factors on achievement, which he measured by Higher School Certificate results. There were five factors he considered influential. These were home background, formal

14 The final secondary school credential in New South Wales schools at that time.

As he completed this research, Flynn noticed that the relative importance of classroom curriculum in establishing school culture, which he had expected to be a decisive factor in student academic achievement, was not (Flynn 1993: p 5). Both this and socio-economic background, also a factor he had expected to be prominent, were small compared with the influence of the informal curriculum of the school.

Informal curriculum is the term Flynn used to denote the way in which the school contributed to the morale of the students and the extent to which their personal needs were met by the school they attended. Informal curriculum was the school culture which contributed strongly to student wellbeing and achievement (Flynn 1993: p 5). In analysis, the contribution made by informal curriculum to variance in achievement was found to be more than three times that of the other four factors explored.

Flynn then concluded that schools which fostered a positive culture were effective in supporting academic achievement because such a culture generated a co-operative classroom environment which underpinned effective teaching and learning. In addition he found that there was a cumulative effect of school processes which in turn influenced the level of achievement of students.15

This finding led Flynn to further delve into the question of school culture and how the specific character of a Catholic school makes it effective. Like Bryk et al (1993) in America, Flynn (1993: p 8) found that the culture in Catholic schools was directly related to their “core beliefs, values, traditions, symbols and patterns of behaviour”. These Flynn believes provide the school culture and in turn, “provides stability, fosters certainty, encourages predictability and creates meaning” (Flynn 1993: p 8). That is “the way we do things around here” (Flynn 1993: p 8).

As Flynn (1993:p 8) has shown the core beliefs and values constitute the building bricks of Catholic school culture. They are visible in what the school stands for through

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15 This was a point made by Rutter et al. (1979).
its commitment to people, its focus on faith development in the whole school community, the emphasis given to Catholic traditions and values through liturgy, and the emphasis given to education. These are all reasons for the existence of a Catholic school but Flynn (1993: p 8) identified four dimensions which contributed to the shaping of a Catholic school culture. These are:

- The core beliefs and values of the school, which Flynn termed “Its Soul.”
- The symbols of the school, which Flynn termed “Its Models.”
- The school traditions, which Flynn termed “Its Story.”
- The behavioural patterns within the schools, which Flynn termed “Its Rituals or Way of Life.”

Schools are known and individually identified by their symbols. These publicly distinguish one school from another and include uniform, badges, mottos and even buildings as well as religious symbols and the physical features that denote Catholic school rather than simply school (Flynn. 1993:p 9). Catholic schools are also distinguished from government and independent schools even one from the other by their traditions. These traditions are apparent in the goals of these schools, their curriculum and their heroes. Traditions are however created from all facets, Flynn (1993: 8) calls them dimensions, of the school. Traditions emerge from the school environment, from the processes of education and those specifically related to religious education.

Core beliefs, symbols and traditions all contribute to the patterns of behaviour in the school. The combination of these dimensions shapes the school and makes it what it is and what it is perceived to be by the extended community. This school identity or culture is not immune to influence from a whole range of historical, geographic, social and political factors. It is, however, somewhat buffered from drastic change by its sense of functional community and the network of relationships between students and
teachers identified by Coleman and Hoffer (1987: p 214). But being buffered does not reduce tensions, as was noted by Bryk et al (1993: p 316).

Ideally all stakeholders in a Catholic school should be working towards the same purpose—they should have shared values. Congruency of stakeholder values contributes to school effectiveness in Catholic schools. Part of this congruency lies in the fact that parents have chosen a Catholic school for their children, teachers had chosen to work in a Catholic school and in many cases the children of the family have either complied with parental direction to attend a Catholic school or have wanted to go to one, although the motives for choice might vary as researchers have found (Reay and Ball. 1998; Reay and Lucey. 2000).

Choice of a Catholic school does indicate empathy with its image. Praetz (1974: pp 1-6), in her investigation of school choice on the part of Catholic parents, found that there was strong evidence of a conscious choice being made by parents although there was also an onus for this choice placed on parents because they were Catholic. Flynn (1993: p 136) has probed these motives and was able to demonstrate, for example, that the overwhelming belief of parents was that Catholic schools would be drug free. This probably reflected the pertinent community issues of the time of his data collection but it is important to note that of the 21 reasons for choice given, the most important half concerned behavioural issues (if the issue of drugs can be seen this way), standard of teaching, morality and the fact that there was a belief that the academic and job outcomes of Catholic schools would be good (Flynn 1993: p 136). Motives concerning faith were ranked in the second tier of reasons, as were the sporting and cultural life of the school and its prestige (Flynn 1993: p 136).

This led Flynn (1993: p 154) to conclude that parents chose Catholic schools for a very complex set of reasons all of which interacted with the other. He found that in their perception of all facets of the Catholic school environment parents accepted the culture of the Catholic school which permeated all aspects of teaching and learning and which inculcated both formal and informal curriculum. But parents and Year 12 students were
focused on the academic outcome whilst teachers were more inclined to rank a student’s personal development as priority.

In their early work Coleman and Hoffer were able to show that the difference in achievement for students in American Catholic schools related to “what goes on in school” (1987: p 175). That is, the difference reflected the level of inspiration generated by the school and passed on to its students. Where this was positive then, achievement was positive, and retarding factors such as socio-economic background, although they may still exist, were to some degree offset by the positive influence of the school. In Australia, Flynn’s work has shown that informal curriculum is significant in the determination of Catholic culture and that Catholic culture contributes strongly to the development of an effective school.

However not all Catholic schools were of uniform effectiveness. Working with Mok, Flynn further investigated the differences between schools and found that where students’ perception of school was positive, then learning outcomes were better than where students expressed alienation from school (Mok and Flynn 1997: p 169). This study built on Flynn’s former work and explored the culture of school and its relationship with achievement with a view to quantifying the difference a positive experience of school makes to achievement measured in Year 12 final examinations. Mok and Flynn (1997: p 186) found that, (a) where there is a culture of student support, (b) the provision of a relevant curriculum, (c) students felt secure, (d) had a sense of belonging, (e) identified with school culture and (f) were satisfied, then they did better in final (Year 12) examinations. Where students perceived themselves to be enjoying the school environment their achievement levels were better. Mok and Flynn (1997: p 186) concluded that enjoyment of the school experiences was an indication of an effective school and that an effective school ameliorated, amongst other things, the limiting impact of socio-economic background.

But Flynn consistently measured achievement by Year 12 results (1997: p 174). The use of examination results such as these as a measure of effectiveness is one criticised by Reynolds (1992: pp viii – ix) as inadequate on the grounds that effective schools
identified in this way might well reflect social background of the school students rather than success of the school input in generating a positive outcome. As a measure of effectiveness school examination results are limiting and in a further way because they did not allow the assessment of school effectiveness on the outcomes of drop-outs.

Using more detail than examination success as a measure of effectiveness the research of Mortimore and Sammons (1988), who undertook a project for the Inner London Education Authority (in Reynolds and Cuttance 1992: p 3), demonstrated that there is more to success in examinations than social background even after adjustment for the difference in student intake between schools, and that effective schools contribute to this success.\footnote{A comparison of the structures of Australian and British education highlights some differences between them. At the completion of compulsory education in Britain children are assessed and this creates a school exit point. Students having gained their O levels often consider that they have gained an adequate level of schooling for their career aspirations and exit school for work. In Australia a similar point, although a point not attracting a credential, was found to exist at the end of the first year of the VCE (Kirby, 2000: p 53).}

Flynn did not investigate those who did not reach Year 12, the school drop-outs, for whom the literature has dire warnings of poor post-school outcomes (Kirby, 2000: pp 56 - 57). Higher achievement is not the only outcome of an effective school. Strong holding power is also a function of effective schooling. Mok and Flynn (1997: 186) identified enjoyment of school as a factor which promoted student achievement but where there is little enjoyment then staying on in school and having a poor school experience is of no benefit to a potential drop-out (Dwyer, 1991:p 25). The latter factor termed “forced retention” by Dwyer (1991: p25) in his in depth study of students in seventeen Catholic schools in Australia was explored at greater length by Lamb, Dwyer and Wyn 2001) who recognised that staying on in school reluctantly is accompanied by a poorer quality school experience and reduced wellbeing of the student (2001: p 56). Such an outcome would be in conflict with school effectiveness.

The effective school must meet the needs of those students who will complete Year 12 and those who will make the transition to work earlier. A positive school experience should encourage students to stay for as long as necessary. But it must be realised that...
where a positive post-school outcome lies, for example, in the trades, there are good reasons for a student to exit for work earlier. In Victoria the Kirby Report found that a “goat path” to work had emerged at the end of the first year of the VCE and that students who took this pathway into training such as apprenticeships were not necessarily disadvantaged (2000: p 53).

To meet the challenge of providing a positive school culture that suits both those intending to complete and those intending to leave school earlier there is a need to meet the academic and educational needs of both groups. Coleman and Hoffer (1982) demonstrated that school effectiveness could counter disadvantage emerging from socio-economic background and Bryk et al (1993) argued that an effective school could bridge social class differences. But these American researchers were keen to emphasise that curriculum should remain academically focused. They considered that Catholic schools improved over public high schools by operating a more narrowly defined and traditional curriculum. Bryk (1996: p 30) reiterated this tenet some three years after the publication of his initial work but with the addendum that Catholic schools “now educate a very broad cross-section of Americans of diverse race, ethnicity and social class … and in the process extend significant educational opportunities to many” (Bryk. 1996: p40). This statement does not sit well with a constrained curriculum. Certainly in Australia one of the more common reasons given for non-completion of school is related to irrelevant curriculum (Lamb, Walstab, Teese, Vickers and Rumberger 2004: pp 31-32). Any restriction on the breadth of curriculum narrows social intake to schools. So there is a risk that the high standards identified in the work of Bryk et al. (1996) involved a sacrifice of inclusiveness.

Catholic schools are selective by their nature. They might not choose students according to academic prowess, but the families choosing a Catholic school do so because it is Catholic, and in Australia, according to the work of Flynn (1993: p 136) their desire for a Catholic education is also closely associated with their desire for academic success. Catholic parents who want academic success for their children choose a Catholic school as a vehicle for this success.
Australia is not the only country in which there is evidence of families choosing Catholic schools in an effort to ensure academic success in order to either improve or maintain accumulated social successes (Teese 1989: p 111). In France, for example, Catholic schools do not present a homogenous group and are used by families of different social background to avoid public schools. The image of Catholic schools is positive compared with that of public schools and families view them as schools of possible social mobility in a public system where this is problematic (Teese 1989: p 138). Amongst these Catholic schools are schools so socially selective as to attract only the upper classes and the higher levels of middle class but the group does include other types of schools (Ballion 1982 in Teese 1989: p137) has described this structure as one of schools of academic excellence, which are selective and utilised by the upper and upper middle classes; schools for upper-class education, which are less academically selective; innovative schools that are small in number and again appeal to the middle and upper classes; refuge schools that serve the working classes by offering vocationally oriented education; and finally the “substitution” schools, which comprise more than a third of Catholic schools and are utilised by families that perceive them as offering a viable alternative to a public school of poor reputation. Despite this pattern of differentiation between French Catholic schools, positive achievement does not reflect school climate only. Self-selection means that the exceptional academic outcomes of the most selective schools in this structure of Catholic schools must also consider family background as contributing to success, not just the climate of the schools. At the same time relatively poor academic achievement is displayed by the less selective “substitution” schools, which are those with the most diverse family backgrounds. It would seem that these schools too do not display positive Catholic school effects despite their more egalitarian recruitment.

Similarly Lareau (2000: p 189) has criticised the findings of Bryk et al. (1993) on the grounds that they have worked in schools where self-selection had already taken place. Although Lareau does not give her reasons for this criticism, the fact that parents choose a Catholic school over the public high school alternatives does distinguish between students who go to a Catholic school and those who don’t. Even self-selection does pose the possibility that the differential effect of Catholic schools is not related to
their ethos so much as their selective intake, which contributes both an ethos and good results.

Mok and Flynn (1997: p 183) did divide the schools they considered by type. They studied single sex schools (which included denominational schools) and co-educational schools, which included community or comprehensive schools—Catholic Regional Colleges. It could be expected, although not mentioned by the researchers, that curriculum breadth and focus would vary from one school to the next. However care must be taken when generalising across all Catholic schools. Although curriculum core might be the same, specific school subjects would identify girls’ schools from boys’ schools and co-educational schools from either and each other.

Responsive to markets, as they need to be, Catholic schools would also provide curriculum pertinent to the needs of their students. The needs of Catholic students from the upper middle-class metropolitan areas might be quite different from the needs of rural Catholic students in a disadvantaged locality and so on. In order to be effective a school would have to meet all these needs.

Perhaps the most telling outcome of the research of Mok and Flynn (1997) is with respect to these interschool differences amongst the Catholic high schools of New South Wales. For when they controlled for the quality of school life and investigated the effect of socio-economic background on the outcomes, even for Year 12 students only, they found that students in single sex schools outperformed students in co-educational schools and that the dominant socio-economic background distinguished between the level of Higher School Certificate achievement at each school. On whether in fact the Catholic effect was evident in both single sex and co-educational Catholic schools, Mok and Flynn are silent. But as already mentioned in America, Riordan (1985) has noted that in Catholic co-educational schools there were “no Catholic school effects” (1997: p 147).

Australian Catholic secondary school types are varied. There are single sex schools and co-educational schools. There are also schools administered by religious orders and those by clusters of parishes. The latter are known as Catholic Regional Colleges
Teese and Walstab found that government and Catholic schools have a similar sector profile and recruit students from the same level of society (2004: p 9).

Catholic Regional Colleges make up only some of the schools studied by Flynn and the question that arises concerns their ability to make the difference for less advantaged children. These schools recruit students from their immediate neighbourhood so that those situated in disadvantaged areas would be populated with students from similar backgrounds.

Most follow a tradition of non-selective recruiting. Being Catholic meets all entry requirements. Do these co-educational Catholic schools—Catholic Regional Colleges—work for children regardless of social background, as Flynn’s work and the literature on Catholic school effectiveness predicts? Determining whether these schools display the effectiveness for all users is the raison d’être for this research.

Schooling cannot be separated from family background. In fact Riordan has argued that school effects on equalising disadvantage are smaller than that of home background (1997: pp 147 – 149). But the efficient school does, as Bryk et al. (1993) suggest, have success bridging the gap between background and achievement. It does provide upward mobility and entrée to the middle classes for many.

But there is a very real need to be alert to the differences in the quality of experiences amongst students from families without prior experience of a full secondary education who nevertheless wish that their children should enter the professions currently denied to them. These differences might materialise between social groups in the one school or between schools. If the school climate is positive then the work of Flynn would lead us to expect that differences in achievement arising out of social differences within that school would be lessened. Does this happen in Australian Catholic Regional Colleges?

Certainly Catholic schools are potentially well placed to create a culture that contributes to greater equality in achievement outcomes. It is part of their milieu—their emphasis on Christian personhood. They also work with a socially diverse set of
families (Teese and Walstab 2004: p 9). The variations in families’ cultural capital are significant and the limitations in achievement brought about by this and identified by Bourdieu (1979) cannot be ignored. This too is part of being Catholic.

In Australia, the ability of Catholic schools to hold on to students and then provide positive academic achievement for them is second to the more usually selective independent schools and ahead of the less usually selective government schools (Lamb et al.2004: pp 42-44). But their effectiveness is constrained by a tension between the curriculum they must offer to meet the needs of their diverse clientele and the curriculum that meets the academic demands of the universities.

The effectiveness of Catholic schools is limited by the criteria they have to meet to provide the bridge for those seeking upward social mobility through education, and the pathway to this social success is disconnected at the point of transition to universities. The problem of mismatch lies in curriculum, because in Victoria there is a curriculum for the inheritors and another for the newcomers to education. As Teese (2000) points out, inheritors, with their social capital advantage, utilise curriculum of all types well. Newcomers, however, are often constrained to certain areas of curriculum that, despite high achievement, limits their access to the competitive university courses.

Catholic schools, even Catholic Regional Colleges, might well be effective in narrowing the social gap in achievement and raising the quality of learning of the average student but as Teese (2000: p 230) points out, for the full thrust of this achievement to be felt, all educational institutes, not just schools, not just Catholic schools but universities too, must comply with the same educational target and they do not. Whilst there are impediments to this then school climate, even if positive, might not be able to totally offset the disadvantage of family background and Catholic Regional Colleges will not work for all their students.

Why is effective schooling necessary? In an ideal world all young people would have the same opportunities at the end of their education. But the world is not ideal and Teese draws parallels between employment and education pointing out that, “The
economic system should create real chances to earn; the education system should create
real chances to learn” (2000: p 1) each system however falls short of the ideal.

The quality of educational outcomes is directly related to a number of factors, not just the
effectiveness of the school attended. Certain social groups are more at risk of experiencing a poor post-school outcome than others. In Australia these are children from the lower end of the socio-economic hierarchy, they are more often boys than girls, they are likely to be indigenous Australians, be living in rural areas, to be from government schools, to not achieve at school and to drop-out before completing Year 12 (Lamb, Dwyer and Wyn 2000: p 7). What is more the plight of these young people at risk of a poor post-school outcome has been identified and investigated for decades. Almost thirty years ago Poole (1983) in her exploration of transition from secondary school to adult life commented that in, ”Australia, the important relationship between social class and educational and vocational aspirations and expectations is one of the most widely documented research findings” (Poole 1983: p 112). Amongst the researchers Poole cited was Keeves who had argued that for young people the major contributors to future occupation and income were, “the number of years of education completed – attainment- and …..achievement” (Keeves 1975: p 47) factors which were to still be associated with school completion levels some three decades later.

In the intervening years further research has added to the field of unequal post-school outcomes and will continue to do so for as long as schooling fails to benefit all young people. The Longitudinal Surveys of Australian Youth (LSAY) research program which tracks young people in Australia through secondary school into adult life documenting their school, further study and work experiences, has provided a rich source of data about the quality of post-educational outcomes encountered by the cohorts. Amongst the reports of research findings generated by the LSAY data are a number which explore post-school outcomes for those who do not complete school (Lamb 1996; Marks and Fleming 1999; Lamb, Dwyer and Wyn 2000; McMillan and Marks 2003). In addition Lamb in corroboration with Rumberger in the United States of America found that the rates of dropping out of school were almost identical in each country (1999: p vii). This was not the only similarity. Lamb and Rumberger showed
in both Australia and America the highest non-completion rates were experienced by young people of low socio-economic status, those who attended government schools, and those with low achievement levels (1999: p vii).

However final outcomes vary where almost half of the early school leavers in the United States of America ultimately completed high school usually by gaining a General Educational Development credential compared with fewer than 10 per cent of drop-outs in Australia (Lamb and Rumberger. 1999: p vii). This prompts Dwyer and Wyn to exhort governments in Australia to make it easier for drop-outs to re-engage lifelong learning (2001: p 68).

But returning to learning is indeed another issue for many young people. Many school drop-outs did not like the experience of school before they dropped out. In fact it was often so disliked that it was one of the reasons for dropping out of school given (Lamb, Walstab, Teese, Vickers and Rumberger 2004: pp 11-12). Lamb et al. (2004: p 12) found that over half of the cohort of their study did not like school or could not get along with the teachers. Slightly less than half (46.2 per cent) said that they dropped out because they were failing school (Lamb et al. 2004: p 12). McMillan and Marks who worked with data from the LSAY project however found that although poor school experience was cited as a reason for a small number of young people to drop-out of school the most common reason for exiting school for work before completing Year 12 was to get work (2003:p xi).

Level of school achievement contributes to the decision to stay in school to completion or to drop out before then (Lamb et al 2004: p 29). Problematic transition to work is also found to be related to poor previous school achievement (Lamb and McKenzie 2001: p 53).

found that more than half of those in the cohort of students they studied experienced a poor school life, lacked interest in schoolwork and had poor relations with teachers before they dropped out of school (Teese and Polesel 2003: p 143).

But regardless of the reason for dropping out of school not all early school exit leads to a poor post-school outcome. Where the transition from school to work is accompanied by training then there is a greater likelihood of success (Teese et al 2000: p 5; Lamb and McKenzie 2001: p 42).

Of course there are those who stay in school regardless of poor school experience. These young people often termed “reluctant stayers” (Dwyer 1994: pp 58-64) must find the year to Year 12 difficult (Teese, Polesel, O’Brien, Jones, Davies, Walstab and Maughan 2000: p 5). There are a number of reasons why poor school achievers and those experiencing a poor quality of school experience do stay and complete Year 12. Some will stay because of pressure from influential others (such as family and teachers) perception of difficulty of access to the youth job market or both. Dubbed “forced retention” by Dwyer (1995:p 272;1991: p 25) and called reluctant stayers by Kirby (2000:p 6) this leads to students ‘filling in time’ with a risk of experiencing a poor quality of outcome with implications for not only job access but also life-long learning access, despite the extra time spent in the system. (Teese et al. 2000: p 5.)

Even though still in school the goal of these young people is still job access and school exit at the earliest available moment. (Ainley, Batten and Miller. 1984: p 111) Their attitudes towards schooling and life opportunities resemble those of ‘traditional’ early school leavers in that they are strongly negative (Dwyer. 1991: p 24). This is a factor which can threaten the degree of success at accessing post-school training and life long learning opportunities. (Teese et al. 2000: p 20) This negative attitude increases and is joined by a display of uncertainty about the future, the nearer these young people come to their chosen school exit point. (Dwyer.1991:p23.) It is hypothesised that these young people in fact are coerced into staying by circumstance, and that the voluntary aspect of post-compulsory schooling is not apparent to them. Both the emphasis given
by educational policy to staying on at school combined with a continuing depressed youth labour market effectively creates a de facto extension of compulsory education and with it the risk of, “disillusionment about the value of the additional years spent at school” on the part of the individual. (Blackburn. 1981:p 27 and Crittenden.1981: p 83. both in Karmel [Ed.] 1981)

Staying in school however, “boosts prospects all round” (Ryan. 2010: p 15). That is for both the student and the rest of the community. The Australian government and those from each state and territory aim at keeping young people in school until completion (Lamb, Walstab, Teese, Vickers and Rumberger 2004: p1). There are personal benefits to young people and social benefits to the community for doing this (Dusseldorp Skills Forum 2004: p 5). Young people who complete school benefit from, amongst other things, higher levels of employment and income and governments benefit from young people staying in school through lower welfare expenditure and higher taxation income amongst other things such as improved labour productivity and economic growth Dusseldorp Skills Forum 2004: pp 5-6).

But staying on requires engagement with the curriculum in post-compulsory education and as Teese (2000) shows the curriculum favours those from the higher end of the social scale.

This was not the intention of the changes to the post-compulsory curriculum in Victoria which resulted in the VCE. In fact the terms of reference of the Ministerial Review of Postcompulsory Schooling 1984 (the Blackburn Committee) specifically required the committee to create a curriculum for a post-compulsory credential which would encourage all students to compete school. However, change, to the original structure of the VCE meant that within a few years of its introduction, it had become a “curriculum structure which is a translation of social structure” (Teese.2000: p 201) with the subjects less valued by universities being those which appeal to the average or below average student. This placed the curriculum in a position of tension with the spirit of the VCE which was to provide a vehicle by which a diverse group could complete Year
12 and gain the same credential – the original purpose for which the VCE was designed
Ministerial Review of Postcompulsory Schooling (Recommendation 5: p 63).

In addition to these changes the introduction of a tertiary selection process in which
VCE achievement was adjusted according to the subject in which it was gained, meant
that the average student with the new VCE subjects was disadvantaged in the
competition for a university place where the most successful students were likely to be
those with the tradition VCE subjects from at least an upper middle class family
background.

For the student from a non-professional family background with aspirations of a
university course at the end of the VCE, the road to be travelled was somewhat
smoother if the journey was to be via an effective school where the possibility of
achieving the goal of a university course was better because of the Catholic school
effect (Bryk et al. 1993).
CHAPTER 3

Methodology

Aims of this case study

This case study has three aims. These are:

- To better understand both the pathways through school taken by each of the members of the Class of ’95 and the work outcomes of the school experience of each of them.

- To better understand the connection, if any, of these pathways and outcomes with individual family background and gender.

- To appraise the contribution of the school in neutralising social origin as a factor determining the quality of post-school outcomes.

Choosing the school

Soton College snapshot – 1990 to 1995

Soton College is a co-educational Catholic Regional College located in the South-eastern educational region of Melbourne on the urban fringe. Soton College does not choose students on academic merit but recruits from a defined geographic area around the location of the college. Not all students were Catholic but most students came from the five partner primary schools although there were students from government primary schools and from primary schools which were outside the normal catchment area of Soton College. (See Table 1)
Table 1: Primary schools attended by the Class of ’95

<table>
<thead>
<tr>
<th>Number of students</th>
<th>Partner primary schools</th>
<th>Nearby government primary schools</th>
<th>Catholic primary schools outside the catchment area</th>
<th>Primary school not recorded</th>
<th>Class of ’95</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>32</td>
<td>19</td>
<td>14</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>Proportion</td>
<td>60%</td>
<td>20%</td>
<td>12%</td>
<td>8%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Over the period of this research, 1990 to 1995, the annual college population was about one thousand two hundred students. Soton College charged fees which were moderate and comparable with those charged at all the other Catholic secondary schools either in the same educational region or within relatively easy travelling distance from the college. In 1995 the year in which the cohort in this research completed Year 12 the tuition fees ranged from $900 for a Year 7 student to $1,200 for a Year 12 student and each family was asked to pay a building levy of $150 per family. There were levies for each subject. These paid for school excursion costs, contributed to the cost of class sets of textbooks and specialised running costs such as chemicals in science and vocational aptitude testing in Career Education\(^\text{18}\).

If a family experienced financial hardship Soton College negotiated a financial arrangement with that family. These arrangements were common. No child was refused entry to the school because the family were unable to pay the fees.

Snapshot of learning- relative position of Soton College in academic space

Research carried out as part of the Locational Disadvantage in Education and Attainment Project (Teese and Polesel 1992-1993) provides a comparison between the achievement of Soton College for 1992 and that of all schools on the Mornington Peninsula for that year.

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\(^{18}\) Excursions were planned and costed in advance so that parents paid only the subject levy determined. Should a teacher want to take a class on an excursion which had not been planned and taken into account at the raising of fees and subject levies then unless the cost could be found within the relevant department or faculty levy the excursion could not go ahead.
Teese and Polesel (1993: p 12) tracked seven thousand young people in the South-east of Melbourne from school to tertiary study and work and showed that transition to university was low and that there was high teenage unemployment levels in the area.

The results of this research contrasted with those of Soton College are shown in Table 2.

Table 2: Post-school destinations of 1992 school leavers from the Mornington Peninsula compared to those of Soton College at the same time.

<table>
<thead>
<tr>
<th>Destination</th>
<th>Mornington Peninsula Labour Force Region 1992 (N = 7,000)</th>
<th>Soton College 1992 (N =97)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Higher education</td>
<td>41%</td>
<td>63%</td>
</tr>
<tr>
<td>Training or apprenticeship</td>
<td>17%</td>
<td>26%</td>
</tr>
<tr>
<td>Full-time work</td>
<td>13%</td>
<td>7%</td>
</tr>
<tr>
<td>Part-time work</td>
<td>5%</td>
<td>2%</td>
</tr>
<tr>
<td>Unemployed</td>
<td>7%</td>
<td>-</td>
</tr>
<tr>
<td>Repeated Year 12</td>
<td>5%</td>
<td>-</td>
</tr>
<tr>
<td>Un traced</td>
<td>11%</td>
<td>2%</td>
</tr>
</tbody>
</table>

N.B: This chart is constructed using two pie charts showing the post-school destinations of the Year 12 students in the Mornington Peninsula Labour Force Region and those of the Year 12 students from Soton College for the same year. The pie charts are located on page 30 (Mornington Peninsula Labour Force Region) and in an unnumbered attachment to the draft third report of the Locational Disadvantage in Educational Attainment Project. The report showed the work or Part 2 of the Project. The proportion of students shown in the pie chart of destinations of Mornington Peninsula student data added to 99% only. Those of the Soton College data added to 100%.

The apparent differences in academic achievement between Soton College and the other secondary schools on the Mornington Peninsula stimulated the choice of Soton College for this case study. Other reasons for choice included the fact that the researcher was a long standing staff member at the college and that over time she had noted an apparent relationship between gender, family socio-economic background,
school completion, academic achievement, VCE subjects selected by students and Tertiary Entrance Rank gained.

Choosing a cohort

The Class of '95 was the first Year 12 group in Victoria to encounter a combination of educational events which had impact throughout the full VCE two year period. These included:

- A VCE in which the mathematics curriculum and structure had been overhauled. (Introduced to all schools in 1993)
- The introduction of Vocational Education and Training. (Introduced to all schools in 1994)
- Changes in the tertiary course selection process through the introduction of the Tertiary Entrance Rank known as the TER. (Introduced in 1994)

The Class of '95 was the first group at Soton College to experience all three of the changes to the VCE and university selection system. These changes were a new certificate, the co-existence of vocational education with the VCE and the change in tertiary selection process (TER). Therefore the experiences of this graduating year in Victoria marked the beginning of the new era of post-compulsory education.

Design of this research

This ethnographical longitudinal case study uses both qualitative and quantitative data to analyse student academic achievement in secondary school and the post-school outcomes of these students. The use of a case study methodology is particularly apt in education where each student encounters the interface of educational policy and the

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19 The Class of '94 encountered the new mathematics program for the full two years of their VCE but it was so new that text books were still not published and some teachers were still not briefed fully. Vocational Education and Training subjects were not available to Soton College through the local TAFE until 1994 which meant that the very first users of this program were amongst the Class of '95. The Tertiary Entrance Rank functioned for the first time at the end of 1994 whilst the Class of '95 were in the first year of the VCE so they were able to appraise the effect of the system on their potential to enter tertiary study. Those who were the first to be caught” in the system, that is the Class of '94, had no opportunity to assess the effects on their subject choices and academic performance in anyway prior to the application of the scoring system to their VCE achievement.
quality of each student’s interaction influences both school experience and post-school outcomes for her or him.

Against the backdrop of educational change and the effectiveness of the school in which the journey took place this case study explores the relationship between gender and socio-economic background in one year level (the Class of ’95) and,

- Academic achievement in English and mathematics from Year 7 to Year 12.
- Overall academic achievement in the post-compulsory years.
- Choice of VCE subjects for those who stayed on to complete school.
- Dropping-out and staying on to complete school.
- Post-school outcomes for all of the Class of ’95.

This requires an in-depth examination of a large number of variables relating to the school experience of each member of the cohort. Such an examination is best carried out using a case study (Yin, 1993: p 114) which will provide a rich description of each student’s experience and ask the following questions,

- Why did the Class of ’95 achieve as they did at school?
- Why did they choose the education pathway that they did?
- How did the post-school outcomes come about for each member of the Class of ’95?

In addition this case study asks how the school, Soton College, managed this journey.

Interpreting events in the context of their occurrence in order to determine how they occurred and how they may be explained is an underpinning principle of case study methodology (Kyburz-Graber 2004: p 56). In addition it is difficult to extract school achievement and experience from social background and educational change making the boundaries “between phenomenon and context” blurred (Yin 1993: p31). This too
encourages the use of a case study method which permits the study of phenomenon in their environmental context. Case study allows the consideration of the bigger picture or context seen as often ignored in the exploration of “social linkages” between family and school by Lareau (2000: p 189). Lareau’s concern for the omission of context from the study of school experience is that it leads to underestimation of the, “role of structural inequality in the distribution of resources, especially power” (Lareau 2000: p 189). She sees this as ignoring the resilience of the elite and the plight of the less privileged in society to the continuously shifting standards and criteria which sort then realign social order through, amongst other things, education (Bourdieu and Passeron 1977: p 87).

Research, such as that of this case study, which looks in depth at personal data in the context of the big picture of education is “significant in researching and theorizing social change” (McLeod and Yates 2006: p 1). These researchers used a longitudinal case study to explore, in depth, a small number of intentionally selected cases in an educational setting, which provided a detailed description of the phenomenon studied and the consequent development of new theoretical conditions (Sturman. In Husén and Postlethwaite. Undated: p 641) with respect to the values of 12 to 18 year old Australian youth.

This current work explores the linkages between the members of the Class of ’95 and their families and their experiences at Soton College and it does so against a changing educational environment. It takes,

*An existing, real-life situation in all its complexity, exploring it as close to the people concerned as possible, describing the situation in as much detail as possible and finally explaining the findings in a clear and comprehensible way.* (Kyburz-Graber. 2004: p 54)

The current work does not rely on a controlled and “somehow artificial environment” (Kyburz-Graber. 2004: p 54) it takes the whole Class of ’95 and follows their journey through schooling to work. The minutiae of a lived life was available for everyone of the Class of ’95 and its richness and depth supported the use as a research method, of a
longitudinal, ethnographic case study, which would (a) provide understanding of post-
school outcomes and (b) expose trends in these outcomes which could be further
explained in the context of the educational environment which changed over the time
the Class of '95 spent at Soton College. A case study design was used not only because
the context was important and the “events could not be manipulated” (Yin. 1993: p 38)
but also because these events took place at a time of huge, almost cataclysmic, change
to Victorian education and the pathways to tertiary study. This change affected all
students individually. In this research the actions of individuals in pursuing secondary
school studies is connected with the large-scale social structure of the post-compulsory
phase of education and its processes (Vaughan. 1992 in Neuman. 2003: p 33). In so
doing the combination demonstrates a, “causal argument about how general social
forces shape and produce results in particular settings” (Walton. 1992b: p 122 in
Neuman. 2003: p 33) and leads to an expansion of,

[The] understanding of the theoretical propositions and hypotheses in
[a] situation where (a) the context is important and (b) events cannot
be manipulated (Yin. 1993: p 38).
**Time Span of the case study**

This case study was commenced in 1996 which was the year after those who completed VCE from the Class of ’95 finished school at Soton College. It tracks the progress of the Class of ’95 through secondary school and, where it occurred, tertiary study to their first full time work and spans 13 years.

**Procedure and data collection**

Contact with former students

Permission for the research was received from the both principal of Soton College and the Education Committee of the Soton College Board.

In a telephone call to each of the Class of ’95,

1. The reason for the research was explained.
2. The process of data collection was outlined.
3. The procedures to protect the privacy of participants were explained.
4. An appointment made for a telephone interview where possible.

If the former student agreed to participate then he or she was sent a package which contained,

1. A letter from the principal of the college which explained the importance of the research to the school.
2. A letter from the researcher providing further information to the recipients about the process of data collection and reiterating privacy procedures.
3. An authority form for signature by the participant.
4. A copy of the appropriate survey schedule.

Overseas students were contacted by telephone where possible and where not, by mail. Some students preferred to complete the survey without a further phone call. One hundred and forty-five former students were contacted directly by telephone and two
by letter. This made a total of one hundred and forty-seven former members of the Class of ‘95 who were contacted. Details of the participation of this group and their eligibility are shown in Appendix E.

Communication was maintained with the respondents through a six-monthly newsletter about the progress of the research. Privacy was maintained by using pseudonyms and all participants’ data were stored using a numerical code number identifier.

**Data collection**

**Participant observation**

Participant observation is a data collection tool which allows the researcher to identify a, “combination of steps in a causal chain” and to “report on those that appear the most important in the natural setting” (Kidder 1981: p 106). Kidder also tells us that participant observation is particularly useful as a data gathering technique in the study of young people as they move into adult roles (Kidder 1981: p 106). The technique involves the development of a high degree of trust and benefits from the researcher being immersed in the social setting in which the research is carried out. Kidder argues that where a researcher is deeply involved over time with the group being studied then, “the researcher observes phenomena as they are and not as the respondent or the researcher wishes they were” (Kidder 1981: p 109) and that the longer the involvement of the researcher and the participants then, “the less likely the research subjects are to distort the research” (Kidder 1981: p 110).

The ground breaking work, in Britain, of Ball (1981) in which he explored the day to day functioning of a comprehensive school together with that of Burgess (1983) who delved into the workings of a Catholic comprehensive school relied on the collection of data whilst the researchers were each members of staff. Burgess noted that being on staff allowed involvement in day to day activity which is beneficial if a study is to, “reveal the way in which a comprehensive school works” (1983: p i). Pollard (2007), who tracked the school careers of primary school pupils to the completion of the GCSE, has pointed out that an addition benefit of being on staff in the school of
participants is that both enduring and transitory influences can be identified by the researcher and taken into account when analysing data (Pollard 2007: p 12). He argues that transitory data might be masked or lost when the researcher is a visitor to the environment under exploration.

Gaining the trust of school-age participants is not totally reliant on the researcher being a staff member. In Australia, McLeod and Yates (2006) chose to interview the participants in their research into the values of 12 and 18 year old youth. Contact between the researchers and the participants occurred every six months for six years. Nevertheless McLeod and Yates noted that there was an element of significance to interviews on the part of participants and recognised the need to scrutinise data for distortion as a result (2006: p 15).

Concern about establishing trust with participants did not affect the current research. The researcher of this case study had already worked at Soton College for fifteen years when the research was commenced and had been the Careers Coordinator and a member of the middle management team for eight years. This placed her in a unique position to observe the school experience of all students. Her school based role for all of the research period incorporated,

- Involvement in policy development and implementation.
- Participation at middle management level in school planning with respect to timetabling and curriculum.
- Liaison between Soton College and universities, TAFE Colleges, employment groups, local school networks and other secondary colleges.
- Administration of aptitude testing for Year 10 students.
- Counselling for VCE subject selection and post-school courses as well as employment.

This role is shown diagrammatically in Figure 1:
The researcher had both daily dialogue with other staff and regular communication with the institutions external to Soton College which administered the VCE, vocational education (VET) and university and TAFE course selection. She also had a first hand experience of the application of school policies, particularly those related to curriculum offering and change, timetabling, the availability of subjects, class sizes, classroom resources and school program implementation. Her role of careers counselling meant she had a first hand knowledge of each member of the Class of '95 as well as regular and ongoing contact with each of them from Year 10 to 12 and in many cases after they left Soton College.

In particular she worked with each student who completed school to build strategies to attain their individual goals within the constraints of the changing policies of the VCE and university and TAFE course selection. Over her years of working directly with the Class of '95 the latter had seen her as a reference point, even a trouble shooter, for their
own encounters with educational policies which governed their everyday school life. Trust between the participants and the researcher was well established at the point where this research was commenced.

The researcher was well aware of the culture of Soton College and familiar with the position of the college in the changing landscape of Victorian post-compulsory education. She was well aware of the, “core beliefs, values, traditions, symbols and patterns of behaviour” (Flynn 1993: p 8) of Soton College and she was imbued in the argot of the college providing insight into the quality of the journey through the college of the Class of ’95 Neuman (2003: p 382).

Data collection – archival data
All other data have been archival and taken from the Soton College records. These data are described below.

Historical records – school records
School records were comprehensive and had been meticulously kept with each record providing a summary of each child’s school experience from Year 7 to 12 inclusive. Some of one student’s reports were missing from the file and were provided by the student.
The data provided by school records is summarised in Table 3.
Table 3: School records as a source of data used in this case study.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Source of data</th>
<th>Relevance of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family background at commencement of secondary school</td>
<td>School enrolment records</td>
<td>These provide information about the father’s occupation, primary school previously attended and reasons for choosing Soton College.</td>
</tr>
<tr>
<td>Academic achievement</td>
<td>Formal school reports issued twice per year from Years 7 to 10.</td>
<td>Show achievement in grades UG to A+ and teacher comment on academic performance for every subject studied.</td>
</tr>
<tr>
<td>Subjects studied in the post-compulsory years of schooling (VCE)</td>
<td>Individual subject selection forms for each of the two post-compulsory years of schooling</td>
<td>Provide information on anticipated careers, VCE subjects chosen and subject teacher comment on academic potential.</td>
</tr>
<tr>
<td></td>
<td>Enrolment records and class lists for each VCE subject studied</td>
<td>Gender and socio-economic background composition of each subject class in which enrolments occurred in 1994 and 1995 at Soton College.</td>
</tr>
<tr>
<td></td>
<td>Soton College annual subject handbooks</td>
<td>Provide details of the subjects studied from 1990 to 1995 and advice to parents on subject choice.</td>
</tr>
<tr>
<td>Timing of the decision to leave school</td>
<td>School exit forms</td>
<td>Provide the date of school leaving and, in most cases, reason for exiting school and post-school work or study intentions.</td>
</tr>
</tbody>
</table>

The above school records provided a chronicle of the school experience of each of the young people in the cohort. The data used by the researcher was that used by each of these young people in making decisions about how long to stay in school, the subjects to take whilst in school and the post educational work occupation (if known) to which each of them aspired.

**Historical records - Non-school records**

In the post-compulsory VCE years, assessment was determined by the Board of Studies (BOS) which in turn provided this data to the Victorian Tertiary Admissions Centre (VTAC) which is the administrative body of the tertiary course selection process in Victoria. Both these organisations provide each secondary school with records of
assessment, tertiary course selections and offers of places in tertiary courses for each of the students at the school.

Table 4: Records of the Victorian Board of Studies (BOS) and the Victorian Tertiary Admissions Centre (VTAC) as a source of data used in this case study.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Source of data</th>
<th>Relevance of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achievement in VCE</td>
<td>Student summary reports</td>
<td>Prepared by BOS provide details of assessment of every VCE unit of study over the two years of VCE. Contents of each student’s report showed all VCE studies (subjects) taken and achievement was shown as S/N for units 1 and 2 and Common Assessment Task grades and a scaled study score for each of units 3 and 4.</td>
</tr>
<tr>
<td>Tertiary courses selected</td>
<td>List of tertiary course applications by cohort</td>
<td>Provides preferences for tertiary level courses lodged with VTAC September 1995 for study in 1996. Preferences are ranked in order from most preferred to least preferred. Each student was allowed eight preferences.</td>
</tr>
<tr>
<td>Regulations for successful application for tertiary study in 1996 as well as prescribed VCE studies by tertiary course</td>
<td>Victorian Tertiary Entrance Requirements 1996 and Tertiary Entrance Requirements 1996 (Revised Edition)</td>
<td>Details of rules in gaining an offer of a place in tertiary study in 1996b together with the list of any prescribed VCE subjects required by university and TAFE course. Since the tertiary course selection process changed whilst the VCE students of 1995 and 1996 were completing VCE this publication was revised and reprinted.</td>
</tr>
<tr>
<td>TER December 1995</td>
<td>Tertiary Score Guide 18/12/1995</td>
<td>Published by BOS and VTAC in daily newspapers on 18/12/1995 as a set of charts to assist in “roughly” checking the TER awarded to each of them.</td>
</tr>
</tbody>
</table>

The historical documentation outlined in the tables above was that provided to stakeholders at the time of the significant changes introduced in the relatively new VCE during 1994 and 1995. Data from these sources encompassed the entire secondary school experience of each of the Soton College students in the cohort.
Data collection – former student surveys

These were designed in the form of interview schedules which could be forwarded to ex-students and also used to structure a phone interview with an ex-student. Two schedule designs were used. The first of these was designed to collect data on post school education and work experiences of students who had competed Year 12. The second was designed to collect the same data from those of the Class of ’95 who had dropped-out of Year 12 before completing Year 12. The structure of the surveys is discussed in Appendix D.

Survey respondents

One hundred and forty-seven members of the Class of ’95 were contacted and of these one hundred and thirty-one either returned the survey or were interviewed by phone. This was a return rate of 89 per cent. An additional sixteen students participated in a phone interview. Contact occurred between ten and eight years after the Class of ’95 had left Soton College. At this point it was harder to trace those who had dropped-out of Soton College before completion than those who had completed Year 12. The members of the Class of ’95 were often overseas travelling and a number of phone interviews were held with ex-Soton College students in places as far away as Turkey, Czechoslovakia and one ex-student filled in a very long rail delay in England by completing the survey by phone. All their help and commitment has been greatly appreciated.

Social background of the cohort

Great consideration was given to the process of classification of parental occupation. There are various models in the literature. Poole in her work with youth expectations and transitions argued that,

\[ \text{The influence of social class, particularly the social class of father's occupation, has been identified as one of the most powerful determinants of patterns of educational and occupational aspirations}. \]
and expectations, as well as of subsequent occupational attainment

(1983: p 111)

This argument is also supported by Ainley and Sheret (1992: p 15) in their work tracing the pathways of students through high school. Bourdieu writing with Passeron (1979: p 3) noted that father’s occupation contributed to the socially based differentiation in school achievement and illustrated this by providing a table of conditional probabilities of being found in a range of university courses by social origin.

Other measures of socio-economic background have been used by researchers. Marks, McMillan and Hillman (2001: p 16) in their investigation of the role of social background and school in tertiary entrance performance in Australia included parental occupation and education and family wealth amongst the factors considered. Parental occupation was determined by taking that of the father or where the father was not present in a family that of the mother. Parental occupation was also used to distinguish socio-economic background by Lamb, Dwyer and Wyn (2000: p 4) in their exploration of patterns of non-completion of school in Australia and by Marks, Fleming, Long and McMillan (2000: p 47) although the later researchers constructed a statistical measure based on the occupation of both mother and father to use in their investigation of social background in Year 12 participation and that in higher education in Australia.

However parental occupation may vary over time. In particular a mother’s role in the family may change from prime carer in the house to the combined role of family breadwinner and prime carer. Mothers often move between home duties and part or full-time work over time.

It was decided to take the occupation of each parent at the point in time when families chose Soton College for their child. At this point in time parents also disclosed their long term aspirations for their child. This information was available in the application forms to Soton College completed by each family.

Initially the aim of this research was to classify the socio-economic background of each family according to father or mother’s occupation which ever was the highest but it
soon became obvious that at the time they applied to Soton College on behalf of their child, sixty mothers that is thirty-seven per cent of mother’s, described their occupation as home duties. What is more, the mothers who described their occupation in this way were significantly more likely to come from the families where the father was a non-professional worker (thirty-nine per cent) than from those of professional workers (twenty-six per cent).

So using mother’s occupation in paid work was rejected as a classification technique except where the father was not present in the family. All but four of the father’s of the Class of ’95 were in paid employment when they completed the application form to the college. In the four cases where the father was not part of the family or a contributor to the school choice the occupation of the mother was taken.

Father’s occupations showed that families of professional or unskilled workers made up the two smallest categories and those of non-professional white-collar workers, followed by those of tradesmen made up the largest categories. Professional families were the traditional users of the full extent of education and it was decided to term these families inheritors as had Bourdieu and Passeron (1979) in their work. The remaining social group were traditionally the less frequent users of the full educational system and it was decided to refer to this group as the newcomers. That is those who had in past generations been less likely to fully use the educational system. The newcomers were further divided up according to the occupation of the father.

Four categories based on socio-economic background were defined in relation to the father’s occupation at the time the student in the family commenced secondary school at Soton College in 1990. These categories are set out in Table 5.
Classification of socio-economic background by parental occupation

The family backgrounds of the Class of ’95 were broken down into the following categories based on the type of work done by the father and, where there was only the mother still in the family, by her. This network of categories can be summarised as in Table 6.

Table 5: Father’s occupation classified for socio-economic background categories

<table>
<thead>
<tr>
<th>Socio-economic background category</th>
<th>Father’s occupation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritors</td>
<td>Professional work or senior management</td>
</tr>
<tr>
<td>Non-professional white-collar</td>
<td>Clerical and administrative work, middle level management, retail work, technician, small business ownership</td>
</tr>
<tr>
<td>Tradesmen</td>
<td>Trade</td>
</tr>
<tr>
<td>Unskilled workers</td>
<td>Unskilled or semi skilled worker.</td>
</tr>
</tbody>
</table>
Table 6: Summary of classification, based on fathers occupation, of the families of the Class of ’95

<table>
<thead>
<tr>
<th>Inheritors</th>
<th>Newcomers</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 families</td>
<td>132 families</td>
</tr>
<tr>
<td><strong>White-collar workers</strong></td>
<td><strong>Blue-collar workers</strong></td>
</tr>
<tr>
<td>65 families</td>
<td>67 families</td>
</tr>
<tr>
<td><strong>Non-professional white-collar workers</strong></td>
<td><strong>Tradesmen</strong></td>
</tr>
<tr>
<td>65 families</td>
<td>40 families</td>
</tr>
</tbody>
</table>

N.B. In the four cases where father’s occupation was not applicable, that is children came from a fatherless family, then the occupation of the mother was used to classify the social background of the child.

At the start of Year 7 there were one hundred and sixty-three students in the Class of ’95. Between Year 7 and the completion of Year 12 thirty-five students dropped out of the Class of ’95.

The pie charts in Figure 2 and Figure 3 show these social groups.

At the beginning of Year 7, the Class of ’95 comprised:

- Seventy-eight boys and eighty-five girls;
- Thirty-one inheritors and one hundred and thirty-two newcomers.

The newcomers could be further divided into sub-groups of:

- Sixty-five children from the families of non-professional white-collar workers;
- Forty children from tradesmen’s families;
- Twenty-seven children from the families of unskilled workers.

This is illustrated in Figure 2.
Figure 2: Socio-economic composition of the cohort at the commencement of Year 7, 1990

Number of students = 163

Over time the cohort was reduced through attrition to one hundred and twenty-eight.

At the end of Year 12 the Class of '95 comprised:

- Fifty-six boys and seventy-two girls;
- Twenty-five inheritors and one hundred and three newcomers;
- Eighty children from the families of white-collar workers and forty-eight children from the families of blue-collar workers (see Figure 2).

Newcomer sub-group numbers had declined to:

- Fifty-five children from the families of non-professional white-collar workers;
- Thirty-one children from tradesmen’s families;
- Seventeen children from the families of unskilled workers;

The thirty-five members of the Class of '95 who dropped out were comprised of:
• Twenty-two boys and thirteen girls;

• Six of these were inheritors and twenty-nine newcomers. There were ten children from the families of non-professional white-collar workers, nine children from tradesmen’s families and ten children from the families of unskilled workers;

• Sixteen children were from the families of white-collar workers and nineteen children from the families of blue-collar workers.

Figure 3: Socio-economic background of students who completed Years 7 to 12 at Soton College between 1990 and 1995

The above data show that both before and after attrition, newcomers dominated the socio-economic make up of the Class of ’95 and the children of white-collar workers dominated the classrooms. There was also a gender imbalance favouring girls which, over time, was increased through the attrition of more boys than girls. Within the social sub-groups the smallest was that of children from unskilled workers’ families. Since, over time, this group also suffered the highest rate of attrition, then, by the end of Year
12, membership of this newcomer sub-group had declined to seventeen which was only 63 per cent of its original size.

The imbalances in social and gender group sizes are important in this research. When admitting students, schools, especially non-selective schools such as Soton College, do not balance the numbers of boys and girls nor do they make sure that they have the same numbers of children from each of the social backgrounds, although such imbalances as these can influence school culture and climate from one new intake to the next. Indeed imbalances in gender and social background are factors that contribute to the unique ethos and school climate the Class of ’95 experienced at Soton College.

**Attrition rates**

Attrition rates for boys (28 percent) were significantly higher than that for girls (15 per cent). Lamb has shown in his study of school retention in the 1990s, that in Catholic schools in 1995, the expected attrition rate for boys was equivalent to the 28 per cent of the boys from the Class of ’95 (1996: p 12). The 1995 attrition rate for girls in Catholic schools was found to be a little more than the 15 per cent of girls from the Class of ’95 at Soton College (Lamb. 1996: p 12). On a state basis, however, Lamb found that in 1995 the attrition rates for Victorian boys were significantly greater than those of boys from the Class of ’95 and a little greater than those of girls from the Class of ’95 (1998:p 11)

Attrition rates according to socio-economic background showed that amongst the Class of ’95 the children of unskilled workers were far more likely to exit Soton College before completion than inheritors. The rates are shown in Table 7 below.
Further division by gender of the attrition rates, in Table 7, would create distortion because the resulting groups would be so small for inheritors and the children of unskilled workers. But as we moved down the socio-economic scale at Soton College completion rates declined.

Lamb (1996: p 18), using data from the Longitudinal Surveys of Australian Youth, has also shown this trend. In Australia during 1995, the daughters and sons of professional and managerial workers were the least likely to leave school before completion. The daughters and sons of other white-collar workers, those whom Lamb classified as intermediate/non-manual were more likely to leave school before completion than were the children from professional and managerial families but less likely than children from families where the father worked in manual work either skilled or unskilled. The children of skilled manual workers were more likely to stay on in school until completion of Year 12 than the children of unskilled manual workers.

The social pattern in attrition shown by the Class of ’95 is in keeping with the pattern determined by Lamb (1996: p 18).

**Assessment**

All academic assessment at Soton College was marked out of a range of grades from A+ down to UG (ungraded). Convention in Victorian schools equates a grade below D as a fail and those of D and above as a pass. This convention was followed at Soton College and consequently in this research.

<table>
<thead>
<tr>
<th>Socio-economic background</th>
<th>Attrition rate Year 7 to Year 12 inclusive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritors</td>
<td>19%</td>
</tr>
<tr>
<td>Non-professional white-collar</td>
<td>15%</td>
</tr>
<tr>
<td>Tradesmen</td>
<td>23%</td>
</tr>
<tr>
<td>Unskilled workers</td>
<td>37%</td>
</tr>
</tbody>
</table>
Dealing with achievement in mathematics

There was significant difficulty in making comparisons of achievement in mathematics over the pre-VCE years. The Soton College mathematics program was centred on a core curriculum for Years 7 and 8 and a hierarchical curriculum structure in Years 9 and 10. For these two years achievement was not simply measured in grades but also in location in the hierarchy. Determining both relative position of the achievement of one student with that of another and then determining relative achievement over time was difficult. It was also almost impossible to match achievement in the hierarchy with the achievement levels of Years 7 and 8 for all of the Class of ’95.

Several techniques were tried and found inappropriate. Finally it was decided to simply track the mathematics achievement of the Class of ’95 and follow the progress of students over time as they improved or reduced their relative achievement position in mathematics. Modified tree diagrams were then created to provide a “map” of the changes from Year 7 to the end of Year 10.

Rejection of sampling techniques

Education is a holistic experience and the gender and socio-economic background bias displayed by the cohort is indicative of the real life school experience of young people in ordinary government and Catholic secondary schools. These schools do not usually undertake any means of student selection other than that forced upon them by a combination of legislation and convention. So recruitment is shaped by the location of a school and its geographic student catchment area. This was the situation in the case study. The bias in the cohort could be expected to generate the gender and socio-economic background culture of the year level. This in turn provides a vital input to school experience.

Sampling on the other hand is a “search for typicality” (Williams. 2003: p 74) and achieves this by either providing the researcher with a representative group of a specific population (in the case of quantitative research) or by enhancing what the, “researchers learn about the processes of social life in a specific context” (Neuman. 2003: p 211) in
the case of qualitative research. None of these techniques would seem appropriate in
the case of this research which considered the school experience of the population of
students from the one year level of one school and not the selection of a representative
group.

**Limitations related to the use of a case study technique in this research**

Use of a case study technique in the examination of the experience of one particular
year level of students at one school must present only one of the many possible pictures
available in examining the topic. Ball (1981) in his case study of a British
comprehensive school in the early to mid 1970s argued that his work was distorted by
distance from the cohort being studied. Despite a significant use of participant
observation, Ball pointed out that the analysis of the data was “handled through second
order constructs and categories which rigidify, simplify and reify the actual
interpretations, perspectives and meanings held by the teachers and pupils.” (Ball.
1981: p xviii)

To some degree this criticism too relates to this case study. The use of formal reported
grades in achievement from Year 7 to Year 10 for each of English and mathematics is
really a crude measure of the academic achievement of each student. It does not take
into account the real intent of the teachers in recording the grade although it may well
take into account the interpretation given to the final reported grade by the student and
her/his family. Where a teacher uses discretion to mark work and is aware of the
attitude of the actual student, then a reported grade might be improved to encourage or
reduced to “push” a student.

The work in this case study has used only historical data. The same relied upon by each
student in the cohort to make decisions about her or his future including the timing of
her or his exit from school to work. This historical data source does not display the
nuances which contributed to each student’s decisions such as the influence of peers
and trusted and influential adults. But it does show what information input was used to
get to the decisions made about post-school aspirations.
Lack of associated non-documentated data can distort analysis and this was a reason for the additional data collection through survey. For instance in an interview with one of the participants in the case study it was found that liking for a teacher had influenced his choice of mathematics in Years 7 and 8. In the first year of secondary school Fintan had been set aside for special help in mathematics and this led to a better grade at the end of Year 7. Consequently Fintan returned to mainstream classes but within six months his report showed deterioration and he returned to the special classes. At interview years later Fintan pointed out that he had deliberately let his mathematics skills decline when he was promoted in order to get back into the remedial class where he liked the teacher. This behavioural aspect of the teaching and learning situation cannot be “picked up” in using historical data alone.
CHAPTER 4

The context of the journey through education

Who were the children who would be the Class of ’95?

The young people who participated in this research commenced their secondary school journey with a school assembly. At this assembly the Year 7 class of 1990 was introduced to the rest of Soton College. This group was destined to leave Soton College for university or work six years later in 1995. They were to be the Class of ’95 and that is how they will be referred to throughout this work.

Social background

If the Class of ’95 had been asked to sit in groups according to their family socio-economic status at this first assembly, then two unequal groups would have formed (see Figure 4). The children of professional workers referred to as “inheritors” by Bourdieu (1979) formed a small group of thirty-one students, and the newcomers, who were daughters and sons of non-professional workers, a much larger group of one hundred and thirty-two students. Inheritors made up only one in five of the Class of ’95 at the assembly. The remainder were newcomers.

The term newcomers will be used in this work to refer to those students who formed the new student cohort in high schools. This group had emerged as a consequence of near universal educational retention. They were the daughters and sons of semi-skilled and unskilled workers. Their family backgrounds were more modest than those of the inheritors, but their aspirations and that of their families were similar. They were equally focused on tertiary level education at the completion of six years of secondary schooling.

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20 Strict compliance with Bourdieu’s definition of inheritors would have further reduced the size of this group. The parents of these inheritors were teachers, nurses and senior managers not the lawyers, doctors and engineers whom Bourdieu argued were the most successful users of the educational system (Bourdieu and Passeron. 1979).
Within the newcomer category were three sub-groups.

The children of non-professional white-collar workers dominated the Class of ’95. They made up 39 per cent of all Year 7 students. The children of tradesmen made up a smaller group that comprised 25 per cent of the Year 7 intake and the daughters and sons of unskilled workers made up the smallest group, which was 17 per cent of all Year 7.

The comparative size of each of the social groups is shown in Figure 5.
Figure 5: Social background of the Class of ’95 whilst in Year 7

Reading the chart: Pie segments bordered in red represent newcomer sub-groups. There are 132 (81%) newcomers of whom 65 are from a non-professional white-collar socio-economic background; 40 are from a trades socio-economic background and 27 are from an unskilled workers socio-economic background. The blue pie segment represents inheritors of which there are 31 (19%).

Fathers’ occupations indicate diversity in their educational backgrounds. In this, the families of newcomers differ from those of inheritors who work in the professions and therefore hold a university degree, a level of management of significant responsibility or both.

It is important to note that the parents of the inheritors of Soton College were not all members of the more prestigious professions of medicine, law and architecture. These were more likely to be the less elite, being teachers, nurses or senior managers. Nevertheless most, if not all, were university graduates and carried out significantly responsible work. Like doctors, lawyers and architects, the parents of inheritors in the Class of ’95 were imbued in cultural capital and could effectively transmit its benefits to their children in a number of ways.
The parents of newcomers were those who did non-professional work. In Figure 5 above we can see that newcomer families come from three different social backgrounds. These are non-professional white-collar workers, tradesmen and unskilled manual workers. This makes a diverse group of families with diverse educational experiences, for unlike the families of inheritors there is little common educational and cultural background.

The parents of the newcomers in the Class of ’95 worked in jobs that usually did not require a pass at Year 12. They were clerks, receptionists, computer operators and sales representatives. They served in shops, drove buses and trucks, sold insurance and were members of the public service and security guards. They were carpenters, electricians, motor mechanics and plumbers. They owned milk bars and sandwich shops, market gardens, Tattslotto agencies and fast food shops. They worked in factories as process workers, in hospitals as cleaners, in hotels as bar staff or waiters and in many more occupations.

The cultural capital present in the families of some newcomers would be little different to that of the families of inheritors from the Class of ’95 but it would be very different in others. In homes where cultural heritage permeated the environment children would be advantaged. The effect of privilege through cultural heritage is subtle, not obvious. It is passed on from one generation to the next through absorption like some form of osmosis but it is noticed in its “crudest” form as direct intervention in the schooling process by confident parents familiar with schooling (Bourdieu and Passeron. 1979: p 20). The families most exposed to this transmission of cultural capital were those of inheritors.

Crude or not, the intervention by parents confident enough to do so was of benefit to the inheritors of the Class of ’95 as they trod an educational pathway different to that of their parents. In the case of dramatic educational change, such as that brought about by the VCE, those most familiar with education, if not the system, could be expected also to respond more resiliently to the change.
Assessment in the new credential was to have greater reliance on school assessed, subject related tasks that were supposed to be completed by the student only and in their own time. Controversy surrounded this form of assessment (McRae. 1992. pp 36-40). There were accusations of cheating in the press and a perception that parents would help with assessments. Those most competent to help in such a way would be those with a full school experience—the inheritors.

Ultimately the reliance on these tasks in the overall assessment of VCE students was reduced, but parental academic support in the earlier as well as later years of secondary school advantaged those for whom it was available. Parents could help with home tasks, which included projects and assignments as well as nightly homework tasks and, in the VCE years, Common Assessment Tasks, all of which contributed to the achievement grade of the student. As children proceeded through school such support was more likely to be available to inheritors than newcomers. Newcomers might achieve the same result but they were more likely to do that without academic home support than inheritors.

The new structure of post-compulsory education and the breadth of its curriculum could challenge even the parents of inheritors at first, but developed networks would enhance their resilience. Highly credentialed parents who found the content of a certain subject alien to them would (a) know where to go to find out about it and (b) draw on their educational experience in the process of problem solving, competency in language and familiarity with assessment requirements to help their child cope with the demands of specific VCE subjects. This level of support was denied to students whose parents had not gained the same level of formal education. Given that the VCE was still quite

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21 Schools were required to set up a panel which authenticated this form of assessment. At Soton College work considered as not being that of the student was referred to this committee for adjudication. Teachers proved very competent at recognising work which was not that of the student only. It must be remembered that teachers, many of whom had taught the same student for a number of years by the final year of school, were well aware of the commitment made by the student and the capability of that student and therefore able to query work which seemed to be outside this capability.
new to all in 1995, all families were treading new ground. The only exceptions to this were those families in which an older child had already completed the VCE\(^{22}\).

**Gender and prior school experience**

There were seventy-eight boys and eighty-five girls in the Class of '95 sitting at that first assembly. They had come to Soton College from its six partner primary schools, a mixture of other Catholic primary schools and a number of government primary schools. The largest group of students (80 per cent) had come to Soton College from partner primary schools so many of the new Year 7 class had old friends sitting with them in the assembly.

Although the actual experience of secondary school was new to all of the Class of '95, one third of their number had heard tales of school life at Soton College from older brothers and sisters. The older brothers and sisters of twenty-six members (sixteen per cent) of the Class of '95 were sitting amongst the established students at that first assembly for 1990; others had already completed their journey through Soton College.

**Choice of Soton College**

The families of the Class of '95 chose Soton College for their child because they wanted their child to be educated in a Catholic environment and they wanted their child to go to university. These families obviously saw Soton College as a provider of a pathway through education to a university degree and a profession, and entrusted Soton College with the stewardship of their ambition as a result.

Such trust was not without warrant. In the short time that Soton College had been in existence (a little over ten years) the college had maintained high scholastic standards particularly in the public examinations at Year 12. Post-school outcomes had also been good. Students who did not go to university got into TAFE courses or went directly to work. Soton College boys were particularly popular as apprentices with local

\(^{22}\) Only the members of the Class of '95 who had had an older brother or sister complete VCE the year immediately before them could be advantaged by prior knowledge in mathematics because VCE mathematics was totally changed for the year graduating in 1994 from that experienced in the years graduating from 1991 to 1993.
tradesmen and at least one of them per year gained the much sought after electrical apprenticeships offered by the “Big Australian”, BHP.

These were good reasons for choosing Soton College but there were more successful schools available. These included single-sex Catholic schools and several Independent schools. Parents had not chosen Soton College simply for achievement or for that matter because they wanted a Catholic education. There would be various additional reasons for choice and included amongst them would be affordability, location, type of academic program, image of the college in the community and in the case of parents who had elected to send older children to the college also, previous experience.

Ambitious parents, most of whom were working class, and all of whom were well aware of the competitiveness for university entry, chose Soton College for their child just as middle class parents chose independent schools or in some cases selective high schools. Soton College parents, like their middle class counterparts, saw the college imparting “personal distinction, precocity in language skills and an emphasis on formal learning as the vehicle of personal expression and growth” (Teese. 1998: p 402) in a Catholic environment. This was what the parents of the Class of ’95 sought for their children.

This action by the families of the Class of ’95 tends to fly in the face of the findings of Reay and Ball (1998). Working in Britain these researchers found that middle class parents selected education with a view to “making something of oneself” and that working class families selected with a view to community–friendship maintenance and locality (1998: p 433). But at Soton College, families, regardless of social background, wanted their children to make something of themselves and use a university course to do so. Given the newcomer background of the majority of the Class of ’95, this was indeed a statement of intention for social elevation.

Community and the Class of ’95

Most members of the Class of ’95 were neighbours. They played in the same netball and football clubs, they went to the same movies, they shopped at the same shopping
centres and they spent summer on the same beaches. In many ways their lives were almost identical. Almost all were Catholic and familiar with the liturgy, rituals and symbols of the Catholic Church. But their family background differed considerably particularly with respect to parental education level, occupation and financial resources. English was not spoken in the home of a few of those from the Class of ‘95.

There were relatively strong communication links with the families of children at Soton College. The college provided an annual information night for each of the six year levels and a weekly newsletter, as well as formal reporting to parents every term, i.e. four times per year, and parent-teacher interview sessions once each semester. There was a general expectation by parents that they could access teachers in the evening and many of the teachers allowed parents to contact them in their private homes and outside school hours. Although these were factors regarded as nurturing the positive climate of an effective school they are not always satisfactory arrangement for all parties.

Nevertheless communication between the families and the college was encouraged by the college and there was a significant attempt by the college administration to maintain a public image in the community. Importantly two of the three deputy principal positions were held by members of one of the Parishes which administered Soton College and the Principal was a member of another one.

**Functional school community and the Class of ’95**

The goals of the families of the Class of ’95 were also those of Soton College. There was intention on the part of all stakeholders to develop a supportive community environment in which to be valued and to learn, and through this transcend the social scale.

In their first weeks and months at Soton College the Class of ’95 would be encouraged to meld into the existing close community. Strong bonding between Soton College students would add to the same bonding that came from being part of the broader local and Catholic communities. In essence this would achieve the functional community noted by Coleman and Hoffer (1987: p 214) generating the “Catholic school effect” by
which American Catholic schools effectively supported higher levels of school completion and aspirations. And this was what the parents of the Class of ’95 had wanted when they chose Soton College.

It is highly unlikely that the families who applied for their children to enter Soton College in 1990 had read of the findings of Coleman and Hoffer (1987) in the United States of America so they did not know of the Catholic school effect but they did know about Soton College. They had witnessed the success of the College in supporting young people in the pursuit of a university degree and this influenced their choice of school. Their perception was to be proved correct by the academic success of the Class of ’95.

But in addition to academic success the college would also encourage a close community amongst the Class of ’95. Over time the members of this year level became significantly involved in non-academic activities including leadership. In their final year at Soton College the Class of ’95 selected as their leadership motto, “Celebrating the gifts of each other”, and it was particularly indicative of the ethos of the graduating class of 1995. At their ten year reunion almost all the young adults from this cohort reassembled. Only a few were missing and these were predominantly overseas. At that point the group were still close to each other and the school community.

Looking ahead

Some differences in post-compulsory education

The future for the Class of ’95 was not as clear as it had been for the Year 12 Class of 1990—the graduating class sitting directly in front of the Class of ’95—in that first
assembly. The Class of 1990 were the last students to complete the Higher School Certificate (HSC) and they represented the old order of post-compulsory schooling.

Amongst them self-selection had been high. Around one in two had reached Year 12. Most of the Class of 1990 had followed a traditional pathway through post-compulsory curriculum. A small number had taken the alternative route by studying a Group 2 HSC. This pathway traditionally led to work or TAFE but not university.\textsuperscript{25} The choice of any subjects from the Group 2 range of HSC limited competitiveness for university places and therefore was not taken lightly. A few, like Nina, had combined these studies with academic ones successfully and before the year was out would be offered the choice of their most preferred university course but this was not a common outcome.\textsuperscript{26}

Distinction between Group 1 and Group 2 subjects was not the only curriculum-based division in place in 1990. There were already a number of additions to the curriculum, such as legal studies, home economics, graphics and physical education, which were considered less academic than traditional subjects by university selection officers and all of which were devalued in competition for university places (Teese, 1998: p 411). But regardless of devaluation of these subjects they were popular with Soton College students in the HSC and were to stay popular amongst the Class of '95 in the Victorian Certificate of Education (VCE). The popularity of these less traditional or “newer subjects” was to be one of the things the newest Soton College students and the oldest Soton College students of 1990 had in common.

But the Class of '95 sitting in that first assembly were facing dramatic educational change. The new Victorian Certificate of Education, heralded as a certificate to meet the educational needs of all students regardless of social background, was about to be introduced and Soton College was prepared for it.

\textsuperscript{25} Although successful Group 2 HSC candidates traditionally could access TAFE qualifications rather than degrees, Soton College past students who had completed a Group 2 HSC had been able to gain entry to some degree courses and had been successful in them. Degrees undertaken by these students included teaching, nursing and business. Usually these degrees were from country universities where competition for places was not as high.

\textsuperscript{26} Nina was a gifted student whose grades in HSC Group 1 subjects would totally eliminate the loss of grades in the Group 2 subject she chose.
School structures had been changed or were about to change. Curriculum content, school timetable, teaching patterns and delivery styles, even the geography of Soton College, were adapted to meet the demands of the new VCE. The new VCE promised much. It was designed to lessen drop-out rates and reduce the restrictions of curriculum.

Unfortunately the VCE curriculum would not be immune to the power of the universities and continued to be divisive. At first, through use of prescription, as eligibility of potential candidates for an individual university course was restricted only to those who successfully studied certain VCE subjects. Later, there were to be additional barriers set up by universities through the use of a selection process, the Tertiary Entrance Rank (TER), in which applicants were ranked, not only by achievement, but by achievement adjusted by the subjects in which it was gained. These conditions to university course access were at best to re-establish the barriers imposed by the choice of newer subjects imposed in the old HSC and at worst to increase them.

There was already uncertainty about the value of the VCE to the students who would complete it. In 1989, the year in which the Class of ’95 were planning their secondary schooling, debate about the relative merits of the soon to be introduced VCE was being played out in the press. Headlines such as, “Education is at the crossroads” (Penington. Sunday Herald. 15th October 1989: p 14) and “A syllabus for ignorance” (Santamaria. Australian 24th October 1989: p 15) or “VCE lacks merit” (Donnelly. Sunday Herald 5th November 1989: p12) must have concerned parents of the young people starting their secondary school experience at the beginning of 1990.

A group of independent schools entered the debate by offering the International Baccalaureate as well as the VCE, arguing that the former certificate had greater credibility. With this degree of criticism from people and organisations that “should

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27 In 1998 the TER was recalculated to make it compatible with the selection processes used in other Australian states and renamed the Equivalent National Tertiary Entrance Rank (ENTER). It was used for the first time in the 1999 selection period. TER was the appropriate term during the period of this case study and is the term which will be used throughout this work.
know”, even parents familiar with the educational system could feel confused and concerned about the educational future of their children.

The VCE was still unfolding as the Class of ’95 commenced Year 7 and the regulations of the credential were to be changed quite drastically as the Class of ’95 moved from Year 7 to Year 10. The new VCE mathematics curriculum and structure were to be totally changed within the four years. VCE assessment was also to change and Australian Studies, initially a mandatory subject in the VCE, was to be downgraded to an elective subject during the same four year period\textsuperscript{28}.

The future for the Class of 95 in their first school assembly was one of challenge. This too was to be the future faced by Soton College – the school chosen by the families of the Class of ’95 as steward of their educational future.

**Changes to the traditional post-compulsory social mix**

During the pre-VCE years, in which being in Year 12 was only for about 20 per cent of young people,

\textit{The secretaries to be and the State Rivers and Council workers would leave at the end of Form 3 (Year 9), the …… nurses at the end of Form 4 (Year 10), the primary teachers at the end of Form 5 (Year 11) and at Form 6 (Year 12) the smarties would be left, the ones who wanted to go on to tertiary education and the higher status professions... They would be the children of well-educated people by and large – interested, attentive, motivated by the automatic quality of their legacy, a real pleasure to teach, the little bit of cream on secondary teachers’ professional puddings (McRae 1992: p 7).}

But the VCE did bring change to the social structure of Year 12. The new Year 12 students now comprised a mixture of “smarties” and others who were equally ambitious. The exclusiveness of Year 12 had vanished as it became accessible to all

\textsuperscript{28} Australian Studies was finally dropped from the VCE subjects available but not before the Class of ’95 finished the VCE.
students, and if the VCE met expectations this exclusiveness would diminish even further. And it did. At the end of that first assembly each Year 12 student from the Class of 1990 processed out of the assembly room between two of the new Year 7s. It proved to be a prophetic symbol. By the time these Year 7 students became the graduating Class of ’95 the school completion rate at Soton College had improved by a quarter and the procession leaving the assembly room on the first day for the Year 7s of 1995 was much longer.

The challenge for Soton College

With only one or two exceptions each of the families of the Class of ’95 wanted their child to get a degree. For most this goal would be achieved. Regardless of social origin most of the Class of ’95 would complete six years of secondary school and go to university. But it would be easier for inheritors than for newcomers.

The social mix of university populations, unlike that of Year 12, was not about to change drastically. Two decades after Bourdieu and Passeron (1979) saw French universities populated by the children of professionals and senior managers who comprised the socially privileged, the same social groups dominated the universities of Australia. Inheritors for whom passage through the educational system was simply part of a normal journey to adulthood, were and still are disproportionately represented in university populations.  

Traditionally only some of the new students, those not so advantaged, survived to enter university because for new students the “social past has been transformed into an educational handicap through relay mechanisms such as early, often ill-informed decisions, forced choices, or lost time” (1979: p 14). Those of this stream who survive secondary education to enter university have been subjected to rigorous self-selection throughout the process of their pre-university education and the distinction

30 In particular the method of calculation of the Tertiary Entrance Rank (TER), which is the index of tertiary course selection in Victoria, could be seen as one of these mechanisms since it scales VCE subject scores by subject and in so doing effectively discriminates between certain VCE subjects. The subjects adversely affected are those subjects most often selected by the “new” VCE students. (See Appendix A)
between their goal achievement and that of their inheritor classmates will continue into tertiary education where, Bourdieu and Passeron (1977: p 85) argue, the effects of social handicap are felt through the choice of less demanding university degrees.\(^\text{31}\)

But amongst the Class of '95 those clamouring for university degree access are predominantly newcomers. This is the group of young people that Bourdieu and Passeron (1979) have identified as being at risk of not achieving the goal of a university degree simply because of their social background. These students outnumber the inheritors four to one.

The families, if not the members of the Class of '95, have the ambition to go to university, so if Soton College is to be effective it will have to:

a) encourage all students regardless of social background to complete the VCE;

b) lift the academic standard of weaker students; and

c) help stronger students to survive the new challenge of secondary school.

This will prove a challenge indeed. The proportion of inheritors from the Class of '95 who achieve this goal will be significantly greater than that of newcomers. Similar post-school aspirations of these children were not going to generate the same post-school results.

This is the dilemma of contemporary Australian secondary schools where almost all students stay to complete Year 12. An effective school should be able to compensate for social and cultural barriers and work collaboratively with parents to facilitate goal attainment for all children regardless of social background—even those children who have traditionally shunned university. (Sullivan and Whitty in Teese, Lamb and Duru-

\(^{31}\) Certainly there were to be only four (all girls) of these Soton College students who were to access the prestigious degrees of Law and Medicine, both of which were protected behind a barrier of the combination of demanding levels of VCE achievement in either directly prescribed challenging subjects or indirectly selected challenging subjects through the operation of the TER tertiary selection system. All of these students were from a white-collar socio-economic background although none were from the group of “inheritors”.
This is the charge of all schools, including those like Soton College where the only limits to enrolments are the number of teachers and classrooms in the school, the regulations of the Diocese regarding recruitment boundaries and the requirement that students at the college be Catholic. A Catholic Regional College such as this, like non-selective government high schools, draws its student body from a defined neighbourhood. Consequently the social background of the school population is dictated by that of the neighbourhood in which the school exists (Keating and Lamb. 2004:pp 5-8).

The neighbourhood surrounding Soton College was home to mainly working class and lower middle class families and so the population of Soton College matched this social mixture. Soton College must use the tools available, such as curriculum and programs, school structure and policies, to lead to a pattern of valuable and sought after post-school destinations for each of its students regardless of social background. Coming forward in time the potential educational outcome of those rich in cultural capital and those poor in cultural capital should be equally valuable but not necessarily the same.

The quality of the consequent outcomes, such as length of time spent in education, access to tertiary study, choice of a university course and ultimately the access to full-time paid employment, should be improved by the interaction of each student with the educational program offered at Soton College. The same program should also reduce the risk of a poor educational outcome for all students. If this program is to be effective then it will lead to equitable post-school outcomes for each student. If this was to be the case then the largest group of students amongst the Class of ’95, i.e. the newcomers, will achieve the same range of post-school goals as the inheritors.

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32 In Australia this tends to occur when recruitment for a certain school is from one particular residential area in which levels of wealth are similar or where enrolments are accepted from certain like social groups within a community. Private schools, selective government and denominational schools are examples of where there is similarity of social groups. Non-selective government and non-denominational schools Catholic schools, such as Catholic Regional Colleges, tend to face the challenge of catering to very diverse groups of students (Anderson. 1992: pp 225-228).
Keeping the Class of ’95 in school to the end of Year 12

To do this Soton College looked, as recommended by the Blackburn Report (1984), to relevant curriculum and a school organisation that supported increased individual responsibility for learning and a more adult environment. By the time the VCE was introduced, Soton College had provided a broad curriculum for the post-compulsory years for almost a decade. Practical subjects such as woodwork, food technology, word processing and computing offered during Years 7 to 10 and supported with a number of Group 2 HSC subjects had been offered in Years 11 and 12. With this experience and the integration of practical and vocational subjects with theoretical and traditional subjects in the VCE, Soton College was well placed to provide a curriculum which would meet the more diverse needs of those staying on in school in the new certificate.

Fortunately the Soton College campus was large and a totally self-sufficient VCE campus was able to be easily established. This was in accordance with the recommended provision of a more adult structure for the VCE that would encourage students’ responsibility for their own learning.

Changes of this nature created a different school climate for older students. In this way Soton College was able to meet the spirit of the VCE and this in turn contributed to the higher retention rate that developed over time, until by the time the Class of ’95 reached Year 12 it had reached 78 per cent of the Year 7 intake.33

The inheritors and social advantage in the classroom

Soton College enrolled relatively few traditional inheritors for whom the pathway through education was long, predictable and known. These are the young people for whom the “social arrangements of school” are already familiar (Lareau. 2000: p 8). For these students there is a high degree of congruency between the cultural capital of home and the experiences of school and they are the students most likely to be suited by the academic structure of education. Where a student can gain mastery of the

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33 It was popular with senior students but difficult for teachers and placed a great demand on school resources and finally proved impossible to sustain.
education process as well as the content then he or she is also likely to develop a positive academic self-concept and both complete school and do well. In this, inheritors are aided by parents who have experienced the full breadth of education, are familiar with the process of learning and are confident in engaging the structures of education on behalf of their children.

These parents comprehend school curriculum at all levels and they are confident in approaching teachers and other educational professionals to discuss the school experience of their child. They check their child’s homework, have the resources to provide an appropriate space for the homework to be done and monitor the academic progress of their child in many ways (Lareau 2000: p viii).

The new stream of parents (those of newcomers) are not as familiar with the educational system and do not display the same confidence as parents of inheritors in addressing issues which arise out of their child’s educational experience. Their own educational journey is more likely to have been truncated than that of inheritors. Fewer of them will have completed Year 12. Even the educational experience of those who might have re-engaged education at a later date is likely to be limited to that of an adult part-time student where the role of student has had to compete with, even be subservient to, a variety of simultaneously held roles including that of worker and parent (McLeod and Yates. 2006: pp 231-239).

Despite good intentions, parents from other than professional or senior managerial work roles are more likely to be overwhelmed, even alienated, by the structure of the educational system beyond a certain point. Although they may be confident at various levels of pre-school and primary school and work collaboratively with teachers, the self-confidence and knowledge of these parents is likely to wane as educational

34 The establishment of an appropriate setting for homework can be a challenge for lower income groups. Often children from these families must share a bedroom, or do schoolwork in a family living space. Some of these children do not have a computer at which to work or have to share with other family members. In a number of cases the only internet access for a child will be through school or a local facility such as a public library where access time is strictly limited. These are problems not usually experienced by children from professional or senior managerial families where, even if there is only one available computer, parents will allocate access time appropriately for the needs of each child.
structure and curriculum language become more sophisticated and move away from their personal experience.

Often newcomers’ parents distance themselves from the learning process as its complexity moves outside their own experience of schooling and support a “tacit division of labour between school and home” (Connell. 2003: p 244). Where this happens, their child’s school experience is likely to be poorer for it, regardless of the input from Soton College.

For the families of many Australian newcomers the first contact with universities is through their oldest child. Even in the 21st century, newcomers are often the first of their family to complete six years of secondary education and move into a tertiary course of some kind—particularly a university course. Without a history of university access these young people are amateurs in the process of getting into the course and completing it. In contrast inheritors are familiar with universities. Often generations of their families have successfully completed at least one degree.

**Who would stay and complete the VCE?**

Of the Class of ’95, one hundred and twenty-eight would successfully complete the VCE. This meant that thirty-five students left before they finished school. The attrition rate for the Class of ’95 was 22 per cent.

But in many cases it is difficult to describe these students as drop-outs. Even where students left Soton College for work as soon as possible after reaching the compulsory school leaving age, the subsequent work histories of most of them were positive. Where students went into work by way of training such as an apprenticeship, and most of the Soton College students chose this route, then the transition was a good one.

A far greater proportion of boys (28 per cent) to girls (15 per cent) dropped out of school and a small but significantly greater proportion of newcomers (22 per cent) to

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35 For a number of years this condition has been recognised as one that should be brought to the attention of tertiary course selection officers to assist in the selection of applicants of like score but different social background with a view to promoting equity in selection of applicants for university and TAFE courses (Victorian Tertiary Admissions Centre. 1995b: Section 2.8: pp 5-6).
inheritors (19 per cent). Boys tended to enter an apprenticeship when they dropped out but girls usually chose stereotypical jobs not requiring credentials in which job security and promotion were riskier.

Compared with the fate of the graduating Class of 1990 who sat on the chairs at the head of that first assembly, the success of the Class of ’95 was to be good. The attrition rate of the Class of 1990 was almost 50 per cent—over twice as great as that of the Class of ’95. Although it is not within the scope of this study to probe the reasons for the difference, it is probable that the new VCE, which replaced the HSC, was to contribute to more students staying on to complete six years of school at Soton College, as it had been designed to do. It is also possible that the breadth of curriculum allowed those who stayed on to do so with interest.

**Discussion**

The Class of ’95 commenced their secondary education at a point in time at which traditional patterns of education were being changed. Although their social backgrounds were probably no more or less diverse than those of the students of Soton College ahead of them, the Class of ’95 could look forward with more hope to achieving their post-school goals. The changes that they were to experience in the next few years of their secondary school journey would mean that regardless of their socio-economic background or gender they would have an increased possibility of staying on in school longer and going to university than students of HSC had expected.

This is what their parents hoped for and why these parents had picked Soton College for their child. Parents of the Class of ’95 had selected Soton College because it was known in the neighbourhood that it got good results. Parents had wanted a Catholic school to reinforce the family values and support social mobility, and they saw Soton College as achieving this.

For its part, Soton College accepted the challenge to meet the diverse demands of the families of the Class of ’95 and to do so in a Catholic school environment. At a time when the VCE was being introduced into Victorian schools the academic environment
was uncertain but would the Class of ’95 emerge from an unequal secondary school start having achieved the parental aspirations of a university degree and improved social position? It could, and drawing on lessons learned in previous years, Soton College adopted a broad curriculum to address the diverse needs of the college’s student population and provide a vehicle through the VCE to tertiary education and work. In fact the VCE was to prove an appropriate way of maintaining this curriculum program with results even better than that experienced in the HSC.

In this environment most of the Class of ’95 were going to complete the VCE, go to university and enter a profession as their parents had wanted. Despite this apparent egalitarian outcome, however, social background would continue to divide one student from another. Inheritors would always achieve better grades than newcomers and be more competitive in the race for university places. Almost all the Class of ’95 were going to attain their post-school goals but for newcomers it was going to prove more difficult to do than it was going to be for inheritors.
CHAPTER 5

Achievement in English from Year 7 to Year 10

Introduction

Not all the Class of ’95 easily settled into Soton College in their first semester of Year 7 easily but all passed English. Achievement in English was, however, socially divided. Inheritors and girls performed better in Year 7 English than newcomers and boys and this pattern continued to the end of Year 10.

Success in English is the key to academic achievement because it is both the language of instruction and of assessment. Success in Year 12 English was also mandatory for the award of the new certificate, the VCE, and essential to enter a university course. If the Class of ’95 were to achieve their post-school goals they would have to be competent in English.

At Soton College English was a core subject in the curriculum from Year 7 to Year 12 inclusive. There was no selection for English although students who experienced difficulty with the subject were able to get additional help with it. A small number of students from the Class of ’95 had some remedial help in English in their first year at the college.

On the starting block: achievement in English first semester of Year 7

Although none of the Class of ’95 failed English in their first semester at Soton College none gained a perfect score of $A^+$ either. Children were assessed using an eleven grade scale from the maximum of $A^+$ to the minimum of UG (ungraded). $A^+$’s were rare at

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36 The eleven point scale used was:

<table>
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<th>Excellent</th>
<th>Good</th>
<th>Poor</th>
<th>Fail</th>
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<td>$A^+$</td>
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any year level. Teachers of English were very cautious about awarding a perfect score to students of English. On the other hand UGs were given only if students did not submit all work required for assessment. One semester into Year 7 this had not happened, but over time a significant number of the Class of ’95 would fail to submit required English work and suffer the ignominy of an UG.37

A pass in English was common to all the Class of ’95 but there were social and gender differences in the quality of the pass. The most common grade awarded to inheritors was an A. This was the highest grade awarded in Year 7 and almost half the inheritors gained it. The most common grade awarded to newcomers was a C. This is three grades lower than that gained by inheritors (see Figure 6).

Regardless of social background poor performance in Year 7 English was limited to a very few students. Most of those who gained Ds in English this early in their school-life at Soton College shared a common outcome: they failed to complete six years of schooling.

Included amongst the drop-outs were inheritors Gilbert and Gerald, both of whom gained a D in their first semester of English at Soton College. Ultimately each of these boys left school for an apprenticeship prior to reaching Year 12.38 This too was to be the outcome for over half of the newcomers who gained a D in Year 7 English at the end of their first semester. Of the eleven newcomers who did this, six left school before completion. The remaining five completed school and successfully gained their VCE.

37 Rules were inflexible. Even if only one assessment was missing a child would get an UG. Often this led to acrimonious confrontation between the teacher, who argued that the piece of work had not been received, and the child, who claimed to have submitted it. Bad feeling between teacher and child often continued into future classes. Zac for instance developed a poor rapport with an English teacher very early on in secondary school and then continued to encounter the same teacher often in the next years. Zac admits that his work for English was sloppy and when done submitted after the due date. Given that Zac had a very poor beginning in English then this poor relationship cannot have contributed positively to Zac’s development in the subject.

38 Gilbert later chose to complete the VCE and then a degree.
Boys were the most likely to perform poorly in English at this stage of secondary schooling. Only two girls, both newcomers, received a D for English at this time. Of these Sybil was destined for university and Wilma dropped out for work. Every one of this small group of students took remedial English in the second half of Year 7. Despite this poor start, those from this group who completed the VCE were to find that VCE English was one of their highest achieving subjects.

Boys’ achievement in Year 7 English compared unfavourably with that of girls. Only fifteen of the seventy-eight boys gained an A in English. This was 19 per cent of boys. In comparison almost half the girls in the Class of ’95 (43 per cent) gained an A in English.

Amongst newcomers, however, grades in the first assessment of Year 7 English reduced as the family background of Class of ’95 descended the social scale.

Figure 6: Grades in Year 7 English – Semester 1, 1990 by socio-economic background

Boys were the most likely to perform poorly in English at this stage of secondary schooling. Only two girls, both newcomers, received a D for English at this time. Of these Sybil was destined for university and Wilma dropped out for work. Every one of this small group of students took remedial English in the second half of Year 7. Despite this poor start, those from this group who completed the VCE were to find that VCE English was one of their highest achieving subjects.

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Amongst newcomers, however, grades in the first assessment of Year 7 English reduced as the family background of Class of ’95 descended the social scale.
At the end of the first semester of Year 7 English the most commonly awarded grade to daughters and sons of non-professional white-collar workers was, like that earned by inheritors, an A.

On the other hand the most commonly awarded grade to students from blue-collar families was a B in the case of tradesmen’s children, and a C in the case of children whose parents were unskilled workers.

Most of the daughters and sons of tradesmen displayed mediocre skills in English and only two, Desmond and Caroline, gained an A at the start of Year 7. This is seen in Figure 7.

If achievement is further analysed to reflect the differences in membership size of the social sub-groups, then the differentiation between achievement grades by social background is more apparent. Year 7 English was made up of 19 per cent inheritors and 81 per cent newcomers, and yet inheritors were the most likely to score the highest grades.

If achievement could be expected to be proportionate to the size of each social group then inheritors should gain 19 per cent of A, B, C, and Ds. But they didn’t. The chart in Figure 8 shows that inheritors were over-represented amongst the high achievers in the first semester of Year 7 English and underrepresented amongst those who gained poor grades. The converse was true for newcomers.

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39 By the end of Year 10, Caroline’s grade in English had declined by two to a B and Desmond’s had declined by four to a C. Caroline was able to improve her grade by the end of the VCE in which she gained a score which placed her amongst the highest performing 15% of VCE English candidates. Desmond continued on at the lower level. But his VCE English score was above the average of the statewide study score and the average VCE English score for the Class of ’95.
Number of newcomers = 132. These are made up of 65 children from the families of non-professionals white-collar workers; 40 children from tradesmen’s families and 27 children from the families of unskilled workers. Reading the chart: Poor achievement increased as students’ family background moved from non-professional white-collar families to the families of unskilled workers. Highest achievement in English followed a different pattern with the children of non-professional white-collar workers having more than twice the share of high achievement than children from unskilled families and more than eight times the share of high achievement in English than did the children from the families of tradesmen.

Inheritors were doing better than newcomers in the Year 7 English program.

At the end of the first semester of Year 7 the challenge for the Soton College English Faculty was to improve the skill level of those who scored below an A and at the same time maintain the skills of those who achieved this grade. Or put more simply, to bring the English skills of children from a blue-collar socio-economic background up to those of inheritors and children from a non-professional white-collar family background.
Figure 8: Year 8 English achievement by size of group of inheritors and newcomers

Number of inheritors = 31 & number of newcomers = 132  NB: Red lines mark the expected share of grades if awarded according to the relative size of each of the social groups in the cohort i.e. 19% inheritors to 81% newcomers Reading the chart: Inheritors accounted for 30% of all A grades and 18% of all B grades awarded in Year 7, whereas they represented 19% of the cohort. At the same time they gained only 10% of Cs which were the lower end of average and 15% of the poor achievement of a D. Newcomers on the other hand exceeded the expected population share of 81% in the grades which were at awarded for lower performance.

Some change resulted in the second semester of Year 7. A proportion of newcomers (15 per cent) improved their skills in English. Most of these moved from Cs and Ds to Bs and As, but at the same time the achievement of 10 per cent of inheritors declined from Bs to Cs (see Figure 9 below). Of particular merit is the experience of the boys who had gained poor results at the end of their first semester of English. After taking additional English classes in the second semester five of these eleven boys improved their English by the end of Year 7.
Figure 9: Proportion of students’ change in achievement in the second semester of Year 7 by direction of the change

Number of inheritors = 31 and number of newcomers = 132. Reading the chart: Achievement of inheritors has moved from left to right i.e. achievement has declined from a grade of B to one of C. Achievement of newcomers has moved from right to left i.e. achievement has improved from D and C to A and B. There was one exception: one student received an UG because of non-submitted homework.

Boys also lagged behind girls in Year 7 English. This situation needed to be improved. In an attempt to do this the English Faculty reviewed and re-wrote the English syllabus, widening the emphasis on reading and writing to include discussion and verbal communication, which would better serve the needs of boys and not exclude those of girls. This change did lead to improved English achievement for newcomers and boys by the end of Year 7.

40 Given the high study scores gained by both boys and girls in the VCE then there was obviously some success with the revised Year 7 to 10 English syllabus adopted at Soton College.
High level achievement

High achievement in English was the prerogative of inheritors and the children of non-professional white-collar workers. Between Year 7 and the end of Year 10 the proportion of inheritors who maintained an A grade in English declined but was still far higher than that of newcomers. Almost half of the inheritors from the Class of ’95 got an A in Year 7 and this had reduced to close to a third by Year 10. In comparison with the elite newcomers who gained an A the achievement of inheritors was good. At the end of Year 10 one in three inheritors achieved an A in English but at the same point in time only one in seven newcomers gained the same level of achievement.

Share of A grades in English also changed over the same period of time. Although the proportion of inheritors getting an A declined between Year 7 and Year 10, the share of the A grades awarded increased as the share of newcomers correspondingly declined (see Figure 10).

In this illustration, expected grades have been determined using the assumption that if the ratio between inheritors and newcomers is 19%:81%, then the share of the total awarded A grades would reflect this pattern. It did not and the illustration in Figure 10 shows that inheritors’ share of As was higher than expected in both Years 7 and 10 that of newcomers’ share of A grades was lower.
Between Year 7 and Year 10 the study of English had become far more challenging, demanding, amongst other things, a more sophisticated use of language, writing for specific audiences and in a range of forms and styles as well as debating, oral class presentations and critical evaluation of books, plays, poetry and films. Work once completed in class took more time and spilled over into the home, becoming part of a homework requirement and requiring greater student commitment.

These changes to Year 7 to 10 English appear to have been better utilised by the elite students amongst inheritors than they were amongst the elite English students amongst newcomers.
The really good at English, i.e. those who got an A for every final assessment from Year 7 to Year 10, were all from a white-collar socio-economic background. There were eleven of these and most were inheritors. There were three boys and eight girls, of whom six were inheritors and five newcomers. This was 19 per cent of inheritors but only 4 per cent of newcomers. Looking forward in time to the completion of year 12 English, there were to be outstanding successes amongst members of the Class of ’95 from blue-collar families and the ability of these students was emerging by the end of Year 10, but to that point their high achievement in English had not been consistent.

Good students of English from the Class of ’95 were good at other subjects also. School suited them. Almost all had been assessed as being settled at school at the end of their first term and in addition to academic competence they were actively engaged in a number of non-academic school activities. As they progressed through their school years they were to also emerge as school leaders.

**Poor performance in English**

Let us now consider achievement at the other end of the scale. From the end of Year 7 to the end of Year 10 an increasing number of students received bare passes (or D). This was true for both inheritors and newcomers but the increase was more dramatic for newcomers.

At the end of Year 10 poor achievement in English by inheritors had increased by 14 per cent from Year 7 to Year 10 but that of newcomers had burgeoned by 24 per cent over the same period of time. From the two inheritors and six newcomers who gained a bare pass (there were no failures) at the end of Year 7, six inheritors and thirty-five newcomers gained a bare pass or a fail in Year 10.\(^{41}\) Thus newcomers bore the brunt of increased failure in English by the end of Year 10.\(^{42}\)

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\(^{41}\) As part of Soton College policy in all subject assessment non-submission of one piece of required work (i.e. any assessed task) generated a fail in the formal school report. Poor work generated a bare pass.

\(^{42}\) For the pattern of distribution of grades across the two semesters of Year 7 and Semester 2 of Year 10 see Appendix B.
Figure 11 shows the relationship between inheritors and newcomers in low achievement. The red bands show the expected share per social group and the same process used in the construction of Figure 10 above has been used. If the relationship between social groups is 19:81 then inheritors could be expected to receive 19 per cent of the bare passes and fails and that newcomers would receive 81 per cent.

Figure 11: Share of bare passes and fails by inheritors and newcomers at Year 7 and again at Year 10

Number of students = 159 (Four students left for work during Year 10). Number of students with bare passes or fails was 8 in the second semester of Year 7. They were 2 inheritors and 6 newcomers. In the second semester of Year 10 there were 40 students with bare passes or fails. These were 5 inheritors and 35 newcomers. NB: Red lines mark the expected share of bare passes and fails if awarded according to the relative size of each of the social groups in the cohort i.e. 19% inheritors to 81% newcomers.

Bare passes by inheritors, in any year, were few. There was only one fail and that was in Year 10. Inheritors exceeded their expected proportion of bare passes in Year 7 English. They should have had 19 per cent but had 25 per cent of all such grades. By
Year 10 they had reduced this position by half, thus falling short of the estimated 19 per cent. Newcomers, for their part, had fallen short of the estimated proportion in Year 7 but exceeded it in Year 10. They gained fewer than expected bare passes or fails—75 per cent instead of 81 per cent in Year 7—but exceeded that proportion with 87.5 per cent at the end of Year 10. At both year levels newcomers held the greatest share of limited achievement. In Year 7 their share was three times that of the inheritors but by Year 10 it was seven times as great.

One thing is certain and that is that a large group of the Class of ’95 were, by the end of Year 10, underachieving in English. Less than half of these underachieving students (17, or 42.5 per cent of the group) stayed on to complete the VCE and all were successful in VCE English. This indicated that 57.5 per cent of this underachieving group were already disengaging from school at the end of Year 10 and within the first year of the VCE most of them would have left school for work.

Soton College reports show that few poor grades reflected poor skills in English. Instead the poor grades reflected poorly completed work. Often, when done at all, home-work was quickly done in the school-yard before a class or copied from a friend. So, poor achievement in English better reflected a poor attention to task or a poor motivation rather than low ability. The English teacher of Martin, Malcolm and Gerald reported her concern for their achievement in English to their parents by the end of the first term of Year 10. These parents were hopeful that each of the boys would continue on in school but were also aware that their sons were very keen to “cut loose” and enter the workplace and were probably not surprised when poor grades in English continued. Other parents received the same message from teachers but some students, like Zac, were able to improve on their English sufficiently to avoid a poor grade at the end of the year. But then Zac wanted to because his parents had told him that he couldn’t leave school until he passed Year 11 and they meant it.43

Only boys seemed to generate a cause for concern in their first term of Year 10 English. There were to be fourteen girls who gained a bare pass or fail in their final Year 10

43 We will meet Zac again later in the chapter.
English assessment but in their first term they had not been identified. Half of these girls would also drop out of school before the completion of Year 12.

But poor performance in Year 10 English was displayed by a far higher proportion of boys to girls. Almost two-thirds of the poor grades (63 per cent) awarded in Year 10 English were those of boys. Given that there were more girls than boys in Year 10 English the relative position of boys to that of girls is even lower.

**The average student**

Most students in any subject are “average”. These are the children who consistently score Cs and Bs in subjects throughout their school-life.

At the end of Year 7 there were one hundred and one “average” students of English amongst the Class of ‘95. Four years later at the end of Year 10 English there were only ninety who gained a grade of C to B. The decline in numbers also reflected a decline in grades from a predominant B in Year 7 to a predominant C in Year 10.

As is shown in Figure 12, the composition of average students in Year 10 was part of a change in relative position of both high achieving students and poorly performing students. Behind the number of ninety average students of Year 10 English was an overall decline in the number of students who got As and an increase in the number who displayed a poor level of Year 10 English.

Even amongst average students of English, inheritors were more likely to achieve at the higher end of the range of grades (B down to C which was three grades) than newcomers. Inheritors were the B students to newcomers’ Cs. This was a relative position inheritors had maintained since their first assessment at the end of their first semester at Soton College.
When the English achievement of newcomers is broken down into the social subgroups a distinct pattern of achievement emerges. Average students from a non-professional white-collar family improved their position from a median of C to one of B between the beginning of Year 7 and the end of Year 10. The average scholars from a trade background reduced their position by a grade, from a B to a C, over the same time. The average achieving children of unskilled workers maintained their position on a C from the start of Year 7 English to the end of Year 10 English (see Appendix B).

There were gender differences amongst the average achievement group also. Boys and girls who were average in English maintained their relative achievement position between the start of Year 7 and the end of Year 10. Girls in this group consistently scored a median grade of B and boys a median two grades lower at C.\footnote{The eleven point assessment marking scale included C+ grades but conservative teachers refrained from using this grade throughout the four years.}
Over the years from Year 7 to Year 10 the English achievement of the average boys of all social categories, including inheritors, declined. Girls of average ability in English suffered a similar fate, although the daughters of unskilled workers and those of non-professional white-collar workers maintained their relative position in English from Year 7 to Year 10.

In the case of boys whose achievement in English had occasionally been good, usually mediocre at best and often poor in Year 7, the exit from average to a bare pass or even a fail in Year 10 English was small but significant. Only Anthony from a blue collar background and with a history of poor performance in English, gained an A in Year 10. In fact only three gained a B. In contrast more than half of the sons of professional workers (57 per cent) gained an A in Year 10 English which was more than their female counterparts.

But for the Class of '95 achievement in English was more likely to vary according to social background than gender. To be male and a newcomer was to under achieve in Year 10 English. Girls from the same background fared only slightly better but to be an inheritor meant that success in English was more likely.

In summary then, inheritors had maintained their position relative to newcomers although all but a few, regardless of background, had seen their grades of Year 7 English reduced by the end of Year 10. In Year 7 the standard of English had been promising with almost a third of students being awarded an A at the end of their first semester. But only nineteen of these students maintained an A standard to the end of Year 10. Of these, only ten had maintained an A in English annually since the beginning of Year 7.

**What had changed the achievement level in English?**

The decline in English grades between Year 7 and Year 10 was significant. The daughters of non-professional white-collar workers had been the most affected. In Year 7 these girls had submitted well prepared and well presented work for assessment.

45 There were thirty-two boys from a blue-collar family background in Year 10 English.
They were compliant in class. They met their deadlines for homework. They checked their work for grammatical or spelling errors and 80 per cent of them gained an A grade. By Year 10 the challenge of English caused many of them to exit their relative position in English and only 17 per cent were able to maintain the A they received in Year 7.

The daughters of blue-collar workers had suffered a similar fate but because so few of them had gained an A in Year 7 the decline in their performance was not as obvious as that of the girls from non-professional white-collar families. The daughters of professional workers also lost ground although the proportion was not as great.

Why had this happened? It is possible that the grades awarded in the first semester of Year 7 were inflated. Teachers might have rewarded well presented work that was submitted on time for assessment and these criteria were most likely to be met consistently by girls. But as time passed the expectations of teachers increased and the syllabus became more challenging as it was shaped to lead into that of the VCE. The girls who worked diligently became more greatly challenged by the concepts and so although work was well presented and timely it was not always correct.

Certainly the thrust of English in Year 7 to 10 had changed. Armed with a few years exposure to the VCE, teachers were well aware of the demands of VCE English and keen to send students into VCE with adequate skills for success. Over time both the cognitive and cultural demands of the subject increased as teachers worked with students to equip them with the skills necessary to successfully negotiate the two post-compulsory years of learning. A well presented, well spelt creative story was no longer enough. The demands of English included critical analysis of texts and command of various styles of writing from the descriptive to the construction of a cogent argument and this challenged the ability of students.

The Class of ’95 were required to move from writing narrative or descriptive passages in Year 7 to composing essays and the development and recognition of appropriate writing styles. Oral presentation of opinions and ideas had become a combination of presentation and class discussion. Reading for appreciation and enjoyment had ceded
emphasis to analysis of novels, poetry, plays and films. In addition, by Year 10, students of English were expected to formulate a logical and persuasive response to a contemporary issue.\(^{46}\)

The cultural demands of English had also increased. Cultural demands included the requirements of attitude and behaviour made by teachers of students in order for the latter to effectively learn. Rather than the content of a subject, cultural demands affect the process of learning—for example, the organisation of school work to be submitted for assessment so that deadlines are met. At the forefront of the cultural demands of English was the effective use of language.

By Year 10 there was urgency about the acquisition of the ability to communicate effectively in writing and speech because students were about to decide which pathway to take to work.\(^{47}\) For those moving straight to the workplace, formally assessed competency in English would be a factor in getting a good job. For those moving on to university, competency in English would influence their achievement in the VCE, shape the success or otherwise of their post-school tertiary education, and finally as with those who had already entered the workplace, influence their success in accessing appropriate work.

There had been a change in the way in which work was completed in English as well. Driven by the demands of VCE English students of Year 10 English were required to submit drafts of their work for correction. The same piece of work might be submitted three or four times and reviewed by the teacher in collaboration with the student before being deemed satisfactory. Continuous improvement of student essays and other assignments was a practical issue, not simply an intellectual challenge. It was the organisational demand of this process of review of ongoing developmental work that appears to have caused the greatest anxiety amongst teachers of Year 10 students because Year 10 students found it hard to do.

\(^{47}\) Careers education was part of the English curriculum. This class was held once per cycle for a year and covered work related personal development through preparation of a job application package using both print and electronic media as well as development of a personal school to work pathway plan and identification of vocational interests and aptitudes.
Teacher frustration with the progress of student improvement in the day to day demands of English is evidenced by comments on formal reports such as, “Lewis will need to organise himself to ensure that all work is handed in on due dates” followed a year later with, “Lewis is capable but will need to develop a more committed and mature approach to English 3 & 4”. Similar frustration must have been felt by the teacher who first pointed out to Michael that most of the problems with his work in English were associated with not meeting deadlines for its submission and who then saw his A grade in English in the first semester of Year 10 turn to a D, a bare pass, at the end of the second semester.

These comments reflect teacher frustration in witnessing both a student’s potential to meet the cognitive demands of English and failure to do so through not meeting subject requirements. On the brink of entry to VCE these students had the cognitive skills necessary to be successful but not the cultural skills demanded by the role of VCE student. In the following two years these students would have to compete with students such as Honour who was “commended for her attitude and work habits” or Kitty who was “a pleasure to have in the class” and teachers were well aware of this situation even if the students were not.

It is ironic that both Lewis and Michael, the young men causing their teachers so much concern in Year 10 English, went on to gain a VCE score well above the mean for the subject. Michael’s VCE score placed him in the highest achieving 15 per cent of the state. Both ultimately worked with language. Lewis worked as a reviewer and media critic and Michael as an English teacher. No doubt this outcome was a measure of final satisfaction for their Year 10 English teachers.

Honour and Kitty were also highly successful in English and proceeded unflatteringly through VCE, gaining two of the highest scores in VCE English awarded to Soton College students. Despite this both students went in to work in the scientific field

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48 The carbon copy of Lewis’ school report shows that the underlining of “all” and “due” was done by the teacher when making this comment and undoubtedly reflects her concern.

49 VCE English was Honour’s highest scoring subject.
after completing a university degree and turned their backs on working directly with English.

Other teacher comments expressed in Year 10 related to the need of a student to better develop her or his cognitive skills in English. Zac, a student whose primary school life had been fractured by repeated family relocations, was advised to “avail himself of additional help from Mrs B” for improvement in English skills. Mrs B coordinated the Independent Learning Centre (ILC), which provided learning programs including one on one intensive teaching in literacy for those children thought in need of it and prepared to do it.\textsuperscript{50}

This type of comment was made where required, throughout the secondary school experience of students and remedial action was usually very successful. For instance, at Year 7 Anthony, a student who had come to Australia from a non-English speaking country during his third year of schooling, was advised to undertake a program in English adapted to his needs and provided by the ILC. By Year 10 Anthony was able to achieve an A in English and in Year 12 his score was in the highest achieving 15 per cent of students of VCE English students in the State.\textsuperscript{51}

Where poor academic performance was a consequence of poor cognitive skills and yet cultural demands were met, teachers were concerned and made recommendations. Frustration with the student’s progress was not evident. This pattern of learning came well within the teaching role, which is to address the limitations of knowledge and understanding of any student, and teachers were comfortable in dealing with it.\textsuperscript{52}

\textsuperscript{50} The program was also available in numeracy under the same conditions of referral. Parents of students in need were usually keen for their child to access the program. Children were, unfortunately, not so keen. In some cases children felt stigmatised by undertaking the program. There were no grounds to for this reaction to an offer of a place in the program. The facilities were very pleasant and the environment relaxed and friendly. Help was available during class hours and the staff providing the service were trained in working with under-achieving children.

\textsuperscript{51} Anthony was a highly articulate multi-skilled student who was quick to grasp concepts and ideas. He was successful in sciences and mathematics, languages and other humanities and a gifted pianist. In a recent discussion he commented that he was a lazy student and that his lack of English skills in Year 7 was related to this rather than poor comprehension at that point in time.

\textsuperscript{52} Even after twenty years Zac was able to pinpoint the primary school and the time in his life at which his difficulty with English developed. He was also able to recall a tension in the relationship he had with the Year 10 English teacher and his lack of confidence in English. Zac pointed out that he had felt more confident in mathematics although his grades were usually better in English.
Teacher frustration developed with the students whose cognitive skills in English were adequate but whose inability to meet the structural demands of the subject led to failure.

By the mid-teens (most Year 10 students were 15 to 16 years old) students were juggling a variety of roles, all of which competed for time. They were family members, school children, part-time workers, sport participants and spectators, and party goers, and were in relationships with others. They watched television, talked for hours to others on the phone or through chat rooms and email, locked themselves in the bedroom and played music, helped around the house, to mention just a few of their activities. At Soton College they played sport once or twice a week and trained for that event at some other time during the week. What they did not do with commitment was to study. Their organisation of school work and study was usually poor and poorer for some than others. This was what worried the teachers of Year 10 because these students were on the brink of the VCE and such traits would lead to more failure in the post-compulsory years.

Discussion

One semester into their secondary school experience the Class of ’95 had displayed some promise in English. There were many high achievers and few poor achievers. None of the students failed English, although a small number who received a grade of D were noted and remedial tuition in English offered to them and in almost all cases accepted. Indeed the principal of the college, who took care to read the formal reports and personally sign each one, would have been justified in believing that in English, at least, those with difficulties could be helped with the programs the school had in place. In this he was correct. All who knew the college would also know that in the long run all the Class of ’95 would be successful in English.53

53 In the seven years prior to the introduction of the VCE the writer can recall only two HSC failures in English and in the years after the introduction of the VCE only one. During this time about two thousand students would have completed either the HSC or the VCE at Soton College. Passing English was a certainty but teachers of English were never complacent about it. Rather they knew that their program
Although gender differences were apparent, achievement was also divided by social background. It was harder to tie social background and gender. But it happened. Classroom teachers of English in particular gained an insight into the social origins of each of their students and could see where it was necessary to compensate for lack of cultural capital and where the poor results reflected poor ability levels.

It was harder to see where many poor achievers shared common ground but consultancy between teaching staff across the year level at formal meetings and informally in the staff room led to common ground being identified. Teachers knew who was trying to drop out of school. They knew who of the Class of '95 did not have access to newspapers to read at home or did not have a dedicated space for homework or who had a sick parent and cared for younger siblings after school. At Soton College staff were briefed by the Welfare Counsellor or year level co-ordinator where these difficulties existed and a conscious effort was made to compensate in a way that would result in a better level of achievement.

In the case of those amongst the Class of '95 who wanted to drop out, counter actions to keep the children in school were often rejected. These children wanted to leave school for work whatever may happen and in some cases had done so for a considerable time. For instance some of the students who achieved a D in Year 7 English were already anxious to leave school at that time. They did not like school, and found it irrelevant to their needs. It was a negative experience for them so they simply did not complete required work in any subject including English.

All but one of them had been reported by homeroom teachers as unsettled at the end of their first term at Soton College. The well adapted student in the group was Sybil. Her grade of D at the end of the first semester of Year 7 English did not reflect her ability at all. Sybil was the daughter of an unskilled manual worker and found English more challenging than mathematics throughout her school life. She went on to be successful in all her VCE subjects, which included Specialist Mathematics and Mathematical Methods. She also passed VCE English with an above average score.
settle down to do the tasks required. Preparedness to commence classes and to have the appropriate books, pens and pencils and any other tools required are elements of school culture essential for an effective level of class participation and in almost all cases the poor achievers in the first semester of Year 7 English lacked this organisational skill.

Soton College tried to compensate for lack of cultural capital in families. Students regularly visited plays, listened to authors discuss their work, and visited and explored other cultures. All of these activities extended the experience of the students and broadened the horizons of students from families where exposure to literature, music, dance and drama and cultures other than their own was limited.

Similarly the school tried to monitor the acquisition of organisational skills with respect to schoolwork. Maintenance of a school diary was expected and parents were asked to check it for required homework and to acknowledge any entry by signing it. But members of the Class of ’95 who were not committed to school often preferred the sanctions of detentions, letters home to parents and criticism by teachers to keeping the diary itself.

Over time poor performance (particularly in English) poor maintenance of a school diary, not being prepared for class, not doing homework and poor achievement levels became part of the culture of the students who behaved this way. This was almost a culture of failure.

In most cases these facets of the school day were accompanied by poorly kept or inappropriate uniform, extreme hairstyles, inappropriate jewellery, the chewing of gum, lateness to class and almost an alienation from the main event of learning. Students functioning in this culture were not always poorly behaved in class or in the school-yard. They were usually polite to teachers and other school-friends. In order to be part of this culture they endured teacher criticism, parental criticism and perpetual low achievement. At parent teacher nights they would be seen sitting beside their mother or father with head down, or looking embarrassed and unhappy as parents and teachers conferred on what to do.
They would be the young people who were regularly called to discuss their progress with the year level co-ordinator. If they attended homeroom they would discuss the same matters with their homeroom teacher. Often they promised reform but they rarely changed the pattern of their school-life. These children endured school and wanted to endure it for only the minimum time. They were misfits and did not fit well with the students who were journeying towards Year 12 completion.

By Year 10 the pattern of their existence at school was entrenched. They would be in an English class without anything to write on or with. They would borrow paper, pens and rulers from other more prepared students, they would “look-on” and share another students text books and if a written response was needed they would scribble it down and complete it, provided it could be done in class. If the topic discussed interested them, however, many of them would participate in the discussion, offer opinions and demonstrate that they were capable of passing English but did not choose to do so.

At Year 10, the limit of compulsory schooling, most of the poor performers fitted the above pattern. Their numbers had burgeoned since Year 7 and the “culture of failure” outlined above had become entrenched. Over half these members of the Class of ’95 would leave school for work before the completion of Year 12 and three quarters of them were newcomers. Only five of them were inheritors, all of whom would leave Soton College before they entered Year 12. This combination of poor achievement and poor learning commitment in English proved a portent School drop-out.

The competent in English were still competent even as the challenges of the English syllabus increased and the demands of the course diminished their grades. Inheritors still outperformed newcomers and girls outperformed boys at the end of Year 10. The social division of achievement in English first apparent in Year 7 was still apparent at the end of Year 10 and on the brink of the VCE.

55 Homeroom was held at the first period of the day and these students would often be late to this if they attended at all.
CHAPTER 6

Year 7 to year 10 achievement in mathematics

Introduction

Between Years 7 and 10 mathematics was mandatory at Soton College but not all the students of mathematics studied the same syllabus.

At the end of Year 8 mathematics students were streamed into ability groups, which were arranged in a hierarchy for Year 9, and the practice continued in Year 10. Those in the lowest levels of mathematics studied a different syllabus to those in the two highest levels. Over time, membership of the lowest of these groups restricted exposure to the breadth of syllabus taught in the higher groups. Consequently students in the lowest group were ill-equipped to undertake higher level mathematics studies in the VCE.

What was learnt in Year 7 to 10 mathematics laid the foundation for choosing to do VCE mathematics, and also which of the VCE mathematics subject was selected.

The structure of the mathematics program

The mathematics syllabus for the first two years of secondary education at Soton College was common to all except those deemed to be in need of a modified program. The latter was used to address any significant difficulties with mathematics by providing teaching in the basic concepts of the subject. Once these concepts were grasped then students were moved back into the mainstream of mathematics.

From the commencement of Year 9 to the end of Year 10, however, mathematics was arranged into a four tiered structure. Each tier represented a level, with level 1 being the
highest tier and level 4 the lowest.\textsuperscript{56} The syllabus was common to the highest two levels although in the second level its delivery was at a slower pace than in the highest level. Students who were successful in either of these levels were regarded as having the competency necessary to undertake preparatory mathematics in each of the VCE years.\textsuperscript{57}

The mathematics program experienced by students in the lowest two levels was different to that taught in the highest two levels. The syllabus was modified and consequently it was considered difficult for any student from each of these levels to access preparatory mathematics regardless of how successful that student had been in the program at either level 3 or level 4.

In effect the hierarchical structure provided a set of co-ordinates of achievement in mathematics. Grades gained were modified by the level in the hierarchy at which they were gained. The convention within the school was that a student from either level 1 or level 2 mathematics would be encouraged to continue on in the higher branches of VCE mathematics provided they were scoring a B or above.

Students with poor grades in either of the two top levels of Year 10 mathematics and those who were in the two lowest levels of mathematics at Year 10 were encouraged to continue on into VCE mathematics but in a less challenging orientation than preparatory mathematics.\textsuperscript{58}

Despite the variations in syllabus, students were not locked into a level of mathematics and some movement did occur between the tiers of the hierarchy. Initial membership of these levels had been determined by a test style assessment at the end of Year 8.

\textsuperscript{56} In Year 9 there was a lower level which was equivalent to the group which had undertaken the Year 8 modified mathematics program.

\textsuperscript{57} Preparatory mathematics is a term used in this research to indicate the level of mathematics most in demand by universities for course entrance. For this cohort of students preparatory mathematics was Mathematical Methods and it could be studied in a sequence from the first to the second years of VCE. Another mathematics study could be done in addition to this subject in each of the VCE years.

\textsuperscript{58} Prior to the introduction of the VCE Soton College curriculum policy had made at least one mathematics subject mandatory at Year 11. The college offered almost all mathematics orientations existing at the time and all students were required to take at least one in Year 11 although not in the final year of schooling – Year 12.
Often movement between levels of mathematics was at the request of a student who felt that he or she was not coping with the level of mathematics being studied.

At the end of each semester some students would change to another level in the hierarchy as a result of assessment.\(^{(59)}\)

On the whole students stayed in the level they commenced at the beginning of each of Year 9 and Year 10. Where change did occur it was both significant and most likely to be at the end of Year 9. It was also usually in a downwards direction.

There were seventy-four changes (almost half the cohort) in mathematics levels at the end of Year 9. One in six improved their relative position in mathematics and one in three students reduced their relative position at this time.

**High and low achievement in Year 7 and Year 8 mathematics**

If we analyse mathematics, as we did English, where participation rates in Year 7 and Year 8 mathematics were 19 per cent for inheritors and 81 per cent for newcomers, then, as with English, we see that inheritors achieved better than newcomers in mathematics.

In Figure 13 inheritors had gained a greater share of A grades in mathematics at both Year 7 and Year 8. Although the share had declined from 33 per cent to 29 per cent at the end of Year 8, it was still significantly above the expected share of 19 per cent.

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\(^{(59)}\) There were twelve students who moved up or down a level of mathematics during both Year 9 and Year 10.
Number of students = 159 (This includes an adjustment for the four students who left Soton College for work during Year 10). Reading the chart: Inheritors accounted for one third of A grades in Year 7 mathematics but represented only 19% of the cohort. By the end of Year 8 inheritors’ share had diminished but only by 4% and they still gained 10% more As than could be expected. Newcomers fell short of the anticipated proportion of As in Year 7 by 14%, but made up some ground by the end of Year 8 where although they still fell short of the expected proportion of As they had gained grades rather than lost them as inheritors had.

The achievement of newcomers fell short of the expected share of 81 per cent of A grades in mathematics in both Year 7 and Year 8. In contrast to the performance of inheritors, newcomers improved their share of high achievement by the end of Year 8 but their share remained below that.

At the other end of the achievement scale inheritors received the expected proportion of poor grades, i.e. bare passes and fails in Year 7, and the share of newcomers was slightly below that expected (see Figure 14). A comparison of achievement in Years 7 and 8 shows that there was very little change between the two years for either inheritors or newcomers.
Number of students = 159 (This includes an adjustment for the four students who left Soton College for work during Year 10) Reading the chart: Red lines mark the expected share of membership in each of the two highest levels of mathematics in the Year 9 mathematics hierarchy. The proportion of poor grades in Year 7 and Year 8 mathematics gained by both inheritors and newcomers was close to that expected by level of social group.

There was a socially differentiated pattern of achievement amongst ‘average’ mathematics students also. Although almost all inheritors in both Year 7 and 8, achieved an A, newcomers in Year 7 mathematics were more likely to achieve a B. By Year 8 newcomers’ achievement was more likely to be a C. This makes the initial difference in relative position—that is at the start of Year 7—two grades. By Year 8 the relative position of newcomers had declined a further two grades to a C and the difference between the most common achievement position of inheritors and newcomers was four grades.
Surprisingly, the decline was amongst the children of non-professional white-collar workers. In Year 7 the most common grade achieved by these children was an A. By the end of Year 8 the most common grade achieved by these children was a C. At the same time Bs, which were the most common grade awarded to the children of tradesmen and unskilled workers, declined to Cs at the end of Year 8.

The size of this decline in competency on the part of newcomers is alarming particularly since the relative position of inheritors was quite stable.

Only nine inheritors and twelve newcomers, nine boys and twelve girls, maintained the highest position in mathematics from the start of Year 7 to the end of Year 8. All of these members of the Class of ’95 were from a white-collar background. There were none from a blue-collar background. In the future only inheritors (all boys) and a boy and three girls from the ranks of newcomers would complete the highest level of Year 12 mathematics.

**The importance of a “good” grade in Year 8**

Test grades gained in Year 8 were used to filter students into the tiers of a mathematics hierarchy in Year 9. Year 8 mathematics students knew this since the Year 8 college handbook read, “In Year 9, the students are split into three levels determined by their performance in Year 8.” (1991: p7) In point of fact, at the commencement of Year 9 in 1992, the Class of ’95 were split into five achievement groups, the lowest two bands being very small and in this analysis amalgamated.

Movement between levels of mathematics was possible. In the Soton College school timetable, mathematics classes were included in the same time block so that a student was able to move up or down the hierarchy without affecting other subject choices. This movement did happen but not often. Once established in a level of mathematics students tended to complete the remainder of the school year at that level. Since curriculum differed between the two highest levels and the lower levels of Year 9 mathematics, any movement from a higher level to a lower level in mathematics required the student not only to “catch up” with the faster moving other classes but also
to “catch up” on the additional curriculum. A move in the opposite direction, i.e. down the levels, was not as difficult.

Movement up the hierarchy was not impossible but it was difficult. From the Class of ’95 six, one inheritor and five newcomers made this transition over the two years to the end of Year 10. Only one of the six, inheritor Gabrielle, went on to complete the most challenging VCE mathematics combination of Mathematical Methods and Specialist Mathematics. Of the remainder, all of whom were newcomers, only Daphne and Ivy were to complete a VCE mathematics subject and they chose and were successful in the lowest level of VCE mathematics—Further Mathematics.

Failure to get into one of the two top groups of Year 9 mathematics effectively placed students at risk of limiting their post school work options.

At the beginning of Year 9 over half the Class of ’95 (59 per cent) were placed in the highest two levels of mathematics. At this point the remaining students in the cohort (41 per cent) faced a reduced range of post-school work and study options. Some of these students improved their relative position by the second semester of Year 10 at which point 70 per cent of students were to be found in the two highest mathematics groups.  

Only a handful of these mobile students went on to complete a VCE mathematics subject. This small group included Gabrielle, Daphne and Ivy mentioned above and four boys, all newcomers and all of whom achieved poorly in mathematics at the end of Year 8.

In the long run most of the students who found themselves in the lower levels of Year 10 mathematics either discontinued mathematics or selected the lowest level of mathematics in the post-compulsory years of schooling.

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60 These students, previously discussed, included the fifteen who successfully climbed the tiers to be in the highest two levels of Year 10 mathematics.
61 Two boys completed Further Mathematics and two the preparatory mathematics, Mathematical Methods.
Gabrielle’s case was different as she experienced a change in circumstance at the beginning of Year 9, and achievement in all her subjects was affected by it. This distraction was most likely known to the mathematics teacher of Year 8 and coupled with a poor examination result led to Gabrielle’s movement to the second lowest level of mathematics. Certainly it was an unexpected move given Gabrielle’s academic ability. An inheritor, Gabrielle rectified her shaky start and achieved an A in mathematics. She then moved into the highest tier of mathematics in Year 10 and in the long run she was to successfully complete the highest level of VCE mathematics and undertake a profession based on mathematics and physics.

Two thirds of the students who gained a C in Year 8 mathematics and were placed in the two highest levels of Year 9 mathematics went on to complete at least one mathematics subject in Year 12. Those placed in the two lowest levels displayed a different pattern of VCE mathematics choice. Two thirds of these students either discontinued VCE mathematics or did not complete school. Only one of these students was from a professional socio-economic background. All the others were newcomers.

Although relegation to the lowest level of Year 9 mathematics had the potential to limit post-school options, the Class of ’95 did not know this at the time. Post-school university course requirements were not to be published until the penultimate term of Year 10 which was almost two years into the future so the consequences of relegation to the lowest Year 9 mathematics level would not be known until then. This timing difference meant that for some students the release of tertiary course requirements came too late for major change in secondary school mathematics to occur easily.

None of the Class of ’95 consulted the Careers advisor about the change at the time, although homeroom teachers and staff of the mathematics faculty did have some input into the decision, which appears to have been largely unchallenged by families.

Most of the families of the relegated children would have expected it because the last report of Year 8 would have shown a poor performance in mathematics. But for about a third, relegation should have been relatively unexpected and yet it would appear that the families did not query the outcome.
Apparently parents, even those of the five inheritors who suffered this fate, were unaware of the long term implications for their child’s post school aspirations. They appeared to trust the actions of the mathematics faculty and the college, which they allowed to be the decision makers in their child’s future. This is an attitude that Lareau (2000: p 169) has argued is common to newcomers and most of these children were newcomers.

Challenges to these decisions over position in the mathematics hierarchy did happen, but not a lot. For instance, concerned that Fabian had achieved a C in Year 8 mathematics, his inheritor parents demanded that he be allocated to the second highest level in the Year 9 mathematics hierarchy. They were right to intervene. Fabian, who at the time was interested in Engineering, went on to successfully complete the most challenging VCE mathematics option and complete a degree in computing and business at university and work with one of the world’s largest companies in his field. Fabian’s outcome could have been otherwise, but his parents were confident to intervene because they were inheritors.

It is probably not surprising that the largest proportion of early school leavers in the Class of ’95 was to be found in the lowest levels of Year 9 mathematics and that the highest proportion of students who would drop out of mathematics at VCE level was also to be found in this group. Poor performance is symptomatic of students keen to leave and those with a low interest in a subject. Often these are the same students.

**Membership of the highest Year 9 mathematics levels**

There were fifty-two students in level 1 and forty-one in level 2 of Year 9 mathematics. Successful completion of either of these Year 9 levels followed by a similar achievement in Year 10 should equip a member of the Class of ’95 to enter preparatory mathematics in VCE.

If we again analyse the membership of both these groups using the relative proportion of inheritors to newcomers in the population we find that inheritors are so well represented in the highest level of Year 9 mathematics that they exceed the expected
membership considerably, but are not as well represented in the second level. Newcomers fell short of their expected membership in the highest level of Year 9 mathematics and exceeded it in the second level (see Figure 15).

Figure 15: Membership share of highest two levels of Year 9 mathematics

![Chart showing membership share of highest two levels of Year 9 mathematics]

Number of students in level 1 mathematics = 52 and number of students in level 2 mathematics = 43. Reading the chart: Red lines mark the expected share of membership in each of the two highest levels of mathematics in the Year 9 mathematics hierarchy. The actual proportion of inheritors in the highest level of Year 9 mathematics is greater than the expected 19% and a less than expected in the second level of Year 9 mathematics. In contrast the actual proportion of newcomers in the highest level of Year 9 mathematics is 10% lower than expected and the actual proportion of newcomers in the second level of Year 9 mathematics is slightly higher.

In Figure 16, membership share of lowest two levels of Year 9 mathematics shows that in the two lowest levels of Year 9 mathematics inheritors did not reach their expected membership of level 3 but exceeded it in level 4. Conversely newcomers exceeded their membership of level 3 and fell short of it in level 4. A comparison of both Figures 15
and 16 shows that newcomers dominated the middle two groups of Year 9 mathematics whereas inheritors were most likely to be placed in the highest and lowest levels of mathematics.

Figure 16: Membership share of lowest two levels of Year 9 mathematics

N.B: Number of students in level 3 mathematics = 41 and number of students in level 4 mathematics = 27. Reading the chart: Red lines mark the expected share of membership in each of the two lowest levels in the Year 9 mathematics hierarchy. In the second lowest level of Year 9 mathematics (level 3) inheritors fall well short of their expected share of 19%.

Inheritors, at least those in the highest levels of Year 9 mathematics, were better placed to access the higher levels of VCE mathematics, especially preparatory mathematics, than were newcomers. If they maintained their position in the highest level of Year 10 mathematics then the inheritors of the Class of ’95 would be able to choose any of the three VCE mathematics subjects offered.
The influence of socio-economic background on post-Year 10 mathematics options.

In Figure 17 it can be seen that a greater than expected proportion of inheritors met the criteria for access to VCE preparatory mathematics and fewer than expected newcomers met the same criteria.

Figure 17: Membership pattern of students who met the criteria for the selection of VCE preparatory mathematics

**Number of inheritors = 30 and newcomers = 129** (four students dropped out of school during Year 10. **Reading the chart:** Red lines mark the expected eligibility for VCE preparatory mathematics by social group if eligibility was determined by the relative size of each social group which was 19% inheritors and 81% newcomers. Inheritors accounted for 66% of all students from the Class of ’95 who met the criteria for normal entry into VCE preparatory mathematics at the end of Year 10 although they only represented 19% of the cohort at this point in their school life. Newcomers who made up 81% of the cohort of Year 10 students were far more likely not to meet the criteria to enter VCE Mathematical Methods which was the preparatory maths. Only 73% of newcomers met the criteria despite their 81% membership of the Class of ’95.
Not only did inheritors have a greater access to preparatory mathematics but amongst newcomers the daughters and sons of non-professional white-collar workers were better situated to choose from the full array of VCE mathematics subjects than were the daughters and sons of blue-collar workers. Of course the most suited were the daughters and sons of professionals. This can be seen in Figure 18.

Figure 18: Membership pattern of students who met the criteria for the selection of VCE preparatory mathematics by social groups

NB: Number of inheritors = 30 and newcomers = 129 (four students dropped out of school during Year 10. Reading the chart: Red lines mark the expected eligibility for VCE preparatory mathematics by social group if eligibility was determined by the relative size of each social group, which were 19% inheritors and 81% newcomers. Inheritors accounted for 27% of all students from the Class of ’95 who met the criteria for normal entry into VCE preparatory mathematics at the end of Year 10 although they only represented 19% of the cohort at this point in their school life. Newcomers who made up 81% of the cohort of Year 10 students were far more likely not to meet the criteria to enter VCE Mathematical Methods which was the preparatory maths. Only 73% of newcomers met the criteria despite their 81% membership of the Class of ’95. When newcomers are sub-divided by the individual social group it is found that the children of non-professional white-collar workers meet expected level of participation and that both the children of tradesmen and those of unskilled workers fall short of the expected level of participation in VCE preparatory mathematics.
It is clear from the chart above that the option to access preparatory mathematics in the VCE not only declined significantly as the social groups descended from inheritors to the children of unskilled workers but also fell further short of the expected levels. If this is summarised as in Figure 19 it can be seen that inheritors with a higher actual to expected access were well served whereas children from the families of unskilled workers were significantly less well situated as they moved into the VCE.

Figure 19: Difference between expected and actual preparedness for VCE preparatory mathematics at the end of Year 10 by social group – family background

**NB:** Number of students = 159 (Four students left school for work during Year 10. Reading the chart: The gap between the actual and expected membership of the highest level of Year 10 mathematics of Inheritors and newcomers varies by 8% to 13% as the scale of newcomer sub-groups is descended.
Was there a gender effect?

There were seventy-five boys and eighty-four girls by the end of Year 10 mathematics.\textsuperscript{62} Although there were fewer boys than girls in the cohort, boys held similar membership of the two highest levels of Year 10 mathematics. There were fifty-four boys in the highest levels of mathematics and fifty-eight girls.

Boys just exceeded their expected share of level 1 and 2 membership and girls just fell short of it but exceeded their expected membership of the two lowest Year 10 mathematics groups.\textsuperscript{63} This placed girls in a weaker position than boys in gaining access to VCE preparatory mathematics so that by the end of Year 10 girls were already facing a limited number of post-VCE choices of university degree.

\textsuperscript{62} Three boys and one girl left Soton College for work during Year 10.
\textsuperscript{63} See figure 20.
Figure 20: Share of membership of highest and lowest levels of Year 10 mathematics by gender

NB: Number of students = 75 boys and 84 girls. Reading the chart: Red lines mark the expected eligibility for VCE preparatory mathematics by gender group if eligibility was determined by the relative size of each gender group in the cohort i.e. 47% boys to 53% girls. Boys just exceed the expected membership of the highest two levels of mathematics and do not reach the expected membership of the lowest two levels of Year 10 mathematics. Conversely girls just fall short of the expected membership of the two highest levels of Year 10 mathematics and just exceed the expected membership of the two lowest levels.

Girls had fared badly in the selection process at the end of Year 8 and far fewer than would be expected had moved to the highest level of Year 9 mathematics. Girls had fallen well short of their expected membership in the highest mathematics groups of Year 9 and boys had exceeded their expected membership of the same group. By the end of Year 10, however, girls had reasserted themselves and although they never caught up to boys, their membership of the highest mathematics groups and consequently eligibility to study VCE preparatory mathematics improved.

The reason for this difference is not apparent. Analysis of the Year 8 end of year reported grades does not indicate a significant difference in performance. It can only
be surmised that the final examination, a key element of the selection process, distinguished between boys and girls more than the reported grades did.  

Somewhere between the beginning of Year 9 and the end of Year 10 some girls had ascended the tiers in mathematics and made the quite difficult jump between one level of mathematics and a higher one. This was no mean feat because in the case of the second highest level of mathematics the curriculum was the same but the pace slower and in those levels below this one the curriculum also varied from that of the highest two levels. Nevertheless girls from the Class of ’95 were more likely to move up in mathematics than boys.

It was easier to stay in the level to which you were allocated. There was a powerlessness associated with being allocated to a certain mathematics level. After all it was the level at which a student’s mathematics ability had been assessed by those who knew—the teachers. A sought after career goal could act as a stimulus to encourage a student to be promoted but at Year 9 many young people had not developed a strong goal for post-school life, and it was easier in the lower levels of mathematics.  

It was not just the Year 8 examination that distinguished the performance of girls from boys in mathematics during their compulsory school years. Their performance was most likely influenced also by both the hierarchical structure of the subject and its method of assessment.

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64 During discussions with boys and girls alike at the collection of data it appeared that the students themselves were never quite clear as to why they were allocated to any particular level of mathematics from Year 9 to Year 10. It would seem that there was a failure in communication because the impression given was that individuals were allocated to classes almost on a whim. This was certainly not the case and students were chosen after consultation with all their mathematics teachers but it would seem that students and possibly their families were locked out of the discussion and that students subsequently felt powerless to change the status quo. It is doubtful that students and their parents were aware of the ramifications of the outcome and that those who did not get into the two highest groups of mathematics would face limited post-school options.

65 Two students—Dominic, who required preparatory mathematics to support his desire to be a pilot, and Belinda, who required preparatory mathematics for selection into a particular health science—successfully made the transition but both these students were in the two highest Year 10 mathematics levels although they achieved a lower grade at this level than would indicate a high level of mastery. Both were successful in the preparatory VCE mathematics subject which was Mathematical Methods.
Assessment in mathematics was reliant on tests and examinations that made up 90 per cent of all assessment. Continued examination style assessment together with streamed classes form the prime two conditions identified by Boaler (2002: pp137-147) as disadvantaging girls. Added to this the impact of the VCE as a driver of curriculum content and pace and the situation encountered by mathematics students of Soton College resembles that described by Boaler (2002: pp137-147) as existent at ‘Amber Hill’.

At Soton College the achievement of girls in mathematics ‘staggered’ after they encountered examination style assessment and a hierarchical mathematics program. They were not, however, the only ‘victims’ and by the end of Year 10 they were improving on the ground that they had lost. Boaler describes a phenomenon in which boys adapted to the pressures of learning environments that were competitive and highly paced and girls did not (1997: p 151). This was not immediately obvious with a significant number of girls at Soton College. In fact the change of pace may well have re-established mathematical self-esteem for the 13.6 per cent of boys and 19 per cent of girls who exited the lowest tiers of mathematics for the higher tiers of levels 1 and 2 between the commencement of Year 9 and the end of Year 10, but the majority of those relegated to the lower tiers stayed there.

**Boys, girls and actual achievement in mathematics**

At Soton College one in nine boys achieved an A in Year 10 mathematics regardless of the level at which they studied. Girls did better with one in six gaining an A in Year 10 mathematics. For both boys and girls As were more common in the highest level of mathematics than at any of the other levels in the Year 10 mathematics hierarchy.

Failure or gaining a bare pass were far more common outcomes of studying Year 10 mathematics. The rate of poor performance was the same for boys and girls, which was one in four students.

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67 The pseudonym for one of the secondary schools in her research into teaching and learning in Mathematics in which variations in achievement based on gender was one of the factors investigated.
68 The toll taken on students from blue collar socio-economic background group was to be as great.
The academic performance of the average student, i.e. the student at the fiftieth percentile, was also the same regardless of gender. This is shown in Table 8 below. Achievement was better in the highest levels of mathematics and the average boy and girl both achieved a B which was four grades above the achievement of the average boy and girl in the two lowest levels of Year 10 mathematics.

Table 8: Grades of the average student – median at the fiftieth percentile in each level of Year 10 mathematics by gender

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Levels 3 and 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td>Girls</td>
<td>Boys</td>
</tr>
<tr>
<td>Median grade</td>
<td>B</td>
<td>B</td>
</tr>
</tbody>
</table>

Gender was not a significant discriminator between average students of Year 10 mathematics.

**Passing and failing Year 10 mathematics**

But the level at which a student studies mathematics is only part of the achievement picture. The grades gained also reflect capability in the curriculum. The number of As awarded in Year 10 mathematics was few. Most students likely to get an A for mathematics were studying at the highest level, and six of these were inheritors and eight newcomers. That is one in five inheritors and one in sixteen newcomers gained an A.

There were a greater number of bare passes or fails gained. One in seven inheritors to one in three newcomers gained a bare pass in or failed Year 10 mathematics. Students in the highest level of Year 10 mathematics were the least likely to fail mathematics or gain a bare pass. No inheritors scored badly in the highest level of Year 10 mathematics, in fact the lowest grade gained was a C, but they did in lower levels of Year 10 mathematics.
Newcomers were much more likely to gain a bare pass or a fail in Year 10 mathematics regardless of the level at which they studied the subject. One in three performed badly. This amounted to one in four children of non-professional white collar workers, one in three children of tradespersons and one in two children of unskilled manual workers. Failure was much more likely to increase as socio-economic status decreased.

At the fiftieth percentile, achievement of inheritors was at least a grade higher than that of newcomers regardless of the level in the hierarchy at which that grade had been obtained. The achievement of this, the average student, also decreased as the hierarchy of mathematics descended. The average inheritor in the lowest two groups of mathematics gained a C, which was two grades below the average inheritor’s B in either of the two highest levels.

The average newcomer gained a D in the lowest two levels but a C⁺ in the highest two levels. This difference of three grades is greater than that of inheritors and is likely to be a reflection of the greater diversity of newcomers.

Table 9: Grades of the average student – median at the fiftieth percentile in each level of Year 10 mathematics by social group

<table>
<thead>
<tr>
<th>Level 1</th>
<th>Level 2</th>
<th>Levels 3 and 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritors</td>
<td>Newcomers</td>
<td>Inheritors</td>
</tr>
<tr>
<td>Median grade</td>
<td>B</td>
<td>C⁺</td>
</tr>
</tbody>
</table>

Clearly inheritors prove more resilient in Year 10 mathematics and have done so in all other year levels. Newcomers are more likely to be mediocre achievers in mathematics.

**The influence of gender on post-Year 10 mathematics options**

Initially, i.e. at the beginning of Year 9, girls were a little less represented in the highest mathematics group than boys. By the end of Year 10, however, girls had regained their ground and their position was better than that of boys. But this was not the experience
of all girls or all boys. Most of the inheritor girls were well placed to choose any of the VCE mathematics subjects at the end of Year 10. So too were most of the inheritor boys. The daughters of non-professional white-collar workers were as well placed as the inheritor girls but the sons of non-professional white-collar workers were most likely to be found in the second highest mathematics group. This should have been a good position for choosing any of the VCE mathematics subjects but such a choice would be qualified by the grades gained in Year 10 mathematics. A poor achievement level in Year 10 could limit the choice of VCE mathematics for these boys.

The sons of tradesmen were slightly better placed than their daughters, and were most likely to be found in either of the two highest groups of Year 10 mathematics, but girls from a trades background were very poorly represented in the higher group and had to rely on representation in the second highest Year 10 mathematics group for access to VCE mathematics subjects. Girls from the families of unskilled workers could be found in both the second highest mathematics group and in level 3 mathematics where the syllabus was modified. Level 3 was the fate of most of the sons of unskilled workers also. A consequence of this was limited VCE mathematics choices.

Gender coupled with socio-economic background appeared to be the influence in Year 10 mathematics level membership and the latter was better for inheritors regardless of gender, followed by the children of non-professional white-collar workers. Both boys and girls from a blue-collar family background were not as well placed as those of white-collar families in Year 10 mathematics.

**Discussion**

Successful completion of VCE mathematics was a prerequisite for entrance to 52 per cent of university and TAFE courses that were to be offered in the year immediately after the VCE⁶⁹. At the end of Year 10 and on the brink of post-compulsory education

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⁶⁹ Since the VCE was introduced in part in 1991 and the first full VCE mathematics program was not until 1992, these students of Soton College could not be aware of the implications of level in the Year 9 and 10 mathematics program until they were actually entering Year 9. Information and detail even then were not adequate because after introducing a very complex hierarchy of VCE mathematics (found by many schools, including Soton College, impossible to resource) both the syllabus and the hierarchical
and the VCE, the level of mathematics in the Year 10 hierarchy studied was important to support the career outcomes of each of the Soton College students. This was because it determined the level of mathematics in the VCE program that could be accessed and this in turn influenced the accessibility of university and TAFE courses.

The pathway to post-school outcomes via mathematics was already established by the completion of Year 10. It is important to note that the pathway was not set in concrete. Students were counselled at the time they selected their VCE subjects and as part of Soton College policy encouraged to take a mathematics subject in the VCE. If, however, a student had not gained the appropriate skills for studying VCE mathematics then there was a need for caution in recommending taking on a high level VCE mathematics subject. In general, however, students selected a VCE mathematics subject, although which of the three available subjects was influenced by Year 10 mathematics experience.

Even after four years at Soton College the social patterns evident in achievement in mathematics at Year 7 were still apparent and appeared to be entrenched. Inheritors did better than newcomers in mathematics. There were more of them in the highest levels, and regardless of the level in mathematics, inheritors gained a higher median grade than newcomers. What is more, they were the most likely to stay in the highest level of mathematics once they reached it.

structure of mathematics were changed. The new changes were introduced in 1993 when the group of students in this study were in Year 10 and on the brink of the VCE themselves. During their passage through Years 9 and 10 mathematics at Soton College, everything about the VCE mathematics curriculum was new to all stakeholders. Teachers of mathematics at Soton College were coming to grips with a syllabus and structure that were new, confusing and terminal for their senior students and at the same time trying to adapt the syllabus of Years 9 and 10 to meet the demands of the new, whatever the new was to be. It was a period of extreme uncertainty and stress for staff in the Mathematics Faculty. It is possible that the indecision and uncertainty consequential to total structural change twice within three years contributed to the grades attained by the students of Soton College in VCE mathematics.

Change could occur and at least one Soton College student in a later year level changed from a lower level VCE mathematics to the highest level of VCE mathematics and was successful and went on to compete an engineering degree and subsequent Doctor of Philosophy. But cases such as this are rare and certainly this young man had been counselled to continue with the higher levels of mathematics and had completed the highest level of Year 10 mathematics.

One-third of inheritors were allocated the highest mathematics group at the beginning of Year 9 and stayed in this level to the end of Year 10. Only 20% of newcomers did the same.
Over time authoritative researchers such as Lamb, Walstab, Teese, Vickers and Rumberger (2004) have identified a strong link between poor earlier school achievement and dropping out of school. But amongst the Class of '95 a history of poor achievement in Year 7 to Year 10 mathematics did not necessarily herald early school leaving. About a third of the Class of '95, seventeen students, who gained only bare passes or even failed Year 10 mathematics, did not complete school. The remainder of the twenty-eight students who barely passed did.

The rate of poor academic performance in mathematics declined as the family background of the Class of '95 moved up the social scale. The most affected were the daughters and sons of blue-collar workers and the least affected were those at the other end of the social scale—the inheritors.

At school these students shared the same classes, teachers, resources, curriculum structure, assessments, non-teaching days, excursions and the minutiae of a busy school experience and had done so for at least four years by the end of Year 10. Despite this common school experience social patterns of academic achievement in mathematics still persisted. Teese (2000) argues that some social groups are more successful in engaging the curriculum than others. At Soton College both the curriculum in mathematics and the style of assessment and the hierarchical structure could have acted as deterrents to children from families who were not totally familiar with the secondary school system and who were inclined to trust the school rather than challenge it. Families for which there was likely a separation between the school and the home (Lareau. 2000: p 115) and the outcome was one of increased risk in successful curriculum engagement.

The life experience of each of the students was different. Included in the life experience is family cultural capital, which according to Bourdieu (1979) contributes to educational outcome and by extrapolation academic educational experience. Simply stated, in a lifetime of shared classroom experiences some students are better able to make use of the educational resources they encounter than others and the efficiency of utilisation is directly related to the social background of each student.
The challenge for the school is to break down these inherent social differences in learning and provide a platform for success for each student in its care. If academic achievement level is a reflection of school response to the demands of social gap reduction then by Year 10 at Soton College, in English and mathematics at least, this challenge was apparently not as yet resolved.
CHAPTER 7

The path least travelled by—Inheritors’ attrition at secondary school level

Introduction

Somewhere between the commencement of Year 9 and the completion of Year 10, most of the students in the cohort turned 15. At this time in Victoria, this age marked the end of compulsory education. No matter how much parents wanted their children to complete secondary school and go on to university, at age 15 the child could decide to walk away from schooling. This was the start of diverging pathways from Soton College to work or further study for the Class of ’95.

Some of the Class of ’95 would stay on in school because they wanted to. Some would stay, albeit reluctantly, because they couldn’t think of anything else to do or their parents wouldn’t let them leave. Some would leave school for work regardless of the prediction of negative consequences. In the next two chapters we will look at the school experience of those who left Soton College for work from the beginning of Year 10 onwards.

So much is written about dropping out of school that there is a general awareness that non-completion of school is characterised by poor levels of school achievement, low levels of involvement in school based activities, whether in the classroom or extra-curricula activities, and low levels of school engagement. The literature has identified the typical school drop-out as male from a non-professional family background. In Australia this boy will be likely to live in a rural area, is often indigenous or sometimes from an ethnic background, and attends a Government school rather than a Catholic or Independent school.

There were drop-outs at Soton College and amongst the Class of ’95 but there were no indigenous students in the cohort. Soton College was a Catholic Regional College and
located in an urban, not rural, area although some students lived in the rural areas abutting the suburb in which Soton College was situated. Soton was also co-educational so there were boys in almost equal numbers with the girls of the Class of '95.

The drop-out rate from the Class of '95 was significant, at a little more than one in five of the students who commenced Year 7 in 1990. The outcomes from dropping-out were not often as predicted by the literature. Leaving school before completion has long been seen as hazardous for young people. Such an action can result in long-term unemployment and vulnerability to work place change. The consequence of this is low income and dependency on government welfare (Lamb, Walstab, Teese, Vickers and Rumberger. 2004: p2). But a school drop out enters work with training then the outcome is often positive (Dwyer.1995: p 266) with better employment potential for the future, although without completing Year 12 even a student who takes this pathway runs the risk of being less well equipped to adapt to any future work place change does a student who completed Year 12 (Lamb, Walstab, Teese, Vickers and Rumberger. 2004: p 2).

Non-completing school leavers from the Class of '95 were not all newcomers; there were some inheritors and they were not all boys, there were some girls. Almost all drop-outs left with a stated purpose (usually work) and when interviewed at the time of data collection for this research almost all were employed in secure work and had been for a number of years. They had also more often than not entered work with training, which would have contributed to the security of their work.

It must be remembered, however, that parents of the Class of ’95 wanted their children to complete school and go to university. Even those amongst the Class of ’95 who desperately wanted to leave school could expect parental opposition to their plan and certainly the aspirations of parents for their children were supported by Soton College. Leaving Soton College before completion of the VCE was not taken lightly and generally required the member of the Class of ’95 to persist for some time in her or his intention.
There were differences in the characteristics and motives of inheritors compared with those of newcomers and for that reason this chapter will concentrate on the non-traditional school leaver. These were the inheritors from the Class of ’95. The next chapter will analyse the motive and outcome of dropping out of school by newcomers.

**Why did any of the Class of ’95 want to leave school?**

Motives for leaving school before completion vary but extensive research shows that early school leaving is most commonly associated with disenchantment with schooling (Lamb, Walstab, Teese, Vickers and Rumberger. 2004). Disenchantment on the other hand can have many causes but is strongly related to low achievement. Persistent low achievement affects life in the class-room by eroding self-confidence. This in turn can lead to absenteeism, non-participation in extra-curricula activity and even withdrawal from the social aspects of schooling (Teese and Polesel. 2003: pp 134-5).

Non-completion of secondary schooling has concerned governments and researchers throughout the world and over time. There are two aspects of this concern:

- From a policy perspective, leaving school before completion tends to lead to high levels of unemployment. This is particularly important in a technologically changing and sophisticated age. Low levels of literacy and numeracy in potential employees limit the type of work available even in times in which there are shortages in the labour market (Dusseldorp Skills Forum 2004: pp 5-6).

- From the perspective of the individual, leaving school before completion has greater potential to lead to intermittent employment, part-time or casual work and low job security, as well as reducing the employment resilience of an individual by limiting direct access to on-going training where it is necessary for change such as technological change (Wyn and Lamb. 1996: p 261).

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72 This trend has persisted over time. In 2001 the Dusseldorp Skills Forum (2001: p1) reported that 15 to 19 year olds were still at risk in the job market and that there was no indication of any apparent relief from this situation.
In either case the earning capacity of the individual can be significantly challenged over time and this in turn can impact on quality of lifestyle (Lamb, Walstab, Teese, Vickers and Rumberger, 2004: p 2).

The importance of early school leaving increased in the last half of the 20th century as universal completion of schooling became the norm rather than the exception. Over the same period of time national data bases such as the Longitudinal Survey of Australian Youth, National Educational Longitudinal Surveys in the United States, and both the England and Wales Youth Cohort Study and Scottish School Leavers Surveys in Britain, have provided ongoing data for researchers and led to the development of an extensive volume of knowledge on all facets of the pathway through school including early school leaving.

In an authoritative review of the contemporary research literature about early school leaving Lamb et al. (2004) identified both a wide range influences on the decision to leave school as well as a number of motives for doing so. Influences include a mixture of demographic and individual factors such as:

- Gender—boys are more inclined to leave school before completion than are girls.

- Family social background—students from a low socio-economic background are more inclined to “drop out” of school than those from a high socio-economic background.

- Family structure—children from single parent families are more inclined to leave school before completion than those from two parent families.

- Indigenous status—indigenous children are more inclined to withdraw from school before completion than other children.

- Ethnicity—there are mixed influences from this, with some children staying on in school and others withdrawing, but English language capability appears to be a factor in this too.
• Residential location—children from the city are likely to stay longer in school than those from the country.

• Type of school attended—there is a clear cut hierarchy of retention rates with Catholic schools falling between the highest retention rates, found in independent schools, and the lowest retention rates, found in government schools.

The motives identified by Lamb et al. (2004) for leaving school are most usually linked with academic achievement. Students for whom school achievement is consistently poor tend to drop out. Over time their, “motivation to learn declines….putting them on the trajectory towards disengagement and early leaving” (Lamb et al. 2004: p 29).

There are a number of causes of consistent low school achievement. For example it will be seen later in this thesis that newcomers are not as adept at utilising the curriculum as inheritors. But this does not tell the entire story. Why are newcomers not as able as inheritors to effectively engage with the curriculum? Is it because of the difference in culture between the two social groups? Is the curriculum pitched at the needs of inheritors and therefore a source of academic disadvantage to newcomers? If this is the case then why are some newcomers apparently successful in completing the pathway through school, university and into work?

The relationship between newcomers and effective use of the curriculum had not been ignored at Soton College and the school had a long history of encouraging students through innovative broad curriculum from Year 7 to Year 12. The college had been particularly careful about making both curriculum and delivery of it gender neutral and in the past had offered students both the academic Higher School Certificate (Group 1) and its more practical Group 2 component. Soton College had pursued alternative education options in addition to academic ones since its foundation. But still young people dropped out of school.73

73 At the time the Class of ’95 passed through Soton College, there were technology classes of all kinds; the college had an extensive computer network which was using radio LAN for communication
While today most young people do complete school, many have an unsatisfactory school experience. This may be because of personal circumstance. For example children experiencing family trauma because of parental illness, parental job loss or family break-up could be expected to find keeping up with school work difficult. Even where such trauma is transitory, time lost, particularly in subject matter that is sequential, can place an impossible burden on learning and lead to poor achievement.

Some other causes of unsatisfactory school experience can arise from:

- poor social relationships with school peers, often a consequence of emotional and physical bullying;
- un-addressed learning difficulties;
- selective curriculum and other learning related structural elements such as assessment processes that are not inclusive and do not address the learning needs of all social groups.

All these factors and others shape the pathway taken by children through school to work, but do not of themselves lead directly to early school leaving. Some students will encounter life events such as those mentioned above and stay on in school and others might change school but stay on in education. Others will not take either of these pathways. They will exit school because they have had enough. Even at a time of a poor youth labour market these young people are prepared to take the risk of unemployment rather than return to the classroom. Lamb et al. (2004: p 11) argue that these young people are “repelled by school”.

But as Teese, Polesel, O’Brien, Jones, Davies, Walstab and Maughan (2000: p 5) point out, not all early school leaving leads to poor transition to work. Many outcomes are positive. As in the 1970s some students will exit school for work because they feel that they have achieved a level of schooling adequate for their needs and the demands of the

throughout both campuses and allowing the use of notebook computers in classrooms and even outdoors if needed. It offered a specifically designed individual learning course called Challenger for the non-traditional student learners and a range of extra-curricula activities which catered for more than just those interested in sport.
occupation they want to enter. Even after the introduction of the VCE, a two year post-compulsory secondary school certificate, Kirby (2000: p 53) identified a “goat-path” to work at the completion of the first year of VCE. This off-the-track route to work continued to attract students and provide them with a successful school to work transition.

There is, however, a risk associated with early school leaving. By truncating schooling before its completion the student must trust that there will not be a future need to improve on the school credential or, if the need does arise, that there will be a pathway with which to accommodate her or his educational circumstance. The students who leave school early for work are taking a minority pathway and not always because of a negative school or personal experience.

Leaving school is not something that suddenly happens. It is usually the end of a long chain of interactions between the student, her or his family, and teachers. In some cases schools themselves discontinue a student’s enrolment. This is usually a disciplinary decision or in the case of selective schools because the level of the student’s achievement is not adequate. Soton College was a Catholic Regional College and the enrolment of a student was rarely discontinued on disciplinary grounds. If this happened Soton College would liaise with another school within the region so that the student concerned could be given a fresh start with a view to overcoming past indiscretions. Of course sometimes the student would not accept this option and would leave school for work and this did happen to students from time to time.

Soton College was not a selective school. Although there was a procedure for promotion of students from one year to the next no student was told to go to another school because of poor academic achievement. In fact few students were kept back a year. There were a few of these students in the Class of ’95, but the request to repeat an academic year was made by the students, not the school administration. Reasons for this action varied but were usually the result of extenuating circumstances such as illness.

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74 The Ministerial Review of Post Compulsory Education and Training Pathways in Victoria chaired by Peter Kirby reported in August 2000, almost a decade after the introduction of the VCE.
Certain apparent factors flag students at risk of leaving school before completion. There are usually multiple risk factors apparent. For example, a boy from a low socio-economic background might display low levels of self esteem, poor participation in the classroom and school yard, lack of interest in school cultural activities and poor academic achievement (Poole. 1983: p 158; Dwyer, Wyn, Wilson and Stewart. 1990: p 19; Lamb and McKenzie. 2001: p 12 and p 53). Each of these factors is a known trigger for early school leaving and teachers are aware of this. Soton College tried to address these problems. In the four year period of school experience from Year 7 to Year 10 of this cohort, Soton College employed a Student at Risk Coordinator. A very approachable and friendly person, her work was valuable and included referral of a student in need to other welfare services. Despite this some students still moved away from school.

What then were the pathways and the outcomes for those Soton College students who chose work rather than completion of schooling?

**Dropping out of the class of ’95: Who were they?**

As mentioned above there were thirty-five students who chose to go to work before completing Year 12. There were more boys than girls, more newcomers than inheritors and just a few more from a blue collar background than from a white collar background. There were twenty-two boys to thirteen girls. This amounted to 28 per cent of boys in the cohort but only 15 per cent of girls.

If we were to again view the cohort in Year 7 assembly (see Figure 21), but arrange the seating so that the students sat in social groups, with those who were to leave school for work before completion of Year 12 in the front rows, then the relative size of the early school leaving group from each social background is apparent.

75 The combined efforts of this coordinator and the student welfare coordinator supported more than one of the students in this cohort so that they completed school.
The children of unskilled manual workers were the most likely to leave school before completion and the least likely were the children of non-professional white collar workers. As would have been predicted from the research literature the great majority of early school leavers were newcomers. At Soton College they contributed 83 per cent of early school leavers. Drop-outs amongst inheritors, whilst contributing a much smaller proportion of total drop-out, were not insignificant. As the number of inheritors in the cohort was fairly small (N = 31) it required only a handful of individuals to drop out to produce a rate of early school leaving almost equal to that of newcomers. There were almost five times as many newcomers as inheritors but the rate of drop-out by social group was similar, with that of inheritors being 19 per cent and that of newcomers 22 per cent.

What is striking in looking at the phenomena of inheritor drop-out is the relevance of individual circumstances. By contrast drop-out amongst newcomers is more related to broad social and academic factors.
Academic achievement, social background and years in school

Academic achievement and early school leaving are irrevocably linked. Low grades are more associated with early school leaving than staying on in school to completion. Nevertheless some students with low levels of achievement complete school and some with high levels of achievement exit school before completion.

The relationship between achievement and length of time in school is complex and varies from one student to the next. But persistent poor academic achievement was a factor amongst all Soton College drop-outs regardless of gender or socio-economic background.

Analytical conventions

“Poor” is in itself a relative term. Poor school achievement simply means the lowest academic performance in the cohort. The other measures used in the analysis of academic achievement are good and average. The limits for each of these classifications are set out in Table 10.

Table 10: Categories of academic achievement from Years 7 to 10

<table>
<thead>
<tr>
<th>Grade boundaries</th>
<th>Achievement category</th>
</tr>
</thead>
<tbody>
<tr>
<td>A* down to B*</td>
<td>Good</td>
</tr>
<tr>
<td>B down to C</td>
<td>Average</td>
</tr>
<tr>
<td>Below C</td>
<td>Poor</td>
</tr>
</tbody>
</table>

In this analysis poor performance in English is defined as a grade of D (a bare pass) or lower.

Poor performance in mathematics is defined in the same way but at Year 10 this is qualified by the level in the hierarchy of mathematics at which the grade is earned.

In
In this hierarchy the two lowest levels of mathematics are distinguished from those higher in both content and delivery.\textsuperscript{76}

Adequate grades, i.e. those higher than a bare pass, do not provide the student with the same range of outcomes for further study as would poor grades in the highest levels of mathematics. As a convention in this research membership of the lowest two levels of Year 10 mathematics will be considered evidence of poor relative achievement in mathematics. The mathematics hierarchy will be divided into two groups termed respectively highest and lowest mathematics.

\textbf{Inheritors, achievement and leaving school before completion}

Inheritors are the traditional users of the schooling system. They are the most likely to complete school and continue on to university and the least likely to leave school before completing Year 12.

Nevertheless, at Soton College a significant minority of inheritors left school before completion. Six of the thirty-one inheritors became early school leavers. This was one in five students, a rate that was only slightly less than that of newcomers, which was two in nine.

The early school leaving inheritors comprised four boys and two girls. Three of the four boys had displayed a poor achievement record in English from the beginning of Year 7 and by Year 10 the achievement in English of all six early leavers was poor. In fact these six students were the only inheritors with a poor performance in English. Their achievement level was even worse than that of non-completing newcomers, 27 per cent of whom gained at least an average grade in Year 10 English.

Only one inheritor, a boy, left school for work during Year 10 and the remaining five completed at least Year 10 before leaving for work.

\textsuperscript{76} These are levels 3 and 4 at which the syllabus is different and less challenging than the two highest levels of Year 10 mathematics.
Figure 22 shows the pattern of inheritor’s achievement in Year 10 English and the pathways followed by inheritors after Year 10.

The poor academic performance of these inheritor drop-outs was not restricted to Year 10 English. Every one of these inheritors had achieved poor grades in English more than once since the beginning of Year 7, but where in Year 7 relatively the low grades reflected a low standard of work, by Year 10, grades also reflected the failure to submit required school work.

Figure 22: Inheritors’ achievement in English Year 7 and Year 10 and post-Year 10 outcomes:

Number of students = 31

77 Details of the achievement of these inheritors in this subject from the first semester of Year 7 to the final assessment of Year 10 are shown in Appendix B.
At Soton College, failure to submit required school work resulted in a formal communication process designed to alert parents. When work was outstanding a letter was sent to parents with details of the work to be completed. If work continued to be outstanding then there was further follow up with parents.

A child had to be very determined to resist the pressure put on them to complete schoolwork. Such resistance could not have led to a happy home or school existence. This situation must have exacerbated an already poor classroom experience. In most cases it would have been easier to do the schoolwork.

In their final Year 10 grade every one of the inheritors who subsequently dropped out of school either failed English or gained a bare pass in it. The poor performance of inheritors in English arose from non-submission of required schoolwork rather than an inability to do it.

Where sophisticated language skills exist in the home—and these could be expected in an inheritor’s home—they supported the study of English at school and allowed students who did little of the set work in the subject to at least pass. The same could not be said for mathematics. Even where help was available from parents there was a need to ask the parents for that help and also prepare for tests and do the problems set for homework. With young people keen on getting into work or simply out of school this type of organisation of school work was likely to be absent.

The importance of competency in both English and mathematics has been discussed previously (see Chapters 5 and 6). Drop-out inheritors also achieved poorly in mathematics. Not only did they score a low grade, but by Year 10 half did so in a mathematics subject in which the syllabus and the delivery style had been modified to assist weaker learners.

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78 This was printed on pink paper and became known as a “pinky”. Before long it was found that the pink showed through the envelope and enterprising students arriving home ahead of their parents tended to destroy the “pinky” and delay the parental anger. Soton College changed the colour of the paper to white.
Poor academic performance in mathematics

Academic achievement in Year 7 to Year 10 mathematics was analysed in Chapter 6. Competency in mathematics was a benefit in that it opened up a wider range of post-school options of work and study. Whether a student was planning to stay on in school or leave before completing Year 12, successful completion of at least one mathematics subject was an advantage. But unlike English it was not essential. 79

Drop-outs were not the only inheritors who achieved poorly in mathematics over the years but they did make up most of the group. In addition to being in the lower levels of Year 10 mathematics, all but one of the inheritor dropouts failed the subject regardless of the Year 10 mathematics they studied. 80

Figure 23 shows inheritors’ pattern of membership in Year 10 mathematics and the outcomes of this membership.

Achievement in mathematics by the six drop-out inheritors was worse than their achievement in English. Between the beginning of Year 7 and the final semester of Year 10, all but one failed more than one semester of mathematics. Poor performing inheritors were also in the lowest levels of Year 10 mathematics. These students were getting a bare pass in what was a modified mathematics program in which class size allowed a better student to teacher ratio.

In fact all academic achievement had been persistently poor for those inheritors who were to drop-out of school. There were only four inheritors who gained a subject average for all Year 10 studies of grade of D or less and all were destined to drop-out.

At least once between Year 7 and Year 10, however, most of these inheritors achieved a score in English and mathematics which was average or above. This would seem to indicate that each had the ability to pass in either subject.

79 A student could successfully complete the VCE and enter a number of university courses, TAFE courses and jobs without having completed a mathematics subject at all. This could not usually be done with English, the successful completion of which was mandatory for the award of the VCE.
80 Two of the inheritor drop-outs were good at mathematics and in the highest Year 10 mathematics level.
Figure 23: Inheritors’ membership of Year 10 mathematics by school completion status

Number of students = 31

These rare moments of academic achievement raise more questions than the long period of poor academic performance. Good grades could result from a period of schooling during which the student became interested in a class, a subject or an activity, or one in which the student developed a rapport with a teacher. When achievement was higher for this small group of drop-out inheritors it is possible that it reflected something positive in the school experience that in turn had bolstered achievement at these times.
A period of greater interest in school with positive consequences in achievement was experienced by Penny. Although she never came to grips with mathematics, inheritor Penny was able to consistently achieve an average grade in English. In Year 8, she participated in the school musical production and at the same time gained quite good grades in English. During this time and for the only time in her school career Penny scored a B in each semester of Year 8 English. Penny’s other good grades were in performance studies such as music and drama. Could it be that the above-average English grades she gained in Year 8 reflected a year in which Penny’s school experience was more positive?

Where involvement in a school drama production might have acted as a stimulus to Penny’s achievement, Gerald’s stimulus possibly arose from “fitting-in” at school. When Gerald arrived at Soton College he knew no other students. His previous primary school was a government school and had been outside the catchment area of Soton College. In his first semester it was obvious that Gerald had not made the transition easily. He only managed a bare pass in English and mathematics at the end of his first semester at Soton College and his achievement in most other subjects was low.

In the second semester of Year 7 Gerald was moved to a modified mathematics class. The class focused on improving the mathematics skills of each student so that he or she could rejoin the mainstream mathematics program. It was a small class which allowed individual attention to be given by the teacher who was well liked by the students in the class. At the end of his second semester at Soton College, Gerald achieved an A in mathematics. This meant he was returned to mainstream mathematics in Year 8. However, there was an immediate decline in his achievement and this persisted throughout the years to Year 10.

Gerald’s English was also poor and he achieved only a bare pass for most of his time at Soton College. Mainstream English and mathematics classes were large. The only high grades Gerald achieved in any subject were those gained in the small class where personalised attention was possible.
Inheritors had the advantage of a home environment familiar with the education process. Poor academic performance was the result of a low level of classroom involvement. Reasons for the latter are probably diverse but each of these drop-outs shared a common attitude to school: most of the time each of them would have preferred to be somewhere else. These students were reluctant stayers but were required by law to be in school until they turned 15 and after that by parents who had envisaged that each would complete secondary school at least. Although Dwyer’s (1991: p 24) work with reluctant stayers concentrated on those in post-compulsory education, the characteristics of reluctant stayers he noted are easily translated to this group of inheritors.

In their last semester of schooling, whether in Year 10 or the first year of VCE, the academic performance of each of these students was very poor. This characteristic of reluctant stayers was also noted by Dwyer (1991: p 23) also. He showed that the negative attitude of “reluctant stayers” increased as they approached the point where they intended to leave school. Associated with this was an increase in uncertainty about the future.

There did not appear to be a strong indication of uncertainty about the future amongst this group of students. In selecting their VCE subjects all but one had listed a number of occupations to which he or she aspired. But since this was required as part of the process and parents had to indicate their approval by signature, it is possible that the list of occupations was provided more to comply with school regulations and appease parents.

Drop-out inheritors were not traditional early school leavers. They were the daughters and sons of professional people and four of the six students had older siblings already at Soton College when they started there so they were familiar with the school. Despite this their academic achievement was poor in most subjects and this is most likely to be linked with a negative attitude to school as a whole. Certainly for those five of the six students who stayed for at least part of the first year of the VCE the term “reluctant stayers” is most appropriate.
For instance, in the first semester of VCE, Penny had established a poor level of academic achievement, receiving a “cause for concern” in two of her six VCE subjects. Despite her parents attending a relevant parent teacher discussion at the end of the first semester of VCE Penny received a “cause for concern” in four of her VCE subjects in second semester. In all cases this concern was related to non-submission of required common assessment tasks and work requirements or not attending classes. This had been the difficulty Penny had faced throughout her earlier schooling so it was not surprising that it persisted into the post-compulsory phase.

“Wagging” class (non-attendance) was a serious issue during the VCE because the award of the certificate was also dependent on the number of days school was attended. Absenteeism is a good indicator of lack of interest. A year after she left school for work Penny was interviewed for the school magazine and ruefully commented that her favourite classes were the one she “wagged”. Attendance at class was checked off and a student who absented themselves from a class was immediately detected. The consequence of this action was an after-school detention and if absenteeism persisted detention on a Saturday. Despite this Penny was prepared to accept the punishment in preference to attending the class.

**Other indicators of dissatisfaction with school**

Persistent poor academic achievement is an indicator of poor school experience that usually leads to early withdrawal from school. It is not, however, the only indicator. The quality of transition from primary to secondary school or the involvement with non-academic school activities, particularly those outside the mainstream class times and which therefore required a high level of commitment, are two others.

**Transition from primary to secondary school and participation in extra curricula activities**

Some of the inheritors’ transition reports were missing from the school records but those that remained showed that although some inheritors such as Penny and Gill had settled into school quite well there was still room for improvement.
Almost all of the six inheritor drop-outs participated in at least one extra-curricula school activity. Don represented the school in five types of sport throughout his years at school. Penny and Gil were involved in music and drama activities whenever they were available.  

Gerald, who had no friends in the school when he commenced in Year 7, participated in a music ensemble but only in Year 7. Drake participated in sport and represented the college but only during the first two years of his school life there. Maddy did not participate in any extra-curricula activities. Gerald and Drake had left school for apprenticeships by the end of Year 10. Maddy stayed on but very reluctantly and finally left for work in the early months of her Year 12. This pattern of declining involvement in extra curricula activities by these inheritor drop-outs also reflects their declining commitment to school work.

Maddy’s journey through school particularly illustrates the negative aspects of school experience. Maddy was an inheritor—both her parents were worked in professions. She was also a reluctant stayer and had been almost from the start of her life at Soton College. She had come to Soton College from one of its partner primary schools and therefore had already established a friendship group so it is not surprising her Year 7 homeroom teacher assessed her as confident and displaying rapport with other students. The same teacher also assessed Maddy as displaying an excellent attitude in class and approach to schoolwork. The only areas in need of improvement were initiative and getting schoolwork started.

Maddy’s first Year 7 reports show a scattering of As, usually in practical subjects such as health and physical education. The grades for other subjects are far more diverse and range from an E in mathematics to Cs in English. Within a year her academic achievement declined by at least a grade in most subjects. By the end of Year 10 Maddy’s reports provide a dismal picture of her academic experience. The Year 9 reports show failure to submit work in Year 9 English, History and Textiles, with comments on poor levels of participation in science and business subjects, and these are

81 Major drama productions occurred biannually but smaller scale drama productions occurred at least annually and music performances were a regular feature of school events and assemblies.
replicated in Year 10. The only positive comments were for practical work in Home Economics, a subject focused on health and which also had a strong practical basis. Maddy’s Year 9 Home Economics report comments that her practical work was not just good but of a “high standard”.

Only four years after her homeroom teacher had assessed her attitude to class and approach to schoolwork as excellent, Maddy’s report card was full of comments from teachers about her lack of class participation, non-submission of assessable work, poor attitude to class, inconsistency in effort and, the mainstay of all teacher comments, “wastes time in class”.

When she chose her subjects for the VCE teachers queried the selection of three of her six VCE subjects and expressed concern that she would be successful in them. One of these subjects was Home Economics, the one in which Maddy obviously felt the most confident. Maddy completed the first year of her VCE but withdrew from Soton College during the first semester of her final year.

School failed Maddy. Throughout her secondary schooling she had wanted to be a primary school teacher but for some reason could simply not connect with school work and school organisation. Poor academic standards led to persistent criticism by teachers in every year level, which must have made the five years she stayed in school unpleasant for her, and it is easy to see why she wanted to leave.

Although their attitude to the curriculum was negative, none of these six inheritor drop-outs was abnormally disruptive in the classroom. If there was a characteristic of classroom behaviour at all it was one of passivity.

Teachers were probably frustrated with these six children because each was rejecting all efforts to be involved; they were, as Lamb et al. (2004: p 11) say, repelled by schoolwork but not by the total experience. Although Gerald and Maddy moved away from school contact the remaining four did not. They maintained friendships with completing students even after all left school.
The next step—work

These six students show that being an inheritor was not necessarily protection against school drop-out. In addition school drop-out was not an indication of poor quality work outcomes. Gerald left school to take up an apprenticeship. Maddy left school to work in clerical and administrative work. Although only four of the six inheritors could be located at the time that data for this research was collected, all four were employed in work that they enjoyed. Penny was working with a European fashion house, Drake and Don had both established themselves in business after completing their trade training, and Gil had completed a fine arts degree and was still employed in the music industry.

During Year 10 when Penny, Gil and Don were selecting their subjects for the VCE, each had included in their list of post-school occupational goals a job similar to that they finally entered. Penny had wanted to continue with dancing, Gil with fine arts and Don either in sport or a trade. Although the pathway each took was less conventional than that of most of the other classmates, they had each achieved their goal.

Discussion

Could anything have been done by Soton College to stop these six inheritors drop-outs leaving school?

Achievement levels, even in their first year at Soton College, provided the most reliable signal that each of these six students had not connected with schooling, and attention had been paid by parents and teachers to these signals.

School records provide a history of poor grades, requests by teachers for an interview with parents and, as poor grades continued, requests for an interview between the year level coordinator and parents. By Year 10 Maddy and her family had also been called to a conference with the Academic Promotions Panel of Soton College. The function of this panel was to establish a support network to help a child through academic difficulty to academic success. This was done for Maddy but it was too late.
Overturning poor academic experience needs to be done early in school life. Authoritative research continues to show that where school experience is positive students stay and complete schooling. But this is not the only reason for improving the quality of school experience—the most important reason must be the wellbeing of the student. Reluctant students are not happy students and Dwyer has been able to show that reluctant students display the same negative attitudes to school and to life that early school leavers display (Dwyer. 1994: p 62).

Gerald, Maddy and Gil were obviously unhappy at school and passive, often even withdrawn, in the classroom and this outcome needs to be avoided. Staying on in school is to the advantage of any child but where the quality of school life is poor staying on proves counter-productive (Teese et al. 2000: p 5).

If the educational platform is weak from the beginning, then there is a need for intervention in an attempt to strengthen the relationship of the child with learning. One off events might work but often there is a need to tailor a program to the specific needs of the individual students and schools are simply not resourced for this level of intervention.

Class sizes in Catholic Regional Colleges are large, which limits the time a teacher has with each student. The usual size of a Year 10 English class at Soton College is twenty-six students. A well behaved child who appeared to do work in class could slip by a teacher until a test or some other form of assessment highlighted the lack of completed schoolwork. This is probably the pattern of school life for each of the inheritor drop-outs and it resulted in an occasional link with schoolwork which declined over time until it was almost non-existent by Year 10.

At the two transitions in their secondary school life—i.e. when they entered Soton College and again for those who stayed on to commence it, the move into the VCE—the achievement of the drop-out inheritors improved briefly. Both of the above transitions involved a physical change of location, in the first instance from primary school to secondary school and in the second from the Year 7 to 10 campus to the VCE
campus. The rally in academic achievement might well have been a response to novel educational circumstances but it was not lasting.

Soton College did have some programs in place. In Year 7 and Year 8 small classes in mathematics were provided in which the program, modified from that of the mainstream students, was focused on “catching-up” through re-learning skills taught during primary school years and revising skills taught in Year 7 and Year 8 mathematics. Where literacy proved problematic support in the form of small group classes was available in the Individual Learning Centre. School resources and available funding options limited the availability of these programs. For part of the time these inheritor drop-outs were in school there was a Student at Risk Counsellor. Records of these consultations were not available at the time of data collection for this research so it is not known whether any of the drop-out inheritors were amongst those who were sought out by the Student at Risk Counsellor but it is highly likely.

Soton College followed a referral model based on the supposition that poor academic performance as well as poor behaviour often signalled a poor school experience. Each year level coordinator would refer students to the Student at Risk Counsellor for help. The year level coordinator would develop a list from consultation with subject teachers and heads of faculties and through her or his observation. The Student at Risk Counsellor would then approach the child concerned and establish a program which was as student centred as possible. Since the whole process also included the child’s parents, it was unusual for a child to reject the program. Despite this, students still left school before completion.

Vocational education, in the form of Automotive offered in conjunction with the neighbouring TAFE College, was to be introduced in the first year of the VCE. Not one of these six inheritor drop-outs selected the program when choosing their VCE subjects. Its introduction did not encourage Gerald to stay on into the VCE or Don or Gil to complete at least the first year of VCE. If the program available had been one that appealed to girls, Maddy might have undertaken vocational studies. After all, virtually her only commendation from teachers was for her practical work and then
with a qualification if some record of the practical class was to be maintained. Certainly
the method of delivery would have suited Maddy because theory was provided in
modules that accompanied the extensive practical work. Unfortunately, at the time
Automotive studies was the only vocational study available in the immediate vicinity of
Soton College.

It appears that the inheritor drop-outs were simply not able to connect with the
engaging activities within the academic program. At Soton College all but Gerald and
Maddy participated in some school activities such as sport or drama. Poor academic
performance no matter how persistent had not held each student back in their progress
from one year level to the next so that they were still part of the social group in which
they had commenced their secondary school years.

Soton College had not been able to integrate these inheritor drop-outs into mainstream
school programs. The educational platform for each of these six students had not been
strengthened and to do so would probably be outside the resources of the college.
Motives for not engaging the curriculum varied per child and included a mixture of
personal circumstances such as issues in the family, loneliness, interest in activities not
within the mainstream programs and a belief on the part of each child that he or she had
adequate schooling for their future.

These six inheritor drop-outs were articulate, their English grades were poor but failure
had been the result of work not done rather than inability. To some degree they were
correct in that provided their future occupation did not require a specific standard of
English or mathematics they were adequately provided for the world of work. Because
they were articulate they were confident that they could communicate adequately for
work and in effect they were each in control of what they did at school in English
classes. If they chose to commit themselves they were capable of better grades. They
had each the resilience of being from families in which language skills were
sophisticated so that they could “get by” at school and hopefully at work on what they
had learned in their families. This was not the case with mathematics for all but Don,
who was competent in this field. But each of these drop-out inheritors was to eschew
mathematics in their post-school outcomes and it is possible that the relationship of learning mathematics and post-school work outcomes was not apparent to each of them.

In effect Soton College had not altered the shape of a pathway though education established somewhere earlier in education for these six young people. They were determinably heading for work before completing school.
CHAPTER 8

The path less travelled by—newcomers

Introduction

In Chapter 7 we followed the pathway of drop-out inheritors through education to work. We saw that inheritors, the traditional users of schooling, were not immune to dropping out of school and that poor levels of earlier school achievement acted as signals to early school leaving for inheritors.

The motive and the timing of inheritors’ early school leaving varied from one student to the next although the two girls who did drop out stayed until the completion of the first year of the VCE. Was there any pattern of early school leaving amongst drop-out newcomers or were their motives as diverse as those of inheritors?

Certainly the extensive and authoritative research literature developed over decades has identified newcomers as more likely to drop-out than inheritors. The same literature and research has shown that certain social groups are the most likely early school leavers. These were listed in the previous chapter and include young people from a blue-collar background, boys, indigenous youth and children from some ethnic groups, young people resident in the rural areas of Australia and those from Government schools. Drop-outs are also identified as being poor school achievers.

The young people in the Class of ‘95 were predominantly newcomers. There were nearly as many boys as girls, there were no indigenous students, those from a non-English speaking background were few and all were resident in either the suburbs surrounding the college or on the rural fringe that was characteristically urban.

See the ongoing research of the Longitudinal Survey of Australian Youth particularly the work of Lamb, Dwyer and Wyn. (2000) and for an authoritative discussion of both Australian and international research see Lamb, Walstab, Teese, Vickers and Rumberger. (2004).
In previous chapters we have seen that in the two key learning areas of English and mathematics, Soton College newcomers achieved less well than inheritors. We have also seen in Chapter 7 that drop-out inheritors at Soton College achieved less well than those inheritors who completed Year 12.

Soton College was a Catholic Regional College. The type of school attended by students is significant in relation to the pattern of school retention. Children from an Independent school are more likely to stay to complete school than those from a Catholic School and the least likely children to stay in school to completion are those in the Government sector.

Although classification of schools according to the sector in which each exits is convenient, it is also essential to be aware that within each of the sectors there is also diversity (Keating and Lamb. 2004: p 5; Teese and Polesel. 2003: p 119). Thus we would expect retention at Soton College to be in the medium range.

At Soton College thirty-five students left before completing Year 12 and twenty-nine of these students were newcomers. There is a range of different family backgrounds represented in the newcomers, as shown in Figure 24. Here the bars of the chart have been divided to reflect the numbers who stayed and the numbers who dropped out of school within each sub-group of newcomers. It can be seen that the daughters and sons of unskilled manual workers made up the greatest proportion of school drop-outs and that the children of non-professional white collar workers were the most likely to stay in school until completion.
Figure 24: Drop-out rate of newcomers by social sub-group

The chart in Figure 24 above shows that as newcomer sub-groups moved down the social scale the proportion of drop-outs increased. That is, only 15 per cent of the children from the families of non-professional white-collar workers dropped out compared with more than twice that rate (37 per cent) amongst children from the families of unskilled workers dropped out from the Class of ’95.

The role of academic achievement in staying on or leaving school

We have already seen that the performance in English of newcomers was inferior to that of inheritors. But unlike the inheritors who performed badly in English, not all low achieving newcomers dropped-out of Soton College. Figure 25 displays the pattern of retention of newcomers according to their level of achievement in Year 10 English.
Whereas all poor performing inheritors had left school for work before completing Year 12, some of the poor performing newcomers were to stay on and complete Year 12. The largest proportion of poor performing newcomers, however, did leave school for work over the last two years of schooling.
For every girl who achieved a poor grade in English and dropped-out of school there were two boys who did the same. Whereas all inherits who left school before completion achieved a low grade in Year 10 English some newcomers achieved a grade above a bare pass but discontinued school anyway. There were three boys and five girls who did this.

One of those who achieved average grades in Year 10 English and still left school before completion was Zac. The term drop-out does not seem appropriate for Zac. He had chosen a pathway based on what he considered to be adequate schooling. Throughout schooling he had only one goal—to become a motor mechanic. His parents had insisted that he complete the first year of VCE but he was aware that he could have sought an apprenticeship earlier than this. Zac incorporated the vocational course Automotive into his VCE and was successful in all his studies and used the “goat-path” acknowledged by Kirby (2000: p 53) into his chosen career, in which he was also successful. This was a traditional route through school to a trade.

Christine was another student who achieved a good pass in all her subjects and still left school before completing Year 12. In Year 10 she was in the highest level of mathematics and scored a B. Christine was unsure of what she wanted to do when she left school. By the end of Year 10 she knew that she didn’t want to go to university and thought that she might work in retail. Christine was a capable student but although she enjoyed the social side of school, she also wanted to enter the work place. She did not intend to undertake university study although she did finally attend TAFE. As she entered the first year of the VCE Christine thought that when she left school she might work in business. She was successful in every VCE subject she took in her first year. She selected subjects, mostly business related, for the second year of the VCE, but was at the time unsure whether she would return to Soton College for her final year. In the event she did not return, but she did maintain links with Soton College through her friends all of whom completed Year 12 and university.

83 Christine was sufficiently unsure as to submit her Year 12 subject selection form late and then only after she had been requested to do so by the Director of Organisation at Soton College.
Zac and Christine didn’t like being at school. It is true that they had friends there and they participated in some activities and they even enjoyed some classes. Zac is quoted as saying that Year 8 Home economics “was fun”. Christine received school reports from Year 7 to Year 10 that were peppered with As, but usually in practical classes such as Art, Personal Information Processing (a computer based subject) and Textiles. Zac and Christine liked doing things rather than learning theory. For these two students, level of academic achievement was not an indication of early school leaving.

Similarly Geoff finally left school at the end of Year 11 but he was motivated by a change of family circumstance. Throughout his schooling Geoff was an average student of English and mathematics. In his first year of the VCE he selected subjects that would allow him to pursue a career with aircraft as either a pilot or an aircraft engineer or mechanic. He was successful in these subjects in the first year of the VCE but for personal reasons decided to exit school for work at the end of that year. He took a job with training on the job and remained with the company for a number of years but to date has not worked in the aircraft industry. Geoff’s academic strength was in mathematics. He had been in the second level of mathematics throughout Years 9 and 10 and selected preparatory mathematics for the VCE. Teachers did raise concerns about his achievement level in two of his first semester subjects in VCE and in the second semester teachers again were concerned about English and mathematics but overall he was successful.

Zac, Christine and Geoff were all in the higher levels of mathematics in Years 9 and Year 10. All were also successful in English. But for many drop-out newcomers, having poor grades in English and being in the lowest of the mathematics groups from Year 7 to Year 10 was the most common level of achievement. This was the experience of Martin, whose journey through school to work was not satisfactory and whose post-school outcome will be discussed.

Figure 26 shows the school leaving pattern for newcomers studying different levels of Year 10 mathematics. From this it is clear that newcomers who were to leave school
before completing Year 12 were most often found in the lowest two levels of mathematics in Year 10, a pattern shared with inheritors.

Figure 26: Newcomers’ membership of Year 10 mathematics and post Year 10 outcomes

Number of newcomers = 132
Although mathematics was important in accessing a range of post-school work and study, it was not essential. There were other pathways.\textsuperscript{84} So it is understandable that some students who performed poorly in mathematics would continue on in school. Studying the higher levels of mathematics did not insure newcomers against dropping out. Twelve students or 13 per cent of newcomers who studied the higher levels of mathematics in Year 10 dropped out of school. Some didn’t actually need that level of success as can be seen by Zac’s experience related above. The rate of newcomer drop-outs from mathematics was twice that of inheritor drop-outs from the same mathematics groups.\textsuperscript{85}

This is a very significant contrast. Newcomers depended upon the successful use of school and amongst them are some very successful students, but some of these students leave school early and at least on this evidence do not harvest the fruits of their labour.

**Academic failure and school leaving**

One of the most significant differences between inheritor drop-outs and newcomer drop-outs lies in achievement levels in English and mathematics. The pathway of inheritor drop-outs from Year 7 to Year 10 was strewn with academic failure. School work was not just poorly done; it was not done at all. In addition the resistance to school displayed by inheritor drop-outs was apparent in Year 7. This pattern was rare for newcomer drop-outs.

In their first semester at Soton College most newcomer drop-outs had gained a C grade in at least one of Year 7 English or mathematics. Only three of these students gained a fail in their first year at the college. The fail was in mathematics and after remedial teaching the grade improved.

Persistent failure was more elusive amongst newcomer drop-outs than it was amongst inheritor drop-outs. In all instances where persistent failure occurred amongst newcomer drop-outs it could be associated with a particular personal trauma, usually as

\textsuperscript{84} The importance of mathematics has been discussed in Chapter 6.
\textsuperscript{85} There were two inheritors who dropped out and these two students made up 6% of inheritors successful in the higher level of Year 10 mathematics.
a result of family break-up. The impact of changes in family circumstances in particular does act as a marker of academic achievement change. This area is a difficult one to pursue but has been noted as influential on school retention by Lamb, Walstab, Teese, Vickers and Rumberger (2004: pp 23-24).

Failure affected a few of the newcomer drop-outs but poor levels of pass affected all. In Chapters 5 and 6 it was seen that the academic achievement levels of all students regardless of whether they were inheritors or newcomers who stayed or those who dropped out tended to decline by at least a grade from Year 7 to Year 10.

A comparison of newcomer drop-out grades in English at Year 7 and Year 10 identifies a downward trend in achievement over that time. This is shown in Figure 27 below.

Figure 27: Comparison of academic achievement in English in Year 7 and Year 10 of newcomer drop-outs.
None of these twenty-nine newcomer drop-outs improved their academic performance in English from Year 7 to Year 10. But we will see in Chapter 10 that the achievement in English of one in two newcomers who stayed to complete the VCE also declined by up to seven grades over the same period of time. Almost two-thirds of newcomers were experiencing a declining academic standard in English over these four years so what made the newcomer drop-outs leave school?

Similarly in mathematics newcomer drop-outs did not stand out as experiencing a very different level of achievement from other newcomers. This contrasted with the experience of inheritor drop-outs in mathematics where four of the six inheritors (67 per cent) occupied the lowest level at Year 10. But only seventeen of the twenty-nine newcomer drop-outs (59 per cent) did the same. The number of inheritor drop-outs was very small, far smaller than that of the newcomer drop-outs but even so within the lowest level of Year 10 mathematics only one inheritor passed—that is, three quarters of inheritors failed. In the same mathematics level fourteen of the seventeen newcomer drop-outs passed and only three—that is 18 per cent—failed.

There were serious ramifications to this pattern of achievement by newcomer drop-outs. Although a remedial mathematics program existed for Year 7 and Year 8 students it was for students who failed mathematics more than those who just passed. College records show that only three of the twenty-nine newcomer drop-outs participated in the remedial mathematics program from Year 7 to Year 8.

At the highest level of Year 10 mathematics there were two of the six inheritor drop-outs, which was 33 per cent, and eleven of the twenty-nine newcomer drop-outs, which was 38 per cent. It would seem from these data that newcomer drop-outs were also likely to be more successful in mathematics than were inheritor drop-outs.

Mathematics is far harder to analyse because of its hierarchical structure in Years 9 and 10 but the above comparisons indicate a pattern for newcomer drop-outs which differs from that of inheritor drop-outs. Poor performance in school did not automatically lead to early school leaving and was low, but not a fail.
Poor academic performance over all subjects

The analysis above concerns English and mathematics only but school experience incorporates far more, both in formal curriculum and related school programs. The whole school experience involves classroom and school yard. Drop-outs, whether inheritors or newcomers, were less likely to “fit-in” at school. Regardless of social background they were more likely to perform poorly over all subjects and less likely to participate in extra-curricula activities than were school stayers.

Transition and school cultural involvement

At the end of the first term at Soton College, Year 7 teachers reported that only one in five of the newcomers who would subsequently drop-out had adjusted well to secondary school. The remainder were described as lacking self-confidence and initiative and the appropriate attitude in class and approach to schoolwork. This meant that the majority of newcomer drop-outs were, at that time, experiencing a problematic transition to Soton College. It is true that many newcomer drop-outs became active in extra-curricula activities but this involvement tended to be intermittent or temporary and faded over time.

Involvement in extra-curricula activities was associated with differences in engagement with the curriculum and achievement. For instance Todd represented Soton College in four sports and in music while he was in Year 7. An average scholar in Year 7, Todd’s academic performance declined from Year 8 onwards and his involvement in extra-curricula activities stopped. By Year 10 Todd was often absent from school and his average achievement had declined from a C in Year 7 to only an E+ in Year 10 when he left school for work. Although Todd came to Soton College from a partner primary school and had a number of classmates move to the college with him, he was more inclined to keep up with friends who did not attend the school and has stayed out of contact with the school since he left.

Those who were never involved in any extra-curricula activity often experienced low levels of academic achievement from the start. Ruby never participated in any extra-
curricula activity. Her Year 7 homeroom teacher found that amongst other things she lacked initiative and her self-confidence needed improvement. Ruby’s Year 7 report shows that although she scored an average grade in English, she was studying a modified mathematics subject and was experiencing significant difficulty in most Year 7 subjects. Over time this situation was to become worse with Ruby’s grades deteriorating significantly to Year 10. Newcomer drop-outs such as these did not engage in school activities and programs as strongly as those whose achievement was better. Conversely a greater commitment to the entire school program seems to reflect a student with a higher level of achievement.

The fragility of the relationship with school for newcomer drop-outs is captured in lower involvement in school programs and poor achievement. This, it should be noted, is different from the experience of inheritors; many of these were involved in school programs even if their study commitment was poor.

**When did they leave?**

Early school leaving was not encouraged by Soton College policy. Students who left the college for work were supposed to be counselled by the Careers Counsellor as part of the school withdrawal procedure. This was usually ad hoc because students who left the college during VCE rarely made appointments to discuss their decision with any staff including the Careers Coordinator. Where, as often happened, a parent did make an appointment on their child’s behalf, it was not kept.

In reality an exiting student tended to come to school, see the Year Level Coordinator, empty her or his locker, gain the required signatures on the withdrawal form and walk out of the school as quickly as possible.

The most popular exit points for newcomers were at the end of Year 10 and the first semester of Year 11. Figure 28 below shows that of all newcomer drop-outs, over half

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86 The program developed to encourage children to complete school included a Student at Risk Coordinator, both full-time careers and full-time welfare counselling from Years 7 to 12, an inclusive curriculum of considerable breadth, and an extensive extra-curricula program designed to also be as inclusive as possible.
left school for work between the end of Year 10 and the end of the first semester of the VCE.

The exit points and the level of relevant achievement are seen in Table 11.
Table 11: Academic achievement at point of school exit

<table>
<thead>
<tr>
<th>Year level of school exit</th>
<th>Educational level attained</th>
<th>Certificate or award</th>
</tr>
</thead>
<tbody>
<tr>
<td>During Year 10</td>
<td>Year 9 pass</td>
<td>None</td>
</tr>
<tr>
<td>End of Year 10</td>
<td>Year 10 pass</td>
<td>None</td>
</tr>
<tr>
<td>During Year 11</td>
<td>Year 10 pass and if at mid year some VCE units</td>
<td>Transcript of results*87</td>
</tr>
<tr>
<td>End of Year 11 or During Year 12</td>
<td>Some VCE units</td>
<td>Transcript of results</td>
</tr>
</tbody>
</table>

* If subjects were not completed then the result would be an N. Successfully completed subjects gained an S

Of the total of twenty-nine newcomer drop-outs sixteen achieved a pass at Year 10 only. Five left school after a few weeks of VCE study and five remained and left during the second term. Anecdotally it appears that these last five newcomers extended their stay at school largely because they wished to participate in the presentation ball, which was a major college social event. The ball was held in the first week or so of the second term and only enrolled students were permitted to take part. Only two of these five newcomer drop-outs stayed long enough at Soton College to gain a pass in any of the VCE subjects they studied in the first semester of Year 1188. The highest standard that the others attained was a Year 10 pass.

The post-school outcome of early school leavers varied. Seven newcomer drop-outs, six boys and one girl, undertook an apprenticeship. More than half the students who left school during the first semester of Year 11 said that they intended to go to TAFE to do a course there, but it was unusual for students even to commence a course at the TAFE. Access to a range of TAFE courses had been restricted by the introduction of the VCE, with regulations restricting access of students under the age of 18. Since the academic year at TAFE Colleges coincided with that of secondary schools, a student exiting the

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87 Where a student left school for work without completing a VCE subject but after the date at which withdrawal from a VCE subject was permitted, then a transcript of results could be more damning than no transcript at all because it would show a fail rather than simply non-completion. Failure of this nature could reflect a poor attitude to school work and a lack of commitment to completing a task. Some employers were concerned about this in a potential employee particularly where the young person was entering training in some form such as an apprenticeship.

88 Three of the five students left school immediately after the presentation ball.
latter for the former during a school semester could not usually access a TAFE course immediately. This meant that it was usual for those who left school at the end of Year 10, or the end of Year 11 to seek work before they could enter a TAFE course. A consequence of this was that the young person would stay in the job and give up the idea of doing a TAFE course.

Actually only two Soton College newcomer drop-outs, Lynette and Morgan, completed a TAFE course. Lynette completed a course in computing and Morgan one in business administration. Morgan returned to TAFE to study for her VCE as an adult part-time student and was successful.

**The mood of early school leavers**

Not all newcomer drop-outs were buoyant at entering a new phase of their life. Dwyer (1991: p 23) noticed this negative attitude and linked it with uncertainty.

However, one student who did seem happy about making the move from school by way of TAFE to an apprenticeship was Martin. Although he had attended a partner primary school and had an older sibling at Soton College when he arrived there, Martin did not enjoy school. His Year 7 homeroom teacher found that he lacked confidence, although he was well behaved and apparently attentive. He found English difficult and although he was more confident in mathematics he was in the lowest level in the hierarchy. Somewhere between Year 7 and Year 10 the quietness he displayed in his first weeks of school became withdrawal and his academic achievement declined even further.

By Year 10 his friends, who were mainly from other schools, had left school and were looking for work. Although all his older brothers and sisters had completed Year 12, Martin left school in the first weeks of VCE. His intention was to complete a pre-apprenticeship course at TAFE but unfortunately he dropped out of this course before the end of that year and did not gain any qualifications other than Year10. Martin has worked in unskilled and semi skilled work ever since.
Martin’s story is common. He probably already had a low interest in schooling when he arrived at Soton College and certainly saw the transfer to a pre-apprenticeship course at TAFE as a welcome change. But this too failed to interest him and a succession of low skilled jobs and unemployment has been the result.

**Leaving school during Year 10**

The timing of the decision to leave school is important. Only three newcomer drop-outs, a girl and two boys left school for work before the completion of Year 10. These three had only a Year 9 pass. Students who leave school with only a Year 9 pass are amongst the most vulnerable in gaining interesting and secure employment.

Girls in this position often fare the worst. They tend to move into clerical, service and retail work that is stereotypical and often difficult to find and transitory. Jobs in these areas of employment are frequently undertaken by full-time students in a part-time capacity with a high turnover and an upper age limit. Jobs of this nature are often transitory and at the point where the young employee is eligible for an adult wage there is the risk of retrenchment (Johnston 1990: p 6). There is also a noticeable lack of work with training which appeals to girls particularly those who have not completed school.

Using data from the Longitudinal Survey of Australian Youth, Lamb, Dwyer and Wyn (2000; p 37) investigated the changes in post-school training options available to non-completing school students over time and found that there had been a general decline in the options available, but that this decline was even higher in the jobs sought traditionally by girls.

For newcomers Abe and Marita, both of whom left school for work during Year 10, the future was quite uncertain. But for Barry, also a newcomer, who left school at the same time.

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89 Martin was one of the few exiting students who sought careers counselling. He was very positive about the future and confident that he would like both the new adult style of the TAFE College and a job. It is a pity that he was not able to achieve his goals.
90 An inheritor also left at this point in time.
91 Not only had there been a decline in the traditional work areas of secretarial and clerical work because of technology growth but there was increased competition in this field from school completing girls.
time for a vocationally oriented program at the nearby TAFE College, the future in
work was more certain.92

Abe had not enjoyed schoolwork but appeared to enjoy the social side of schooling. He
was a competent student in English and mathematics. Although he had been assessed
as lacking confidence in Year 7 he had participated in a number of school sporting
activities from Year 7 to Year 10. Despite this he was keen to go to work. Abe
undertook an apprenticeship in the building industry. He was successful and at the time
of data collection owned his own business as an electrical contractor.

Marita’s transition was the riskiest. Not just because of the latent difficulties in finding
appropriate and secure work, but also because Marita had not wanted to leave school.
A change in family circumstance had led to the decision. Once in work, however, she
made the best of the move and successfully coupled work and vocational studies over
the years. Ten years later, when she was interviewed in relation to this research, she
was established in an interesting and skilled non-traditional job.

All three of these students had successful outcomes from the move to work. The
research literature shows that this is inclined to be an atypical situation faced usually by
young people who leave school at this point in their education. Lamb and McKenzie
(2001: p 9) found that seven years out of school early school leavers experienced
greater unemployment levels than those who completed school. But this was not the
case for these three newcomer drop-outs.

Success in the transition to work with only a Year 9 pass was undoubtedly the result of
the method of transition, i.e. by way of apprenticeship for Abe and in the case of both
Barry and Marita – vocational training. In fact the transition of these three students had
been more successful than Martin’s despite the fact that Martin had stayed longer in
school to complete Year 10.

92 When, ten years later, data was collected for this research Barry still worked in the food industry
although he had changed his job a number of times. At the same time he had completed several related
vocational qualifications through the TAFE system.
As researchers such as Dwyer (1995: p 266) and Teese et al (2000: p 20) have pointed out, early school leaving might not be a problem where recognized formal training accompanies the move to work. There is a rider to this comment. Poor levels of school achievement might inhibit reengagement with education and life-long-learning should the latter become necessary in the future. In an age of accelerating sophistication in technology this could be so.93 There is still a risk attached to this school to work option.

**Leaving school between the end of Year 10 and the end of the first semester of the VCE**

This was the most popular period for school exit by newcomer drop-outs. Sixteen newcomer drop-outs selected this period to leave Soton College. This was more than half the number of newcomer drop-outs (see Figure 28 above). Despite being in school for another few months those who stayed on into the VCE did not add to their credentials and left school for work with a Year 10 pass only.

In the case of Vivienne and Stan, the Year 10 pass was only a compensatory one. Neither had passed English at the end of Year 10 although they had done so at the end of the first semester of Year 10. They had both gained a bare pass in Year 10 mathematics, but in the lower level which meant that they had really studied a modified form of mathematics.

Vivienne had been one of those students considered well integrated during Year 7 and up until the end of Year 9 had maintained a B average in achievement. Personal circumstances in Year 10 were very difficult and by the first semester of VCE Vivienne became an independent student. Her achievement at the end of Year 10 had slipped to a D+ and she was unable to pass any of the subjects she selected for the VCE.

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93 It seems hard to envisage a world without electricity but even since the data were collected for this piece of research the increased concern about global warming has led to a greater imperative to develop renewable energy and different ways of producing electricity. It is possible that significant retraining will be necessary for electrical contractors as a consequence and that this training will be in a scientifically more sophisticated milieu with the need for a higher level of theoretical understanding. This might prove to be out of the skill area of those whose schooling does not include some understanding of, say, physics.
Vivienne had an urgent need to support herself and the college welfare counsellors worked with her to find a combination of work and study at the local TAFE College and she left school immediately after she participated in the Presentation Ball. When data were collected for this research she had moved from the part-time retail work she had entered after leaving school to trained administrative work with a secure future.

Stan was an articulate young man but his transition to Soton College had been somewhat problematic. Although his academic achievement from Year 7 to Year 10 was poor he obviously enjoyed drama in which he gained a mixture of As and Bs. This persistent difference in grades in drama and those in any other subject is undoubtedly related to interest in drama and dislike of other subjects. This probably indicates that Stan was capable of better than the average grades of D+ he scored for most of his school life and certainly more capable to score higher than the E+ average with which he completed Year 10. Like Vivienne he did not pass any of the VCE subjects he commenced. He left Soton College to work in retail and was still employed in this field when the data for this research were collected.

The experience of each of the newcomer drop-outs who did not complete Year 11 varies. Morgan did not leave school until the end of the first semester of VCE. She did not enrol in a TAFE course until some time later and worked in a legal office. Morgan finally completed her VCE as a part-time student at TAFE. When interviewed Morgan was still working in administration work although at Year 10 her ambition was to work in the media as a journalist or in public relations.

Morgan’s pattern of school achievement differed from most other newcomer drop-outs. In Year 7 Morgan had been described as well integrated. She had maintained a B average in English and although her overall academic average had declined in Years 9 and 10 it still fluctuated between a D and B. Morgan had difficulty with mathematics from Year 9 on and at the end of Year 10 was in the lower group where her grade was a C. She discontinued mathematics in the first year of VCE and was successful in every VCE subject she studied to the end of the first semester.
A comment should be made about Morgan’s ability in mathematics. Up to the point where mathematics groups were structured into a hierarchy, i.e. at the beginning of Year 9, Morgan gained a C in mathematics. She was moved to the lower levels of Year 9 mathematics after the selection examination at the end of Year 8, and her grades stayed at a C. This leaves open the question as to whether Morgan would still have been successful in a higher level of mathematics and also whether she responded to relegation by simply meeting the level required to “survive”. Morgan was a competent student in all other subjects and her continued post-school engagement with education and subsequent success in gaining her VCE would indicate interest in learning. Certainly her parents would have opposed her decision to leave school before completion.

Silas first completed a pre-apprenticeship course at TAFE and then moved into an apprenticeship and work, and finally when interviewed was about to move into his own business. Integration into secondary school had been described by Silas’ homeroom teacher as in need of improvement. His academic performance had been inconsistent. He was better in mathematics than English. He had managed to move from the lower level of mathematics to the higher level by the end of Year 10 although his final grade of a D was disappointing.

None of his VCE subject selections were queried by teachers despite his relatively low level of achievement throughout Year 10. During the first semester of the VCE, however, teachers raised causes for concern about Silas’ ability to pass every one of his VCE subjects. At the end of the first semester Silas had failed two of the subjects and decided to leave Soton College.

Certainly all these students wanted to be in work and out of school but low academic achievement levels do not provide a motive for all. In most cases achievement in Year 7 had been at the lower end of the scale for both English and mathematics. This level of achievement had either been maintained or had deteriorated from Year 7 to Year 10. But as can be seen from the school experience of newcomer drop-outs discussed above, academic achievement was not a reliable indicator of early school leaving. In
particular many low achievers did not drop out of school and some newcomer drop-outs were not low achievers. This was seen, previously in this chapter, with the school experience of both Christine and Zac.

All of the girls who dropped out, with the exception of one, Marita, entered administrative, clerical or retail work for which the only training was on the job. Those who were interviewed some ten years later reported little unemployment and although there had been some change of employers none felt that they had been disadvantaged by the move to work.

**Completion of one year of VCE**

Students taking this option are following the “goat-path” recognised by Kirby (2000: p 53). Up to the introduction of the VCE this had been the traditional exit point for students who wanted to enter the work place and not go to university. Although there was no credential issued at this point, a certificate showing VCE results (satisfactory or non-satisfactory) was awarded to students and acted as a de facto credential.

The group comprised ten newcomers—six boys and four girls. All these ten newcomer drop-outs successfully completed the first year of the VCE. It should be noted that their academic performance was no better at Year 10 than that of the other early school leaving students, but despite this they completed the first year of the VCE.

When data were collected about eight years later, only four of the newcomer drop-outs who completed the first year of VCE were able to be contacted. Given their longer involvement with school this was surprising. It could be expected that these students stayed on in school because they wanted to be there, but if this was the case a closer contact with their peers and the college itself would be expected.

For two students, however, academic achievement in the VCE was to be better than in previous years. In 1994 the vocational education subjects offered in conjunction with the VCE became available through the local TAFE College and included Automotive. Soton College newcomer drop-outs Zac and Terry were amongst those who took up the
course. Satisfactory completion of the units in the course contributed to the award of the VCE and also provided recognition of prior learning for related TAFE courses.

There were several aspects of the Automotive course which appealed to Zac and Terry. Students attended the neighbouring TAFE College once per week and were not required to wear uniform. Adult behaviour was expected at the TAFE and although there was more than adequate supervision in workshops and classes there was none outside these areas. Soton College was a traditional school. Uniform was compulsory and standards of behaviour enforced. Being at TAFE gave Zac and Terry some freedom away from the rigours of school regulations and they each found the course interesting. Zac had always wanted to be a motor mechanic and Terry was interested in marine engines.

When Vocational Education was added to the curriculum at Soton College it was decided to provide a mentor for those undertaking the program. The Careers Counsellor acted as mentor and her role was to liaise with the TAFE and with the students involved in vocational studies at TAFE. This was done through weekly meetings, usually of an informal nature, at which any difficulties encountered by the students were raised. These were then resolved through liaison with the appropriate department at the TAFE College, when appropriate, or as was more frequent, liaison with the teachers at Soton College or the parents of those students involved. The mentoring program was successful and was maintained for some years.

It is important to note that although Soton College school policy was one of inclusiveness it was not always supported by all teachers. The VCE had removed from Victorian students the option of going to a secondary school that specialised in vocational education. This area was, by 1995, incorporated in the VCE and because

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94 There were a number of problems in the first years of vocational education programs provided by the TAFE. These ranged from some difficulties arising from inter-school rivalry amongst students in classes at the TAFE College which were handled by staff at TAFE and the relevant schools to parental objections to students being given unsupervised free time on site at the TAFE at “smoko” (afternoon class break).

95 Mentor programs were used whenever funding was available. Unfortunately without funding mentor programs relied on teachers having sufficient time to staff them. Although Soton College was a fee paying school as a Catholic Regional College it catered for the needs of all Catholics and its students were predominantly from lower middle class or working class backgrounds. Extra programs relied heavily on staff goodwill and the occasional funding from government sources.
resources for providing vocational education were not available in many secondary schools such as Soton College, neighbouring TAFE Colleges provided the courses to all local schools at a fee. The courses were timetabled to suit as many schools as possible. This did not suit Soton College and students who attended vocational courses off site found that they missed some classes at Soton College.

In the early years of vocational education few of the students undertaking these studies were academically gifted. At best they were average students in their Soton College based subjects. Most were young people who liked doing practical work and did not like doing theoretical studies. Many teachers became frustrated with their regular absence off site and the fact that these students missed classes. The students who took vocational studies away from Soton College also became frustrated because of always having extra homework to do in order to catch up with each class they missed. They tended to sacrifice their Soton College studies for the much enjoyed vocational study. The arrangement was by no means ideal for anyone. Mentoring provided a way in which some of the difficulties for all parties could be resolved in a timely fashion.

Certainly neither Zac nor Terry was immune to frustrations and difficulties in combining the vocational course in Automotive with the VCE. But they persevered and were successful. Zac and Terry had wanted to leave Soton College for some time but their parents insisted that they complete at least the first year of the VCE, which they did successfully.

Although they achieved praise from the TAFE College for their work in Automotive neither Zac nor Terry enjoyed their other VCE studies.

Zac had more or less lost heart when a primary school student. Family circumstances had led to him changing primary school five times. At one of these schools he encountered poor teaching in English. Zac recalls watching video cassettes more than being taught by the teacher, and believes that his grades in English deteriorated from this point. He did not have the same recollection of mathematics classes.
Zac feels that this fractured primary school experience contributed to mediocre grades later at Soton College. By leaving school at the end of Year 11 Zac was fulfilling his dream of becoming a motor mechanic. Poor school experience did not influence his decision to leave at the end of Year 11 although he does feel that his school experience was endured rather than enjoyed.

Both Terry and Zac were very successful in their transition, by way of an apprenticeship to work. Ten years later when the data were collected for this research Terry had qualified as a plumber and added several vocational certificates for additional specialisations in the field. He still worked for the large firm in which he had done his apprenticeship and was very satisfied with both the organisation and his work. Zac gained an apprenticeship in the workshop of a large car dealership and was very successful. His supervisor was well thought of in his field and was known to be very demanding of his apprentices. During his time with this employer Zac was made Apprentice of the Year. Sometime after completing his apprenticeship Zac set himself up in his own business and now employs apprentices himself.

Discussion

In Chapter 7 it was pointed out that the inheritor drop-outs had not responded to any of the programs Soton College had in place to encourage students to stay in school until completion. The same happened to newcomer drop-outs.

But it was harder for teachers to identify potential newcomer drop-outs because they were less likely to fail than their inheritor drop-out classmates. Five of the six inheritor drop-outs had experienced at least one failure in either English or mathematics throughout their secondary schooling. In contrast only two in three newcomer drop-outs experienced any failure in the same subjects over the same time. Persistent failure did not occur amongst newcomer drop-outs. Instead these students scraped through from one school year to the next by getting bare passes in English and mathematics. This meant that newcomer drop-outs tended to bypass remedial mathematics classes until at the beginning of Year 9 they were placed in the modified lower levels of mathematics as a consequence of poor performance in the Year 8 assessment, which in
effect operated as a selection test for Year 9 mathematics. In this case although the College had an early intervention program for mathematics in place most newcomer drop-outs did not meet the criteria for access.  

Certainly most newcomer drop-outs were low achieving students. But there were few ungraded assessments. Over the years, six of the twenty-nine newcomer drop-outs received an ungraded assessment through not submitting work but the remaining twenty-three students did do the required work albeit often at a low standard. Newcomer drop-outs did not appear to be repelled by school but rather to endure it.  

It is important to realise that low academic achievement in the formal school setting does not always mean inability. There are many causes, reasons and motives for poor school performance. Newcomer drop-outs like inheritor drop-outs could use persistent low school achievement to pressure parents to permit school exit even where these parents wanted the child to stay in school. During the collection of data for this case study some newcomer drop-outs indicated that this was the stance that they had taken in order to get out of school and that they were now critical of their attitude at that time.  

Soton College had an early intervention policy and tried to maintain support for students considered at risk throughout their years in the college. There were programs in place. These were discussed in Chapter 7. Newcomer drop-outs had the same access to these programs as inheritor drop-outs. Student progress was regularly considered in a staff forum at which students considered to be academically at risk were identified by teaching staff and any concerns passed on to each Year Level Coordinator. He or she would then liaise with the child and her or his parents with a view to developing a supportive strategy. At the end of first and third terms a formal report of progress was prepared and sent to parents. Where a teacher raised a concern then the parent and the child were invited to attend a meeting with that teacher.  

Despite the good intentions and the all too brief meeting between frustrated teacher, anxious parent and defensive child, achievement patterns were largely unchanged from

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96 Only three of the twenty-nine newcomer drop-outs participated in the mathematics remedial classes in Year 7 or year 8.
one semester to the next. There would be a brief flurry of activity, school work would be completed well for some time and then academic achievement would return to previous levels or worse. In the busyness of everyday home and school life teacher monitoring, parent supervision and the study habits of the child tended to move back into their pre-meeting position.

These students were undoubtedly reluctant to stay. Other newcomers with the same poor levels of achievement and possibly similar attitudes to school did stay although in some cases they also might have been reluctant to do so. There is no obvious distinction between each of these groups of newcomers. Both those newcomers who stayed and those who did not included students who were quiet, even withdrawn, and passive in class, students who were difficult in class and the occasional “good” student. However over half of the newcomer drop-outs could be described as “loners” at school or at best members of very small school-based social groups. Perhaps the stayers remained at school because, at least socially, they were satisfied with the experience.

There were some differences between newcomer stayers and drop-outs that are worth noting. Firstly newcomer drop-outs displayed lower grades than did newcomer stayers. Secondly newcomer drop-outs were less socially integrated than stayers, usually having fewer friends at school and being less involved in extra-curricula activities. There were exceptions to this as the school experiences of people like Christine and Don attest.

As with inheritor drop-outs Soton College had not altered the shape of newcomer drop-outs’ pathway though education to work because the college had not been successful in turning poor achievement, when it developed, around. Soton College might have been able to turn this poor pattern of achievement around if the actual curriculum needs of each newcomer drop-out had been determined. The few high academic achievements of these newcomer drop-outs had usually been early on in school and mostly in subjects with a practical component. A less academic curriculum might have provided more interest to these newcomer drop-outs and this in turn might have generated higher achievement and a stronger will to stay in school until completion.
CHAPTER 9

What happened to the drop-outs from the Class of ’95?

Introduction

In addition to analysing the reasons for school non-completion it is important to consider the outcomes of early school leaving in the long term. Indeed the reason for taking a case study approach to the discussion about those who dropped out of the Class of ‘95 was that the outcomes of their actions were varied and not typical with the predictions of the literature.

Some transitions to work made by Soton College drop-outs were problematic but most were not. Drop-outs themselves were not typical of those identified by the literature. There were more boys than girls and newcomers than inheritors but the proportion from each of these social groups was similar with 20 per cent of inheritors dropping out and 22 per cent of newcomers dropping out.

To this point, this research has explored the relationship between academic achievement, school program involvement and non-completion of school. This chapter will consider the actual plans for a working future and the outcomes of the transitions.

Family background to independent background—the transition of drop-outs

Family background has long been recognised as contributing to both the length of time spent in school and the pattern of access to further and higher education (James. 2000: pp 17-18; Marks, Fleming, Long and McMillan. 2000: pp 28-30; Teese, Polesel and Mason. 2003: pp 39-44). But in this study we have already seen that the rate of drop-out was very similar with 19 per cent of inheritors dropping out compared to 22 per cent of newcomers. There was, however, a significant difference in drop-out rates between the social sub-groups that make up the newcomers. The children of unskilled
manual workers were the most likely to drop out and those of non-professional white collar workers the least likely to drop out.

But when these young people dropped out of school, did they remain in the social sub-group of their childhood? Inheritor drop-outs were faced with the reality that unless they completed Year 12 they would not be able to enter a profession that required a university degree qualification. They could not expect to enter a profession without further study. Gil did complete a degree some years after leaving school but none of the others did. Even after completing the degree Gil remained working as a musician.

The most common work destination for drop-outs from the Class of ’95 was white-collar work. Regardless of the family background of their childhood those who dropped out of Soton College for work chose to work in administrative positions of some kind. For most this was a movement up the social ladder and the pattern of their social mobility is shown in Matrix 1.

Matrix 1: Comparison of social background of drop-outs from Soton College and their original family social background.

<table>
<thead>
<tr>
<th>Socio-economic status</th>
<th>Family social background</th>
<th>Unskilled manual workers</th>
<th>Skilled tradesmen</th>
<th>Non-professional white collar workers</th>
<th>Total newcomers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child’s post-school social background</td>
<td>Social sub-group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unskilled manual worker</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Skilled tradesmen</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Non-professional white collar worker</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Total newcomers</td>
<td></td>
<td>8</td>
<td>9</td>
<td>4</td>
<td>21</td>
</tr>
</tbody>
</table>

NB: When data were collected for this research it was not possible to locate eight newcomer drop-outs. The analysis in Matrix 1 above relates to information gained from twenty-one newcomer drop-outs only. Six of the untraced newcomer drop-outs were the children of non-professional white collar workers. Reading the matrix: Coloured cells show those drop-outs who have maintained the social group of their childhood and taken on a job with the same social status as that of their father.
Six (more than one in three) newcomer drop-outs maintained the socio-economic background in which they had been raised. This is highlighted in Matrix 1 above. Eleven of the twenty-one newcomer drop-outs went to occupations higher in the social hierarchy than that of their fathers. Only one in five newcomer drop-outs went to occupations lower in the social hierarchy than that of their fathers. This is in contrast to inheritors where five of the six inheritor drop-outs entered work that was lower in the hierarchy than that of their fathers.

Catholic schools are vehicles of upward social mobility (Praetz. 1980: pp 17-18 and Dudley and Vidovitch 1995: p 103). And this was achieved by most Soton College newcomer drop-outs but not by inheritors who dropped out. In effect only four of the twenty-nine newcomer drop-outs had reduced their position in the social ladder. These were:

- Martin who had left school looking forward to the future working in a trade but had not been able to achieve this goal.
- Geoff for whom there had been a change in family circumstance which had forced him to reconsider his future in schooling and opt for work.
- Raisa, the only girl amongst the newcomer drop-outs to enter a hairdressing apprenticeship albeit stereotypical.
- Todd for whom the quality of school experience had continued to diminish over time until his academic average achievement was an E+ and his school involvement was minimal.

Aspects of the school journey of all but Raisa have been already discussed in previous chapters.

**Newcomer drop-outs and school connectedness**

When data were collected for this research almost a decade after the Class of ’95 had graduated from Soton College, the daughters and sons of non-professional white collar workers proved the most difficult to locate. Only three of the ten newcomer drop-outs...
from this sub-group were able to be contacted and interviewed. In contrast fifteen of the nineteen newcomer drop-outs from a blue-collar family background were located. There is no apparent explanation of this. That this group had drifted from contact with the college and other ex-students might well be a reflection of a poor attitude to school and quality of school experience.

**Post-school work aspirations**

As part of the Year 10 career education program, Soton College students had to nominate the occupations that interested them. To help in this each completed a Kuder Interest Inventory and received small group careers counselling. When this was completed Year 10 students selected the VCE studies they wanted to undertake.

With the exception of the four students who left for work during Year 10, all non-completing students participated in the full program but not all students selected subjects for the first year of VCE. Amongst newcomers one in six had, by the middle of Term 3, made up their minds to leave school at the end of Year 10 and therefore did not select subjects for Year 11. There were four boys and a girl who took this option and three, Clive, Wyatt and Ruby, commenced apprenticeships in plumbing, mechanics and hairdressing respectively.

During the third term of Year 10 four newcomer drop-outs had no idea what occupation they would pursue after leaving school. One of these was Martin, and this lack of interest in a specific occupation might have contributed to his disappointment in the pre-apprenticeship course he entered after leaving Soton College. If Martin had had a strong interest in a particular occupation then his story might have been different. Charles also had no specific occupational interest but received on-the-job training in an area of the automotive industry and remained in that job from immediately after school to the point when data were collected for this research, which was a period of over eight years. The remaining two newcomer drop-outs with no definite post-school plans were Stan and Vivienne. Stan took a job in retail and like Charles remained there and Vivienne moved by way of part-time work and a part-time TAFE course to work in the finance industry.
None of these post-school outcomes appears to have been anticipated, although at time of interview for this research, all but Martin were continuously employed, had not experienced long periods of unemployment and seemed happy with their chosen occupation.

When they nominated occupations of interest during the third term of Year 10 most of the drop-outs included at least one job that did not require a VCE pass to access. Some, like Zac, knew precisely what they wanted to do when they left school. Others, such as Geoff, cast their net wider and thirteen of the twenty-nine newcomer drop-outs included in their occupational plans a job that did not require the completion of school.

Five newcomer drop-outs did not act as prudently. The experiences of these young people were similar to Morgan and Lynette. In Year 10 Morgan had set her sights on a range of professions all of which required a university degree. But during the first year of the VCE Morgan simply left, took the most appropriate type of job, as a clerk in an office, and remained even though she completed her VCE part-time as she worked.

Similarly at Year 10 Lynette wanted to study psychology at university but left school for a TAFE course in administration. She then changed her mind and took a course in computing offered by a private provider instead and worked in the field until she gave up work for parenthood a decade later.

The actions of Morgan and Lynette are those of young people who wanted to exit school regardless of outcome. Six months after making the plans for a future in a profession both these girls exited Soton College. But although they took flight from Soton College they continued with their education whilst they worked.

With the exception of a few, such as Zac and Terry, there seemed to be a lack of preparation by drop-outs for a working life. Some such as Charles had no idea what type of work they wanted to do. It might be argued that the majority of drop-outs left school out of lack of interest and boredom and that they were unhappy with the
prospect of more schooling\textsuperscript{97}. Alternatively it could be concluded that they wished to be independent and have a job even if they had unclear ideas about the job they sought.

The family and school environment must also be considered when investigating the motive for leaving school before completion. The parents of these drop-outs had, at the beginning of their child’s secondary school life, said that they wanted their child to complete school and most had said they also wanted their child to go on to university. The focus of Soton College curriculum was the completion of the VCE. All academic pathways led to the VCE. School student leadership rested in VCE students. Social, sporting and other extra-curricula environments were organised and managed by VCE students.

It was apparent in the school environment on a daily basis that reaching the VCE years was the pinnacle of being at school. By implication, to eschew these years was to somehow fail to meet the demands of the college. This image was implicit and certainly not subscribed to in school policy but it was there.

So in dropping out a student in effect stepped off the much worn pathway and distanced herself or himself from the mainstream. Where this action also went against parental expectations then dropping-out of school could be a courageous step on the part of the young person.

Students who dropped out but either kept studying along side their work, like the newcomers Morgan, Lynette and Vivienne or inheritors Gil discussed above, possibly did so as part of an agreement with their parents. But while it is clear that there is a level of disconnectedness about drop-outs on the whole, they were not necessarily unhappy at Soton College and did not dislike learning but simply sought a more adult environment in which to do it.

As newcomers then, these students who dropped out are continuing a family pattern of early school leaving even whilst extending it. The daughters and sons of unskilled

\textsuperscript{97} The same argument arises about the motives of Soton College students who dropped out of tertiary education.
workers became skilled blue-collar and non-professional white collar workers and the children of tradesmen became non-professional white collar workers (see Matrix 1).

**Subjects selected for the first year of VCE**

During the first year of the VCE for those who went on, VCE English was mandatory and all students also studied one unit of Texts and Traditions as their religious study but mathematics was not a compulsory VCE subject.

Despite a history of poor achievement in mathematics a quarter of the twenty-one newcomer drop-outs who selected subjects for VCE included a mathematics subject in their selection. All the newcomer drop-outs who had been in the highest mathematics levels in at the end of Year 10 chose a VCE mathematics subject. There were ten of these students. Although positioned in the highest of the Year 10 mathematics groups only three of the ten students, Christine, Lynette and Zac, achieved a grade above a bare pass.

Christine with a B average in both mathematics and English appeared to be the most capable mathematics student. Her grade of B should have encouraged her to study preparatory mathematics but she did not. When Christine chose her VCE subjects the counselling notes show that she was, at that time, pressed to take the higher preparatory mathematics but refused and selected the orientation of General Mathematics, which led into the lowest level of mathematics in Year 12.

Initially Christine wanted to select an even lower level of mathematics—General Mathematics (Business orientation). Her Year 10 mathematics teacher counselled strongly against this, so strongly in fact that she refused to recommend her for this lowest level mathematics. Christine then selected the next highest level of mathematics in the VCE hierarchy. Records show that in the months before she entered the VCE Christine was again counselled by the Careers Counsellor on two occasions in an attempt to change her mind and take the more challenging preparatory mathematics,

98 Six students elected to leave Soton College for work at the end of Year 10 and did not choose VCE subjects. Another six students chose to select a VCE mathematics subject despite low achievement from Year 7 to Year 10.
which would provide a wider pathway to post-school work and study options. Christine, however, was adamant about sticking to her choice.

Whilst Christine underestimated her mathematical ability, three other newcomer drop-outs would appear to have overestimated theirs. Max, Geoff and Julian all elected to study preparatory mathematics in the first year of the VCE. All three boys had been positioned in the highest level of mathematics during Year 10 but they had all only achieved a bare pass at this level. Of the three Max was apparently the most able in mathematics but his Year 10 mathematics teacher expressed concern about his ability to successfully complete preparatory mathematics. Geoff and Julian were in a different Year 10 class and their teacher did not query their selection of preparatory mathematics.99 Max and Julian did not stay long enough at Soton College to complete their first year of VCE study but Geoff did and was successful in passing Unit 1 and 2 of Mathematics Methods—the preparatory mathematics.

The pattern of selection of VCE mathematics subjects by newcomer drop-outs is shown in Table 12.

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99 There were nine Year 10 mathematics classes, four large classes in the highest levels of mathematics and five small classes at the lowest levels of mathematics.
Table 12: Pattern of selection by newcomer drop-outs of VCE mathematics

<table>
<thead>
<tr>
<th>Pattern of selection</th>
<th>Mathematics orientation – first year of the VCE</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Math orientation – first year of the VCE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>No mathematics subject</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Mathematics – Business orientation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>General Mathematics – Tertiary orientation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mathematical Methods</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>21</td>
</tr>
<tr>
<td>Proportion</td>
<td>9.5%</td>
<td>47.6%</td>
</tr>
<tr>
<td></td>
<td>28.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14.3%</td>
<td>100%</td>
</tr>
</tbody>
</table>

**NB:** Only twenty-one of the twenty-nine newcomer drop-outs selected VCE subjects; those who did not ended school. The cells shaded in green show the number of newcomer drop-outs who chose a pathway in VCE mathematics which terminated by the end of the first year of the VCE.

It is of interest that regardless of whether drop-outs completed the highest or lowest level of Year 10 mathematics, more than half of them selected either the lowest level of VCE mathematics (i.e. General Mathematics - Business orientation) or no mathematics at all. This would reflect a low level of academic self-esteem in mathematics.

Of the group of drop-outs who chose a higher form of VCE mathematics, most selected the option leading to the least demanding mathematics in Year 12. So the overall picture was one in which drop-outs seemed reluctant to extend themselves with more challenging work even while maintaining some mathematics to keep their options open.

Boaler (1997: p 151) has pointed out that hierarchical mathematics systems such as that experienced at Soton College promote low academic self-esteem. At Soton College the hierarchical structure in Year 9 and Year 10 mathematics was justified on the grounds that it would provide a syllabus and class size suitable for remedial work. Once problems causing lower than expected achievement levels were remedied then the
students could re-enter a higher level of mathematics. This happened. But the ramifications of the practice seemed to be more apparent in the post-compulsory years where students tended to underestimate their mathematics ability. This will be further explained when we discuss students who completed their schooling at Soton College. However at this point it is worth stressing the poor levels of mathematics self-esteem amongst those who were to drop-out.

Other VCE subjects chosen by drop-outs varied by interest. But all drop-outs selected one or more non-traditional or “new” VCE subjects. The more practical technology subjects were very popular with the group. Nineteen of the twenty-one newcomer drop-outs who selected VCE subjects chose at least one technology subject. With the exception of computing subjects, technology was selected on stereotypical gender lines. Boys selected Materials and Technology—Wood and girls Materials and Technology—Food or Technological Design and Development—Textiles. Other popular subjects were Physical Education and Human Development and Society—Home economics as well as creative and performing arts subjects. Alternative subjects from the traditional mainstream thus played a large role and may have helped these young people at least to attempt the VCE and later on their path in work beyond school.

**Where did they go after Soton College?**

Although not all drop-outs could be contacted when data were collected for this research the post school occupational plans for these students were usually recorded. Students were required to notify the school of their “out of school” intention when they left Soton College. School records show that eight students (all boys) exited Soton College in order to take up an apprenticeship. Three of these boys owned their own business when interviewed for this research a decade later. Most of the girls as well as some boys took up work in sales and clerical work.

A third of the group ultimately completed the VCE as an adult. This was not the only credential completed by non-completing students. Those who had passed through vocational education had up-dated their qualifications or broadened them to include
other related skills. As we have seen above, plans for work after school and outcomes
did not always match for drop-outs, but the degree of post-school success in
employment experienced by drop-outs was surprisingly good given the warnings of the
literature.

**Post-school experiences in the work-place of drop-outs**

Only ten drop-outs completed the survey of post-school work history that was
distributed as part of the data collection for this research although another four were
interviewed. This was 40 per cent of the cohort. The survey was designed to capture
information regarding the type of work done, number of jobs held over the eight to ten
years since each had left school, relevant training undertaken, and engagement with life
long learning through the acquisition of further qualifications.

Only Martin and Barry had changed jobs more than twice since leaving school. Barry
continued to work in the food industry but changed employers, usually for reasons of
location or improved career opportunities. Martin tended to work in unskilled manual
work, where possible with a technical focus. He found that jobs were short term or that
he was put off if there was a downturn in the business. The remaining eight survey
respondents had changed their jobs up to twice in the eight to ten years they had been
out of school. Christine, who worked in office administration, Terry, who was a
plumber, and Julian, who was an electrician, had never changed employers. All three
had entered work with training and had stayed with their employer for nearly a decade.
When interviewed Julian did say that he was in the process of setting himself up in
business and would soon leave his then employer.

Julian was also the only one of these ten respondents who had taken more than three
months to get his first job. Most drop-outs already had a job waiting for them when
they left school although Zac and Martin had sought work for about a month after
leaving school.
This experience in work shown by drop-outs flies in the face of the literature which points to problematic transition for early school leavers involving intermittent employments and mainly casual or part-time jobs.

Most of the drop-outs from the Class of '95 found full-time jobs with a career path quickly. On-the-job training such as apprenticeships allowed promotion within the business or led to the qualified worker establishing his own business.

Transition for this group had been largely successful.

**Discussion**

Those who completed the first year of VCE and then left, using the informal but acceptable “goat-path” to work, were following a plan (Kirby. 2000: p 53). For them completion of the first half of the VCE would set them up to take additional VCE subjects in the future if required, whilst exit at this point would allow them access work and income a year earlier than those who completed the VCE.

These non-completing school students from the Class of '95 left school for work rather than dropped out of school. Their actions lacked the desperation of those who simply wanted to get out of school. In the competitive job market these drop-outs were quite well qualified to enter most apprenticeships and some traineeships. Even so they are still vulnerable to changes in the job market and to sophisticated technological change that they will need to go back to school to engage with.

In addition to workplace vulnerability school drop-outs can expect lower earnings over time, periods of unemployment and the consequential risk of marginalisation (Dwyer and Wyn. 2001; Lamb and McKenzie 2001: p 38; Wyn and Lamb. 1996: p 267; Holden. 1990). Quite often, however, an early school leaver is lured into the workplace by the promise of the income and the independence that it will give. Most of this group were, however, upwardly socially mobile. They took on non-professional white-collar work rather than trades or unskilled work.
Soton College drop-outs were young people who were attracted by the practical aspects of learning. Academic studies dependent on theory were of little interest to them. Their parents had selected Soton College for two reasons. Firstly because it was Catholic and an education at the college was going to incorporate Catholic values, and secondly because the parents had wanted their child to work in a profession after school. The latter was an unrealised aspiration for drop-outs but the former was a reality.

Almost all the drop-outs had covered a work outcome rather than a tertiary study outcome by selecting the least challenging of the mathematics orientations and including at least one technology study in their VCE subject choice—that is, where they opted to consider the VCE option at all. An employer in a skilled manual job could be expected to look for passes in English and mathematics and some form of practical subject such as Materials and Technology (wood, food or textiles) or Information Technology.\(^{100}\)

The stimuli that trigger leaving school before completion can be found in social background, gender, aboriginality, academic achievement, ethnicity, psychological trauma, family circumstance and so on. (For a detailed discussion see Lamb, Walstab, Teese, Vickers and Rumberger. 2004). But it is the individual who, after encountering the stimulus pertinent to her or him, makes the decision to leave school for work before completing the former.

The decision might not be one based on a negative school experience. This is why it is essential to recognise that for some, the completion of “enough” schooling to enter a job of choice is a legitimate reason to truncate formal education. For those who planned an apprenticeship as their post-school work goal then the achievement of a pass by the end of Year 11 is a more than adequate school level for their purposes. These young men (they were all boys who chose this pathway at Soton College) have a legitimate work purpose, interest and life plan. The wisdom of their decision might be questioned\(^{100}\)

\(^{100}\) It is of interest that the Australian Defence Force (ADF) recruiting policy preferred traditional VCE subjects such as Geography and History to the technology subjects even when the applicant was seeking trade training in one of the Defence forces. Recruitment into the ADF was common for Soton College students and there were two students in this cohort who entered the ADF.
at some time in the future if challenged by significant work-place change, such as technological change, but in 1994 and even today, these boys equipped themselves sufficiently for the job of their choice.

The Soton College girls who dropped out face a more problematic future because all but Marita and Raisa did not take on formal on-the-job training when they left school. Morgan and Lynette, however, built academic qualifications on top of those gained at school once they had left. All these four girls could be considered equipped to deal with work-place change should it eventuate.

But as this chapter is being written the demands of the global response to climate change have begun to influence jobs. Governments are now recognising that adaptation to climate change and minimisation of its impact will lead to redefinition of jobs and the conditions under which jobs are done. This will lead to the retraining of millions of workers throughout the world. It can be anticipated then that those who are without the required skills for retraining will be in a poorer position to respond to the demands of change in the future of work.

All school drop-outs are at risk including those for whom the transition to work appeared in 1994 to have been successful.
CHAPTER 10

Travelling through the VCE

Staying on in school

Year 10 often coincided with the end of compulsory education. Children who turned 15 years old during Year 10 were legally able to leave school should they want to. Four students, a girl and three boys, chose to leave school for work during Year 10 and a more significant thirty-one members of the Class of ’95 chose to leave school for work at the end of the year or during the VCE.

Choosing to stay and commence the VCE meant that the Class of ’95 had to select a pathway to take through the VCE. They had to select subjects to study that would comply with the regulations governing the award of the VCE, the requirements of Soton College and also with the requirements of VTAC, which was the administrator of the selection process for university courses. At the same time the members of the Class of ’95 were advised to choose subjects in which they had an interest and a positive self-concept, and that were accepted by the university course to which they aspired.

Complying with the demands made by various bodies associated with the VCE and the selection process for university was not easy but at Soton College all Year 10 students undertook a mandatory Career Education program to help them in choosing a future career and matching an appropriate VCE subject pathway with that career.

VCE subject choice: Soton College policy for VCE students

Career education comprised one period per thirty-six periods in a six day teaching cycle for four terms in Year 10. Careers counselling was additional and students were permitted to leave other classes for a pre-booked session. Parents and their children could also book an appointment. The Career Education Centre was open at all recess and lunchtimes and at these times the careers counsellor maintained an open door
policy. A lot of thought on the part of parents, Year 10 students and the staff of Soton College went into VCE subject choice. An outline of the process of selecting VCE subjects together with a timeline is provided in Figure 29 below.

Figure 29: Process and timeline for VCE subject selection

NB: Year 10 students followed the process from Term 2. At the end of the first year of the VCE students would reselect VCE subjects for the second year of the VCE. The process followed that enclosed in the red bordered box. It was a modified version of the Year 10 process.

The process was designed to encourage considered choice and review of that choice. Students could modify their choice up till the mid-point of the first term in the relevant year. After this point catching up on missed work in a new subject was considered too difficult except in a few special cases.

**VCE subjects offered at Soton College for 1994/5**

Soton College offered a wide range of VCE subjects and if students could not be accommodated at the college itself then, where possible, other arrangements were
made. Usually this took the form of Distance Education through the Victorian Education Department or off-site schools such as the community language schools or even night classes at a TAFE College. Several students also studied vocational education at a neighbouring TAFE College and two studied a first year university subject taught at a centre in the vicinity of Soton College.

VCE regulations in 1994/5 required the successful completion of at least two units from the humanities subjects offered and two units from the mathematics, science and technology subjects offered in order to pass. Students were also required to pass sixteen units over all including three sequences of unit 3 and 4 subjects and three of the four units (unit 1 to 4) of English. A pass in VCE English was mandatory for the award.

The mixture of humanities, mathematics, science and technology subjects offered by Soton College was quite extensive and offered a broad choice. There were about three humanities subjects (Group A subjects) for every two subjects from the mathematics science and technology subjects (Group B subjects). Subjects within these two groups could be further subdivided into “traditional” subjects, which were the long established Year 12 subjects like English Literature, and “new” subjects that were relatively new, like Legal Studies (see Appendix A). With the introduction of the Tertiary Entrance Rank (TER) process of university selection “traditional” subjects came to be known as “hard” subjects and “new” subjects came to be known as “easy” subjects in VCE student vernacular.

To traverse the VCE and gain access to a tertiary course the Class of ’95 had to select the VCE subjects they felt best suited their needs. English was mandatory for the award of the VCE but providing students successfully studied at least two units of a humanities subject and two units of a mathematics or science or technology subject

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101 The full list of VCE subjects offered by Soton College can be seen in Appendix A.
102 This is a classification used by Teese (2000) to distinguish between (a) the established post-compulsory school subjects such as English Literature, Languages other than English, Economics, the higher levels of mathematics and the physical sciences and (b) the subjects more recently taken into the post-compulsory secondary credential such as Physical Education, Legal Studies, Drama, Information Technology Processing and Management.
over the two years of the VCE then students could choose freely from within the subjects offered by Soton College.

**Social and gender composition of the Class of ’95 in the post-compulsory years**

Planning to go to university and getting into a university course were two very different things. As they chose VCE subjects during the third term of Year 10, almost all of the Class of ’95 were still intending to complete the VCE and move into a university course. This is what their parents had wanted when they chose Soton College for their child and the majority of the Class of ’95 were still treading a pathway which would achieve this aim.

Over the next two years self-selection was to be high and the number of members of the Class of ’95 who left school for work without the VCE also significant.

Thirty-five young people would leave Soton College between the end of Year 10 and before the end of Term 3 in Year 12. This group would be more likely to be boys than girls and newcomers than inheritors and they would leave behind one hundred and twenty-eight students who would pass the VCE. The pattern of retention and attrition for the Class of ‘95 is shown in Figure 30.
One hundred and twenty-eight from the Class of ’95 stayed on in school. They were twenty-five inheritors, fifty-five students from non-professional white-collar families, thirty-one students from a trade background and seventeen boys and girls from the families of unskilled workers.

Attrition caused a change in social group and gender balance with the daughters and sons of non-professional white-collar workers increasing their dominance over the daughters and sons of blue-collar workers in the classroom.

Similarly girls increased their share of the Class of ’95 for the post-compulsory years. There had always been more girls than boys in this class but the fact that a greater number of boys than girls dropped out of school before completing the VCE meant that girls’ relevant representation increased, albeit modestly by 2 per cent by the end of Year 12.

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Reading the chart: From the middle of Year 10 to the end of Term 3 in Year 12 twenty-two boys and thirteen girls from six professional families, ten families of non-professional white-collar workers, nine tradesmen’s families and ten families of unskilled workers dropped out of school.
So as the Class of ’95 commenced their VCE there were far more newcomers than inheritors, far more students from a white-collar social background than from a blue-collar social background, and significantly more girls than boys. Children from the families of unskilled workers formed the smallest social group in the Class of ’95. They were closely followed by inheritors, then tradesmen’s children and lastly the overwhelming numbers of children whose parents were non-professional white-collar workers.

The relative size of each of the social groups in the Class of ’95 is shown in Figure 31 below. In this illustration the Class of ’95, at its final assembly, has again been seated according to family background.

Figure 31: The final assembly of the Class of ’95 with students seated in social groups

<table>
<thead>
<tr>
<th>Social Background</th>
<th>Percentage</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritors</td>
<td>25 or 81%</td>
<td>103</td>
</tr>
<tr>
<td>Non-professional white-collar families</td>
<td>55 or 85%</td>
<td></td>
</tr>
<tr>
<td>Tradesmen’s families</td>
<td>31 or 78%</td>
<td></td>
</tr>
<tr>
<td>Unskilled background</td>
<td>17 or 62%</td>
<td></td>
</tr>
</tbody>
</table>

NB: Number of students = 128

The Class of 95 came from diverse backgrounds and it is not surprising that they had an array of post-school aspirations generating a diverse choice of subjects demanded for
entry by the array of university courses. It could also be expected that there would be a diverse set of interests expressed by the members of the Class of ’95 but would the choice of VCE subjects be affected by the social patterns displayed in Year 7 to 10 achievement? When considering their needs and interests in the VCE curriculum, would the Class of ’95 draw on earlier school achievement to either choose a subject or reject it?

Choosing for the future—the Class of ’95 and VCE subject choice

Key factors in making a choice of subjects include:

• Need for the subject—that is, it is a prerequisite subject for entry into a specific university course?

• Interest in the subject.

• Level of academic self-concept in the subject. This was a consequence of previous experience in the subject selected or at least in a similar subject.

There are other motivating factors for subject choice such as position of the subject in the school timetable (this was not a factor at Soton College for most students because choice generated the timetable rather than timetable dictating choice), the personality of the teacher taking the class, or recommendation of an older sibling or friend who had previously taken the subject. Need, interest and self-concept were very strong influences on subject choice if not the prime influences, this is supported by extensive work by researchers such as Ainley, Robinson, Harvey-Beavis, Elsworth & Fleming (1194): Collins, Kenway and Mcleod (2000); Fullarton and Ainley (2000) and Thomson (2005),

All of these motivating factors could vary by socio-economic background or gender. Where achievement distinguishes academic success on social grounds as has been seen amongst the Class of ’95 from Year 7 to Year 10 then it is easy to see that interest in a particular subject and the self-concept of the student in that subject would be usually directly related to prior experience in the subject. A good previous experience in a
subject could lead to choice whilst a poor previous experience could lead to rejection of
the subject. The members of the Class of ’95 could not simply ignore their past
experience in subjects. Experience and self-knowledge are important in choosing VCE
subjects.

Social background and gender had in the compulsory years of schooling divided the
achievement of the Class of ’95 in English and mathematics. It could be expected that
these factors will also influence VCE subject choice.

In the VCE years inheritors and newcomers made up 20 per cent and 80 per cent of the
Class of ’95 respectively. If there was no social or gender distinction in the subjects
chosen then it could be expected that inheritors would make up 20 per cent of a subject
and newcomers 80 per cent of that subject. This only happened in mandatory English
and then because all students were required to take the subject. Membership of the
other subjects varied according to interest and need which in turn could be shaped by
social background and gender. The outcome of this was diverse choice of VCE
subjects.

**Easy and hard VCE subjects and the TER**

The VCE and, when it was introduced, the TER created their own language. The
traditional subjects of higher level mathematics and the physical sciences were
encouraged through the TER by rewarding achievement. These subjects were joined by
a small number of humanities subjects such as languages other than English; some of
the history subjects and English in attracting a reward from the TER. These too were
traditional subjects but only non-community languages such as French, Chinese,
Japanese and Latin attracted the high rewards of Specialist Mathematics and
Mathematical Methods (preparatory mathematics). The rewards of the other
humanities subjects were more modest, especially those of community languages such
as Greek and Italian.

In this there was no intention to discriminate against certain cultural groups. The
distinction between the treatment of specific languages other than English in the
determination of the TER arose, as did that between the levels of VCE mathematics, from the structure of the algorithm that established the TER. There was a greater variation in the competency of students of a community language than there was in a language such as French, which was often selected by high achieving students, and this affected the rank calculation in a different way.

At Soton College only French, amongst the humanities subjects, was highly rewarded. The size of the distinction made between the treatment of French and community languages can be illustrated by looking at the study scores of Yvonne and Eric both of whom gained a score of 23. Yvonne gained this score in French and Eric in Modern Greek. When the scores were adjusted for the TER, Yvonne found that her achievement had been rewarded by approximately 24 per cent in the calculation but Eric’s reward was far lower. He gained a reward of approximately 6 per cent.103

So called easy subjects were the relatively new subjects to post-compulsory in secondary schools. These subjects included Physical Education, Legal Studies, Business Management, and Human Development and Society—Home Economics. “Easy” mathematics was called Further Mathematics and was the lowest level of VCE mathematics. These subjects were not rewarded in the determination of the TER until the achievement in them was at the highest level. In many cases scores were discounted. This particularly affected middle order scores, that is those between 23 and 37 out of the maximum of 50. Some discounting was particularly severe. For example a score of 30, which is the mean of Materials and Technology, would be discounted to 21—a loss of 9 points or 18 per cent. A score of 30, which was the mean of Physical Education, would be discounted to 27, which is a discount of 3 points or only 6 per cent.104

103 The calculations carried out in the determination of the TER were not disclosed to students who had to check their adjusted study scores against a table printed in the daily press on the day that the VCE results were released. These tables were developed in increments of 5 so scores such as 23 could only be adjusted by extrapolation by students. This is the process used in this calculation.

104 Adjusted scores have been calculated using the table of Study Averages for 1995 published by VTAC in The Age December 19th 1995 page 31.
If a student gained moderate scores in “hard” VCE subjects then they would be rewarded for their efforts and if a student gained moderate scores in “easy” VCE subjects their achievement would be discounted. An understanding of the full impact of this situation was not available to the Class of ‘95 until the beginning of their final VCE year because the first application of the TER to university course selection did not occur until the end of 1994, when it affected the class ahead of those in this cohort.\footnote{There had been a great deal of discussion between the universities, VTAC and schools for some time. Earlier in 1994 the Vice Chancellors of the biggest universities had written to schools refuting claims that the introduction of the TER in 1994 would disadvantage those students already in their VCE years. In particular the Vice-Chancellor of the University of Melbourne defended the treatment of Specialist Mathematics and some languages under the TER. These subjects were to attract bonus points as well as rewards in the determination of the TER.}

But with the knowledge of the impact of the TER on competitiveness there was to be some soul searching by members of the Class of ’95. However, making a change to subjects half way through the VCE was not necessarily a prudent action. Knowledge of the effect of the TER was too late for most of the Class of ’95 to change their VCE pathway in a drastic fashion so they tended to stay with the subjects they had already chosen and hope that their scores would compensate for the discount that they would encounter in the calculation of the TER at the end of their final VCE year.

Changing from an easier mathematics to preparatory mathematics was only possible if during their first year of the VCE they had studied Mathematical Methods, which was preparatory mathematics. If a student had taken the lower level of VCE mathematics during their first year of the qualification, then they were not equipped to select the preparatory mathematics subject in their second year.

Those who did make an attempt to adapt to the change and who felt that their “easy” subjects would contribute to a lower TER than they wanted often tried to compensate for this by choosing a sixth VCE subject in the final year. This increased the VCE workload. The most popular VCE subject selected in this strategy was Texts and Traditions. This subject was one in which the early years of Christianity were examined through a mixture of historical analysis and interpretation of the St Luke’s Gospel. As such, Texts and Traditions drew on the prior experience of the Class of ’95
in religious education. The outcome, although modest, did help to offset the discounts in the other VCE studies undertaken. Despite the popularity of the choice of Texts and Traditions as an extra VCE subject the appeal was more to girls than boys, and those members of the Class of '95 from a white-collar family background more than those from a blue-collar family background. The strategy was to prove successful for most who took it and even modest scores were rewarded in the determination of the TER.

This can be illustrated by the experience of Briony, a competent student who gained a TER of 81.30. Briony hated mathematics and science subjects and had dropped them from her VCE studies entirely. She had chosen “easy” subjects to study in her final VCE year. At the commencement of her final year of the VCE and aware of the impact of her VCE subject choice on her competitiveness for her preferred university course Briony was able to offset some of the accumulated discount by choosing Texts and Traditions as a sixth subject. For an addition of two periods per cycle in class and the extra out of class work Briony was able to offset the accumulated 15.2 per cent discount on achievement in her “easy” subjects with an accumulated reward of 10 per cent gained through studying English literature and the sixth subject, Texts and Traditions.

Who picked what in the Class of '95

If prior achievement was the main driver of choice, it might be expected that VCE choices would simply reflect individual differences in achievement. But because prior achievement was closely linked with social background and gender the choice of VCE subjects also acquired a social pattern.

After attrition, inheritors made up 20 per cent of VCE students and newcomers 80 per cent. It might be expected, then, that inheritors would account for 20 per cent of enrolments in easy subjects and 20 per cent in hard subjects, but this was not the case.

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106 Briony, whose skills lay in English, chose English, English literature, Information Technology in Society, Legal Studies, Environmental Studies and Texts and Traditions in her final year of the VCE.
Figure 32 shows the share of hard and easy subjects selected by inheritors and newcomers.

Figure 32: Share of easy and hard VCE subjects by social group

![Chart showing the share of easy and hard VCE subjects selected by inheritors and newcomers.]

**NB:** Only subjects other than English are described as “easy” or “hard”. English is mandatory for all Soton College VCE students and has not been included in the determination of share of “easy” and “hard” subjects. **Reading the chart:** Subject share was determined by simply adding the number of “easy” or “hard” VCE subjects studied by each of the 128 VCE students at Soton College and determining the proportion studied by inheritors and that studied by newcomers. Expected share is shown by red lines.

The above chart (Figure 32) shows that inheritors selected a lower than expected share of easy subjects and a greater than expected share of “hard” subjects for VCE. On the other hand, newcomers selected a greater than expected share of “easy” subjects and a lower than expected share of “hard” subjects for their VCE. This would indicate that inheritors were better placed to gain a higher TER than were newcomers, although the final outcome depended upon VCE achievement.
Some members of the Class of ’95 only selected hard VCE subjects. There were four or 16 per cent of inheritors and six or 6 per cent of newcomers who took this option.

Amongst the inheritors who selected only hard subjects was Gabrielle, who had struggled in mathematics in Year 9, but improved by the end of Year 10. Gabrielle selected five hard subjects and English in her VCE and was successful in each subject, gaining scores above average. In English, Gabrielle’s score was amongst the highest 15 per cent of the state.

Anthony, a newcomer, also studied five hard VCE subjects. During his early days at Soton College Anthony had experienced difficulty with English and had participated in remedial classes. During VCE Anthony’s father was very seriously injured in an accident. Despite this personal trauma Anthony gained above average study scores in two of the hard subjects he studied, was placed in the highest 15 per cent in the state in another two including a perfect score of 50 in a language other than English, and received 42 out of possible 50 in English.

Both Gabrielle and Anthony got good Tertiary Entrance Ranks and the offer of a place in a course they liked from one of the two prestigious universities.

In contrast, six or 24 per cent of inheritors selected only easy subjects and a slightly higher proportion, twenty-eight or 27 per cent, of newcomers did the same. But amongst newcomers there were further differences in subject choice between each of the social subgroups. These differences are shown in Figure 33.
Figure 33: Share of easy VCE subjects by newcomers’ social sub-group

Although children from the families of non-professional white-collar workers fell slightly short of their expected share of easy VCE subjects, children from the families of tradesmen and unskilled manual workers exceeded their expected share albeit by a small amount. This meant that the children of blue-collar workers were placed in a potentially more disadvantaged position after choosing their VCE subjects than the children of non-professional white-collar workers. Those amongst the Class of ’95 who were the children of tradesmen or the children of unskilled workers would be forced to achieve higher scores in the easy subjects if they were to compensate for the
discounting their VCE results would attract in the TER. But the analysis carried out in this study to date shows that if VCE achievement reflects that in English and mathematics between Years 7 and 10, then the children of blue-collar workers can expect to gain lower scores than the children of non-professional white-collar workers or inheritors in English and, where taken, mathematics.

In Figure 34 below it can be seen that, of the newcomers only the children of non-professional white-collar workers had, like inheritors, selected more than their expected number of hard subjects. These members of the Class of ’95 were potentially better placed than other newcomers to be rewarded for their achievement in the TER determination and therefore to be competitive in their applications to university at the end of the VCE.
Figure 34: Share of hard VCE subjects by social sub-group amongst newcomers

Figure 34 shows that children of non-professional white-collar workers exceeded their expected share of hard subjects by a modest 2.8 per cent. The children of tradesmen and those of unskilled manual workers fell short of their expected share of hard VCE subjects by 7.40 per cent and a very modest 1.3 per cent respectively. Inheritors on the other hand had exceeded their share of hard VCE subjects by 6 per cent (see Figure 32 above).

The charts above indicate some difference in choice between social groups based on family background. There is a similar distinction based on gender.

NB: The chart shows only the newcomer subgroup’s share of hard subjects. Inheritor share of hard subjects is shown in Figure 32 above. Only subjects other than English are described as easy or hard. English is mandatory for all Soton College VCE students and has not been included in the determination of share of easy and hard subjects. Reading the chart: Subject share was determined by simply adding the number of either easy or hard VCE subjects studied by each of the 128 VCE students at Soton College and calculating that studied by inheritors. The expected share of easy subjects is indicated by the red horizontal line. Bars represent the actual share per social sub-group.
**Figure 35: Share of hard VCE subjects by gender groups**

*NB:* Only subjects other than English are described as easy or hard. English is mandatory for all Soton College VCE students and has not been included in the determination of share of easy and hard subjects. **Reading the chart:** Subject share was determined by simply adding the number or either easy or hard VCE subjects studied by each of the 128 VCE students at Soton College expressing this as a proportion of their total VCE subjects. The expected share of easy subjects is indicated by the red horizontal line. Bars represent the actual share per social sub-group.

Figure 35 shows that boys exceeded their expected share of easy subjects and fell short of their expected share of hard ones, and that girls fell short of their expected share of easy subjects and exceeded their expected share of hard ones. Nineteen or 33 per cent of boys elected to study only easy VCE subjects in comparison with 21 per cent of girls. In comparison only 4 per cent of boys and 11 per cent of girls chose all hard subjects.

Choosing all easy VCE subjects was more popular than choosing all hard VCE subjects but most, that is 56 per cent of inheritors and 66 per cent of newcomers, from the Class of ’95 chose a mixture of hard and easy VCE subjects in various combinations. For
these students achievement in some subjects would be rewarded and in others it would be discounted.

What is more, the most popular VCE subject that both the boys and girls of the Class of ’95 chose was preparatory mathematics. This was a hard subject and advantaged all who took it both in the determination of the TER and in meeting conditions for university courses.

Only eleven of the twenty-nine girls who chose preparatory mathematics gained a score of the mean of 30 or above in this subject but all twenty-nine passed the subject and in so doing would open up a far wider choice of university courses when they completed the VCE. All, even those whose scores were below the published minimum score of 20, could be expected to receive rewards for the achievement they gained in the subject. Similarly only eleven of the twenty-five boys who chose preparatory mathematics also gained a score of the mean of 30 or above, but like girls all the boys who chose this subject could expect to be rewarded in the TER for their endeavours.

The distinction made between subjects in determining the TER meant that in the unlikely event of all Soton students scoring exactly the same study score in each VCE subject they undertook, inheritors and girls—the two social groups with the highest per capita share of hard subjects—would be advantaged by their selection of VCE subjects. Boys and newcomers, particularly those from a blue-collar family background, would be disadvantaged again simply because they preferred “easy” VCE subjects.

**VCE subject choice and competitiveness**

Most Soton College students had selected a mixture of hard or easy subjects but even the inclusion of one hard subject can positively influence the TER as is seen in the experience of Larry and Wes.

Larry is a newcomer—his parents are non-professional white-collar workers. Wes is an inheritor, the son of a health professional. Both boys selected five VCE subjects in their final year. Wes selected four easy subjects plus English and Larry selected three easy subjects, a hard subject and English. Larry and Wes gained an identical above
average score in English (33 out of a maximum of 50). Their grades are shown in Table 13 below.

Table 13: Comparison of VCE scores for Larry and Wes

<table>
<thead>
<tr>
<th></th>
<th>Larry</th>
<th>Wes</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Highest scoring easy subject</td>
<td>42</td>
<td>42*</td>
</tr>
<tr>
<td>Second highest scoring easy subject</td>
<td>36</td>
<td>33</td>
</tr>
<tr>
<td>Third highest scoring easy subject</td>
<td>28</td>
<td>33</td>
</tr>
<tr>
<td>Fourth highest scoring easy subject</td>
<td>-</td>
<td>33</td>
</tr>
<tr>
<td>Hard subject</td>
<td>30</td>
<td>-</td>
</tr>
</tbody>
</table>

* This score was gained in a subject that was heavily scaled downwards. Insufficient detail is available from VTAC to allow the actual adjustment to Wes’s score to be determined but even though this score ranked Wes amongst the highest achieving 15% of students in the state in this subject, it was adjusted down by somewhere between 10% to 14% of the maximum score of 50. (VTAC Study Averages. The Age. 18 December 1995: p 31)

If the competitiveness for tertiary course access for both Larry and Wes was determined by aggregating the four highest scoring VCE subjects together with 10 per cent of the next two highest scoring VCE subjects, the formula that had been used in the Tertiary Entrance Score (TES) up unto 1993, then both boys would have been placed on the same level. Both would have scored 144 out of the possible 210.
But the calculation of the Tertiary Entrance Rank (TER) required that study scores gained should be adjusted because, it was argued, the resultant TER should “accurately reflect overall ability” (Meadley, 1995: p.31). This implies that academic ability was allied to subjects selected by VCE candidates and not just to scores gained in VCE subjects. The adjustment was made to each score and then the TER was determined by aggregating the adjusted score of English with the next three highest adjusted scores and 10 per cent of the adjusted score of the fifth and sixth subject if taken.

The use of adjustments was justified on the ground of relative difficulty of each of the VCE studies. It was argued by Professor Tim Brown, the chair of the Scaling Subcommittee of Selection Processes Committee of the Victorian Vice Chancellors’ Committee, that to be fair to those who took preparatory studies for University which would, “prepare them well” then there was a, “need for high scores in the studies” (Brown in the VTAC Bulletin, May 1995: p.8). Although all subjects studied in VCE contributed equally towards the award of the VCE, not all subjects contributed equally to getting the rank for a university or TAFE course.

In the case of Larry and Wes above, their identical aggregate of study scores was adjusted to a TER of 75.45 for Larry and a TER of 59.60 for Wes. This was a difference in ranks of 315. There were several adjustments that led to this difference. For instance the subject in which Larry scored 42 was adjusted downwards by about 6 per cent, whereas that in which Wes scored 42 was adjusted downwards by about 14 per cent. But the greatest difference lay with the upward adjustment of the “hard” subject studied by Larry. This was a preparatory mathematics subject and 30 was the mean, but it was adjusted upwards to 38, an increase of 16 per cent.

This degree of adjustment does raise a question of parity rather than address it. The distinction between subjects is so great as to encourage a student to take the preparatory mathematics subject even if expected performance is to be average rather than good because in the long run it will bolster the TER and hence competitiveness for university
and TAFE courses. In addition, preparatory mathematics will expand the opportunities for offers of a course place.

In the long run everything worked out for these two young men. Both Larry and Wes were hard working committed school students who were also involved in school activities including leadership. Both intended to study at university, Larry in a business course and Wes in a fitness course. Both boys were successful in gaining a place in the courses they wanted but both boys also had an interest in more practical occupations in the building industry. Neither Larry nor Wes completed their university degree and both have been successful in the building related occupations to which they finally moved.

In the case of Larry and Wes the outcome was a successful one but loss of competitiveness based on the notion of easy and hard subjects can contribute to the quality of post-school outcome. The experience of Loretta and Miriam, who were both newcomers, illustrates the difference in the quality of outcomes for young people with similar achievement patterns but different VCE subjects.

Loretta studied six VCE subjects all of which were hard subjects and adjusted upward in the determination of the TER. Her scores ranged from 27 to 35 and she scored 31 in English. Miriam studied five VCE subjects with scores ranging from 28 to 34. She scored 34 in English and only one of her subjects, Biology, was not adjusted downward in the determination of the TER. Using the same formula used above for Larry and Wes, to aggregate the study scores of Loretta and Miriam results in a study score of 133 for each girl. Loretta received a TER of 82.00 which placed her in the highest quintile of ranks in the state. Miriam received a TER of 49.60 which placed her in the lower part of the third quintile of ranks. Loretta successfully entered her most preferred course at a prestigious university. Miriam accepted a place in a TAFE course that had been her seventh preference.

Although in the long run it would appear that there is little difference in the quality of outcome for both Loretta and Miriam, since they both entered a course in which they had an interest and subsequent related employment, Lamb’s research shows that as a
graduate of a university Loretta could be expected to earn more than Miriam who gained a TAFE Diploma (Lamb. 2001: p vi).

From 1994 onwards the subjects used to travel the VCE mattered more than in the past. The tertiary selection process in place in 1993, the year in which the Class of ’95 selected their first year VCE subjects, was known as the Tertiary Selection Score (TES). In the determination of the TES, “all accredited VCE studies are approved for selection purposes and will be equally weighted” (Victorian Tertiary Institutions. 1993: p 5). There were exceptions and these were listed\textsuperscript{107}.

But the Tertiary Entrance Rank introduced in the second VCE year of the Class of ’95 was different to the TES used previously. The TER, like the TES, acted as a filtering process for tertiary course selection but it included a mechanism by which:

All global scores used (in the calculation of the TER) are adjusted to reflect differences in the cohort of students taking that study compared to other studies and differences in the difficulties of the VCE studies (Victorian Tertiary Institutions. 1994: p 4).

At the introduction of the TER at the end of 1994 there was a need for students to review their subject choice. Despite the exhortation of Professor Pargetter, Chair of the VTAC Board and Chair of the Selection Processes Committee of the Victorian Vice Chancellors Committee, that students should, “take what you like, what you want to do, and what you think are studies where you can perform well” (Pargetter. 1995. p 6),

\textsuperscript{107} The list paired certain subjects that were deemed by VTAC not to be mutually exclusive in the determination of the TES. Soton College followed a practice of timetabling the subjects in this list together so that a student could select only one. This precaution was not always possible. Students often selected to study a six sequence of unit 3 & 4 so that they could maximise the number of subjects contributing to their TES. In order to include the extra subject it was undertaken in conjunction with the first year of the VCE. In effect a student could select a pair of subjects from the list of unacceptable combinations for the purpose of calculating the TES. This did happen, although the student concerned was counselled about the consequences of her choice. The student intended to include creative arts in her tertiary course selections. This created a dilemma because students applying to courses in this field at RMIT University were advised that “to assist in the development of a folio, undertake Studio Arts and/or Art” (Victorian Tertiary Institutions. 1993: p 42). To maximise the chance for selection a student was encouraged to take both art subjects. To do so meant that only the full score of one of the subjects would be counted in the determination of the TER and only 10% of the score in the other. The other area in which Soton College students had to be cautious was mathematics. The easiest of the VCE mathematics subjects, Further Mathematics, could not be combined with the most challenging – Specialist Mathematics.
students could not afford to ignore the impact of the tertiary selection process where the competition for university and, by the end of 1995, TAFE course entry was strong. One rank could make the difference between being a lawyer or not, of getting into a metropolitan university or not or of getting into a university course at all.

By 1995 students had to plan their pathway through the VCE as carefully as possible in order to maximise any chance they had of accessing their desired post-school aspiration.

At Soton College most of the Class of ’95 did this. Inheritors and girls took on greater numbers of the subjects that attracted rewards in TER determination. Boys and newcomers, especially those from a blue-collar family background, were disadvantaged by taking VCE subjects that were discounted in the determination of the VCE. For them the choice of subjects they liked had the potential to reduce their competitiveness for university and TAFE entry. To counter this they would have to gain higher scores than in the past because this was the very group for which achievement in English and mathematics had been lower than that of girls and classmates from a white-collar family background.

The very group for whom that VCE had been introduced as an instrument to encourage them to stay in school until completion had found that the promise of an equitable post-school outcome was more elusive as a consequence of the change in the university selection process. Boys and newcomers who completed post-compulsory education now found that they faced higher hurdles to finish the race to university successfully than did their inheritor classmates and the girls of the Class of ’95.

**Elite achievers: those who selected Specialist Mathematics or English Literature**

English Literature provided an extension of the mandatory VCE English but was usually selected by students confident of their English competency. It is a subject that attracts girls rather than boys and inheritors rather than newcomers (Teese and Polesel. 2003: pp 86-87).
This was not the experience at Soton College. Certainly the subject appealed to girls rather than boys but it was taken by only two inheritors. The remaining fourteen students were newcomers. This meant that only one in thirteen inheritors took English Literature compared with one in seven newcomers. The class was small in number and dominated by students from non-professional white-collar families. There were twice as many students from an unskilled manual workers’ background as there were inheritors in English Literature. None of those from the Class of ’95 who chose English Literature was from a tradesman’s family. But then in Year 10, the time when the Class of ’95 chose their VCE subjects, the daughters and sons of tradesmen were the lowest achievers in English and this would surely deter them from choosing VCE English Literature.

Most inheritors were induced to abandon the field of literature by the need to move to tertiary study. Earlier school experience had been positive; they had navigated the curriculum thus far and now their decisions in the final year of the VCE were shaped by their self-knowledge of academic competence and the demands of university and TAFE courses. Selected VCE subjects had to be those prescribed for course entry and they must also be those that were going to provide the best possible TER, because access to the courses to which almost all aspired was highly competitive.

A little more than half of inheritors aspired to courses demanding Mathematical Methods and at least one science subject. So inheritors chose Specialist Mathematics, Physics, Chemistry and Biology, and they used their English skills in Texts and Traditions rather than English literature. All of these subjects would be adjusted upward in the determination of the TER$^{108}$.

Although the majority of students in English Literature were from less advantaged backgrounds it did not necessarily mean that they would perform badly. In fact there were some outstanding achievers in this subject. Hanna, the academically gifted daughter of a small business owner, was outstanding in literature, gaining 47 out of a

\[\text{At the subject mean of 30 the equivalent score for the TER calculation for English Literature was 33; for Chemistry it was 35; for Physics it was 33; for Texts and Traditions it was 33 and for Specialist Mathematics it was 43.}\]
possible 50. Close behind her came the achievement of Michael and Slade, both of whom gained scores that placed them amongst the highest achieving 15 per cent of VCE candidates in the state. Not all students who took this subject were as successful as these, but 75 per cent of Soton College Literature students achieved a study score above the mean of 30.

Where English Literature was the specialised area of English, Specialist Mathematics was the most challenging of the VCE mathematics subjects. As it was, one in five inheritors compared with one in thirteen newcomers chose Specialist Mathematics. As with English Literature, students selecting this option needed to be confident in their mathematics ability. This too was a small and elite group of VCE students. There were thirteen, of whom five were inheritors and eight newcomers. There were six boys and seven girls.

The academic competence of students who selected Specialist Mathematics was high and eleven of the thirteen were to achieve a TER which placed them in the highest quintile of Tertiary Entrance Ranks in the state. The achievement of Will, whose mathematics skills were superior to all, was outstanding. He was placed in the highest achieving 15 per cent of students of Specialist Mathematics in the state. Only Honour and Paddy achieved a comparable score in this subject. All three of these students were to undertake university study. Will and Paddy were to proceed to a PhD in different branches of engineering and Honour to study medicine.

Only two Specialist Mathematics students, Anthony and Sybil, were from a blue-collar background. They too were successful in their subsequent university degrees. The impact of Specialist Mathematics on the TER was far greater, however, than that of English Literature. Even the lowest published score of 20 in Specialist Mathematics would be rewarded with an adjusted score of 30 in the determination of the TER. In contrast at the same achievement level of 20 in English literature there was no reward or discount at all. For the Class of ’95 this meant outstanding inheritors who were more inclined to take Specialist Mathematics than English Literature did far better in
the TER for the same scores than did the outstanding newcomers who were more inclined to excel in English.

Although the outcomes in the VCE and academic competitiveness for university places of elite students is important, so too is that of the ordinary members of the Class of '95. In fact the latter are vital because they comprise the majority of VCE students.

**Discussion**

Pathways through school to work are very personal. There is no average student because the educational journey of each differs from that of the other regardless of gender or social background. This phenomenon is apparent for young people from different schools, different geographic regions and at different points in historic time, but it is almost unexpected for students from one school in one geographic region and all of whom share the same educational experiences. Despite this uniqueness there are some emerging patterns. If student subject choices differ greatly from region to region, school to school, year to year, it is also true that they differ from student to student in the same school. But subjects had a dual role in the VCE, they provided a vehicle for achievement and a direct pathway to university courses by firstly being prescribed by these courses and secondly contributing directly to the selection process through the calculation of the Tertiary Entrance Rank (TER). And the relevant importance of a subject to university selection meant that subject interest alone could determine competitiveness for a university course.

In this chapter we have shown that while Soton College students had access to the same range of opportunities and resources, their outcomes did vary and in some cases markedly. Students in this cohort all chose their pathway through VCE from the same range of subjects. To come to their decision they used a range of resources including:

- past academic experience in the same or related subjects;
- parental advice;
- advice from school staff including the Careers Counsellor;
• the identification of their needs from information provided by the Victorian Tertiary Institutions through the VTAC Guide 1996;

• self-knowledge.

They each then chose VCE subjects and although there were very individualistic choices, patterns of subject choice emerged that related to both gender and social differences. Inheritors tended to select more hard VCE subjects than newcomers and as a consequence were better placed to take advantage of the tertiary selection process.

Sight must not be lost of the success of the Soton College cohort. All passed the VCE. No student failed. But this success is masked by the need for competitiveness in the demand for tertiary education. The effectiveness of the teaching program at Soton College is evaluated by all stakeholders according to the outcomes measured by access to tertiary courses, not just success in the VCE.

And so at the interface of the individual student and tertiary selection policy the experience of the individual is key. Although intended as fair with respect to all students, educational policy such as the process of tertiary selection may affect individuals differently, sometimes to their advantage and sometimes adversely. The purpose of the policy is to select from applicants to university and TAFE courses, but this may be at the cost to some individuals in a way that is not random and to the advantage of others again in a way that is not random. Consequently this chapter has focused on both VCE success and the experience of individuals with a selection system that operates by distinguishing between the VCE subjects in which achievement is gained.

Although the VCE was designed to suit the needs of all students regardless of gender or social background, the tertiary selection process was not. Because the system of ranking is intended to give a prediction of tertiary course success, it works to the advantage of the academically outstanding. Inheritors, who are at ease in the educational environment, benefit, but newcomers to post-compulsory education and the “average” student are in danger of being disadvantaged simply through choosing VCE
subjects that interest them but not the universities. There are notable exceptions such as the academically gifted newcomers who even before the introduction of the VCE could have been expected to stay and complete school. These are newcomers who are traditional in their capacity to take on the opportunities at the higher end of education because they have the skill and will attract the encouragement to do so.

But the VCE was designed to attract all young people. One of the key features of its design was the provision of relevant curriculum that included traditional and new subjects that were to become known by students as hard and easy subjects. The difference between hard and easy subjects was the way in which each was adjusted in the determination of the TER. Achievement in hard subjects was rewarded and that in easy subjects was discounted. The degree to which these adjustments distinguish between the achievements of students has been illustrated in this chapter and can be very high.

Interest in specific VCE subjects varies by social group and gender. Achievement in the VCE also varies by social group and gender. Inheritors and girls achieve better than newcomers and boys and they are more likely to do so in hard than in easy VCE subjects. This compounds the competitive distance between each of the social groups in their race to university.

Not only does the TER act to distinguish the achievement of students by subjects studied but the argument used to support its use, i.e. that the most able students select the most challenging subjects, ignores the fact that students might choose subjects for interest, or even perceived educational need, and not simply to “get into a university course”. Elsworth and Harvey-Beavis (1995: p 34) have found that student motive for choice of final year subjects was primarily interest and that future work and study ranked a lot lower on the list of reasons for choice. But unless the interest of a student coincides with that of the demands of Victorian universities then achievement in the subject chosen is likely to be discounted.

Interests and tastes of boys differ from those of girls and there are marked differences in interests and tastes between different family cultural backgrounds. Because students
choose subjects for interest rather than for competitive advantage, it means that there is ample scope for gender and culturally based differences to emerge. Amongst the Class of ’95 these differences are evidenced by actions such as self-selection out of the physical sciences and higher levels of VCE mathematics by girls and self-selection out of the more literary subjects by boys. This action was a popular one with the daughters and sons of tradesmen.

Over time negative feedback about the relationship between the TER and many VCE subjects has encouraged Year 10 students to give up on trying to get into university because it is too hard (James. 2002: pp 33-34). These young people argue that the VCE subjects they felt competent in were not the right ones to meet university requirements and generate a TER that was “high enough” (James. 2002: pp 33-34). For these young people the process of completing school and going on to tertiary study has become too daunting and the investment in time required for a perceived poor outcome has influenced them to drop-out of the post-compulsory school years and go to work, with its potential problematic future.

In this chapter we have seen that with some exceptions inheritors tend to take hard VCE subjects and newcomers take “easy” VCE subjects. If we look at total enrolments in VCE subjects then the share of “easy” subjects taken by girls exceeds that of boys. Girls prefer subjects like Human Development - Home Economics, Technological Design and Development - Food, Biology and Chemistry. Boys prefer subjects like computing based Information Technology in Society and Information Technology Processing and Management, Materials and Technology - Wood and Physics. In VCE mathematics the share of enrolments by boys from the Class of ’95 in all mathematics subjects but Specialist Mathematics was slightly higher than that of girls. This was by a modest 5 per cent in Mathematical Methods and a much greater 20 per cent in Further Mathematics.

At the same time differences in patterns of enrolments by family background show that the share of enrolments of inheritors in the physical sciences of Chemistry and Physics and the challenging subject Texts and Traditions is far greater than that of newcomers.
Newcomers display a greater share of enrolments in the less demanding Legal Studies, Information Technology in Society and Human Development—Home Economics, and the more challenging English Literature than do inheritors. The most dramatic differences lie with mathematics. Inheritors’ share of enrolments in the two highest levels of VCE mathematics was very much greater than that of newcomers. Only in the least challenging mathematics did the enrolment share of newcomers exceed that of inheritors.109

Inheritors had also better used the educational system throughout their six years of experience in secondary schools. They had achieved the highest grades in English and mathematics from Year 7 to Year 10. They had been assessed as the best integrated at the end of their first term at Soton College; and they had committed themselves to involvement in extra curricula activities. School had suited them just as it had suited their parents.

Newcomers stayed on but they had not experienced the same comfort with the curriculum and school experience. With the exception of those newcomers like Hanna, Anthony and Mia who were very able students and who would have stayed to complete school in previous years, newcomers in the Class of ’95 engaged the curriculum for less return than inheritors.

Newcomers, like inheritors, were ambitious and the VCE had encouraged this ambition, but its effect was eroded at the introduction of the TER in 1994. The TER was to distinguish between social groups by re-shaping the pathway into tertiary study so that it was easier to travel for those advantaged by the system, the inheritors, than it was for the ordinary newcomers. For the Class of ’95 this is particularly evident in VCE mathematics, which will be dealt with in the next chapter.

The curriculum that Soton College had adopted in an effort to both encourage the non-traditional school completer (boys and newcomers) to stay and to provide interest for the diverse needs of all the Class of ’95 was to act to reward traditional users (inheritors, girls and the occasional newcomer) and penalise those typically new to the

109 See Figures 36 and 38.
VCE unless they achieved outstanding scores. For newcomers and boys, what the VCE had given the TER had taken away.
CHAPTER 11

The Class of ’95 and VCE mathematics

Introduction

The Class of ’95 were able to choose whether they would do VCE mathematics or not. Up to this point at Soton College mathematics had been mandatory. There were a number of options available to them. They could choose one or two VCE mathematics subjects and they could choose whether they studied mathematics for both VCE years or only one of them.\(^{110}\)

Choice was not totally free. There were some rules and restrictions imposed by the administrators of the VCE and tertiary selection but not by Soton College.\(^{111}\) Certain combinations of mathematics in the final year of the VCE were discouraged by VTAC, the tertiary selection administrative body. This was done through the imposition of penalties in the determination of the selection device which was, by 1995, the TER (VTAC. 1994: Section 3.2: p 4).\(^ {112}\) In addition, the Board of Study regulations made Mathematical Methods (preparatory mathematics) mandatory for any student who also wished to study Specialist Mathematics.

Choice of VCE mathematics status was also not without ramifications. Those who chose the highest levels of VCE mathematics opened the door to all university

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\(^{110}\) Up until the end of Year 10 mathematics had been mandatory and the level in the hierarchy studied had been determined by academic performance in classroom tests and end of semester examinations. Only occasionally was the level of mathematics studied in Years 9 and 10 by choice.

\(^{111}\) At Soton College every effort was made to provide students with the mathematics subjects of their choice. No student was refused entry to a VCE class on the grounds that their previous mathematics achievement in Years 7 to 10 had been poor. Counselling was provided but the ultimate decision was that of students and family not Soton College. In mathematics there were multiple classes so that a place was found for every student who requested a place.

\(^{112}\) The Class of ’95 were forced to abide by these provisions through the simple procedure of timetabling one of the prohibited mathematics subjects against the other so it was physically impossible for a student to study both subjects at the campus. If a student had chosen to study one of the penalised combinations at another venue then the combination could not have been prevented but no student in this cohort did this.
courses. Those who chose no mathematics in the VCE closed the door on more than half (52 per cent) the university courses in 1996.

Soton College offered all available orientations of VCE mathematics. These mathematics subjects together with a brief description, the relative difficulty of each subject and the treatment of the subject in the determination of the TER, are shown in Table 14 below.

Table 14: Hierarchy of VCE mathematics subjects 1995

<table>
<thead>
<tr>
<th>Direction of TER adjustment</th>
<th>VCE Mathematics subject</th>
<th>Description</th>
<th>Level of tertiary demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discounted</td>
<td>Further Mathematics</td>
<td>Lowest level of difficulty can be studied alone or combined with Mathematical Methods but not with Specialist Mathematics.</td>
<td>Medium (17% of courses)</td>
</tr>
<tr>
<td></td>
<td>Mathematical Methods</td>
<td>Middle level of difficulty can be studied alone or combined with either Further Mathematics or Specialist Mathematics.</td>
<td>High (27% of courses)</td>
</tr>
<tr>
<td>Rewarded</td>
<td>Specialist Mathematics</td>
<td>Highest level of difficulty cannot be studied alone or combined with Further Mathematics. Must be combined with Mathematical Methods.</td>
<td>Low (2% of courses)</td>
</tr>
</tbody>
</table>

But restrictions imposed on choice in mathematics by the VCE and tertiary selection bureaucracies, although formal and the most obvious, were not the only factors that

\[113\] Providing they met any other conditions of entry.
limited the choice of mathematics by VCE students. At least two other factors influenced choice.

These were:

1. Personal experience in mathematics which inhibited or encouraged choice of VCE mathematics subjects particularly the most valuable—Mathematical Methods.\textsuperscript{114}

2. Perceived need which tempered choice of post-compulsory mathematics. (See Footnote 114 below).

**Deciding on VCE mathematics**

At the point where the Class of ’95 were making their VCE mathematics choices, they then had to ask themselves three questions:

- Am I interested in mathematics?
- Do I need mathematics?
- Can I do VCE maths?

Once the decision to take on mathematics was made, students had to choose which mathematics subject and consider whether or not to study the subject for both VCE years.\textsuperscript{115} The mathematics subject selected could be changed during or at the end of the first year of the VCE. This option did not exist with respect to the choice for the second year of the VCE.

Obviously it would be more difficult to move from an easier mathematics to a harder mathematics during the VCE so in practical terms a student who was uncertain of her or his ability to successfully compete the first year of a VCE mathematics would be

\textsuperscript{114} This was the subject in most demand by universities and TAFE Colleges. Its successful completion opened doors to a wide range of courses not just those clearly reliant on mathematics such as engineering or science.

\textsuperscript{115} Students could choose two mathematics subjects in either of the first or second years of the VCE.
prudent, and also advised, to take the higher level mathematics at this time. If this proved too difficult then a change to an easier mathematics should be possible.

Students did move in the other direction but it was not common. For example Cecilia from the Class of '95 chose the easiest possible mathematics orientation (General Mathematics—Business) in her first year of the VCE.\(^{116}\) This subject was terminal at the end of Year 11 but she then chose Further Mathematics and was so successful in this subject in Year 12 that she was placed amongst the highest achieving students of Further Mathematics in the state. Fintan and Aaron also studied General Mathematics—Business in their first year of the VCE but did not pass the subject. Their VCE included a Vocational Education and Training (VET) subject and the award of a certificate in this subject was dependent on a pass in a VCE mathematics subject so they selected Further Mathematics, the easiest of the VCE mathematics subjects. They passed and collected their VET certificate as well as their VCE.

The level of self-confidence in Year 10 mathematics was crucial in choosing a post-school destination. A member of the Class of '95 confident in her or his mathematics skills could aspire to a career that needed mathematics whereas a student lacking confidence would have to consider the options carefully before making a choice. Past experience determined self-concept and at Soton College mathematical self-confidence also had to be tempered by the level in the Year 10 hierarchy of mathematics being studied at the time VCE mathematics was picked.

Confidence in mathematics, and any other subjects, is related to interest and achievement. Teese and Polesel (2003: pp 103-104) have linked poor performance in mathematics at Year 10 with a poor opinion of the subject. These researchers found that as achievement level fell, fifteen year olds were of the opinion that mathematics was boring (Teese and Polesel, 2003: p 103). Students who felt this way about mathematics could be expected to take care in making the decision to study VCE

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\(^{116}\) Cecilia was adamant that she should do only the lowest level of VCE mathematics in the first year because she was achieving at only a C grade level even though she was placed in the highest tier of the Year 10 mathematics. From Year 7 to the end of Year 10 Cecilia had been a B grade student with the occasional A.
mathematics but those students who enjoyed mathematics and who achieved good grades could be expected to have no difficulty in choosing VCE mathematics.

**Being interested in mathematics**

There were those at Soton College who were both good at mathematics and interested in it. Fifteen of the Class of ’95 consistently scored grades of As, A+s and the occasional B in the highest tier of the mathematics hierarchy. They formed a small and exclusive group of six inheritors and nine newcomers. The six inheritors represented 24 per cent of inheritors but the nine newcomers represented only 9 per cent of their social group. Not only were inheritors more than twice as likely as newcomers to be amongst the elite mathematicians in the Class of ’95 but newcomer membership of this group was restricted to the daughters and sons of white-collar workers with the exception of two. Only Sibyl and Anthony represented the children of blue-collar workers in the group. Boys and girls, however, were equally likely to be in this group.

Most of this group of mathematically elite continued their interest in mathematics in the VCE and took both preparatory mathematics (Mathematical Methods) and the most challenging, Specialist Mathematics. Some were however forced to make a choice in the number of VCE mathematics subjects taken because in the two post-compulsory years of schooling Soton College students had to restrict the number of subjects studied to eleven. If there was a problem with fitting two mathematics subjects into an already crowded student’s timetable then the usual choice was preparatory mathematics.

Elite mathematicians from the Class of ’95 were also good at the other subjects they studied. Motives for the choosing a particular VCE mathematics varied. For instance Kitty, an outstanding student, chose Mathematical Methods to support her main

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117 Soton students studied a minimum of twenty-four VCE units over the two years. At least two units were taken up with Religious subjects and four were taken with English so the number of mathematics units taken could be determined by the number of other subjects studied in that time. The number of overall VCE units studied was similar to that of other Victorian schools at the time. There were no constraints placed on the number of subjects by the VCE itself but the selection process for university considered the scores in only six subjects including English and there was no increase in competitiveness for extra effort. This regulation tended to constrain the width VCE subject choice.
interest, biological sciences. Despite encouragement from her teachers to add Specialist Mathematics to her subject choices, she felt that mathematics was an essential tool rather than a focus of her study and since only Mathematical Methods was required for university course entry she chose to concentrate her efforts on Biology instead. Honour on the other hand wanted to study Medicine. Entry to this course was extremely competitive and being confident in mathematics Honour chose both Mathematical Methods and Specialist Mathematics because not only did she feel she could do well but by the time she made her choice at the end of Year 11 she was aware that good scores in both these subjects would contribute well to a high TER that she needed to get into Medicine. Her strategy was successful.

The VCE choices of both Kitty and Honour demonstrate how hard it is to actually separate interest and need. Achievement levels indicate ability and the latter fuels interest in particular VCE subjects but within the administrative restrictions of the credential, choices have to be made and need can shape the subject choice outcome. In mathematics need decides which mathematics subjects and how many will be taken in the VCE (Elsworth and Harvey-Beavis. 1995:p 33).

**Needing a VCE mathematics subject**

It is hard to separate need and interest. In an ideal world where there was not competition for university places students would be able to choose a mathematics subject that taught them what they needed to know and build upon in their future learning, working and living. Ours is not an ideal world and competition for university places is fierce. In their post-compulsory years teachers meet the requirement of the prescriptive curriculum established to meet university demand. Students are coached for their final examinations and not necessarily taught what is directly relevant and useful to them.

As mentioned above, in 1996 over half (52 per cent) of university courses set at least one VCE mathematics subject as a prerequisite for entry. Some employers offering apprenticeships also encouraged a knowledge of mathematics and even if the same employers did not expect a VCE pass from those seeking an apprenticeship they often
wanted a mathematics subject to be studied past Year 10. This meant that even students who were contemplating dropping out of school were prudent to include a mathematics subject in their choices of VCE subjects.118

At the start of the VCE there are two groups of students, those who will stay in school and complete the VCE and those who will leave school for work before completing the VCE. The following section of this chapter will deal with the subject choices of the one hundred and twenty-eight students in the Class of ’95 who completed the VCE. The VCE mathematics choices of those who dropped out will be considered separately late in the chapter.

**Mathematical Methods—preparatory mathematics**

A pass in Mathematical Methods, which in this discussion will be referred to as preparatory mathematics, was a precondition of entry to 29 per cent of all university courses in 1996, the year the Class of ’95 would make the transition to university119. All university courses indirectly supported preparatory mathematics by complying with a selection system in which the subject was rewarded in the determination of the TER. Some knowledge of VCE mathematics was required in a further 23 per cent of university courses, which meant that a student taking preparatory mathematics had the potential to meet the requirements for 52 per cent of university courses. So preparatory mathematics was an important inclusion in VCE studies for most students and in 1995 it was relatively new to the syllabus.120 It was also the most popular choice of VCE mathematics subject for the Class of ’95 with 42 per cent of students choosing it either as a single mathematics subject, which was the most popular option, or in combination with either Specialist Mathematics or Further Mathematics. Teachers and students alike are well aware of the advantages of meeting the university mathematics requirements. As Teese (2000: p 216) points out that high achieving students gravitate to higher level mathematics and tend include at least Mathematical Methods (preparatory mathematics) in their VCE subjects.

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118 The year in which those from the Class of ’95 who completed Year 12 would take up university courses.
119 See Appendix A.
120 It was only the second year of inclusion in the final year of the VCE.
By the beginning of the VCE, Soton College students were well aware of their ability in mathematics. They had experienced two years of being allocated to a tier in a hierarchy that either generated or reinforced their self-concept. They knew the grade they got and the level they got it in and that most of them were not as good at mathematics as Kitty or Will or Honour or Dean. But if the grade was not a fail and the tier of mathematics was highest or second highest there is still hope of achieving a good pass in preparatory mathematics. This knowledge was reinforced in the classroom and the VCE handbook prepared at Soton College. So the average members of the Class of ’95 complied with university course demands and chose Mathematical Methods.

The mathematically elite of the Class of ’95 chose at least Mathematical Methods but for the average student the choice was not so easy. The term “average” will be used in this discussion for the students who had consistently been placed in the highest two levels of mathematics in Years 9 and 10 and who had gained good grades (B and above) in Years 7 and 8. These were students who had had their competency in mathematics reinforced by the position they occupied in the hierarchy of mathematics at Soton College.

For all students of Soton College prior experience in mathematics moderated choice of preparatory mathematics in both years of the VCE. In many cases need of the subject for university entry motivated choice and students with poor mathematical self-concept must have been concerned by the risk their choice entailed.

Although all the “average” students of preparatory mathematics from the Class of ’95 had been placed in the two highest levels of Year 10 mathematics, their grades were wider spread than those of the elite students. They were also lower. These students had an academic history of Bs, Cs and the occasional A. Only a few of them had consistently scored well for the four years to Year 10. Kitty, whose prowess in mathematics has been discussed above, Prue, Harold, Callum and Odette who chose only preparatory mathematics, all maintained a high level of academic performance in the highest tiers of mathematics to the end of Year 10. This small group of students could have joined the elite in Specialist Mathematics but chose not to.
There were those who displayed both a high level of achievement in Year 10 mathematics and an interest in mathematics and wanted to study two mathematics subjects but chose preparatory mathematics and the lowest level of VCE mathematics, Further Mathematics, rather than the more challenging Specialist Mathematics. This was also a small group, made up of seven boys and a girl. There were two inheritors and only one newcomer from a blue-collar family background; the others were all the sons of non-professional white-collar workers. Motives for the choice by each student in this group varied but Colin, who had maintained an A average from Year 7 to 10, could not be persuaded to change his selection of Further Mathematics for the higher level Specialist Mathematics. Counselling notes show that he discussed this on several occasions with the Careers Counsellor but could not be convinced of the benefits of taking Specialist Mathematics. Colin’s VCE score in Further Mathematics was 43 but this was discounted in the TER calculation. In fact five of the eight students in this group gained scores in Further Mathematics that placed them amongst the highest achieving students of Further Mathematics in the state. But in each case their score was discounted from between 4 per cent and 6 per cent in the determination of their TER. This loss was compensated by the reward each gained on their marks in preparatory mathematics.

Although the grades in preparatory mathematics of this little group of eight were relatively poor, only Simone gained an above average score, they were significantly rewarded in the determination of the TER. Wyatt and Callum gained the lowest preparatory mathematics scores of the group, both scored 24 out of the possible 50, and they gained a significant 12 per cent reward in the determination of their TER. So even where achievement was poor the choice of Mathematical Methods was a prudent one in the pursuit of improved competitiveness in the race for a university place. Even in a small group like the one this one, social background appeared to impact on achievement. Simone and Colin both of whom were inheritors gained the highest scores in preparatory mathematics and the lowest score went to Wyatt and Callum the sons of tradesmen.
The members of this small group of students who combined Further Mathematics and preparatory mathematics were obviously interested in mathematics and although up to Year 10 their grades had been good they had been prudent in ignoring the highest level VCE mathematics for the lowest one. Their self-knowledge of ability and circumstance proved sound. They obviously found preparatory mathematics more challenging that Further Mathematics but given their previous experience in mathematics it is likely that they had the ability to gain better scores than they did. A number of the members of this group were not in a position to commit to significantly extended study time and this was probably an important factor in their choice.

Teachers, however, seemed happy with the choices most of the Class of ’95 made. Over the two years of the VCE the preparatory mathematics subject choices of only six students were challenged by teachers where there was concern about prior academic performance. Barney was the only inheritor in this group and Chloe the only girl. Although Barney continued with preparatory mathematics in the first year of the VCE, he changed to the lower Further Mathematics in the second. He was successful in Further Mathematics achieving a commendable score of 43 which placed him amongst the highest scoring 15 per cent of students in Victoria.\footnote{121} Despite the teachers’ challenge the remaining four continued on in preparatory mathematics and were successful in it.

Who other than the mathematically elite of the Class of ’95 chose preparatory mathematics? Inheritors were far more likely than newcomers to choose preparatory mathematics. In fact as the social scale was descended the likelihood of choosing preparatory mathematics in the final year of the VCE was reduced. This is shown in Figure 36 and Figure 37. In Figure 36 the red lines show the expected proportion of average mathematics students to choose preparatory mathematics from each social group. The expected proportion is determined from the relationship between the size of each of the four social groups in the Class of ’95.

\footnote{121} The maximum score for any VCE subject was 50.
Those in the Class of '95 who completed the VCE could be divided into 20 per cent inheritors and 80 per cent newcomers. Newcomers can be further divided into three social subgroups. The children of non-professional white-collar workers made up 43 per cent, the children of tradesmen made up 24 per cent and the children of unskilled workers made up 13 per cent of the Class of '95. If the same relative participation was experienced in preparatory mathematics then the red lines in Figure 37 shows the expected rate of participation (the expected share) in preparatory mathematics for each of the social groups. The actual rates shown are very different.

The charts in Figures 36 and 37 show that the expected share of Mathematical Methods for inheritors was significantly less than the actual share of inheritors in preparatory mathematics. As the social scale is descended however it becomes apparent that the relative share in preparatory mathematics decreases. The actual share in preparatory mathematics of the daughters and sons of non-professional white-collar workers is only slightly more than that expected and that of the children of tradesmen and unskilled workers is less than the expected relative share.

The comparison between the actual share and expected share of participation of the Class of '95 in preparatory mathematics shown in Figure 36 is summarised in Figure 37. This clearly illustrates the differences in participation, based on social group, which existed amongst the average students of preparatory mathematics from the Class of '95.

Amongst the Class of '95, newcomers, regardless of social sub-group, lacked the confidence displayed by their inheritor classmates and were less likely to choose preparatory mathematics. We will see later in this chapter that newcomers chose Further Mathematics which was perceived to be less demanding instead. There would be consequences of this choice. Further Mathematics was less accepted by university courses for entrance and so the choice of it restricted post-school university options.
Figure 36: Social background of members of the Class of ’95 who chose preparatory mathematics in the final year of the VCE

Number of students = 41 (Members of the Class of ’95 who chose preparatory mathematics with the highest level of VCE mathematics have been treated separately. **Reading the chart:** If choice of preparatory mathematics reflected the proportion of each social group in the Class of ’95 then the expected proportion taking this mathematics subject would be 20% of inheritors; 43% of the children of non-professional white-collar workers; 24% of the children of tradesmen and 13% of the children of unskilled workers. Instead there were 27% of inheritors; 44% of the children of non-professional white-collar workers; 22% of the children of tradesmen and 7% of the children of unskilled workers.)
Figure 37: Difference between expected proportion of students choosing preparatory mathematics and actual proportion of student doing so all arranged by social group.

Number of students = 41 (Members of the Class of '95 who chose preparatory mathematics with the highest level of VCE mathematics have been treated separately). Reading the chart: Each bar shows the difference between the expected proportion of students and the actual proportion of students who chose preparatory mathematics for that social group. Where a greater than expected proportion chose preparatory mathematics the bar is shown above the mid-axis where the proportion who chose preparatory mathematics was less than the expected proportion then the bar is shown below the mid-axis.

The above charts show that inheritors were well placed to meet university course demands they were also more likely to achieve the highest grades.122

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122 Kitty and Prue, both inheritors, were the two highest scoring students of preparatory mathematics amongst the group which did not attempt the challenging Specialist Mathematics as well. At the other end of achievement in preparatory mathematics four of the five students who gained a score below the minimum published, which was 20, were newcomers. Gender was quite evenly balanced amongst this low scoring group however.
Taking Further Mathematics

Like preparatory mathematics Further Mathematics was popular with the Class of ’95. Almost as many students chose this mathematics as chose Mathematical Methods although it was not as greatly accepted by university courses. Forty-seven students, which were 37 per cent of the Class of ’95, chose Further Mathematics either as a single subject or in combination with preparatory mathematics. In 1996, the year of entry to university for the Class of ’95, only 23 per cent of university courses that required a VCE mathematics subject for entry would accept Further Mathematics. This was half the number of university courses that required study of a VCE mathematics subject for entry. But completing Further Mathematics did act to increase options and a student without any VCE mathematics remained with the most limited post-school choice of university courses.

Further Mathematics was not a subject that was rewarded in the determination of the TER and even good grades were discounted. But as a subject it appealed to students who preferred the arithmetic side of mathematics to the abstract. Whereas preparatory mathematics spanned concepts in Boolean algebra, algebraic functions, calculus and permutations and combinations within probability theory, Further Mathematics focused on a core of the more practical probability and statistics.

Assessment in both these orientations of mathematics also differed. Preparatory mathematics included projects that required creative applications of mathematics to unfamiliar situations whereas Further Mathematics was assessed using projects reliant on far more structured and traditional assessment techniques. Differences in the degree of difficulty really lay in the supposition that for students the abstract was more difficult to understand than the practical and it is not within the scope of this work to comment on this. Certainly it is the convention within the VCE and the perception of all stakeholders that Further Mathematics is not as hard as Mathematical Methods (preparatory mathematics).

In effect Further Mathematics became the VCE “vegie” mathematics in the perception of the community. It, like the lower hierarchical tiers of mathematics in Years 9 and
10, became a “dumping ground” for those who were not all that good at mathematics. Even in the VCE Handbook distributed by Soton College to the Class of ’95 the subject was described as suitable for “students who do not require a strong background in mathematics and/or do not need mathematics in a tertiary course” (1993: p 45). The statement is actually not correct. Twenty-three per cent of university courses required at least Further Mathematics for access. But the inference is that those taking this subject were not good mathematicians.

The relegation of this subject to the second tier of VCE subjects was complete with the introduction of the TER in which all achievement in this subject below a creditable 47 out of 50 was discounted in the calculation of the rank. In comparison all disclosed achievement in Mathematical Methods (preparatory mathematics), that is from 20 to 50, was rewarded in the calculation of the TER. Only students and a few university courses seemed to appreciate the value of the educational content of Further Mathematics.

**Who chose the easier VCE mathematics?**

Motive for the choice of Further Mathematics also lay in interest and need. Just because a student does not undertake the higher levels of VCE mathematics does not mean that he or she lacks interest in the so called “easier” VCE mathematics.

As was discussed above there are significant differences in the curriculum of the abstract and conceptually challenging preparatory mathematics subject Mathematical Methods and the even more demanding Specialist Mathematics and the easier Further Mathematics but that does not exclude the fact that the content of Further Mathematics would interest some of the Class of ’95.

There were also those who might need the subject. Success in Further Mathematics would increase the number of university degrees available by 23 per cent and this on its own was a reason for staying on in a mathematics subject in which there was some chance of success. In the case of Fintan and Aaron, need was more immediate. A pass
in Further Mathematics was essential as part of the requirements for the Dual Accreditation in Automotive for both of them.

As with preparatory mathematics, there were those amongst the students of Further Mathematics whose past history had been one of consistent academic achievement at a high level but there were not a great number of students who achieved this. The members of the Class of ’95 who chose Further Mathematics were characterised more by their inconsistent past mathematics grades than by the record of consistent achievement that characterised those who chose preparatory mathematics. Even the eight who elected to study both preparatory mathematics and Further Mathematics and, by this, indicated an interest in mathematics, also tended to display an inconsistent past academic record in mathematics. Only inheritor Colin with consistent As and newcomer Larry with consistent Bs in Year 7 to 10 mathematics, both from this group of eight, displayed a steadiness in academic achievement.

Twenty boys and nineteen girls from the Class of ’95 chose to study Further Mathematics as their only VCE mathematics subject. Using the same analysis technique as that used above in preparatory mathematics it can be seen that newcomers were the most likely to choose this subject and that inheritors fell well short of the expected share of Further Mathematics (see Figure 38).
Figure 38: Social background of members of the Class of ‘95 who chose Further Mathematics in the final year of the VCE

Number of students = 47 (Members of the Class of ‘95 who chose Further Mathematics with preparatory mathematics have been treated separately.) Reading the chart: If choice of Further Mathematics reflected the proportion of each social group in the Class of ‘95 then the expected proportion of taking this mathematics subject would be 20% of inheritors; 43% of the children of non-professional white-collar workers; 24% of the children of tradesmen and 13% of the children of unskilled workers. Instead there were 13% of inheritors; 46% of the children of non-professional white-collar workers; 24% of the children of tradesmen and 12% of the children of unskilled workers.

That there was a greater proportion of newcomers to inheritors who chose Further Mathematics as their only VCE mathematics is not surprising. Newcomers had tended to achieve lower grades in mathematics from Year 7 to Year 10 and about one third of those from the Class of ‘95 who took Further Mathematics came from the lower levels of Year 10 mathematics. The lower levels in the Year 10 mathematics hierarchy had studied a modified version of the Year 10 mathematics syllabus.
This meant that the students who came to Further Mathematics did so with differing experience of mathematics in prior years. Where position in the hierarchy was low and grades poor in Year 10 mathematics, achievement in Further Mathematics was also poor. Only inheritor Joyce, who had a problematic past in mathematics, gained a score in Further Mathematics above the mean. The scores of the other nine poor performers, all of whom were newcomers, were below the average of 30.

Further Mathematics at Soton College was in fact a refuge for newcomers who, at least in Year 10, were mediocre students of mathematics or who lacked confidence in mathematics. There were to be some outstanding achievement outcomes in the subject but there were also some very poor ones.\textsuperscript{123}

What is more, the school was effective in bringing students poor in mathematics experience to the point of VCE mathematical success in this subject. In Further Mathematics at Soton College teachers took a very diverse ability group and brought them to a point that would give an above average mean in the subject for the Class of ‘95.\textsuperscript{124} In contrast the teachers of preparatory mathematics took a more homogenous group of students and were not able to take their achievement mean up to average in VCE Mathematical Methods.\textsuperscript{125} This was a poor result.

There appears to have been more value added to the mathematics experience of the students with a poor past record in mathematics in getting them to a VCE pass in Further Mathematics than in the case of the success in preparatory mathematics or Specialist Mathematics.

**Dropping out of VCE mathematics**

There were those who chose to turn their backs on the final year of mathematics. Some of this group, like Deirdre, could not be convinced that a mathematics subject was of use in the first year of VCE either. Counselling notes from 1994, when Deirdre was in

\textsuperscript{123} Nine of the forty-seven students of Further Mathematics, i.e. 19% gained a VCE study score which placed them in the highest achieving 15% of the state in this subject.

\textsuperscript{124} A mean of 32.3617 the subject mean was set at 30.

\textsuperscript{125} A mean of 29.1481 the subject mean was set at 30.
Year 10 and choosing her VCE pathway, show that she discussed her subject choices with the careers counsellor at Soton College on a number of occasions and at all of these discussions it was suggested that she delay dropping mathematics by at least another year so that she could include a primary teaching career option in her post-school choices.

Deirdre was adamant and would not take even one unit of VCE mathematics. Instead she chose a technology subject. This meant that she met the requirements for the study of at least two units of a mathematics, science or technology subject that was mandatory for the award of the VCE but she compromised her interest in primary teaching.

Deirdre’s skills were in English and her school records show that her mathematics grades were mediocre at best. Although she had been promoted from the lowest tier in the hierarchy at the beginning of Year 9 to the second highest tier by the end of Year 10 she had achieved only a bare pass at that level.

The academically gifted Hanna also dropped VCE mathematics. Hanna had a history of As and a few Bs in mathematics from Year 7 to the beginning of Year 10 but by the end of that year her grades had slipped to a C although she was still positioned in the highest tier in the mathematics hierarchy. In that year her grade for mathematics was the lowest she gained in any of her subjects. In Year 11 she took two units of the lowest level of VCE mathematics and dropped mathematics altogether, and recently commented ruefully that she was hopeless at mathematics. She was not but she was better at other subjects and her choice was a prudent one.

The timing of the decision to drop mathematics was also crucial. Deirdre, eight other girls and three boys did so at the beginning of the VCE. This effectively excluded them from adding a mathematics subject in the final year of their VCE. To do so would have been very difficult because of the interruption to studying the subject. It was a risk for all twelve students and it restricted their post-school university course options two years before they were to apply to them. At this point this small group of twelve, of whom only one was an inheritor, had restricted their possible university course choices.
to 48 per cent of those offered in 1996, the year of their entry to university. Their applications were to be constrained by both achievement and curriculum.

Whereas participation in the final year of VCE mathematics was almost equally divided between boys and girls in each of the three VCE mathematics subjects, non-participation was not. Girls from the Class of ’95 were those most likely to drop mathematics during the VCE. Twice as many girls as boys did so. What is more, for every inheritor who dropped mathematics and there were four, eight newcomers dropped mathematics. Although not all those who dropped VCE mathematics had experienced a problematic past in the subject, most had.

Of those from the two lowest mathematics tiers in the Year 10 mathematics hierarchy, who stayed to complete the VCE, at least three-quarters dropped mathematics. There was also a significant exodus from the second tier of Year 10 mathematics. About a third discontinued mathematics during the VCE but only a tenth of the members of the Class of ’95 from the highest tier dropped mathematics in the VCE. This is shown in Figure 39. Past achievement in mathematics had also been inconsistent amongst those from the Class of ’95 who dropped mathematics but completed the VCE.
The mathematics options for those from the Class of '95 who dropped out of school

Thirty-five members of the Class of '95 left school for work before they completed the VCE. Most of these early school leavers commenced the first year of the VCE. Ten did not finish at least a term of Year 11, which was the first year of the VCE. The remaining twenty-five students chose a first year mathematics subject for their VCE.

The easiest orientation of mathematics was known as General Mathematics—Business. The curriculum for this subject emphasised mathematics in every day life and...
downplayed the more abstract areas of mathematics such as Algebra. This was a terminal mathematics subject and students who took this subject were not expected to continue into a final year of VCE mathematics. Some like Cecilia, who gained a score in Further Mathematics in her final VCE year that placed her amongst the highest achieving 15 per cent of students, did so and were very successful. Most, however, took General Mathematics—Business in the first year of the VCE and then dropped mathematics altogether. In the case of non-completing school students most took General Mathematics—Business and then left school for work.

Eight of the early school leavers chose the more demanding General Mathematics—Tertiary, which emphasised the abstract areas of mathematics such as algebra, functions and graphs as well as arithmetic, geometry and statistics. This subject led directly into Further Mathematics in the final year of the VCE and a number of the Class of ’95 took this pathway.

The early school leaving group studied this mathematics orientation in the first year of the VCE only. Only three of the early school leaving group chose preparatory mathematics. Three boys, all newcomers chose preparatory mathematics in the first year of the VCE—Garth who wanted to be a pilot, Max who wanted to join the Australian Defence Forces and Julian who wanted to be an electrician—all chose the most challenging of the mathematics. All were successful and both Max and Julian were able to achieve their post-school career goals. These were three young men who successfully took a positive pathway to work but who did not complete the VCE. Garth did not become a pilot but did enter work with training and when interviewed some ten years later had only had two jobs and was in secure work.

Even where the members of the Class of ’95 were keen to leave school they tended to choose a mathematics subject for their final year of secondary schooling. In fact this group were well advised to do this because studying a VCE mathematics subject enhanced job applications for this age group. Applicants for apprenticeships even in 1994 often left school with only a Year 10 pass in mathematics if any and VCE mathematics made the Class of ’95 more competitive for jobs.
Social group and VCE mathematics revisited

Gender was not a factor in the choice of preparatory mathematics. Remarkably boys and girls were almost equally likely to have taken preparatory mathematics although a far greater proportion of boys (39 per cent) to girls (25 per cent) chose Further Mathematics. Almost twice the proportion of girls (30 per cent) to boys (16 per cent) dropped mathematics in the VCE.

Social background was a significant discriminator of VCE mathematics choice. As Figure 40 shows, as social group declines both interest in preparatory mathematics and interest in the study of any VCE mathematics also declines amongst the Class of ’95.

Inheritors were the best positioned for future study because almost two-thirds (64 per cent) of them chose at least preparatory mathematics. Children from the families of unskilled workers were the poorest positioned for future study amongst the Class of ’95 because less than a quarter (24 per cent) chose preparatory mathematics and almost half (47 per cent) of these boys and girls chose to drop VCE mathematics.

Those least likely to have selected a pathway to further study that would provide as many opportunities as possible were the daughters and sons of blue collar workers. After six years during which newcomers and inheritors had started by sharing classrooms and then at Year 9 had been streamed by achievement levels they were still socially divided by the mathematics curriculum.
Figure 40: VCE mathematics status by social group and its relationship with post-school university course choice

**Legend**

- At least preparatory mathematics
- Other VCE mathematics
- No VCE mathematics

**NB:** The above chart shows the VCE mathematics status of only those members of the Class of '95 who completed the VCE, the number of which was 128. **Reading the chart:** Since the greatest proportion of inheritors have included preparatory mathematics in their VCE subjects, they have the widest choice of university courses. As we move up the social groups the proportion of students making the same choice declines. Consequently the breadth of university courses available to students from each of the social groups also declines. Members of the Class of '95 with least choice of university courses are those without any VCE mathematics. The children of unskilled workers are the most likely to have dropped VCE mathematics so restricting their post-school university course choices even further. Inheritors form the group least likely to be without a VCE mathematics subject and so this group has the widest number of university course choices.

Even before they sat their VCE examination in mathematics, newcomers, and in particular the daughters and sons of unskilled workers amongst the Class of '95, faced a restricted choice of post-school university choices. These young people did not meet the pre-conditions for entry so regardless of their subject scores and TER they would not be considered for up to 52 per cent of university courses. In the cases where VCE mathematics was dropped, the members of the Class of '95 who took this option...
restricted their post-school university course choice up to two years before they completed the VCE, because VCE mathematics were chosen whilst still in Year 10.

Very able students such as Hanna, with a TER of 94.90 and an aggregate study score of 216, were restricted to 48 per cent of the university courses available in 1996 because they dropped VCE mathematics.

**Discussion**

Almost three quarters of the Class of ’95 (73 per cent) chose a VCE mathematics subject and the most popular of these was preparatory mathematics. This meant that almost half the Class of ’95 were in a position to choose from all university courses when they left Soton College. The remaining group, however, faced a restricted choice of university courses regardless of how well they did in the VCE examinations and even in the tertiary selection process.

Newcomers were over-represented in the group, with the most restricted choices, and only a few inheritors faced the same post-school option. Of the gender groups girls lost the most. A little more than a third of those who did not take a final year VCE mathematics subject dropped mathematics at the end of Year 10, a point that marked the end of the compulsory phase of mathematics at Soton College. This group of girls, together with the three boys who also chose the same VCE pathway, limited their university course options to 48 per cent of those available two years before they completed the VCE. In fact only three of this group were to complete a university degree and only three a TAFE course. Five of the remaining six were to start courses that were not their first choice and abandon them.

Curriculum choice was to be crucial to success in university and mathematics was key in this choice, but some of the Class of ’95 were not well positioned to take on VCE mathematics. Many of these had been streamed into the lower tiers of the Year 9 and 10 mathematics hierarchy and their achievement levels had been poor throughout Year 9 and 10. Those most likely to be in this group were newcomers and girls. The wedge that began to divide the social groups at Year 9, when newcomers and girls were those
most likely to be relegated to the lower levels of the mathematics hierarchy, had by the end of Year 12, separated the group totally. The dropping of mathematics had not simply created a barrier it had erected an unclimbable wall.

It is easily argued that this was a small group, and that is true, but the group comprised 27 per cent of the Class of ’95, and that is significant.

The fifty-four students who chose the preparatory mathematics subject of Mathematical Methods were well placed to access the university course of their choice. Comprised of most of the inheritors but less than half of the newcomers, this group had to overcome the barriers to university entry created by examinations rather than curriculum. The group who chose the less demanding Further Mathematics also faced an unclimbable wall to a significant number of university courses but their choices were broader than those who did not have mathematics at all. Membership of this group was more likely for newcomers than inheritors and for boys than girls. The same membership could also be linked to disappointing achievement levels in Year 9 and 10 mathematics and relegation to the lower levels of the mathematics hierarchy in those years. This pattern of achievement, like that of the students who chose to drop VCE mathematics, was most likely influenced by low self-concept in mathematics. This had developed from years of poor standing in the Year 9 and Year 10 hierarchy and poor achievement at that level. This too was masked by the overall success of those who took VCE mathematics.
CHAPTER 12

Over the hurdles: VCE achievement

Introduction

At the end of six years of secondary schooling, the achievement of the one hundred and twenty-eight students of the Class of ’95 who were still at Soton College was about to be measured against that of the rest of the state. VCE examinations were the final act of secondary education for these students.

All stakeholders had a vested interest in Soton College students being found to be competitive both academically and in the competition for university and TAFE courses. If students were successful in negotiating both these markers, then they would achieve their post-school work and study goals, parents would have their investment in the education of their children rewarded, and staff would have the satisfaction that their input had guided the students to a successful secondary educational conclusion. VCE success and smooth transition to post-school targets was the common goal of students, parents and teachers at Soton College, and the focus of school policy.

At the end of 1995 all stakeholders were to be rewarded. The Class of ’95 would successfully complete the VCE. All but six of them applied to enter tertiary education and only eight did not get the offer of a university or TAFE course place. This meant that one hundred and twelve members of the Class of ’95 (87.5 per cent) received an offer of a course place at university or TAFE in the year immediately after completing the VCE. The fourteen who, at the end of the VCE, chose work were also successful.

To the observer this appears to be a creditable performance. But the statistics mask the fact that some students did better than others and that both the pattern of academic achievement and the pattern of university or TAFE course offers were related to socio-economic background and gender. Family background was allied with achievement in all VCE subjects and particularly in English.
As we have seen, being in preparatory mathematics tended to be the prerogative of inheritors rather than newcomers. As well as being more likely to study preparatory mathematics, inheritors were also more likely to get better scores in the VCE. In the least challenging mathematics subject, Further Mathematics, where newcomers congregated and outnumbered inheritors by six to one, the median study score of inheritors was 16 per cent higher than that of newcomers.\(^{126}\)

Gender was also related to both achievement in VCE English and mathematics and participation in VCE mathematics. In the mandatory VCE English the average Soton College girl gained a better score than the average Soton College boy—although, as we shall see, where academic performance is measured by median study score it masks considerable diversity within the Class of ‘95. Boys outperformed girls in Specialist Mathematics but performed less well in Further Mathematics and Mathematical Method where the girls gained a better median score. But there had been greater self-selection amongst girls and one in every three had discontinued VCE mathematics, some as early as the commencement of the VCE.

Academic achievement alone did not determine the offer of a university place, although once established the patterns of academic achievement were then exacerbated in the determination of the Tertiary Entrance Rank (TER). How competitive a student was for a university course place depended on overall academic achievement and was distorted by the tertiary selection process. For this adjusted the normalised achievement of each student by the subject in which the achievement was gained and created a hierarchy of ranks from which university course selection officers could choose applicants. Competitiveness for scarce university and TAFE places varied on social and gender grounds because both achievement and the pattern of VCE subjects varied by the same factors of social background and gender.

The girls of the Class of ’95 did better than the boys but socio-economic background tended to generate larger achievement difference. The median TER of inheritors was far higher than that gained by newcomers. Even at the end of six years of education in

\(^{126}\) One third of newcomers chose Further Mathematics. It was the most popular choice of newcomers. In contrast the most popular choice of inheritors was Mathematical Methods (preparatory mathematics).
the same school sharing the same classes, teachers and school resources, socio-economic background and gender had an impact on academic outcomes for the graduating class of ‘95.

Inheritors and newcomers from non-professional white-collar backgrounds were to fare best in VCE English as they had done throughout secondary school. Inheritors were to be particularly successful. They both did and gained the high scores in preparatory VCE mathematics (Mathematical Methods). In this they were in the company of a handful of newcomers like Honour and Anthony. Amongst the Class of ’95 those newcomers from the families of unskilled manual workers or the daughters and sons of tradesmen did not fare as well in English. They were also less likely than their white-collar classmates to take Mathematical Methods or to score as well if they did.

Even at the start of their final year of the VCE, some of the Class of ’95 had already compromised their post-school university course options by taking a subject pathway that would not meet the demands of universities. As we have seen previously there were those amongst the Class of ’95 who had dropped mathematics or not studied preparatory mathematics. For this group, which was made up of a greater proportion of newcomers to inheritors and girls rather than boys, even a very high VCE achievement level was not going to provide access to the breadth of courses available to those who completed preparatory mathematics.

This chapter will follow the Class of ’95 through their VCE examinations and on to the next step in their educational pathway, which was the transition to university or TAFE courses or work.

**Success in VCE English**

A successful study of English was not only mandatory for the award of the VCE but an essential element of the Tertiary Entrance Rank (TER). A good score in English was fundamental to getting into university and TAFE courses. Since, in Australia, English was the language of instruction, a strong command of spoken and written English was of benefit in the study of any suite of VCE subjects a student might select. The Class of
’95 were good at English. On their way from Year 7 to Year 12, Soton College students had rarely failed English and in the VCE they were to show how well their command of the language had developed. The pattern of the success of the Class of ’95 in English is shown in Figure 41 below. The median study score in English was 33. Out of a maximum of 50 the median score of the Class of ’95 was three points (6 per cent) above the mean of 30 in VCE English. Over three quarters of the Class of ’95 gained a study score of the mean (30) or above in VCE English.\footnote{There were 99 students, or 77\% of the cohort, who gained a study score in English that was equal to or above the mean of 30.}

Figure 41: Distribution of English VCE scores for the Class of ‘95

![Figure 41: Distribution of English VCE scores for the Class of ‘95](image)

Number of students = 128

Such a success in VCE English was a commendable outcome but social groups were not equally represented amongst the more successful students. Inheritors were more likely to gain a study score in the top 15 per cent of the state than they were to gain one which placed them below the subject mean. In contrast, the children of unskilled manual workers were more likely to find themselves achieving a study score in VCE
English that was below the mean than to gain one that placed them in the top performing 15 per cent of VCE English students. In fact only Alice and Mia, both the children of unskilled workers, achieved this distinction.

The proportion of students who gained study scores in VCE English that were at least 30 (average) and less than 38, which marked the upper limit of “average” performance, was remarkably similar despite social background. This can be seen in Figure 42.

The difference of 3 per cent between the proportion of inheritors with a middle range of scores and the proportion of children of unskilled manual workers is slight. But this difference is not reflected in the proportion of children of unskilled manual workers who gained a below average study score. This proportion was almost three times that of inheritors who gained the same range of scores. Similarly at the other end of the scale the proportion of inheritors with English study scores that placed them amongst the elite students of English in the state was almost three times that of the daughters of unskilled manual workers—there were no sons in this category.

Figure 42: Distribution of study scores in VCE English by social group

Number of students = 128
At Soton College students of English were not selected. The Class of ’95 had shared English classes and English teachers from the time they had commenced secondary school. All had experienced the same English program, the same assessment devices and the same school experience, and yet social background and gender still differentiated achievement in the VCE as it had in the first semester of secondary school. In six years Soton College had not been able to rectify this issue.

From the Class of ’95 twenty-one girls and eight boys gained a study score in VCE English that placed them in the rarefied atmosphere of elite achievement. This group was equivalent to 22 per cent of the Class of ’95 and comprised 29 per cent of girls but only 14 per cent of boys. There was a similar distinction between the achievement of inheritors and newcomers. The elite group of English students from the Class of ’95 comprised eight or 32 per cent of inheritors, compared with twenty-one or 25 per cent of newcomers. But boys and newcomers fell even more by the wayside as the VCE English scores increased in excellence. Scores of 40 and above were printed in the daily press. Fifteen English students from the Class of ’95 had their names published. There were eleven girls and only four boys in this group. Excellence was achieved by 20 per cent of inheritors and only half that proportion of newcomers.

Since 22 per cent of the Class of ’95 were placed amongst the highest achieving 15 per cent of the VCE English candidates in Victoria, which is a creditable performance, it is difficult to see that the achievement was also unevenly divided according to social background (see the illustration in Figure 43).
The English Faculty at Soton College had worked hard at addressing the needs of boys in English but needs based on social background were not as easily identifiable.

The only manipulation of class structure over the years at Soton College had been to, where possible, balance gender. There had been no attempt ever made to stream English. Even in the VCE where subject choice could concentrate students with certain academic interests into a specific English group, class lists show a considerable spread of academically gifted and average students so that classes can be accurately described as of mixed ability. Yet VCE English achievement was stratified according to social background and gender. Shared experiences in the subject did not produce the same outcomes.

The influence of social background and gender was not only felt in the area of high achievement; it was also felt at lower levels of achievement.
At the lower end of the scale, where achievement was below average, boys from the Class of ’95 dominated the group. There were twenty or 36 per cent of boys and only nine or 13 per cent of girls. The size of this low achieving group was significant at 22 per cent of the cohort.

The comparison of both the upper and lower ends of the achievement scale produces a stark contrast between the academic performance of Soton College girls and boys and is illustrated in Figure 44. This illustration shows that boys were three times more likely than girls to perform badly in VCE English and only half as likely to perform at an elite level of excellence.

Figure 44: Comparison of high and low levels of achievement in VCE English amongst the boys and girls of the Class of ’95

Reading the chart: At the low end of the achievement scale three times the proportion of boys to girls were represented. At the highest end of the achievement scale the proportion of girls was over double that of boys.
Despite a similar median study score, 34 for girls and 33 for boys, Soton College girls were far better than Soton College boys at English. This is seen more clearly in the chart shown in Figure 45. None of the girls were placed in the lowest scoring level which was below 23.

![Figure 45: Pattern of VCE achievement in English by gender](chart)

It is hard to find reasons for the difference in the performance levels of inheritors and newcomers as well as boys and girls from the Class of ’95. The boys and newcomers who remained to complete the VCE at Soton College could be considered to be better at English than those who had left before completion. There had been a higher incidence of self-selection amongst boys and newcomers than there had been amongst girls and inheritors. Many of those who left school for work before completing the VCE had a history of poor performance in English. It could be expected then that those boys and newcomers who stayed on to complete the VCE would be more able in English than those who left. Even so the difference in academic achievement between boys and girls and inheritors and newcomers was very high indeed.
Relationship between post-school options and VCE English achievement

Achievement in VCE English directly affected competitiveness for access to university and TAFE courses. The determination of the TER required the mandatory inclusion of the adjusted VCE English study score in the calculation. The better the scaled study score of English, then the better the contribution to the TER and improved competitiveness in accessing university and TAFE courses. Since ninety-nine of the one hundred and twenty-eight students in the Class of ’95 gained a VCE English study score of average—which was 30, the mean set by the Board of Studies—or above in English, it can be said that the majority of the Class of ’95 benefited from their achievement.

Unfortunately this was not a position repeated in VCE mathematics.

Achievement in VCE preparatory mathematics

In the previous chapter we saw that amongst the Class of ’95 the largest proportion of students, regardless of social background, chose to study preparatory mathematics in their final year of the VCE. Sixteen or 64 per cent of inheritors chose at least preparatory mathematics compared with a significant but lower proportion of newcomers of whom thirty-eight or 37 per cent studied preparatory mathematics. Only five students or 22 per cent of inheritors chose Further Mathematics, which was a less challenging VCE mathematics subject than Mathematical Methods (preparatory mathematics). A more significant third of newcomers, however, chose Further Mathematics.

There were no gender based differences in the popularity of preparatory mathematics with the Class of ’95. Equal proportions of boys and girls chose preparatory mathematics. But there was a significant difference between the proportion of boys taking Further Mathematics and that of girls. Over a third of boys completed Further Mathematics compared with only a quarter of girls. Girls were more likely to drop mathematics than to take the less challenging VCE mathematics.
Studying a mathematics subject was one thing; achieving a satisfactory study score was another. All students passed the VCE mathematics subject they selected in their final year but many of the study scores were disappointing, and again there was a noticeable social division in this achievement regardless of the mathematics subject in which the achievement occurred.

**Family background**

The daughters and sons of blue-collar workers were both poorly represented in preparatory mathematics and more likely to gain a study score below the subject mean of 30 than were their classmates from a white-collar social background. Only four girls, and none of the boys, from the homes of unskilled manual workers took Mathematical Methods. Each of the girls gained a study score in this subject that was below the mean of 30.

Focusing on these four girls is important. Their past experience in mathematics had been positive. They had all been in the higher levels of Year 10 mathematics and successful in Mathematical Methods in the first year of the VCE. Yet their achievement in the final year of the VCE was disappointing. The question of appropriate choice of subjects arises. Certainly each of the girls achieved a higher study score in other subjects, but their persistence with Mathematical Methods did benefit each. Firstly successful completion of the subject increased their choices of university and TAFE courses, and secondly the adjustments made to study scores in the determination of the TER were about to increase their measured achievement by more than 14 per cent.\(^{128}\)

In the determination of the TER, the adjusted study score in Mathematical Methods for each of the girls was to be amongst the three highest adjusted study scores of their five VCE subjects.

Given that each of these girls accessed a university course high on their preference list, the strategy was worthwhile.

\(^{128}\) In 1995 the actual adjustment made to each subject was not disclosed. TER adjustments have been determined by using the published data provided by VTAC to each student through the press. These data show that each study score for this small group of girls was increased by at least 7 or 14% of the maximum study score of 50.
The mathematical provenance of all of the Class of ’95 who chose Mathematical Methods (preparatory mathematics) in the final year of schooling was the same. In Year 10 all of these students had been in the highest mathematics groups. And yet when it came to assessment very few of the fifty-four students of preparatory mathematics scored the mean of 30 or above. In fact there were eight or 50 per cent of inheritors and twenty-three or 61 per cent of newcomers who failed to reach the mean study score in Mathematical Methods. This is seen in Figure 46.
Number of students = 54 Reading the chart: Inheritors made up a little less than a third of the class of preparatory mathematics and newcomers made up over two thirds. The size of the representation by social group is shown on the above chart by the red lines. Each bar represents the proportion from each of the social groups which gained the range of scores shown. The mean of 30 was established in the globalisation of scores by the Board of Studies which administers the VCE. Inheritors were far more likely than newcomers to gain study scores of average or above. Newcomers were far more likely than inheritors to gain study scores which were below average.

Of the thirty-eight newcomers who chose preparatory mathematics only fifteen or 39 per cent gained a study score of 30 or above. By contrast, of the sixteen inheritors who undertook the same mathematical journey, eight (50 per cent) had gained a study score of 30 or above. How could this be so? These students had shared the mathematics journey. Most had been in the same classrooms as each other since the commencement of the hierarchical mathematics structure in Year 9. Yet even after self-selection
through choice of mathematics subject, a significantly greater proportion of newcomers than inheritors had failed to benefit as much from Mathematical Methods.

The distinction between the achievement pattern of inheritors and that of newcomers is so strong amongst the Class of '95 that it is easy to conclude that social background does influence not only the choice of mathematics subjects to be studied but also the level of achievement in it. Bourdieu and later Lareau (2000: p9 and pp 116-118) would argue that this outcome reflected the ability of families to give support, either through the personal experience of parents or through their social networks. The parents of the inheritors had attended high school. They either knew mathematics or knew someone in their social network who did. The families of newcomers were more likely to have a limited knowledge of mathematics and limited access to those who had had experience in mathematics.

But was this the experience of all families of newcomers? Surely parents working in non-professional white collar work would have had significant contact with mathematics in their passage through school. These were families where the time spent in schooling was usually greater than that of blue-collar workers so surely the mathematical experience of these parents would be greater? On the whole these white-collar workers, though not completing a university degree, had in many cases finished school and it was likely that many had done mathematics to Year 11 and even Year 12.

Closer examination of the achievement patterns of newcomers in preparatory mathematics shows that the daughters and sons of non-professional white-collar workers achieved nearly as well as inheritors in this subject. In Figure 47 below we see that it was the children of blue-collar workers whose achievement in preparatory mathematics was the poorest.

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129 The differences between inheritors and children form the families of non-professional white-collar workers was quite small. Whilst 50% of inheritors achieved a study score of the mean or above 46% of students from non-professional white-collar families achieved the same distinction in Mathematical Methods.
Figure 47: Pattern of achievement by newcomers in preparatory mathematics

Number of newcomers = 38. **Reading the chart:** The share of preparatory mathematics declined as social subgroup moved from the high end of socio-economic background (non-professional white-collar workers) to the low end (unskilled workers). At the high end of newcomers achievement 44% of the daughters and sons of non-professional white-collar workers too preparatory mathematics and almost half were placed amongst the ranks of high achievers in the subject. Children from a trade background were much less likely to take preparatory mathematics (19%) and most achieved poorly in the subject. Far fewer children of unskilled workers took the subject and all achieved poorly.

The success of the Class of ’95 in this level of mathematics is extremely poor when compared with that in English. There were some students who did well. For instance newcomers Anthony and Honour and inheritors Will and Dean all gained scores in preparatory mathematics that placed them amongst the highest achieving 15 per cent of the state.

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But whereas only 8 per cent of students of preparatory mathematics were placed in the highest achieving 15 per cent of the state, 22 per cent of English students from the Class of '95 gained the same outstanding scores. The Class of '95 were obviously better at English than at preparatory mathematics.

Although Further Mathematics was not as accepted by university courses as preparatory mathematics there were some advantages of taking the subject. We have already seen that inheritors avoided this subject, giving preferences to preparatory mathematics, but Further Mathematics was popular newcomers and forty of them, that is 86 per cent of the Class of '95 and four times the proportion of inheritors, took this subject.

**Gender**

There was a far less obvious difference in the performance of boys and girls in Mathematical Methods then there had been between inheritors and newcomers. Boys did outperform girls but not by a great deal (see Figure 48).

There were fourteen boys (56 per cent) and seventeen girls (59 per cent) who gained below average study scores in Mathematical Methods. The balance of students, which was 44 per cent of boys and 41 per cent of girls, achieved a study score of average or above. Amongst these were the four elite students who gained a study score that placed them amongst the top 15 per cent of the state.

This small elite group, all of whom also studied the most challenging Specialist Mathematics, comprised three boys—Anthony, Will and Dean—and a girl, Honour. The academic performance in all subject areas of each of these four students was outstanding and in Mathematical Methods their scores ranged from Anthony’s 38 to Will’s 44.

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130 Whereas 50% of inheritors and only 39% of newcomers achieved average or above study scores, 49% of boys and 41% of girls were to achieve the same.

131 The maximum possible study score was 50.
Reading the chart: Girls were more likely than boys to take Mathematical Methods or preparatory mathematics (54% of them did so) but their achievement was slightly lower than that of boys. Even where their achievement was above average, it was less likely to be in the elite scoring range (that is amongst the top 15% of students in the state).

Not only had a smaller proportion of girls to boys selected Mathematical Methods but their performance had also been marginally less good than that of boys. But the decision was warranted. In the case of all but two of the poor performing boys and girls the choice was beneficial.

Not only did the successful completion of Mathematical Methods open more doors into university courses but for 86 per cent of the boys and 88 per cent of the girls from this group the adjusted study score used in the determination of the TER was at least fourth highest. This meant that the adjusted study score was included in the primary four
study scores TER of the calculation therefore improving the competitiveness of each of these students for university course places regardless of the paucity of their actual study score in Mathematical Methods.

Positive adjustment of the Mathematical Methods score in the determination of rank order for the TER was experienced by all Soton College Mathematical Methods students, regardless of their actual study score. ¹³²

Mathematical Methods served those who took the subject well. It provided the pathway to more university courses and even a low achievement level was positively adjusted in the determination of the TER. Further Mathematics provided a reward that was second best.

As we will see below, success in Further Mathematics still limited the number of university courses that could be accessed. Even at the highest end of the achievement scale, a perfect score of 50, TER adjustment still favoured the Mathematical Methods student by positively adjusting the perfect score of 50 to 51 in 1995. This did not happen in Further Mathematics.

**Year 10 origins of those from the Class of ’95 who chose preparatory mathematics**

Regardless of whether they were inheritors or newcomers those from the cohort who took preparatory mathematics in their VCE had been in the two highest tiers of mathematics in the Year 10 hierarchy. Almost three-quarters of them (74 per cent) had come from Level 1, which was the highest, and it was this group of students who gained the highest VCE scores.

The disposition of these students across Years 10 and in the final year of the VCE is seen in Figure 49.

¹³² Study scores less than 20 were reported as less than 20. The maximum possible study score was 50.
Figure 49: Prior school experience in mathematics of the members of the Class of ’95 who chose preparatory mathematics (Mathematical Methods) in the VCE

Number of students = 54. Reading the chart: The clear boxes on the left show the proportion of students who took preparatory mathematics and the mathematics level in the Year 10 hierarchy in which they were placed in Year 10. The coloured boxes on the right show the final VCE scores in Mathematical Methods (preparatory mathematics) for the students from each of the Year 10 levels. The highest possible score in Mathematical Methods was 50 and the lowest reported score was 20 whilst the subject mean was 30.

Only one student of the fourteen who had come to preparatory mathematics from the second highest level of Year 10 mathematics reached the mean score of the study which was 30. More than half (55 per cent) of the students from the highest level of Year 10 mathematics gained a VCE study score in Mathematical Methods (preparatory
mathematics) that was of the mean of 30 or higher. It would seem that students from the highest Year 10 groups were the best able and possibly the best prepared for preparatory mathematics. Even so, despite the disappointing results for many of the students, the fact that success in Mathematical Methods opened up a number of university options and the TER rewarded all achievement of the subject meant that all those who took the subject benefited from including it in their VCE choices.

Easy mathematics: the experience in Further Mathematics

Social background

Inheritors were also successful in the easier VCE subject, Further Mathematics. None of the members of the two lowest groups of Year 10 mathematics studied Mathematical Methods in their final VCE year. Only seven inheritors chose Further Mathematics and all achieved study scores above the mean of 30. Newcomers were not as successful but over half did well.

If we refer to Figure 50, then compared with their share of Further Mathematics the achievement of inheritors from the Class of ’95 was outstanding. Not only did all achieve a score in the subject that was above the mean but over five times the expected proportion (57 per cent) gained elite study scores that placed them amongst the highest scoring 15 per cent of the state.

Most newcomers also did well, although not as well as inheritors. Not only did 60 per cent of newcomers gain scores of the average (30) or above but 15 per cent gained a study score that placed them among the state’s elite 15 per cent of students of Further Mathematics. Even at the elite level there was a far higher proportion of inheritors than newcomers and Simone, the highest scoring student of Further Mathematics, was an inheritor.
Reading chart: Inheritors did very well in Further Mathematics. None of them scored below the subject average of 30 and more than half of them (57%) achieved an elite score. Newcomers on the other hand used the full range of scores and although more than half (60%) achieved a score above average the large majority of these scores were between 30 and one standard deviation (37) There was a significant number (40% of poor scores amongst newcomers also.

The lower end of the achievement scale was dominated by newcomers. There were no inheritors at this end of the scale but sixteen or 40 per cent of newcomers gained study scores lower than the mean. Most of these students were low achievers in English and in their other VCE subjects as well. They gained a TER well below the Median TER of the Class of ’95 and their median aggregate study score was also below the class average. None of these students had taken more than the normal five VCE subjects and all had gained an aggregate study score below the average study score of the Class of ’95, which was 134.70. Ten of the thirteen were boys.
The newcomers who gained lower than average study scores in Further Mathematics were low achieving students regardless of which VCE subjects they had studied. Despite this they had persisted with study in mathematics and successfully passed the VCE. For most, the positive self-concept in mathematics had been justified, because their performance in Further Mathematics was better than that in at least one other VCE subject they had chosen.

In the next chapter we will see that their self-confidence was rewarded. All but one of the eleven of these students who applied for entry to a tertiary course in the year following their VCE gained a place.

**Gender**

Further Mathematics was more popular with boys than girls. Twenty-seven boys and twenty girls made up the Further Mathematics classes in 1995, which meant that boys’ share of Further Mathematics was 57 per cent compared with a share of 43 per cent for girls. Despite the smaller share of Further Mathematics, girls were less likely than boys to gain a study score below the mean of 30 but they were also much less likely to achieve a study score that would place them amongst the highest achieving 15 per cent of students in the state. This is shown in Figure 51.
The achievement of boys in Further Mathematics was spread across the full achievement spectrum but most girls (60 per cent) gained study scores between the mean of 30 and 37.

**Prior experience in mathematics**

Not surprisingly the highest achieving students of Further Mathematics had been in the highest levels of Year 10 mathematics but unlike the students who studied Mathematical Methods some of those successful in Further Mathematics had been in the lower levels of Year 10 mathematics. Ten of the forty-seven students, just over a fifth of the group, who took Further Mathematics had studied Year 10 mathematics in levels 3 and 4 and therefore had come to VCE mathematics from a different background of mathematics to those from levels 1 and 2.\textsuperscript{133} Prior to undertaking

\textsuperscript{133} It will be remembered that the curriculum of levels 1 and 2 of Year 10 mathematics differed from the curriculum of each of the two lower levels of Year 10 mathematics i.e. levels 3 and 4.
Further Mathematics the three students, all boys, who scored below twenty had all displayed poor levels of achievement in Years 7 and 8 and from Year 9 had studied a modified version of the curriculum.

The hierarchy of achievement in Further Mathematics reflected the Year 10 experience of the students. This is shown in the tree diagram seen in Figure 52.
Figure 52: Level of achievement in Year 10 mathematics matched to level of achievement in Further Mathematics, the least challenging of VCE maths subjects.

The lowest performing group, where there were two newcomers (both boys), were all from the lowest level of Year 10 mathematics. At the other end of achievement, only students from the two highest levels of Year 10 mathematics achieved a study score...
that placed them amongst the highest 15 per cent of achievers in this subject in the state. Of the seven boys and three girls in this elite group, only one, Larry, was from a blue-collar background. Of the remaining students four were inheritors and five were the daughters and sons of non-professional white-collar workers.

Of course the academic performance discussed above relates to the real achievement of each student. It has been measured by the study score achieved by each of the students of Further Mathematics. Further Mathematics was the least challenging of the VCE mathematics subjects. In the determination of the TER all study scores less than the maximum of 50 in Further Mathematics were adjusted downwards. Since the highest study score in Further Mathematics was 45 (gained by inheritor Simone) the study scores of all Soton College students of Further Mathematics were adjusted downwards. Even so, thirty-eight students taking Further Mathematics, which was 81 per cent of the class, gained an adjusted study score in Further Mathematics that ranked it amongst the four highest scoring subjects counted in the TER for each of them.

All the students who chose Further Mathematics also chose at least one other subject that was adjusted down in the determination of the TER. This factor, combined with the fact that successful completion of only Further Mathematics reduced the number of available university courses, meant that students of Further Mathematics were not as well positioned for tertiary selection as their classmates who studied Mathematical Methods.

The average Soton College students achieved an above average aggregate study score. Given that the average VCE students took five subjects and by definition gained the average study score of 30 in each, then their achievement measured by aggregating the study scores of each final year VCE subject should be 150. This figure is below the achievement of the average student of Soton College who was from an unskilled worker’s family and this group of newcomers gained the lowest median study score of all Soton College social groups. Both the average boy and the average girl also gained a study score above that of the other average boys and girls in the state.
Although Soton College had failed to bridge the distances between achievement by inheritors and newcomers, and by boys and of girls, it had supported the achievement of an above average aggregate study score for all students in the Class of ‘95.

Discussion

All those from the Class of ’95 who studied a VCE mathematics subject passed it. There were some outstanding results but they were achieved by a very small group dominated by inheritors. As the difficulty of the mathematics subject increased, the proportion of newcomers who gained above average scores declined, whereas that of inheritors increased. At the peak of mathematics challenge—Specialist Mathematics—the proportion of inheritors taking the subject and gaining a score of the mean of 30 or above was twice that of newcomers. Clearly achievement in mathematics was still divided by social class amongst the Class of ’95 even six years after they commenced at Soton College.

The achievement of boys differed from that of girls as well. In preparatory mathematics boys did far better than girls and in Further Mathematics they widened this distance again with almost twice the proportion of boys to girls scoring above the mean of 30. Girls had not done as well as boys in VCE mathematics despite being more prepared to take the risk of preparatory mathematics. As they had in Year 9, the point at which the hierarchical structure of mathematics was introduced at Soton College, girls had lost ground compared with boys. It would appear that the boys from the Class of ’95 have adapted better to the pressures of learning environments that are competitive and highly paced and that the girls from the Class of ’95 found it harder to do so. This is a phenomenon identified by Boaler (1997) in her work on gender and learning in mathematics. Boaler found that where mathematics was highly structured and highly paced, even very competent girls did not respond as well as boys (1997: p151) to the environment.

Another reason for the difference in performance could be that illustrated by Kitty. It was mentioned above that Kitty did not see mathematics as anything other than a tool for her greater interest in science. She needed preparatory mathematics and she
completed the subject successfully and competently but probably not with great interest
and certainly her grades did not reflect her capabilities. Kitty focused on her university
subject and her main interest in Biology, for which she gained a perfect score. In order
to focus like this on her strengths and interests she put in “just enough” time in
preparatory mathematics and the strategy worked.

Kitty’s actions probably reflected those of other students, particularly the large number
of girls who appear to have taken preparatory mathematics to be prudent and cover the
demands of their university course goals. Boys on the other hand took mathematics
because it provided them with a subject they had been able to pass and Boaler (1997)
would argue that the structure of the discipline and the way in which it was taught
suited them. At Soton College the attitude of at least competent boys in mathematics is
reflected by the seven who chose two mathematics subjects in the VCE because
mathematics interested them but chose preparatory mathematics and the less
challenging Further Mathematics rather than the most challenging Specialist
Mathematics. The combination of preparatory mathematics and Further Mathematics
was less academically demanding and in terms of subject scores should offer a good
return on the investment of time put into its study. It is unfortunate that this group was
to have their efforts in Further Mathematics discounted in the determination of the
TER. Only one girl took this pathway and her excellent Further Mathematics results
suffered the same fate.

Some of the students in VCE mathematics were still trying to keep up with those who
had moved ahead of them during the earlier years of mathematics. For these students
mathematics was also an essential tool demanded for entry to the university course of
their choice. Although few students of even the lowest level of VCE mathematics had
come from the lowest achievement levels of the Year 9 and 10 hierarchies, many from
the Class of ’95 found that the promise of Year 10 had not developed into successful
achievement in the VCE mathematics subject they studied. This was particularly true
of those who chose preparatory mathematics where overall achievement was at a low
level and more than half gained a score below the subject mean of 30.
Self-confidence in mathematics obviously fuelled choice of the subject in the VCE years. Past experience supported the choice and heartened those who found that they had to study a VCE mathematics subject in order to access the university course of their choice. But it also acted against taking a chance and caused a third of the Class of 95 to drop mathematics in the VCE, and alerted those still in need of a pass in mathematics for their course aspirations that they might need to put an increased effort into mathematics in the future if they were to achieve their aims. The negative side of mathematics confidence affected girls in particular and it is here that Boaler’s (1997) argument that girls walked away from the structure and pattern of teaching in mathematics appears to be relevant to the girls of the Class of 95.

Mathematics was not mandatory in the VCE. There were other options for the Class of 95 and girls, in particular, took them rather than do mathematics. On the other hand English was mandatory and in 1995 there was no way in which the subject could be avoided. The Class of 95 did well in VCE English. Few scored below the study mean of 30 and 22 per cent were placed amongst the highest achieving 15 per cent of VCE English candidates in the state.

There were no internal barriers to divide classes in English at Soton College into those for the able and those in need of extra help. From Year 7 to the end of Year 12 all English classes were of mixed ability. There was extra help available and this help was accessed by students of the Class of 95 with some success.

The impressive scores of more than three-quarters of the Class of 95 in VCE English were not influenced by selection practices in anyway. For these students the promise of Year 7 was rewarded with success and considerable success at that. But despite this outstanding result, social and gender differences in achievement continued. The quarter of the Class of 95 who did not achieve the same success as the larger group was largely made up of boys and newcomers. The gender imbalance amongst poor performers from the Class of 95 was particularly severe with three times the proportion of boys to girls being represented. In contrast twice the number of newcomers to inheritors were represented in this poor performance group.
There had been a high level of self-selection amongst boys from the Class of '95, which should have reduced the proportion of poor performing boys in VCE English but poor performance persisted. What this meant was that newcomer boys did not perform well in VCE English. Inheritor boys who had suffered far less attrition were also far less likely to under perform in VCE English at Soton College.

Regardless of whether the achievement was in VCE English or VCE mathematics, amongst the Class of '95, inheritors would achieve better than newcomers and girls, would choose preparatory mathematics rather than the lower VCE mathematics. Boys, however, chose the latter more than the former and usually performed better in mathematics than girls regardless of the type of mathematics subject selected.
CHAPTER 13

Success in the VCE

Soton College students performed well in most VCE subjects. They gained a median study score higher than the state average in almost two-thirds (63 per cent) of the VCE subjects studied including English. But within subjects inheritors were more inclined to display a higher level of achievement than newcomers. In the case of seventeen of the twenty-seven VCE subjects completed by the Class of '95, the median study score gained by inheritors was greater than that gained by newcomers.

Indeed, as the importance of the subject in determining the TER increased so too did the interest in the subject by inheritors and to a lesser extent girls.

This pattern based on social background has already been discussed previously but here it needs to be considered in light of the achievement of the students of Soton College.

The VCE

The VCE marked a new phase in the educational life of Soton College students. The transition was marked by ritual and clearly understood outcomes. This new phase brought with it new challenges for all stakeholders.

For all Soton College students the stakes were high. Not only was competition for all university courses strong but for the Class of '95 the most accessible of these universities was a metropolitan university, the courses of which were greatly sought after. Competition to gain a place in courses at this university was very fierce.\(^{134}\) For the students the certainty of moving from one year level to the next was replaced with the uncertainty of the future. The certainty of leaving Soton College at the end of Year 12 for the Class of '95 was offset by the uncertainty of the destination. Only the

\(^{134}\) In their investigation of school outcomes for the educational region in which Soton College was situated, Teese and Polesel noted that not only did students in the region display a low university application rate but that they had a low rate of success from their applications (1993: p 29).
twenty-five inheritors were following in their parent’s footsteps to university. But whereas inheritors were following their parents into university, newcomers who chose a university course, and most did, were breaking new ground. For them family experience with university could only have been gained through older siblings.\textsuperscript{135}

Relentlessly the Class of ’95 walked the pathway they had defined for themselves towards their destiny. The last two years of their school experience were full of uncertainty about their post-school future. But it did provide time in which to test their subject choice and make sure that they were comfortable with the choices each had made. In most cases changes made to subjects studied in the first year of the VCE were minor. Only a few, such as Blake, changed multiple VCE subjects. Blake was very unsure of what he wanted to do when he completed his VCE and changed three of his first year VCE subjects in his second year. In the first year of VCE Blake focused on business subjects and in his second year he chose a variety of subjects including environmental studies.\textsuperscript{136}

The change most commonly made was to mathematics and with the exception of a small number of students this change was always to a less challenging mathematics subject. Cecilia and Dean, for example, both chose to move up the mathematics hierarchy. Cecilia, who completed General Mathematics—Business, a terminal first year VCE subject, chose Further Mathematics for her final year of the VCE and was successful in it. Dean added Specialist Mathematics to the Mathematical Methods he studied in the first year of the VCE and was also successful.

By the end of Year 12 the Class of ’95, although anxious about post-school outcomes, had some of their fears allayed. Past experience of Year 12 students had been positive and most students of Students of Soton College did not fail the VCE and most of the students who wanted to, went to university or TAFE. The great uncertainties still lurking were about (a) how well each student would go in the final assessment, and (b) how accessible the university offering a place would be. These unknowns had also

\textsuperscript{135} There were twenty-four newcomers (23\%) who had older siblings at university. All but one of the older siblings of inheritors were at university.

\textsuperscript{136} At the time data were collected for this work Blake owned a small business in the environmental tourism industry. This was an outcome compatible with Blake’s diverse VCE subject interests.
existed at the beginning of their VCE but when at the end of the first year of VCE of the Class of ’95 the Tertiary Entrance Rank was introduced as a university course selection process, its newness and its complex process increased the uncertainty of students. Uncertainty took on a new dimension – that of reaching the TER needed to enter a chosen post-school university or TAFE course.

The Class of ’95 were by the end of Year 11 largely locked into their VCE pathway and therefore were not able to easily adjust their VCE subjects to fully utilise the new system. Some did by taking on a more challenging subject that was to be scaled upwards in the determination of the TER, but most simply tried to do their best in the subjects they had already selected.

Pathways and strategies for success

Students chose individual pathways through the VCE. The study of English was mandatory for the award of the VCE, the study of a religious subject was mandatory at Soton College, and at least one mathematics subject was selected by almost three-quarters (73 per cent) of the VCE students. Choice of other VCE subjects varied. Human Development and Society—Home Economics was popular with girls, as was Biology while Materials and Technology—Wood and Physics were popular with boys. Inheritors eschewed Studio Arts and embraced Chemistry. Newcomers chose Australian History but were cautious in their selection of the challenging Texts and Traditions.

We have already seen that there were also clear differences between the subject selection strategies followed by boys and girls. Boys who were competent at mathematics chose the combination of Further Mathematics and Mathematical Methods or the combination of Specialist Mathematics and Mathematical Methods.

The subjects in which study scores were adjusted upward were dominated by the more challenging mathematics studies, physical sciences and languages other than English. These were all subjects which benefited from sequential study over a period of years. If any of these subjects had been dropped for the first year of the VCE then taking them up again at the final year, although normally possible under VCE rules, would place a heavy study burden on the student. Repeating a year of study could also be detrimental. At Soton College the challenging Texts and Traditions was introduced. A humanities study this proved to be of interest to all students regardless of preferred discipline but usually had to be taken as a sixth subject for the VCE which meant a considerable amount of extra work for the students concerned.
Girls, fewer of whom appeared to have either interest in mathematics or sufficient self-confidence in it, ignored the Further Mathematics and Mathematical Methods combination and instead chose the most challenging Specialist Mathematics and Mathematical Methods at the same rate as the boys. In a strategy used to maximise competitiveness for university, inheritors and girls chose six VCE subjects. Newcomers and boys usually chose fewer VCE subjects.

As the Class of ’95 sat in their first VCE examination in 1995, inheritors and girls were well placed to gain a Tertiary Entrance Rank (TER) that was competitive enough to enter a university course. Newcomers and boys were not so well placed. The last steps along the educational pathway to university were the hardest and comprised jumping two hurdles at once. The first hurdle, which was both lower and visible, was achievement. This hurdle was cleared through accumulated academic experience and should have been easily accessible for all regardless of social background and gender. But as this work has already shown it was not.

The second hurdle was invisible. It was higher and 1995 was only the second year of its existence. This blurred its height and made it difficult to anticipate. It was the Tertiary Entrance Rank, the rank needed to access university and TAFE courses, and it overtly reflected achievement but covertly modified level of achievement by the nature of the subject in which it was gained. Amongst the Class of ’95, inheritors and boys were about to benefit from their subject choice more than newcomers and girls. This chapter is a commentary on how well the Class of ’95 cleared the first hurdle—for none failed to do so—and the consequences of stumbling or just clearing the second hurdle, and who flew over both hurdles without difficulty.

The outcome

Everyone in the Class of ’95 succeeded in getting their VCE. Not everyone gained a university or TAFE place as a result and not everyone applied for one. All but six students, one inheritor and five newcomers, did. Three girls, Collette, Joyce and Maxine, and three boys, George, Fintan and Aaron, chose work immediately after completing the VCE and did not apply for further study of any kind through the
selection process. In 1995, this meant that they did not receive a TER. At that time only students who applied to enter university or TAFE courses accessed through the VTAC system were ranked for selection purposes and given a TER. This was later changed.

Although these six students chose to enter work at the completion of the VCE, they chose work with some form of training and in all cases some of this training was through the TAFE system. Joyce, Maxine and Aaron all chose apprenticeships. Collette and Fintan chose work with related training although Fintan had a short time in TAFE building on his VET Certificate in Automotive. George went into a computing course offered by a private provider and later was to follow this through with TAFE courses.

Not everybody who applied for a tertiary place was successful. There were eight Soton College students, three boys and five girls, who applied for TAFE or university course entry through the VTAC system but did not receive the offer of a place. All but one of these students were newcomers. Only Louis from this group subsequently undertook an apprenticeship. Lydia and Sam did continue with study—Lydia through a private provider and Sam through the TAFE system after negotiating a place after the conclusion of the tertiary offer period. The remaining five students entered the workplace in the year after completing school.

The majority of Soton College students (114) both applied to courses in university or TAFE and received the offer of a place in that course. Eighty-nine students successfully entered university courses and twenty-five entered TAFE courses in the year after they completed the VCE.

Not all the Class of '95 achieved their goal directly and without compromise. For those who unsuccessfully applied for entry to university or TAFE the disappointment is obvious, but for many who finally took up a course in either university or TAFE there was a need to adjust and usually to compromise over the preferred choice of course. Although all successfully completed the VCE hurdle race to tertiary study, some did not clear the hurdles by enough to be placed amongst the successful competitors.
The first hurdle—gaining the score in the VCE subjects

The maximum score for each VCE subject was 50. A mean of 30 and a standard deviation of plus or minus 7 were set by the Board of Studies for each subject. Candidates’ scores were then normalised around the mean.

The Board of Studies did not place an upper limit on the number of VCE subjects each candidate could study. But for the purpose of determining the TER, the tertiary selection process limited the number of adjusted scores that could be included in the calculation to six VCE subjects. This regulation curbed the number of subjects selected and at Soton College only one student chose more than six VCE subjects in his final year. If a student chose to study the maximum number of VCE subjects that contributed to the TER, which was six, they placed themselves in the position of maximising their TER depending on their adjusted VCE results. Choosing six subjects could be a good strategy for increasing competitiveness. It was also a lot of extra work.

There were some outstanding scores amongst the Class of ’95, but like achievement in the classroom from Year 7 to Year 10, VCE achievement was higher for inheritors than newcomers and for girls than boys. In almost all subjects in which inheritors participated the median score they gained was higher than that gained by newcomers.

Inheritors were also more likely to study more than the five VCE subjects (including English), the most common load throughout Victoria was five VCE subjects.

In Table 15: VCE aggregate achievement measured by median and social background, students have been grouped by both socio-economic background and the number of VCE subjects they studied. Most students in Victoria chose five VCE subjects including English. This too was the pattern at Soton College where ninety-seven students (76 per cent) from the Class of ’95 chose to study five VCE subjects. It was usual for the more competent students to select more than five VCE subjects and this is reflected in the same table. It can be seen that as the number of VCE subjects studied increased so also did the median score. Inheritors achieved a higher median score than newcomers regardless of the number of subjects.
Table 15: VCE aggregate achievement measured by median and social background

<table>
<thead>
<tr>
<th>Number of VCE subjects studied including English</th>
<th>Inheritors (25)</th>
<th>Newcomers (103)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Median</td>
<td>Median</td>
</tr>
<tr>
<td>Four subjects</td>
<td>-</td>
<td>90</td>
</tr>
<tr>
<td>(N = 3 newcomers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five subjects</td>
<td>167.5</td>
<td>158</td>
</tr>
<tr>
<td>(N = 18 inheritors and 79 newcomers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six subjects</td>
<td>195.5</td>
<td>191</td>
</tr>
<tr>
<td>(N = 6 inheritors and 21 newcomers)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seven subjects</td>
<td>212.0</td>
<td>-</td>
</tr>
<tr>
<td>(N = 1 inheritor)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Declining socio-economic status and declining achievement

**NB:** Number of students = 128

It is important to note that in Table 9 above none of the inheritors from the Class of ‘95 took fewer than five VCE subjects. It is also evident that as socio-economic status declined so too did achievement when measured by median score, and inheritors gained a higher median score than newcomers.
Table 15: VCE aggregate achievement measured by median and social background shows that amongst the newcomers from the Class of ’95, the VCE results of the children of non-professional white-collar workers were considerably better than those of children from a blue-collar socio-economic background. The children of unskilled manual workers who selected the most common number of five VCE subjects gained a median study score only slightly less than that of the children of tradesmen but each of the blue-collar social groups achieved a median study score ten points lower than their classmates who were the children of non-professional white-collar workers.

The daughters and sons of unskilled manual workers were to be the poorest placed in the competition for university places. Only one—a girl—from the family of an unskilled manual worker studied more than five VCE subjects. The children of unskilled workers also gained the lowest median scores amongst the social groups in the Class of ’95. Not surprisingly the highest median scores were achieved by newcomers from a non-professional white-collar background. Even amongst the confidant newcomers from the Class of ’95 who took an additional or sixth VCE subject, there was a clear distinction by social sub-group between the achievement of the daughters and sons of non-professional white-collar workers and that of the children of unskilled workers.

Similarly there was a difference in the median score for boys and girls. Girls with five VCE subjects achieved a significantly higher median score than boys. But amongst the elite students who selected an additional VCE subject boys excelled with a median study score 15.5 points above that of girls who also chose six VCE subjects.
Table 16: VCE aggregate achievement measured by median and gender

<table>
<thead>
<tr>
<th>Number of VCE subjects studied including English</th>
<th>Boys (N = 56)</th>
<th>Girls (N= 72)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four subjects</td>
<td>90.0</td>
<td>-</td>
</tr>
<tr>
<td>(N = 3 boys )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Five subjects</td>
<td>154.0</td>
<td>161.5</td>
</tr>
<tr>
<td>(N = 45 boys and 52 girls )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Six subjects</td>
<td>205.0</td>
<td>189.5</td>
</tr>
<tr>
<td>(N = 7 boys and 20 girls)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seven subjects</td>
<td>212.0</td>
<td></td>
</tr>
<tr>
<td>(N = 1 boy)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NB:** Number of students = 128

Boys were much less likely than girls to take more VCE subjects than necessary. There was no common motive for this choice. Like girls, some chose an additional subject simply because dropping a subject as they entered their final year meant discarding a favourite subject. This motive most usually related to the study of music or a language other than English regardless of whether the language was selected for interest or because it was the family language. For example, Odette and Prue were so reluctant to discard music that they chose it over Specialist Mathematics. Eric and Jimmy, on the other hand, combined studies in mathematics, sciences and business subjects with the additional study of the language of their family background.
Other motives for taking a sixth VCE subject included the perceived need to improve competitiveness for scarce university and TAFE course places. This was the most common motive of all regardless of social background and gender. The choice of an extra final year VCE subject did however indicate that the student was not only prepared to take on the extra workload but was also confident as a result of their previous school academic experience at Soton College.

But these were not the average students at Soton College or anywhere else throughout Victoria. The average student who chose five VCE subjects including English made up the bulk of VCE students. The achievement differences based on social background and gender for this majority of VCE students is discussed below.

**The score card of the elite**

Only a very small number, three students, achieved excellence in at least half the VCE subjects they studied.

Inheritors Kitty and Will, and Hanna, the daughter of a non-professional white-collar worker, all gained the highest score of the Class of ’95 in at least three of their VCE studies. In each case the scores gained placed them amongst the highest achieving 15 per cent of VCE candidates in the state. Kitty achieved a perfect score in Biology. These three students were academically very able and had been throughout their school life. They also participated in activities other than study. Kitty and Will were school leaders and took part in the organisation of a number of extra-curricula activities. Hanna was a gifted actress and represented the college in a number of performances and dramatic presentations.

A glimpse of the 1995 Soton College Awards Night program shows that the students rewarded for excellence and high achievement in each of the VCE subjects for which a prize was given were either inheritors or from the families of non-professional white-collar workers. The number of elite students was almost evenly split between boys and girls but there was only one student from a blue-collar background and that was Anthony, whose father was a tradesman. There were sixteen members of the Class of
'95 who received awards for achieving the highest score in a subject but only one was from a blue-collar family. One in five inheritors and one in five children of non-professional white-collar workers received awards for highest score in a VCE subject but only one in forty-eight children from a blue-collar socio-economic background achieved this.

In an earlier chapter we saw that school drop-outs were far more likely to be from a blue-collar family background, so that we can expect that the self-selection amongst this group was particularly strong. It is also likely that those from this social background who stayed on at school were comfortable in doing so. That is, their school experience was not sufficiently negative for them to leave school before passing the VCE. An outcome in which students from white-collar families so heavily dominated the academic awards is very concerning.

Let us look at the details of the Awards Night program for the Class of ’95 seen in Figure 53. Inheritors were the highest achieving students in each of the VCE mathematics subjects and in all three of the science subjects. Two of the mathematics subjects and all of the science subjects were deemed to be hard and therefore rewarded in the determination of the TER. The only hard subjects in which newcomers excelled were English Literature in which Hanna gained the highest score; Italian in which Anthony gained a perfect score of 50 and Economics in which Lina gained the highest score. Newcomers’ excellent achievement in most of the subjects in which they topped the class was discounted in the determination of the TER. The Awards Night program below reflects the very different academic interests of inheritors and newcomers from the Class of ’95 at Soton College.
### Soton College Awards Night 1995

<table>
<thead>
<tr>
<th>Inheritors</th>
<th>Newcomers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Will</strong></td>
<td><strong>Hanna</strong></td>
</tr>
<tr>
<td>First place in: Information Technology in Society</td>
<td>First place in: Drama</td>
</tr>
<tr>
<td>Mathematical Methods</td>
<td>English</td>
</tr>
<tr>
<td>Physics</td>
<td>English Literature</td>
</tr>
<tr>
<td>Specialist Mathematics</td>
<td>Legal Studies</td>
</tr>
<tr>
<td><strong>Kitty</strong></td>
<td><strong>Cecilia</strong></td>
</tr>
<tr>
<td>First place in: Biology</td>
<td>First place in: Australian History</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Australian Studies</td>
</tr>
<tr>
<td>Geography</td>
<td></td>
</tr>
<tr>
<td><strong>Ford</strong></td>
<td><strong>Henry</strong></td>
</tr>
<tr>
<td>First place in: Environmental Studies</td>
<td>First place in: Graphic Communication</td>
</tr>
<tr>
<td><strong>Wes</strong></td>
<td></td>
</tr>
<tr>
<td>First place in: Materials and Technology</td>
<td>Physical Education</td>
</tr>
<tr>
<td><strong>Simone</strong></td>
<td><strong>Honour</strong></td>
</tr>
<tr>
<td>First place in: Further Mathematics</td>
<td>First place in: English</td>
</tr>
<tr>
<td><strong>Harold</strong></td>
<td></td>
</tr>
<tr>
<td>First place in: Information Technology</td>
<td></td>
</tr>
<tr>
<td>Processing and Management</td>
<td></td>
</tr>
<tr>
<td><strong>Walt</strong></td>
<td><strong>Patience</strong></td>
</tr>
<tr>
<td>First place in: Business Management</td>
<td>First place in: Studio Arts</td>
</tr>
<tr>
<td><strong>Jeanne</strong></td>
<td><strong>Jeanne</strong></td>
</tr>
<tr>
<td>First place in: Design and Technology</td>
<td>First place in: Human Development and Society – Home Economics</td>
</tr>
<tr>
<td><strong>Flora</strong></td>
<td></td>
</tr>
<tr>
<td>First place in:</td>
<td></td>
</tr>
<tr>
<td><strong>Anthony</strong></td>
<td></td>
</tr>
<tr>
<td>First place in:</td>
<td></td>
</tr>
</tbody>
</table>

**NB:** Not all subjects studied are listed in the above table. VCE subjects of Music, Texts and Traditions, Art, Psychology, Information Systems, French and Spanish have not been included because either highest score gained was below average or there were three or fewer students in the subject.
The average student

Although it is meaningful to examine the achievement outcomes of the best and the worst students, their experience is not that of the majority of VCE students. The “average” VCE students are those who in earlier generations would have most likely stayed at school until they could get a “good” job or at least complete Year 11. These were the students, who for reasons of a “better” job, recognised the value of a complete secondary education and in the 1990s stayed on to complete the VCE in response to the Government policy push to do so.\textsuperscript{138}

These students made up the bulk of VCE students in 1995 and continue to do so. It is vital that their fate be studied. At Soton College they are characterised by taking five VCE subjects including English. They pass the VCE and in the case of the Class of 1995 they almost all aimed at university entrance immediately after they completed their final year of school. Their pathways through VCE varied according to their subject interests and their perception of the demands of the university courses to which they aspired.

There are two measurements of their success, the aggregate of their individual scaled study scores for which 250 was a possible maximum and their individual TERs.\textsuperscript{139} In the popular view the latter—that is the TER—assumed greater importance than the former of these achievement measurements. This is still the situation today and when VCE results are released together with the TER all stakeholders tend to quote the TER as the achievement measure rather than success in the VCE.\textsuperscript{140}

\textsuperscript{138} The Ministerial Review of Postcompulsory Schooling which generated the Blackburn Report in 1985 was convened to determine the best way of addressing the educational needs of 15 to 19 year old young Victorians with a view to keeping this age group at school until completion. It is from this report that the two year post-compulsory secondary education certificate, the VCE, emerged.

\textsuperscript{139} In this analysis the “average” student studied the “average” number of VCE subjects which was five including English.

\textsuperscript{140} In 1998 the TER was recalculated so that it was brought into line with the tertiary selection processes used in other Australian states and renamed the Equivalent National Tertiary Entrance Rank known as ENTER. There was little difference in both the actual scores determined and the overall ranking for students as a consequence of this recalculation.
Figure 54 uses the analogy of a race for comparison of the median aggregate study score and the median TER of each social group. The illustration depicts a birds-eye view of the relative positions of the average students in each of the social groups as they approach the finish line.\textsuperscript{141}

It is clear that the average inheritor gained the highest median aggregate study score. He or she also gained a median study score well above that of the average child from an unskilled manual worker’s family. The lowest median aggregate study score was gained by a child from the family of an unskilled manual worker. But the difference between these median scores is 16.5 points out of a possible maximum of 250, which is 6.6 per cent and although significant not that great. The difference between the aggregate study scores for each of the social-subgroups is also small, there is, however, a clear difference between the median aggregate study score of children from blue-collar families and those from white-collar families.

\textsuperscript{141} The median aggregate study score is determined by adding the subject scores for each student. The median aggregate study score per social or gender group can then be determined.
Figure 54: The end of the VCE race – the median study scores for each of the social groups

<table>
<thead>
<tr>
<th>Social background</th>
<th>Aggregate Raw Study Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inheritors</td>
<td>167.5</td>
</tr>
<tr>
<td>Newcomers</td>
<td>162.5</td>
</tr>
<tr>
<td>Trades</td>
<td>152.5</td>
</tr>
<tr>
<td>Unskilled manual work</td>
<td>151</td>
</tr>
</tbody>
</table>

**NB:** Only 16.5 points separate the achievement measured by aggregate study scores of average students from each of the social groups. This is a 6.6% difference between the achievement of the highest and lowest achievement of the average students of each social group.

At the end of the VCE race at Soton College in 1995 the average inheritor was only just closer to the finish line than the average child from an unskilled manual worker’s family, who was the furthest from the finish line.

Some of the diversity of achievement which was apparent in Year 7 was reduced. That there was a reduction in between social group achievement differences is an indication of school effectiveness on the part of Soton College.

Despite the apparent success Soton College was not able to address the differences that emerged from the determination of the TER for each of the Class of ’95 who applied to go to university or TAFE in 1996. The difference in VCE results was exaggerated by the TER so that competitiveness for scarce university places declined significantly by social group amongst the Class of ’95 from inheritors to the daughters and sons of
tradesmen. There was an anomaly with the VCE academic performance of the children of unskilled workers. These children gained slightly higher median scores than the children from the families of tradesmen. The difference was very small, just 0.7 or one TER place.

The median TER of the average inheritor was 72.4. This was the highest gained and was far higher than the median TER of an average student from a trades background, which was 49.5 and the lowest gained. Thus the median TER of the average inheritor is 22.9 per cent higher than that of average student from a trades background. This amounts to a difference on the TER scale of 458 places and strongly reduces the relative competitiveness of the children from a trades background.

This is not the only difference based on social background. The relative competitiveness of the average student from each of the social groups is illustrated in Figure 55.
Figure 55: The end of the race to get into university—the median Tertiary Entrance Ranks for each of the social groups

**NB:** 458 ranks separate the competitiveness measured by the Tertiary Entrance Ranks of average students from each of the social groups. This is a 22.9% difference between the competitiveness of the highest and lowest Tertiary Entrance Ranks of the average students of each social group.

How could a difference in achievement measured at less than 10 per cent become a difference in competitiveness of 22.9 per cent?\(^{142}\) The answer lies in the different choices of VCE subjects made by students from each of the social groups. In the Class of ’95 the daughters and sons of tradesmen favoured the “new” VCE subjects, which were usually practical and more relevant to their life experience. They liked the technologies, health and Further Mathematics. The daughters and sons of professionals followed in their parents’ footsteps. They selected the traditional subjects that had served their parents well. They were over-represented in preparatory mathematics and physical sciences. Every five of the average inheritors chose 7.5 traditional or “hard” VCE subjects.

\(^{142}\) See Figure 54 and Figure 55.
In contrast every five of the average newcomers chose 4 “hard” subjects. There is also a clear distinction between the achievement of members of the Class of ’95 from a white-collar socio-economic background and that of the members from a blue-collar socio-economic background.

The “hard” or traditional subjects for which the study scores were most commonly scaled upwards in the determination of the TER were also those most favoured by the university course selectors. Students who were successful in these subjects both increased their width of available university courses and improved their competitiveness.

Not surprisingly the average inheritor was better placed to gain access to her or his university course of choice than was the average newcomer, but the distinction lay in the curriculum studied and the differential treatment of the VCE subjects in this curriculum in the determination of the TER rather than in academic achievement.

The daughters and sons of unskilled workers and those of tradesmen and non-professional white-collar workers had achieved close to the level of the daughters and sons of professionals. These young newcomers had transcended the social scale and almost reached the level of the inheritors. They knew as much about the subjects they studied in VCE as the inheritors did. But their choices of VCE subjects were discounted rather than rewarded in the race to university and TAFE. Newcomers faced an additional hurdle in that their academic interests were not those sought by the universities. Therefore their academic interests acted as a brake in reaching the winning post and the inheritors passed them.

The differences in achievement between the average boy and the average girl were less pronounced than that between social groups when measured by either aggregate study

143 VTAC (the administering body of the tertiary selection process) has constantly warned against selecting VCE subjects merely to improve competitiveness. Students are annually advised to select subjects for interest and educational need rather than competitiveness. But published examples of the TER process show that even extremely poor performance in a challenging subject such as Specialist Mathematics can be rewarded. For example a study score of 14 out of the maximum of 50 in Specialist Mathematics is adjusted for the determination of the TER to 19.69, an increase of 11.38%. (VTAC. Undated: p15)
score or TER. Girls out-performed boys by only 2.8 per cent when their achievement was measured by aggregating the study scores gained. When the same comparison was made between the Tertiary Entrance Ranks of boys and girls the latter were better placed with a median TER 5.1 per cent higher than that of boys. This is one hundred and two ranks ahead of that of boys which, although significant, is not as great a difference as that between social groups. The difference between the highest and lowest median TER for social groups was 22.9 per cent or 458 ranks. Again for the Class of ’95 a very small difference in achievement has been turned into a significant gender difference in competitiveness for university and TAFE places and, like the even greater differences in competitiveness amongst social groups, the distinction between the median TER of average boys and that of average girls is related to the differences in curriculum choices of each. And amongst these differences was the choice of mathematics VCE subjects.

The average girl from the Class of ’95 was therefore more competitive in TER for university and TAFE course places than the average boy. Simply gaining the TER was not sufficient, however, and the average girl was more likely than the average boy to have discarded mathematics in the final year of the VCE. These differences are shown in Figure 56 and Figure 66.
Figure 56: The end of the VCE race – the median study scores for boys and girls

Number of students = 97
Figure 57: The end of the race to get into university – the median Tertiary Entrance Ranks for boys and girls.

Number of students = 91 (Six students did not apply for university and consequently did not get a TER)

Competitiveness and VCE mathematics

Mathematics is a special case of subject choice. Like English at Soton College it was a mandatory part of the Year 7 to 10 experience. So too were formal religion classes and subjects like history, physical education and health, geography, art and information technology, but the time allocated to teaching this wider curriculum was not as great as that devoted to the study of English and mathematics. English and mathematics were the foundation studies at Soton College and these were taught in a Catholic environment. The continued study of English in the VCE could not be abandoned—it was mandatory for the award of the VCE—but mathematics could be dropped or taken depending on interest, need and personal self-confidence in the discipline. There was even a mathematics sub-curriculum in the VCE. This comprised three mathematics
subjects or orientations that could be studied alone or in combination with other mathematics subjects in a prescribed pattern.

In one form or another mathematics was needed or accepted at university and it was a known entity to each member of the Class of ’95 because they had studied it for years. It was not surprising that, as we have seen in previous chapters, after English a mathematics subject was the most popular choice of the Class of ’95.

Mathematics had another role too. The higher or more challenging the role of mathematics, the more the study of it was rewarded in the determination of the TER. Like the Class of ’95 university selection officers placed a great weight on the importance of mathematics in offering course places to students. It is important that we look too at the impact of choosing a mathematics subject, in particular preparatory mathematics, in the competitiveness of a university course applicant through the agency of the TER. In Chapter 12 the importance of achievement, particularly in preparatory mathematics, was analysed and it was apparent that although most of the Class of ’95 achieved low scores in preparatory mathematics they still gained from the experience through the TER. Although it is not possible in this work to make a direct comparison between the impact of the VCE mathematics subject taken, the score gained in it and different contribution to the TER of each student, it is possible to compare the contribution of each of the three VCE mathematics subjects to the TER calculation.

Three students from the Class of ’95 each gained a score of 35 in one of the mathematics subjects they studied in the VCE. This is a good score, well above the mean of 30, but it is not an outstanding score. The difference in contribution to the TER gained by each is significant. Camille, who was a newcomer, gained a score of 35 in Further Mathematics, which was the lowest of the VCE mathematics orientations. Bobbie, also a newcomer, gained 35 in Specialist Mathematics, the most challenging of the VCE mathematics orientations, and Fabian, an inheritor, gained 35 in preparatory mathematics. The differences in the contributions each of these scores made to the
calculation of the TER for each of the three members of the Class of ’95 is shown in Table 17.

Table 17: Comparison of contribution to TER of each of the VCE mathematics subjects

<table>
<thead>
<tr>
<th>Student</th>
<th>Mathematics orientation</th>
<th>Subject score</th>
<th>Contribution to TER</th>
<th>Difference and direction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Actual difference</td>
</tr>
<tr>
<td>Camille</td>
<td>Further Mathematics</td>
<td>35</td>
<td>32</td>
<td>-2</td>
</tr>
<tr>
<td>Fabian</td>
<td>Mathematical Methods</td>
<td>35</td>
<td>42</td>
<td>+7</td>
</tr>
<tr>
<td>Bobbie</td>
<td>Specialist Mathematics*</td>
<td>35</td>
<td>47</td>
<td>+12</td>
</tr>
</tbody>
</table>

* The maximum score for each of Further Mathematics and Mathematical Methods (preparatory mathematics) was 50 but Specialist Mathematics included 5 bonus points in its range and the maximum score was 55.

Both Bobbie and Fabian were heavily rewarded for studying the higher level mathematics whereas the achievement of Camille was discounted in the determination of the TER. The difference between the adjusted scores for Camille and Bobbie was 15 points or 30 per cent. The reward gained by Bobbie and Fabian for studying the higher level mathematics is very significant and potentially placed them in a far better position than Camille to access university or TAFE.¹⁴⁴

Even the difference between the adjusted study scores of Camille and Fabian—that is, in Further Mathematics and preparatory mathematics—is a significant cost for choosing the lower VCE mathematics. Where choice is consequent on lack of confidence in earlier mathematics studies then the price for not being confident in Year 7 to Year 10 mathematics is significant.

¹⁴⁴ In fact both Bobbie and Fabian gained the offer of a university place of their choice. Camille chose TAFE as her highest course preference. Fabian changed courses after one year and was happier in the second course. Bobbie studied interstate. All three were successful in their tertiary studies and have worked in the careers of their choice since completing their studies - Fabian in the computing field with a multinational organization, Bobbie as a solicitor and Camille in Business Administration.
And as discussed in Chapter 12 previously, prior experience in mathematics will influence the choice of VCE mathematics subject. Both Bobbie and Fabian had maintained an average of B and above in mathematics subjects in the past. But although Camille’s past history in mathematics had started confidently with an A in her first semester of Year 7 mathematics, it had declined to a C in the second tier of mathematics in the Year 10 hierarchy. Her grades had declined to a poor pass in Year 9 and never recovered from that point. Her choice of mathematics was appropriate given her grades but the sudden decline from an A to Ds and Cs is not simply explained by ability alone. The coincidence of the decline with the streaming of Year 9 mathematics would indicate some connection between the two.

What these three stories highlight is the influence of earlier school achievement on VCE subject choice and the consequent outcome of subject choice on achievement in the VCE and relative competitiveness measured by the TER. That is, apparently, how equal achievement levels produce unequal contributions to the TER. Across the VCE there would be many examples of this outcome but amongst the Class of ’95 there were only three “average” students who achieved the same study score in each of the three mathematics orientations, so making comparisons possible and highlighting the different “treatment” given to each of the VCE mathematics studies.145

The TER and other subjects

The effect of the adjustment of study scores on the TER and resultant competitiveness of students can be illustrated by comparing the VCE results of two hypothetical students—student A and student B. Each of these students gained a study score of 30 out of the maximum of 50 for every VCE subject studied.

---

145 The overall achievement of Fabian and Camille was similar in many aspects. Both studied only five VCE subjects and included Accounting in their final year. Both gained exactly the same English score of 37. Fabian’s scores ranged from 29 in the highest level of mathematics to 37 in English. Camille’s scores ranged from 33 in Accounting to 38 in a technology subject. Fabian’s aggregate study score was 171. Camille’s aggregate study score was 177. Fabian’s TER was 86.40. Camille’s TER was 68.00. Fabian, with the slightly lower score than Camille, was placed 368 places ahead of her in the TER because he had studied the two highest level mathematics and physics and she had taken the lowest VCE mathematics and a technology and a business subject. The difference was not in academic ability; it was in the definition of what was a “good or acceptable” VCE subject and what was not. And this definition was one developed by the universities, not the Board of Studies which administered the VCE.
In Table 18 below, in the determination of the TER each study score has been adjusted using Table 1: Study Averages published by the Victorian tertiary Admissions Centre (VTAC) in The Age newspaper December 18th 1995 on page 31. Student A has studied only “easy” subjects and Student B only “hard” subjects. The TER is determined by adjusting each score appropriately and then aggregating the adjusted study score for English and the next three highest adjusted study score plus ten percent of any fifth and sixth subject study scores. If we apply this technique to the study scores of our hypothetical students then we receive the adjusted scores shown below.

Table 18: Comparison of Tertiary Entrance Ranks gained by two students with equal study scores but different VCE subjects

<table>
<thead>
<tr>
<th></th>
<th>Student A</th>
<th></th>
<th>Student B</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>“Easy” VCE subjects</strong></td>
<td>Raw score of 30 becomes:</td>
<td><strong>“Hard” VCE subject</strong></td>
<td>Raw score of 30 becomes:</td>
<td></td>
</tr>
<tr>
<td>English</td>
<td>28</td>
<td>English</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Geography</td>
<td>28</td>
<td>English Literature</td>
<td>32</td>
<td></td>
</tr>
<tr>
<td>Australian Studies</td>
<td>25</td>
<td>Biology</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Materials and Technology</td>
<td>21</td>
<td>Specialist Mathematics*</td>
<td>43</td>
<td></td>
</tr>
<tr>
<td>Further Mathematics</td>
<td>26</td>
<td>Mathematical Methods</td>
<td>38</td>
<td></td>
</tr>
</tbody>
</table>

* Some subjects such as Specialist Mathematics that were considered the most challenging included a bonus score up to 5 in the scoring range. The maximum possible score for these subjects was 55.

**Calculations**

The aggregated adjusted scores for Student A would give a total of 105 which is equivalent to a TER of 30.00. The aggregated adjusted scores for Student B would give
a total of 144 which is equivalent to a TER somewhere between 70.00 and 75.00\textsuperscript{146}. Student B would be better placed in the competition for a university place despite study scores which were the same as those of Student A.

Additionally the above example shows that in Materials and Technology the adjustment was equal to 18 per cent of the maximum possible score of 50. At the same time the positive adjustment in Specialist Mathematics, which was 13 in a maximum of 55, was equal to 23.6 per cent of the maximum score.

Elsewhere in this thesis the impact on student competitiveness for university places resulting from the determination of the TER has been further investigated. The above example of the tension between success on one hand through achievement and success on the other through differences in competitiveness serves to illustrate the unequal barriers encountered by the members of the Class of ’95 on their way through school to university and TAFE.

**Discussion**

The Class of ’95 had to excel on two levels of achievement. Firstly they had to pass their VCE assessments and gain the best score that they could in each of their subjects. Secondly, and in 1995 only if they wanted to go to university or TAFE, they had to get a TER that would make them competitive enough to qualify for the course of their choice. Part of this level of achievement was that the VCE study scores gained were in subjects where the achievement would not be discounted by the process of determining the TER.

Success in VCE achievement simply provided a report on academic progress. At Year 7 the Class of ’95 had been put in the trust of Soton College both to learn in a Catholic environment and get into university. The latter was the stated aim of most of the applicants to Soton College in 1990. Six years later, those who had stayed on to complete their Year 12 (the VCE) had also to attain a score high enough so that after

\textsuperscript{146} Using the formula – adjusted score of English + the adjusted scores of the next three highest scores + 10\% of the fifth and sixth subjects where they have been taken.
adjustment for the impact of their chosen subjects on their TER they would be competitive enough to get into the university course they wanted.

But as we have seen previously, there were differences in interests and consequent subject choice which reflected social background and to a lesser extent gender. Of greater concern was the fact that the “average” inheritor chose the harder mathematics option (preparatory mathematics) and was more likely than the “average” newcomer to choose a physical science subject. Already in 1995 these were colloquially known as “hard” subjects and amongst the most commonly prescribed VCE subjects for university entry, and they were rewarded by the TER process. Newcomers chose the “new” subjects known colloquially as “easy” subjects. These were subjects less frequently prescribed for university entry and comprised the bulk of VCE subjects offered at Soton College.

Social distinction, however, transcended the simple popular appeal to the average student. Even the elite students were separated in their choice and consequently their TER by their differences in academic interests. In this chapter we have seen the achievement of the elite students, those from the Class of ’95 who not only gained the highest score in each subject but also gained a score which placed them amongst the highest achieving 15 per cent of VCE candidates in that subject, divided by the subjects in which they excelled. Elite inheritors excelled in each of the three VCE mathematics subjects and all the sciences. Elite newcomers excelled in the “new” or “easy” VCE subjects. The only subjects in which reward for effort could be expected in the determination of the TER for the elite newcomers were English Literature, Economics, Accounting, Italian and Australian History. But for these studies, even at the level of excellence the elite of the ’95s displayed in them, the reward was lower than that gained for excellence in the harder mathematics and sciences. So it is possible to say that even amongst these gifted students, curriculum provided a division so that gaining entry to the university course of their choice was made harder.

The outcome of elite students from the Class of ’95 is perhaps the most indicative of the importance of interest in the choice of VCE studies. Members of the Class of ’95
who achieved at the highest level had not selected subjects because they were the only ones they could do. Given the policy of Soton College that the school timetable was built around the subject choices of VCE students, then only a very small number of the Class of ’95 had had to study a VCE subject at another venue. No members of the Class of ’95 had been forced into a VCE subject because their personal school timetable could not be accommodated by that of the school.

There was no arbitrariness about the VCE subject choice of the elite of the Class of ’95. These students had selected their studies with deliberation and an eye to their future careers and they were not constrained by structural factors. They chose subjects they needed and liked and in which they felt they could succeed, and they did that. But inheritors chose a pattern of well rewarded subjects and newcomers chose a pattern dominated by discounted VCE subjects and succeeded in these. The consequences of even their differences in academic interests were substantial in terms of competitiveness.

Yet these were the elite of the Class of ’95 and although the universities wanted the elite, the selection process refined the meaning of “elite” even more when referring to VCE success. The TER was designed to promote the “hard” subjects of preparatory mathematics or higher, physical sciences, some of the languages other than English and the more traditional humanities such as Literature or European (not Australian) history.

Whereas elite achievement was evenly balanced across gender the subjects in which the achievement was gained divided boys and girls by modifying the TER. In the “hard” VCE subjects of challenging mathematics and sciences, achievement was equally divided between a boy and a girl (although both were inheritors). In the less rewarded humanities subjects but those still regarded as hard and rewarded in the TER, girls dominated elite achievement.

Even when the Class of ’95 had been in Year 7, their parents, if not the children, had been aware of the competition for university places. But whilst the Class of ’95 was travelling through Soton College the process of selection for university had changed
and in so doing had impacted on the post-school career options of the “average” student.

It had been the “average” students who were targeted by the policy that resulted in the VCE in order to keep the “average” child in school until completion, but they were to be most affected by the introduction of the TER simply because the VCE subject choice of the “average” student was more aligned to VCE subjects that were to be discounted than to those which were to be rewarded.

So the focus of the Class of ’95 had been firstly to get the score in the VCE and secondly to be competitive for the university course to which each aspired. By Year 12 the Class of ’95 had already chosen the “right” subjects for their course. In a number of cases the student would have already compromised their initial career choice for one that was available at a lower level of TER or one where the prescribed VCE studies for entry did not require the study of a subject the students felt unable to complete successfully.

The Class of ’95 would have reviewed their subject choices in light of achievement as they moved forward through the VCE at Soton College because school policy forced them to take this action. The formal careers program strongly encouraged consultation at times of VCE subject choice. So at the end of the VCE and their school life the Class of ’95 had sat their VCE examinations, opened their results with relief or despair but all finding that they had passed the VCE, then looked, usually with some shock, at the statement of their TER. With this information in hand they were in a position to further refine their university aspirations and then wait to see if their TER would be equal to the task of entry to a course. But inheritors would be more confident than newcomers and girls a little more confident than boys of gaining access to their most preferred course. Social inequality had not been eradicated.
CHAPTER 14

How had Soton College performed as the custodian of the Class of ‘95’s education?

On the first day of school in 1990 the parents of the Class of ’95 had dropped their children off at Soton College for the start of the secondary school experience. The new students, each weighed down by a school bag packed with books—boys in brand new shorts that came down below their knees and girls in overlong blue and white checked dresses—were grouped self-consciously, all a little anxious on their first day.

As the parents drove away from the college they too were most likely anxious. They had committed their children into the stewardship of the college. Each parent had trusted Soton College to provide a learning experience for his or her child that would fit that child for life after education. Few, if any, of these parents would have viewed the transition to secondary school as simply a change of school address. Families had options other than Soton College available to them and the process of application to the College, which included an interview between parents, the child and the principal of Soton College, was designed to stimulate decision making on the part of the family.

Some families, of course, had a sound prior experience of Soton College. Sixty-seven of the Class of ’95 followed older siblings into Soton College. This was 41 per cent of the Year 7 population in 1990 and all social groups were well represented amongst these families.147

The families had decided to place their children in the hands of the college with the belief that their child would be best served by the experience. By 1990 Catholic parents did not send their children to a Catholic school simply because it was Catholic. These parents anticipated that the consequence of their children’s engagement with the

147 Although not part of this work a comparison of the post-school outcomes of both the siblings in each of these families shows that a significant number of siblings chose different post-school outcomes to each other. Most chose the same destination – further study. In the greatest number of cases at least one of the sibling group elected to go on to TAFE or university at the end of Year 12.
college would be a positive one. These parents no doubt saw the school experience offered to their child as one that would take place in an educational environment congruent with their own ideas, values and ambitions for their child. Central to this belief was the perception that Soton College would provide an appropriate academic program that would lead straight into a university course. For most families a university education was synonymous with post-school success.Indeed families had told Soton College this in the application forms they had completed before the Class of ’95 commenced in Year 7. In response to a question on what each family expected from Soton College, the answers had overwhelmingly included mention of Catholic values and entrance to university.  

Since all of those in this cohort completed their secondary education at Soton College over a period of four to six years, the parents of these children must have felt that the experience was worthwhile. If this was not the case then surely parents would have moved their child to another school, because there were other secondary schools nearby and parents were free to withdraw their children and send them elsewhere. 

But by the end of 1995, with secondary schooling of all the Class of ’95 completed, the students commissioned for citizenship, the signed school uniforms carefully packed away for posterity, the balloons of the Valedictory dinner deflating and the detritus of it cleared, parents could reflect on whether their trust in the school to provide a suitable academic program for their children had been well founded. 

True, the public image of the college success was good. A month later when VCE results were released they were very good. When university places were offered, the rate of success of the Class of ’95 was high. The offers of places at TAFE Colleges were small but so also had been the number of applications from the members of the graduating class. All who had applied for a TAFE course had been offered that place. 

Those who elected to go into work at the end of VCE were employed. In fact almost every one of those students who had stood bemused in the school-yard six years prior

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148 This is in keeping with the findings of Flynn (1993: p 141). Parents who choose Catholic schools for their children expect the school to provide a “good” education in a Catholic environment.
was in regular employment, no matter when they had left Soton College for work. Those who had dropped out of school were most likely to be in full-time employment and those who had stayed on to finish school were in part-time employment, which they managed together with their VCE. All this has been discussed in earlier chapters.\footnote{Part-time work was the crucial to contribute to a student’s living during the post-compulsory phase of her or his education and also as a training ground for work skills which would later support job applications no matter how unrelated the part-time and full-time occupations were.}

But a parent’s opinion was not constrained by the public image of the college. A parent could judge the college on a more personal level. Families could compare the academic confidence their child had displayed at Year 7 with the result of Year 12. These parents knew how their child had actually fared and whether he or she had reached his or her potential, either personal or academic, displayed at Year 7 and whether or not their child had reached the targets set over six years before by each of the families. They knew if the college had met its pledge to “provide a comprehensive education in a Catholic environment” (Mission Statement. 2004: p 3) for their child.

So had the Class of ’95 made the transition to the high social status anticipated by their families when they commenced at secondary school? When the Class of ‘95 left Soton College, would they follow a pathway that would lead to university or TAFE and confer upward social mobility?

They did. In short most of the Class of ’95 were successful in getting into university and TAFE courses or work. At the end of their formal training most Soton College students would have improved their socio-economic status.

**How well had Soton College fulfilled its stewardship?**

**A good comprehensive education**

That the schooling of the Class of ’95 had taken place in a Catholic environment is without doubt. The values of Catholicism underpinned all facets of life at the college. Informally they permeated the day to day school-yard and class-room interaction of
children and school staff. Formally Catholic values were built into the school curriculum. Studies in religion and English were the mandatory subjects and both were taught from Year 7 to Year 12 inclusive. Prayer and reflection were part of the daily routine for both students and staff and accompanied the development of a strong sense of social justice and involvement in school community activities.

Public statements of Catholic values were made through liturgy. Students planned and participated in liturgies at all school assemblies, as well as in classroom groups and year level groups. At the completion of Year 12, the students were commissioned for citizenship at a liturgy celebrating their time at Soton College and attended by them in the company of their families. Liturgy became the vehicle through which the strong bonds of school community were often expressed. The strength of these bonds can be illustrated by a practice common in the post-compulsory years. Any students who had left school for work during that year were invited back for the final liturgy in order to share it with their school friends. These returning ex-students usually took time off work to attend.

The sense of community was not restricted to school based activity. Soton College, originally a boys’ school, had been founded by parents who wanted their sons to be educated nearer to home. At the time boys who wanted to have a Catholic education had to travel about 35 kilometres by train to the nearest Catholic secondary school for boys. Parents had actually built the original school buildings. Amongst other things they had drafted plans, cleared bushland, laid bricks and concrete, put down drains and mapped out playing fields in order to get the school up and running. There was an enormous sense of ownership in the school and this extended to the wider Soton College community.

What is more the school had been founded to serve the boys of the area, not only the academically inclined but the diverse needs of the boys who lived in the region. The same commitment to meeting diverse need continued when in 1979 the boys’ school combined with the well established girls’ Catholic school already on the adjacent site.
The region in which Soton College was situated had long been associated with diverse educational need, and continues to be so. High levels of school drop-out and low levels of youth employment in the region had been evident for decades. Soton College had responded to this by attempting to meet the curriculum needs of the students even to the point of adopting programs which, it was felt would contribute to meeting identified needs of students where these needs varied from the traditional offerings available in the curriculum. The college had looked to programs, other than the academic, to encourage students to complete secondary school. Over time these programs had included features such as a model farm, an extensive range of creative and performance arts, the operation of an on site banking system, participation in extra-curricula activities such as visits to the ballet and drama productions that involved travel into the city. Public speaking and debating competitions were well attended and encouraged. The school participated in exchange programs, inter-school competition of all kinds ranging from sports activity to the development, production and racing of a human powered vehicle in an environmentally focused competition that was sponsored by the Royal Automobile Club of Victoria. These activities were supported by teachers and parents who volunteered their time and served to enrich the school experience of the students.

These were not activities for which students were selected. If more than the team size turned up to participate in one of them then the school simply made up more teams. Achievement in these and any other activities of students was celebrated within the school so that all students were aware of these other than academic successes. In this way Soton College contributed by exposing all students, regardless of social background, to “la culture libre” seen by Bourdieu and Passeron as an implicit condition for academic success (1979: p 17). Exposure for those who were poor in these cultural experiences was brief and sporadic, but it happened, and even if never revisited, did broaden the early life cultural experiences of all students, not just those for whom the activity was already well known.

The region in which the children from Soton College resided was relatively remote from the hub of mainstream cultural activity. There was some theatre and as already
mentioned a well developed local sporting life. But plays, ballet, opera and music, other than pub based bands, were not readily available and although a suburb of Melbourne Frankston was over fifty kilometres from the city. Many children rarely travelled to the city and few attended theatre productions there. School organised trips to cultural events and activities served to fill some of the void in the cultural experience of Soton College students.

Leadership was encouraged and supported through a wide range of activities including practical social justice, both within the school community and in the wider community. As part of their contribution to social justice within the college, the Class of ’95 were key players in the writing and development of the first policy against bullying within Soton College. The stand the Class of ’95 took against bullying and their collective commitment to school community was reflected in their final year motto in which they pledged that they would “celebrate the gift of each other”.

Community awareness was not limited to school community, but also extended to issues and needs in a more general sense. In each year, the Class of ’95 embraced a cause and raised money for that cause usually by carrying out a lunchtime activity that also enhanced the school community. Amongst other things Soton College students collected for the Red Cross, the St Vincent De Paul society, the Anti-cancer Council and East Timor. They undertook voluntary work at Ozanam House and formed school based chapters of Amnesty International and the Young Christian Students Society. Sport and all forms of creative art were celebrated throughout the school year. Amongst other things Soton College students debated, participated in public speaking, performed in concerts, entered mathematics competitions and were involved in tree planting. They helped cater for the homeless, produced a school magazine, went on work experience, skied at Mt Buller, were members of Amnesty International, became regional champions in chess, played football, cricket and netball, and participated in regional track and field and swimming competitions. During their school life the Class of ’95 had gone to school camps, dressed up for dances and balls and in fancy dress for their last day of school, and much more. It was a busy school life and it was aimed at
educating the whole person, not just the academic one, and fitting students out for a fulfilling adult life.

The needs of Soton College students were primarily academic. Staying on in school until completion was not simply a matter of offering non-traditional non-academic programs; there was also a need to provide relevant educational opportunity. In order to encourage students to stay in school during the 1980s Soton College had provided programs for the academically capable who intended to go on and study in university and for those who wanted to enter the workplace directly from school. Often this latter exit point was at the end of Year 10 or Year 11. The programs, which included the academic Higher School Certificate known as HSC – Group 1 and the more vocationally oriented HSC – Group 2, had been successful. More than one student, earlier considered at risk, remained on in school to successfully complete Year 11 or even Year 12.

Such was the success of the HSC – Group 2 that many of the graduating Class of 1986, for example, moved from school to university and TAFE courses to work as teachers, nurses and in business. One became an accountant and others entered insurance, banking, the police force and retail. During this period a Year 11 program aimed at keeping at-risk students in school was also very successful.

In a recent interview one of the graduates of this program admitted that his whole very successful post-school career was a consequence of re-engaging education in Year 11. He felt that as a direct result of participating in this program and also being able to be involved at a responsible level in the technical side of school theatrical productions he had been motivated to continue on to complete Year 12 with a mixture of Group 1 and Group 2 subjects.150

Prior to the introduction of the VCE, Soton College had provided both Group 1 and Group 2 Higher School Certificate. When the VCE replaced the HSC the Group 1 academic curriculum available for students in the post-compulsory stage of their

150 This student, who was a graduate of the 1986 class, is now a very senior manager in the automobile manufacturing industry.
secondary education became integrated into the new credential together with some of the subjects from the Group 2 HSC.

Soton College was already experienced with these less academic subjects and incorporated some of them into its VCE curriculum. Offered within the single credential these subjects exerted a wider appeal. Before the integration of these subjects into the VCE, students who took them had been penalised in the competition for university courses. Achievement in HSC – Group 2 subjects was assessed as either Satisfactory (S) or Not satisfactory (N). Students did not receive a numerical score for their achievement. This reduced their competitiveness by also reducing their aggregated score which, for most university courses, was used in selection.151

With the introduction of the VCE, study scores gained in these subjects were also included in the initial university selection process—the Tertiary Entrance Score. Students with an interest in one of these subjects would choose it and not be disadvantaged in course selection even when their overall career direction was an academic one.152

And so in the new VCE Soton College embraced some of these more vocationally orientated subjects. As part of this commitment the college built a technology centre devoted to working with wood and textiles to add to the already existing centre for food. But the major technological interest of Soton College students was computing. In the final year of the VCE the popularity of information technology subjects ranked them third behind English, which was mandatory, and mathematics. The commitment of Soton College to computing was long established and included capital expenditure for multiple computer laboratories and by the end of the school life of the Class of ’95, the first use of Radio Lan technology in an Australian school.

151 Those who completed HSC Group 2 in 1986 and wanted to go to university had to negotiate with universities on an individual basis
152 This situation existed for a short time only. The change from Tertiary Entrance Score to Tertiary Entrance Rank meant that students choosing one of these subjects were again at a disadvantage in the competition for a university place.
These technology subjects were needed, they were popular, they were liked by students, and they were part of the VCE. In a rapidly developing technological age, however, they were not sought after by most university courses.\textsuperscript{153} Despite this overall attitude of disdain towards the acquisition of computing skills, the two major universities offered extension studies in information technology to the most able VCE students.\textsuperscript{154} Like many other of the popular VCE subjects, studies in technology of all kinds were heavily discounted in the TER and this effectively devalued the subjects for the students who took them.

When the new VCE was fully introduced Soton College was well prepared for the changes the VCE would entail, and in the last few years of the 1980s the College heralded the anticipated VCE with a full curriculum review and school restructuring. All subjects offered from Year 7 to Year 12 inclusive were offered in semester units. Soton College chose to continue offering a syllabus that provided a wide choice of subjects from the very traditional, such as English Literature, to the very new Materials and Technology—Wood.

Subjects such as Geography and Physical Education, which had been popular throughout the life of Soton College, were retained, but so also were the higher academic subjects of higher mathematics and chemistry and physics. For Soton College the new credential was viewed as liable to help students to stay on in school by providing them with subjects they saw as relevant to their needs.

From the time that Soton College had opened its doors to the local community, it had remained aggressively inclusive. It was a school that truly offered a Catholic education to all and it did this by identifying and where possible adapting to local student need. Indeed, as Polesel (1995) has pointed out, a school that does not respond to changes in client need is at great risk of disappearing and Soton College had certainly survived and grown in the twelve years to the introduction of the VCE.

\textsuperscript{153} University courses in all aspects of computing did encourage students to take one of the three computing technology subjects.

\textsuperscript{154} Extension studies were new to the VCE in 1995. Very able students were able to extend their capabilities by undertaking a first year university subject at the same time as completing their final VCE year.
Flynn (1993), in his investigation into the priorities of Catholic parents in seeking Catholic schooling, found that in selecting a Catholic school for their children parents put a greater priority on an appropriate education than they did on the inculcation of Catholic values in their children. The families of Soton College could not be expected to be any different. Learning at Soton College was set in a context of Catholic values, but other accomplishments that helped equip a young person to be a contributing member of the community were important. The wider curriculum of the College had been sought by most parents for the education of their children, but in their choice of Soton College parents had also wanted their children to receive a formal academic education of sufficient standing to equip them for university access. And it was this yardstick against which most parents would compare the achievement of the College.

For the parents of those of the Class of ’95 who quit school for work before completing Year 12, the question would be related to the effectiveness of Soton College in equipping the child for a successful transition to work. In all probability these parents would also have been satisfied with the outcome no matter how disappointed they were that their child had not completed the full six years. Almost all these early school leavers had displayed a poor academic experience at Soton College. Despite this almost all had no doubt enjoyed other aspects of life at Soton College. Nearly one half (45 per cent) of the early school leaving group made themselves available for interview for this study. All spoke of lasting friendships that originated in Soton College. Many made positive comments about school programs and staff and were often self-deprecating in their comments. For instance Marita pointed out that she had enjoyed school and only personal circumstance caused her to leave and Penny made a laughing comment that she sympathised with the teachers who had had to try and make her learn. In addition, some time after completing his training Zac made himself available to participate in career focused activities at the college. All of these interviewed students inquired after certain teachers with fondness. These comments and actions demonstrate some liking for the Soton College experience.

An extensive literature tells us that non-completing school students with a poor academic achievement record are disenchanted with school. For the early school
leavers of the Class of ’95 it is truer to say that they were not disenchanted with school, but with schoolwork. Their years at Soton College were generally personally satisfying in one aspect or another.

That the Soton College experience was satisfying in some aspect is obvious for those who stayed on to satisfactorily complete Year 12: there were no failures. Any assessment of the quality of Soton College stewardship for the parents of these members of the Class of ’95 would concern both the level of achievement and the degree of competitiveness attained in order to get into university courses.

On the brink of the introduction of the VCE, as the Class of ’95 stood uncertainly in the school yard on their first day of secondary school the parents who drove away from the school could have been satisfied in the knowledge that Soton College had already displayed some success at keeping students at risk of early school leaving on in school and had supported academic and social success for most students. These parents would know that the school offered a strong sense of community as well as a variety of innovative and tried programs aimed at meeting the needs of a diverse student population, and that all this was offered against a strong Catholic faith background.

**The challenges of secondary education for Soton College**

The paradox of the VCE and TER combination, the introduction of which was imminent as the Class of ’95 commenced their secondary education in 1990, was that a diversity of pathways through the breadth of curriculum was to lead to a single credential—a gateway to the future for all—and that only those who took the pathways prescribed by the universities would in fact benefit. This meant that programs directed at keeping students in school for as long as possible, including school based programs, were, in the post-compulsory years, to be replaced by a single academic credential in which curriculum and assessment were designed to address the needs of all students regardless of their anticipated post-school direction, but in which only those already successfully engaged in the university prescribed curriculum would have all post-school options open to them. The post-school options open to the traditional early school leaver, the student who had by the final years of schooling displayed evidence of
disengaging from that very curriculum, were limited by the very mechanism that should have contributed to stimulating that student’s interest in completing school – the curriculum itself.

For instance, engagement with technology subjects was a great idea for a student who wished to gain the VCE but not such a good idea for a student who wanted to go to university.

Hard work in these subjects, even at a very high standard, would be devalued in the university selection process. Soton College had met need, even demand for subjects that interested the most at risk group of non-completing school students, boys. In doing so, though, it had been stymied in widening the post-school options available to this group by the TER.

Technology subjects and those combining hands-on learning and theory in a prescribed course, uniform throughout Victoria, were a welcome addition to the VCE. In most schools this meant that students with academically oriented career goals shared the same classes as those with vocationally oriented career goals. In effect this meant that pathways to work started at the same point for all children regardless of their self-perceived educational need. Simplistically the concept of an even start for all post-compulsory secondary school students should have meant (and this was the intention) that there was also an even finish—that is, that the finishing line was a tight drawn line all students would breast. But this was not the case.

This concept was, of course, too idealistic and failed to address the fact that students were not able to achieve at an equal pace. The argument that some were more academically able than others is a truism, but the cause of the ability differential is not

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155 As we have already seen the degree of this devaluation is astounding. Inheritor Wes had gained a study score of 42 in Materials and Technology placing him amongst the elite VCE students in the subject. This was discounted to 35.8 by the TER - downgrading the study score by 12.4%. In comparison, newcomer Sibyl, gained a study score of 24 in Specialist Mathematics and this was rewarded by an upward adjustment of 23.2% to 35.6. The difference in study scores between the two candidates was 18 or 36% and yet the TER adjustment restructured their scores to reflect the same level of understanding in the subjects they chose.

156 There were fifty enrolments of boys in these technology subjects compared to twenty-four enrolments of girls.
simply a combination of academic aptitude and interest. At the individual level the causes of academic differential, one student to another, are as unique as a fingerprint. But there are two factors common to all academic differences. These are gender and socio-economic background.

Schools can try and neutralize differences in academic achievement and educational opportunity arising from gender. After all gender is a visible factor but socio-economic background is often not. A boy poor at English and a girl good at English are noticeable and fit the pattern identified by research over time. A similar pattern of achievement amongst boys and girls is not easily traced back to socio-economic background by schools and their staff.

Soton College did try to neutralise gender impact in the classroom. Physical Education was taught in a combination of mixed and single sex classes. School activities were undertaken by boys and girls. Classes were gender balanced in as many cases as possible. Boys and girls cooked food, made wooden tables, studied health, played competitive sport and shared the school-yard. The College also changed curriculum in an effort to address the gender issue. For instance, the changes brought to the Year 7 to 10 English program experienced by the cohort in this study were designed to better engage boys in reading and writing from Year 7 to Year 10. This program appears to have had some success for boys, although not for girls, and in an earlier chapter it was shown that achievement in English for girls declined as that for boys improved under this program. School policy strongly encouraged gender inclusiveness in all activities and provided ongoing support to staff through professional development in an effort to achieve a gender neutral school experience for each child.

But differences generated by social diversity are harder to identify. Socio-economic differences between families can only be guessed at unless families make their difficulties known to the school. The effect on education of socio-economic difference is so subtle that families are themselves unaware of the differences in educational advantage between professional parents and other white-collar workers, tradesmen and

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157 These changes were introduced previously.
manual workers. A school must look for the symptoms arising from diverse levels of Bourdieu’s “cultural capital” and like a doctor treat the symptoms. A school is not in the position to neutralise the cause. The ideal school should be able to counter the effects of a home experience poor in cultural capital, but in the real world of limited resources a good school is restricted to trying to treat the symptoms.

Soton College was one such school. Without being able to identify the cause, Soton College tried to identify poor achievement and “treat” it. At the end of the first semester of Year 7, students who were poor in English and mathematics were identified and invited to attend a mathematics class dedicated to the acquisition of skills that should have been learned during the primary school years. Students poor in English were referred to the Independent Learning Centre where one-on-one help was available. The success of this intervention program with Anthony has already been discussed elsewhere in this thesis and there were some gains made in Year 7 mathematics as well.\textsuperscript{158} Ultimately Fintan and Aaron successfully completed the least challenging VCE mathematics subject, an achievement that most likely had its roots in their early years at Soton College.

Even so students had to be poor performers in academic areas to be “picked up” by the monitoring process. It was previously pointed out that newcomers in particular gained lower grades than inheritors across all subjects. However most did not fail or perform poorly in these subjects and so often did not participate in the very programs that could have enhanced their overall school achievement. The problem was that the effect of lack of cultural capital in newcomers, which hampered learning and engagement with curriculum, was offset by academic ability, support from parents and the efforts of Soton College to support the whole person and provide the resources for a positive school experience. Most of the Class of ’95 were happy at school and this factor most likely offset home disadvantage, so it was hard to see that newcomers needed more than a share of the classroom and schoolyard if each of them was to achieve her or his academic potential.

\textsuperscript{158} Anthony gained a study score of 42 out of a possible 50 in VCE English. This placed him amongst the highest achieving 15\% of VCE English students in the state.
But the Curriculum Committee at Soton College was also well aware that poor achievement levels and disenchantment in one subject area often masked interest and ability in another. If a young person can be engaged in curriculum, then that young person is likely to stay on in school and complete Year 12 and more importantly be able to tolerate the experience. Keeping their students in school to completion was a goal Soton College shared with most families, and over the years various programs directed at this goal were introduced into the school. One enduring program of this nature was introduced as the Class of ’95 reached Year 10 and several of the students in the cohort participated. Titled Challenger, the program was directed at extending the formal curriculum and stimulating student enquiry as well as enhancing student self-esteem through achievement in something other than traditional curriculum. It was believed, with reason, that poor attitudes to school could be countered in such a program and that already highly engaged students could be challenged to seek new heights in a non-traditional curriculum. The program was available to all whose achievement was not average—that is, the low and high achievers of Year 10. This too was a popular and successful program at Soton College.

The above programs were aimed at keeping students in school until the end of Year 10, but at Soton College few left school for work before they completed Year 10. For instance, in this study only four students left school during Year 10 and the majority of early school leavers did so at the completion of Year 11, the first year of the VCE. Improving retention throughout the VCE years was the greatest challenge for Soton College.

**Completing school and the new VCE**

At the introduction of the VCE the pathway for students from Year 10 to a TAFE course was withdrawn and over the first years of the VCE Technical Colleges were closed down. This left a hiatus in the curriculum offered to post-compulsory secondary students and removed one of the avenues through which students uninterested in a university outcome could make the transition to work via the TAFE or Technical College.
This posed a serious problem to non-selective secondary schools such as Soton College, which had to decide between providing only the narrower academic curriculum or adding subjects such as Materials and Technology, Technical Design and Development, and both the computing focused Information Technology in Society and Information Technology and Personal Processing to their VCE curriculum. Provision of technology subjects under the canopy of the VCE was not necessarily going to fully address the needs of students disenchanted with study, but it might go some way to encourage early school leavers to stay on in school.

Aware of the social diversity of the Soton College students, the College chose to add the subjects to its VCE curriculum because it was felt the subjects would meet the students’ need at Soton College.

The technology subjects proved popular. By the time the Class of 95 entered their VCE years, 9 per cent of enrolments were in technology studies in the first year of the VCE, rising to 10 per cent in the second. In comparison, enrolments in science subjects made up 11 per cent of all subject enrolments in the first year of the VCE and declined to only 9 per cent in the second year/ Enrolments in the traditional humanities subjects of History, Geography and English Literature were much lower, at 6 per cent of all subject enrolments. This level of interest was constant over the two VCE years.

At the time the Class of ’95 reached the VCE, subjects with a direct relevance to work had been introduced in the form of a vocational study delivered and administered by the TAFE but also forming part of the VCE. Successful completion of the prescribed modules in this study contributed to the overall award of the VCE.

In 1994, whilst the Class of ’95 were completing Year 11, the first students of Vocational Educational Studies in Schools studied Automotive at the nearby TAFE College. All of the four students from the Class of ’95 who blazed the trail of this form of study still speak well of the program. Zac feels that it was the only thing that kept him going to school in Year 11. Fenton, Aaron and Terry still feel that participation in the VET program changed their attitude to schooling a little. It did not stop Zac and
Terry leaving school for an apprenticeship at the end of Year 11, but it most certainly did influence their decision to complete Year 11.

The integration of VET studies into the curriculum was going to continue to enhance the school experience of Soton College students. Within a couple of years of the program’s introduction about one third of all VCE students combined study in a Vocational Education and Training subject with their VCE studies and this level of interest has been maintained until the present time at the school.\(^{159}\)

Breadth of VCE curriculum had been used by Soton College to encourage higher levels of participation in the VCE amongst its students and this has largely been achieved. But parents had asked for more. Most of them had wanted their child to go to university after six years at Soton College. These parents would not necessarily see a TAFE course as of much importance to their children.

It is unlikely that, in themselves, the programs kept at risk students on in school until completion. Parental support and encouragement to stay on were undoubtedly high motivating factors. But in the group most likely to exit school prematurely—the low achievers—more than half stayed to complete their VCE, enter TAFE courses and in the case of Anthony, for example, complete not only an undergraduate degree but also a masters degree in Commerce.

Even where the programs did not succeed and members of the Class of ’95 left for work before Year 12, there were those like Morgan and Gilbert who combined study and work, gained their VCE and completed a TAFE course, and in the case of Gilbert, a degree. There were also those like Terry and Zac who, having left school at the end of Year 11 for an apprenticeship, kept adding additional vocational certificates to their qualifications in the years after completing their indenture.

It is likely that participation in school based programs aimed at addressing educational skill shortage and boosting academic self-concept had been of some influence in the

\(^{159}\) Soton College policy supported Vocational Education and Training. Amongst other things the College charged parents of students studying VET lower school fees to compensate for the additional fees incurred at the TAFE college that was the provider of the VET services.
decision made by these members of the Class of '95 to extend learning into young adulthood. For these young people, poor achievement levels and a less than positive experience of learning at Soton College does not seem to have soured future commitment to study and their parents possibly appreciated this fact.

The parents of the Class of '95 could feel justly pleased with their decision to select the school for their child and could place their trust in the stewardship of Soton College. But in the same envelope that contained the VCE results of each member of the Class of '95 was a letter from VTAC, the agency of the Victorian Vice Chancellor’s Committee, which included a single rank between 99.95 and 10—the student’s TER. This ranked each student relative to the other university and TAFE applicants in Victoria for the academic year 1996. It was this ranked position that would shape the future of each of the graduating students from Soton College in 1995, not the VCE.  

In many cases the relief, pride and even joy at success in the VCE and above average study scores for the VCE subjects gave way to incredulity as grades of A and study scores in the highest 15 per cent of the state resulted in mediocre Tertiary Entrance Ranks. For those students who had bowed to common sense and prudence and stayed on regardless even though the world of work tempted, those who had subjugated their dislike of being in school and listened to their families and teachers, and those who did their best without enjoying what they did and got average grades and a very low TER, the investment of extra time in school had had very little return. For these students the first flush of success was followed by disillusion because of a level of competitiveness that limited educational options.

The parents of these members of the Class of '95 usually recognised that the success of their child’s educational experience at Soton College had been dampened by the rules of the selection process, which discounted the very subjects that had attracted their child, eased her or his continued school journey and provided that child with skills and a desire for future study.

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160 In 1995 VTAC simply provided a statement of ranked position in the TER there was no individual calculation which showed each student how to check the accuracy of the rank given. It was some years before individually adjusted study scores would be available to each VCE student.
All stakeholders in the school investment—the student, her or his parents, the teachers who taught the child and the school administration that supported the post-compulsory school program—found that their anticipated successful outcome was not totally dependent on academic achievement alone.

**Impact of the TER on the Class of ’95**

The success of the graduating Class of ’95 gave reason for most parents to be satisfied with the trust they placed in Soton College six years previously. Those who had stayed at school had passed the VCE and all but six of them had applied to go to university or TAFE in the following year. But whilst the release of the VCE results was pleasing for many of the Class of ’95, their families had reason to be disappointed with the TER received. It is probably correct to say that many families were mystified by the difference they saw in achievement and the rank their student child had gained.

One such family was that of Maraid who was a hard working and academically competent newcomer. Maraid and her parents had an appointment with the Soton College Careers counsellor late one evening after both the VCE results and the TER had been released. All three of them were distressed by the TER and had difficulty matching it with the grades and scores Maraid had gained in the VCE assessment. Over the fifteen common assessment tasks, including the examination assessment, Maraid had received an A\(^+\), two As, two B\(^+\)s, four Bs, three C\(^+\)s, two Cs and one E\(^+\). Her subject scores ranged between 30 and 35 out of the maximum of 50 in all but one subject—Biology, in which she gained 28. Her average subject score was 31.8 but her TER was 49.6, which placed her in the third highest quintile of Tertiary Entrance Ranks. No longer able to apply for her preferred course Maraid chose a TAFE course in which she was successful. But the compromise was hard to reconcile with the fact that two other members of the Class of ’95 gained the same aggregate study score of 159 as Maraid, but with Tertiary Entrance Ranks of 68.20 and 60.30 both went to university to do a course high on their list of preferred course choices. The difference in the TER related to the difference in the subjects taken, not the level of achievement in each subject. Maraid’s post-school outcome was a consequence of wanting to work
in the fitness industry and therefore choosing related subjects including Physical Education, the lowest of the VCE mathematics, Human Development—Home Economics and Biology.

For this family the trust given to Soton College had been well placed but the tertiary selection process had distorted their daughter’s achievement by discounting all her subject scores but one. This was to happen to others of the Class of ’95 also.

**Discussion**

When the Class of ’95 completed school, their families’ assessment of the quality of Soton College stewardship should have been a positive one. All who had stayed on at school had passed the VCE and almost all got a university or TAFE place. The few without a place were soon in work after they finished Year 12. (Even the families of those who had dropped-out could be pleased for almost all of these members of the Class of ’95 were also in work or training.)

More often than not the parents of those members of Class of ’95 who were successful in the VCE were to see their student child’s efforts reduced in competitiveness for university and TAFE course places by the action of the TER. This university and TAFE course selection device discounted student success and ultimately reduced their post-VCE study options. But because the TER discriminated between subjects, rewarding hard subjects and discounting easy subjects, the effects of the TER were not felt equally by all. On the whole inheritors took more hard subjects than newcomers. Amongst newcomers the daughters and sons of non-professional white-collar workers took more hard subjects than those of tradesmen and unskilled workers. So success in getting into university or TAFE lay visibly with the inheritors and newcomers bore the brunt of succeeding in the easier VCE subjects which was a lower proportion of university places.

Soton College had done well. The educational programs of the school had resulted in academic success for all who stayed to Year 12. The college had not been able to eliminate the gap in achievement of inheritors and newcomers or boys and girls, but
when the Class of ’95 tested its academic prowess in the public arena of the VCE they were found far from wanting. The median score gained by the Class of ’95 was above the subject mean of 30 in four out of every five subjects offered by the college so it would seem that most of the curriculum suited the boys and girls studying it in 1995.

Preparatory mathematics (Mathematical Methods) was not amongst these subjects. In what is arguably the most important subject after English for university course access Soton College students had performed relatively poorly. There were of course some outstanding study scores in this subject but the average student who had been an above average performer in the highest level of Years 9 and 10 mathematics had gained a study score below the subject mean of 30 in Mathematical Methods. No social group gained a median study score of the mean.

Participation in a hierarchical program whereby Years 9 and 10 mathematics students were streamed according to their academic capability had not produced the high scores of English in which there was no selection. In English the median study score for the Class of ’95 was 33 in Mathematical Methods (preparatory mathematics) the median study score was 29.

A good study score in English was vital for university selection since it was always counted in the determination of the TER. In addition the award of the VCE is reliant on a pass in English. But in mathematics only the elite mathematicians and those in the least challenging mathematics (Further Mathematics) achieved a similar level of excellence. The cross section of Class of ’95 who chose preparatory mathematics were often disappointed with their scores but rewarded by the TER nevertheless. Although a difference in the median study score emerged showing the Inheritors and the children of non-professional white-collar workers performed slightly better than the children of tradesmen and unskilled workers and that girls performed slightly better than boys, the overall achievement in preparatory mathematics by the average student of Class of ’95 was poor.

But of course the breadth of curriculum and the freedom of subject choice enjoyed by the Class of ’95 meant that above average achievement was discounted so that the
students were not rewarded in the TER for their efforts. The college was penalised for making a wide curriculum available to a student body.

Parents could see that VCE results were, on the whole and regardless of social background or gender, good. But in a society which regarded the TER as the de facto qualification and the VCE as secondary, the school had failed to live up to expectations for those students who did not get a sufficiently high TER to enter their preferred course at university or TAFE.

The bemused parents of the Class of '95 found it hard to marry the VCE results and the competitiveness of their child. They checked the calculations in the press and were inclined to question whether their trust in the college was well placed. These concerned parents were more likely to be those of boys and newcomers, the two social groups for which breadth of curriculum and the focus of it had been designed but for whom interest driven subject selection had jeopardised the acquisition of a high TER.

At Soton College the effect of the TER was most felt by newcomers, particularly the children of blue-collar workers (tradesmen and unskilled workers) and boys. Policies of the college had kept these groups at school and the college had been instrumental in encouraging these groups to apply for further study at university or TAFE only to have these two social groups penalised in the selection process for tertiary study.

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Experience as a careers teacher has led the writer to believe that it was not unusual for parents to see a TER of lower than 50 as a fail in the VCE.
CHAPTER 15

Goal attained—going to university and work

Upward mobility—social mobility through a university education

Staying on in school to the completion of the VCE met only part of the plan drawn up by families of the children who graduated from Soton College in 1995 at the end of Year 12. This was because VCE success did not provide “automatic” access to a university course. An adequate TER was also essential. As we have seen in previous chapters, the TER required for university courses was dependent on both achievement level in the VCE and the subjects in which those grades were gained.

There were additional requirements. For instance Patience, who wanted to study Landscape Architecture, was required to take an aptitude test as well as gain an appropriate TER in a number of prescribed prerequisite studies. Preston, who wanted to study performing arts, was required to take an audition and Giles had to present his folio of work for the Fine Art course to which he applied. Regardless of the conditions for entry to courses, one hundred and fourteen of the one hundred and twenty-two students from the Class of ‘95 who had applied to go on to further study received the offer of a place in a university or TAFE College in the year following completion of the VCE. This was 93 per cent of those students interested in entering university or TAFE courses immediately after completing school.

Of these successful students eighty-nine (78 per cent) were offered a place in a university course and twenty-five (22 per cent) were offered a place in a TAFE course. Not all students had received offers of their most preferred course but the majority had. Only eight students had received no offer of a place in either university or TAFE and six had opted to go straight into work.

162 It is important to note also that leaving school for work before completion of the former did not preclude a university education.
By the end of the school holidays in 1996, the year immediately after they completed their VCE, all the one hundred and twenty-eight students who had completed the VCE at Soton College knew where they were going. In the eyes of the community the College had achieved its aim. The students who were entrusted to it six years before and who had stayed on in school were successfully aligned with what appeared to be a positive post-school outcome. At this point the stewardship of the college was shed.

But the foundations laid at the College would also shape the future of each of these Class of ’95 members. Their futures were heavily dependent on the adequacy of the next step they were to take. Soton College could not simply step back and rely on academic outcome. Its influence would impact on the lives of each student who had spent time at the college, not just those who at the end of six years attained the parental expectations of a university course, expressed as they commenced Year 7 six years before.

**Had all students achieved their aim independently of gender or socio-economic background?**

Almost all students regardless of socio-economic background and gender had applied for at least one place in a university course but, as with VCE achievement and their Tertiary Entrance Ranks, inheritors were the most successful at gaining a university place. Of the twenty-five inheritors who had stayed to complete the VCE only Joyce, who wanted to undertake an apprenticeship, and Knox, who wanted to study at TAFE had not applied for a university place. Roger, also an inheritor, had applied, but was very unsure of the direction he wanted to take and when interviewed for this research commented that he was relieved when he did not initially receive a university offer and had gone into work with training, which ultimately suited him well. Twenty-two (88 per cent) of the twenty-five inheritors had achieved their aim of university.

Newcomers had not been as successful at gaining a university place. A far lower proportion (65 per cent, or sixty-seven members of the Class of ’95) achieved their goal. More newcomers had applied for TAFE courses but in many cases they had taken this action after finding that the TER that they gained at the end of the VCE was not
adequate to meet the demands of the university courses to which they had previously aspired. These members of the Class of ’95 chose TAFE courses at a time when they were disappointed with their TER and possibly their study scores as well. The TAFE was not their first preference but at least it would provide a relevant credential that might be used to gain entry to a university course later. At the time, getting the offer of a place in TAFE was more important than the quality and suitability of the offer made. This type of decision making could lead to a less than positive outcome.

Overall the rate of university or TAFE offers was almost identical for inheritors (88 per cent) and newcomers (89 per cent). Newcomers were offered far more TAFE places than inheritors and far fewer university places, but although the inference is that a TAFE place was not as prestigious or even sought after as a university place, this was not so. Different interests, again aligned on social grounds, led to different choices of university or TAFE courses, just as TAFE could be seen as a second tier option for a student who had not been able to get the prescribed TER for university course entry.

TAFE courses also appealed more to boys. Three times the proportion of boys to girls applied for and received the offer of a place in a TAFE course. Girls were more satisfied with university places but overall the rate of post-school further study offers based on gender was identical. The college had supported both inheritors and newcomers, boys and girls in their quest for transition to further study.

**Social group and VCE achievement**

Many of the Class of ’95 were disappointed with their VCE achievement, but a greater proportion was mystified by their TER and lack of competitiveness in the race for university places. This has been discussed in previous chapters but there is a need to

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163 Only one inheritor applied to go to TAFE and for a number of newcomers it was first preference. This particularly applied to newcomers who wanted to work in the hospitality industry or in tourism where the most prestigious courses at the time were offered at TAFE. Several Soton College students were successful in getting places in these courses.
revisit a case study or two to illustrate the significance and the unintelligibility of the single measure that was to either make or damn each child: the TER\textsuperscript{164}.

With TER the same aggregate study scores could produce very different ranks. For instance newcomers Courtney, Daisy and Victor all gained an aggregate of 141 from five VCE subjects including English. This was a poor aggregate study score for Soton College students and placed the three in the second lowest level of VCE achievement for the Class of ’95, and the Tertiary Entrance Ranks of the trio were correspondingly low. But despite the exact same aggregate study score, the difference in TER distinguished between each in the competition for a tertiary course place. Daisy was ranked a hundred places ahead of Victor, who was ranked a hundred and forty-three places ahead of Courtney. The difference was not achievement but the subjects in which the achievement was gained. The competitiveness of these three newcomers was determined by curriculum.

It was in this way that newcomers fell short of the demands of university courses. Newcomers had been more likely to make up the lower levels of mathematics during their middle school years and tended to lack the preparatory mathematics often demanded by university courses. Newcomers, especially those who were “average” achievers, had been inveigled by the promises of the VCE subjects that would interest these students relatively new to the higher echelons of secondary schooling and would also contribute to the attainment of the school credential.

With this promise in mind they had chosen VCE subjects that interested them. In many cases these were subjects that had an apparent link with the post-school occupations these students were seeking. If an older teenager is interested in business management

\textsuperscript{164} It must be remembered that the components of the TER were not, in 1995, released to each candidate. Each candidate was given a figure correct to two decimal points and graduated in increments of five one hundredths and told that this was the rank their adjusted grades had given them in the calculation. Even the published details used to check the rank allocated emphasised that the calculation was so complex that it could not be checked accurately and that if the “rough” calculation gave a TER within 10 of that allocated then it was correct. In the competition for university courses where one rank could mean the offer of a place or not, a difference of ten full numbers meant that the TER by which the applicants were accepted for university courses could be checked only to a figure that was give or take 200 ranks different. The practice of silence on the calculation has now been changed to one of disclosure but in 1995 the outcome of the calculation produced trauma amongst students who had to make life altering decisions and do so within a week of the VCE results and Tertiary Entrance Ranks being known.
as a career then there is a likelihood that the same young person is also interested in it as a subject. The same could be said for information technology subjects, health related subjects and other business subjects such as accounting and legal studies. The promise was real. Achievement in each of these subjects contributed to the award of the VCE. Endeavour led to a positive result: a final secondary school credential. But there was significant tension between the traditional demands of the universities and egalitarianism in the curriculum. The tension was resolved by the introduction of a ranking system that penalised those who took the new subjects and rewarded those who took the limited curriculum set in the past. In so doing the TER discriminated against the efforts of newcomers and supported those of the traditional inheritors who were following in their parents’ footsteps.

It was shown previously that at the end of the VCE the median grades of the average student in each social category had not differed greatly from that of each other social category. Inheritors slightly outdid newcomers and girls slightly outdid boys. Within the range of newcomer social sub-groups, the daughters and sons of non-professional white-collar workers gained a slightly better average grade than those of blue-collar workers. But the differences were not great. When translated into the TER, however, the differences became greater because tastes in curriculum choice exacerbated differences in the calculation of the university selection device.

Even if Soton College, like other Victorian schools, had been aware of the potential difficulties faced by those who undertook the new subjects, could it have taken any action to avoid them? By offering providing something of interest for all students, Soton College had allowed all students, not just newcomers, to expose themselves to loss in the competition stakes for university places. Where students combined “hard” and “easy” VCE subjects, with emphasis on the first not the latter, then the exposure was lessened.

In this research, however, it has been obvious that newcomers and those for whom the academic experience was average were those most likely to eschew traditional subjects like preparatory mathematics, physical sciences, economics and languages other than
English in favour of the new. It is also apparent that the parents of the members of the Class of '95 were ambitious for their children and their children had been complicit in this ambition because they had completed the two post-compulsory years of schooling. They had chosen the VCE subjects that would best act as a vehicle for their travel through the certificate.

Would they have stayed to complete the VCE if these studies were not available? This is a question that cannot be answered here but the popularity of the “new” subjects with the Class of '95 cannot be discounted. The demand for a wide curriculum was there and Soton College had met the demand. Using it, most of the Class of '95 had gained entry to further study at the end of their VCE.

**Outcomes of those who did not complete the VCE**

Over the six years of secondary school at Soton College there was attrition among the Class of '95. Thirty-five students had elected to go into work before completing the VCE. This was a little more than a fifth of the students who had commenced at the college in 1990 in Year 7 and there is no doubt that this was a significant minority of students from the Class of '95. It was found that there was a strong gender pattern of early school leaving. Boys left school for work more than girls. It was also shown that at Soton College the lower the social status the higher the risk of school non-completion.

Over a third of children from the families of unskilled workers left for work before completing VCE and most of these left Soton College without more than a Year 9 or Year 10 pass. A significantly smaller proportion of children from the families of tradesmen or non-professional white-collar workers did not complete school but almost a fifth of inheritors also did not complete. Like the daughters and sons of unskilled workers most of the attrition amongst the other social groups occurred before the completion of Year 11. What is more, the highest period of attrition was during the first year of the VCE.
The broader curriculum did not act to keep these young people in school. But curriculum was probably not the only factor. Almost all those who left Soton College for work before completion of the VCE had been poor achievers in every one of their years at Soton College. With one or two exceptions the academic school experience for these students had been poor for some years and the programs offered at Soton College had not been able to counter this. These students left Soton College because they did not want to be in school. If they were disenchanted with Soton College, each of them could have elected to go to another school—there were quite a number in the neighbourhood. But this group chose work, not school.

There appeared to be no common motive for dropping out of school. Zac was focused on becoming a motor mechanic and felt he had gained enough education by the end of Year 11. Martin just didn’t want to be in school, nor did Gilbert or Penny. These were children who didn’t want to be in the classroom and who only went through the motions of schooling. They occupied a chair in class but that was all. Penny did get involved with drama productions but the boys even avoided extra curricula activities. Changes in family circumstances, personal need, and disenchantment with school were all included in the factors which led to dropping out of school for members of the Class of ’95.

In most cases, despite parental opposition and experience in school programs aimed at re-engaging those who undertook them, most of these drop-outs were detached from school activities, just taking up their places in classrooms and the schoolyard. Had Soton College failed these children? Perhaps it had, but many had retained school friendships and continued to in touch with other Class of ’95 members who ultimately completed school and at interview they expressed positive comments about some of their school experience that would indicate at least some appreciation of their time at Soton College. Those who could not be traced and who had drifted away from school friendships might well have had another story to tell about their experience of Soton College.
The alarming factor in the significant level of school drop-out lies in the fact that all but four of these students (that is, 89 per cent of them) did so after choosing VCE subjects. Since this is the case, it would seem that the broad VCE curriculum aimed at keeping children in school until completion had not enticed these young people to stay on. This group, at which the VCE had been focused, had responded negatively to what it had to offer.

Only a third of the group were able to be interviewed although the post-school outcomes of a greater number were reported to Soton College. Where known, the jobs taken on by these drop-outs were often accompanied by training that led to a trade certificate. In several cases certified tradesmen and women who were once drop-outs from the Class of ’95 had established their own businesses by the time they were interviewed for this research. This was a positive outcome and one no doubt supported strongly by parents.

It is hard to think of these students as suffering any form of disadvantage short of changed business conditions or technical conditions requiring more sophisticated training. Should such a change occur, then acquisition of the appropriate training for future change might be made more difficult given that these Soton College drop-outs did not have a VCE pass. This could jeopardize their working futures.

This research does show, however, that Soton College was almost powerless to intercede and prevent very high levels of dropping out from school amongst the children of unskilled workers. At the same time Soton College had not been able to fully address the poorer school achievement level prevalent amongst these children. A similar pattern existed for the children of tradesmen and to a lesser extent amongst the children of non-professional white-collar workers who wanted to drop-out of school. Even the inheritors with dropping out of school on their mind displayed low levels of performance in at least English and mathematics. Over time numbers of short and long
term programs aimed at minimising school drop-out have been tried with varying levels of success\footnote{Teese, Polesel, O’Brien, Jones, Davies, Walstab and Maughan (2000: pp 18-19) provide a useful review of the range of programs.}.

Researchers such as Dwyer (1994: pp 58-65) and Teese and Polesel working with O’Brien, Jones, Davies, Walstab and Maughan (2000: p 20) have argued that exit from school to work via an apprenticeship is a viable path to take. Where this route was from the end of the first year of VCE, Kirby (2000: p 54) also recognised the viability of the action for the individual. Certainly those members of the Class of ’95 who dropped out reported being settled in a job they liked and intended to stay in when they were interviewed for this research, which was up to ten years after they had left school.

**Adult social status of the Class of ‘95**

When the Class of ’95 applied to enter Soton College in Year 7 almost all the parents had nominated a university course as being the destination of their child. In the case of non-professional families this aspiration would imply that the parents were seeking an improvement in social status for their child. The parents of inheritors on the other hand would be looking for their children to maintain their inheritors’ background. A little more than half of those who completed the VCE from the Class of ’95 described themselves as working in the professions when data were collected for this research eight to ten years after the Class of ’95 left Soton College. Only five students or 4 per cent of the graduating VCE class described themselves as working in unskilled manual work. Amongst these young people was inheritor Heidi who, having gained an outstanding set of VCE results and a correspondingly high TER, then gained a place in her most preferred university course. Heidi found that she did not like the course, dropped out of university and came to hospitality work via part-time work in the same field. This is where she is still working.

Details of work outcomes are shown in Matrix 2 below. Around a third (33 per cent) of those from the Class of ’95 who returned the survey described themselves as non-professional white-collar workers and sixteen or 13 per cent described themselves as
tradespeople. A significant number of these ex-Soton College students also owned their own business in their trade speciality at the time they were interviewed.

Matrix 2: Social mobility of the Class of ’95

<table>
<thead>
<tr>
<th>Childhood social status</th>
<th>Adult social status</th>
<th>Newcomers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Inheritors</td>
<td>Non-professional white-collar workers</td>
<td>Tradesmen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inheritors</td>
<td>60%</td>
<td>28%</td>
<td>8%</td>
</tr>
<tr>
<td>Non-professional white-collar workers</td>
<td>58%</td>
<td>33%</td>
<td>9%</td>
</tr>
<tr>
<td>Tradesmen</td>
<td>29%</td>
<td>39%</td>
<td>25%</td>
</tr>
<tr>
<td>Unskilled workers</td>
<td>47%</td>
<td>29%</td>
<td>12%</td>
</tr>
</tbody>
</table>

The number of students who returned their survey was 125 so that the above mobility matrix shows only the social movement of 125 of the 128 who completed the VCE. Reading the matrix: Cells shaded in beige show the proportion of students from each of the social groups who in adulthood maintained the same social category as they had occupied in their youth. Cells shaded in blue show the proportion of students who have improved their social position and cells coloured in green show students who had reduced their social position.

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366 One hundred and twenty-five of the one hundred and twenty-eight students who completed the VCE at Soton in 1995 were contacted.
Overall the Class of ’95 had moved up the social scale although not always as far as their parents had wanted them to. Inheritors, who could not move further up the social scale, were more likely to maintain their social position than to reduce it. Fifteen of the twenty-five inheritors (60 per cent) went on to become young professionals in a range of occupations that included law, engineering, the health field, teaching, computing and business, and in some of the newer professional areas of landscape architecture and environmental management. Seven inheritors (28 per cent) chose to work in non-professional white-collar work but there were only two (8 per cent) who chose to work in a trade. Joyce chose hairdressing and owned her own business at the time of interview. This had always been her dream and she was happy with her occupational choice but also still pleased that she had completed the VCE before taking up an apprenticeship.

Moving down the social scale is probably a misnomer for a planned move into a different work direction. Certainly a move in any direction requires planning for success. Inheritor Wes completed the VCE and was offered a place in one of his most preferred courses at university. He was uncertain about his work future, and deferred the course and undertook an apprenticeship he did not enjoy. Still undecided about his future he took up the deferred offer but found that the course was not what he had wanted either. Finally after much soul searching he undertook an apprenticeship in the building trades and was very happy with the outcome. In all it took Wes about three years to settle into an occupation that interested him.

The movement by both Joyce and Wes from an inheritors’ background into a trade was an alternative choice and a good one, not a negative choice at all. Now in her late twenties Joyce has purchased her first hairdressing salon and enjoys what she does. When interviewed Wes still worked for an employer but was also enjoying what he did. To reject a profession for a trade was by no means a mistake for either of these two inheritor members of the Class of ’95.

However, equipped with good VCE passes both Joyce and Wes are in the position to take up tertiary education in the future if they wish to do so. In this way they have an
advantage over other inheritor tradespeople such as Don, who left at the end of the first year of the VCE, and Gerald, who left school at the end of Year 10.

At the other end of the scale amongst the newcomers of the Class of ’95, all but two of the children of unskilled workers improved their social background as they became adults. Of these almost half, 47 per cent, became professionals of some kind. All who took this course of action were girls. They included Mia, whose skill in English has already been discussed in this work and who became a sub-editor of a newspaper. Kara moved into a non-traditional work role after completing a Building degree, and Shelagh and Elenore took the more stereotypical profession of nursing.

If the sons of unskilled workers undertook further study at the completion of the VCE it was through the TAFE system. These boys chose trades or non-professional white-collar work after completing any further study that they undertook. At the time of the collection of these data most of these boys were satisfied with their work and intended to stay in it. Victor was one, however, who was not settled in his work. Since data were collected Victor has moved to another job as an owner-driver. He felt that this gave him more autonomy, though he is still not happy with the work but uncertain of what else he can do. Victor has trained as a draftsman, an area of work in which it is difficult to access full-time employment. So in the case of Victor circumstance has moved his work status back to that of an unskilled worker with all the uncertainties associated with this type of work. Although initially Victor had moved up the social scale, he is currently working in the same area as his father—that of unskilled work.

The daughters and sons of non-professional white-collar workers and tradesmen have been successful in moving up the social scale through their work. Fifty of the fifty-five members of the Class of ’95 from the families of non-professional white-collar workers (91 per cent of them) have either maintained their childhood social position or improved upon it. At the same time the children of tradesmen have been even more socially mobile and 93 per cent or twenty-six of them have either maintained their social position or moved up the social scale in their choice of occupation. In fact
nineteen (68 per cent) have taken a white-collar job of some kind either as a professional or as a non-professional white-collar worker.

It is particularly interesting to note that even where the members of the Class of ‘95 who completed VCE have rejected a university or TAFE place, the work they have selected has been accompanied with training and a certificate of some kind. The latter is usually an apprenticeship. So although a small number of the graduating class have described their work as unskilled some, like Victor, have trained in an unrelated skilled field of work and others, like Alice and Janet, have rejected a university place and spent years travelling around the world. All of the small number who have rejected further study or work with training and given preference to other aspects of their life find that unskilled work meets their requirements. These young people have entered unskilled work with purpose, not because they were forced to do so by circumstance, and in this way their work outcomes differ slightly from that of Martin.

Martin’s transition to work has been discussed previously and as a school drop-out Martin has experienced a problematic work history that has included unemployment, dead-end jobs and low pay. If Martin had successfully completed the VCE or even dropped out of school at the end of the first year of the VCE, his work outcome might have born a greater resemblance to those of the small number of unskilled workers from the Class of ‘95 who completed their VCE and for whom unskilled work was not as insecure.

More than 90 per cent of the Class of ‘95 were contacted for interviews. Of those remaining, only 13 per cent described themselves as in unskilled work and amongst these were some students who had dropped out of university and who indicated that they were still undecided on career choice even eight to ten years after leaving school.

A movement up the social scale is not solely reliant on credentials obtained. Other factors are also important. These factors include leadership quality, ability to communicate, ability to work alone and with others as part of a team, and personal presentation. Intangible characteristics such as work ethic, commitment, integrity and personal values are also features of being employed. When interviewed none of the
Class of '95 were between jobs, although three were predominantly involved in home duties rather than full-time paid work.

The Class of '95 were all young adults when interviewed for this research. They had taken on responsibility at work and in the home. They were workers, parents and partners. They enjoyed sport, the theatre and socialising. They travelled, owned homes and mortgages, and still had dreams for the future and in most cases the educational background to pursue those dreams. For most the experience of secondary school at Soton College had been largely positive with corresponding outcomes. Their lives were proof of the effectiveness of Soton College as a school.

Discussion

The story of the Class of '95 is one of success. They passed the VCE. They almost all received the offer of a place at university or TAFE and almost all successfully completed the course they started. Of those from the Class of '95 who completed the VCE, half entered the professions and all but seventeen, which was 13 per cent of the class, entered work with training.

These young people had gained their VCE, received a tertiary course offer (university or TAFE) and finally gained a “good” job. These were the goals sought by most of the families in this cohort who had selected Soton College for their child. There would have been some disappointment for those in the Class of '95 who chose a TAFE course as a compromise when achievement and TER were not sufficient for university entry. There would also have been at least initial disappointment for those eight members of the Class of '95 who applied for university entry but were not able to get the offer of a place because of a poor performance in the VCE or the attainment of a poor TER.¹⁶⁷

But not all who received the offer of a course place at university took up the offer or completed the course. There were a number of the Class of '95 who dropped out of university because they did not like some aspect of it. Interestingly there were no drop-

¹⁶⁷ A low TER is not always an indicator of poor VCE performance. This fact has been discussed in this chapter and also earlier in this thesis.
outs for the much shorter TAFE courses and it is possible that the shorter time these took to complete contributed to this outcome. The members of the Class of ’95 who elected to take a TAFE course went ahead to complete it.\footnote{TAFE courses were of six months to two years in length and could be studied full-time or part-time. Often courses were held in the evening so that students could work during the day.}

Social background, however, dictated VCE achievement. With the exception of a few outstanding students Soton College was the educational home to far more newcomers than inheritors. Despite spending six years with inheritors, Soton College newcomers still gained lower grades in VCE English and mathematics and across all the VCE subjects. This did not mean that the academic performance of all newcomers in the VCE was inferior to that of all inheritors. It was not.

The achievements of Hanna and Anthony were outstanding. But within the TER, the tertiary course selection process only in its second year in 1995, the outstanding performances of Will, Kitty, Honor and Anthony were better recognised by the TER process because their achievement was in mathematics and sciences and Hanna’s was in humanities.

And here, in the differences amongst the achievements of the elite students of the Class of ’95, is the ultimate barrier to newcomers’ access to university. This is the divisive role of curriculum. The consequence for Hanna of the application of the ranking process in which the achievement of Will, Kitty, Honor and Anthony was promoted above that of Hanna was a loss of competitiveness in the race for university. This was because, “some studies are attempted by more able students than others. So to accurately predict success and to be fair to students attempting studies which will prepare them well, there is a need for higher scores in these studies” (Brown. May. 1995: p 8).

It could be argued that the different subject interests of these four members of the Class of ’95 reflected different interests and this was true, but all four of these highest performing students intended to enter a course at the university in which competition
was highest. Hanna’s TER was not sufficient to get her into the course of her choice and she accepted an offer of the same course at a less prestigious university. The Tertiary Entrance Ranks of Will, Kitty and Anthony were adequate for their most preferred courses, all of which were at the University of Melbourne.

However the VCE was a vehicle designed for the masses. It was a post-compulsory school certificate structured to encourage the average student to stay in school and not leave. It would seem, however, that the TER was designed to make it more difficult for these students to take the next step into university because it effectively used the curriculum specifically designed to “keep kids in school” to block their race for further education at the end of school.

The main users of the education system were average students and the average students amongst the Class of ’95 had been brought to the brink of achieving their goals in the VCE by Soton College only to be pushed back into compromise of university places by the action of the selection process.

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169 This was the University of Melbourne where the TER required to enter most courses was in the highest quintile, which is between 80.40 and 99.95 which was the maximum possible TER.
CHAPTER 16

Conclusion

Soton College had done the job most of the parents had asked of it. Six years before, the parents of the Class of ’95 had selected Soton College for their children because they wanted their children to finish school, go to university and enter a profession. This had been the common aspiration of almost all parents of the Class of ’95 regardless of their social background. Four in every five parents who expressed this wish for their child were seeking upward social mobility for them because one hundred and thirty-two of the one hundred and sixty-three children from the Class of ’95 were newcomers.

These were families who, like those of the inheritors in the Class of ’95, valued upward social mobility and saw education as the way to achieve this for their children. In addition they were almost all Catholic families and wanted their children to be educated in a Catholic environment. They were families who lived in the neighbourhood of Soton College and they had either had some experience of the College through older children who had studied there or because they had seen the results of neighbours’ and friends’ children who had studied there. These parents, whether those of newcomers or inheritors, believed that Soton College could deliver what they wanted for their children. In most cases their trust had been well placed.

Inheritors were already at the peak of the social scale. They were the daughters and sons of professional workers and their parents wanted them to follow in their parental footsteps and enter professions. Newcomers had some distance to go. The daughters and sons of unskilled workers had the furthest to travel and those of non-professional white-collar workers the least distance. All parents regardless of social background were equally ambitious for their children. Most of these parents were to see their ambitions become reality.
This research has shown that most newcomers from the Class of '95 stayed on and completed secondary schooling. At the end of this they moved to university where most gained a degree. Although when data were collected for this research not all had entered a profession, it was the most common destination of newcomers. Those newcomers who were not in a profession were most likely employed in white-collar work of some kind.

Less than one in five of the Class of '95 took on blue-collar work and even when they did the most popular type of work for this group was a trade. Of the sixty-seven members of the Class of '95 from a blue-collar family background only twenty-eight (42 per cent) entered blue-collar work when they finished school.

At the same time inheritors had not all maintained their childhood social position. Some had dropped out of school, and others had completed school but ignored university and gone into a trade or other work. Even those who had entered university or TAFE had not always stayed to complete a qualification. Only half the inheritors amongst the Class of '95 entered a profession.

Riordan (1997) points out that Coleman (1982) argued that the Catholic school effect was most obvious amongst the disadvantaged who, in this research, are known as newcomers (Riordan. 1997: p 143). Amongst the Class of '95 newcomers had significant success with making a move up the social scale. Children from the families of blue-collar workers were particularly successful. On the other hand half the inheritors and nearly as many children from the families of non-professional white-collar workers moved down the social scale. In the latter case most of the downward social movement was to a trade. This could not be seen as a negative move even for inheritors since at the time data were collected for this research one third of the number owned their own business as a result of taking on a trade.

Inheritors had been the most successful group in achievement. They had out-performed newcomers from their first assessment at the end of their first semester in Year 7. Inheritors had been able to utilise the curriculum far more effectively than newcomers. They were articulate, well read and handled the English curriculum better than their
newcomer classmates. They were in the higher levels of mathematics in greater proportions than their newcomer classmates and out-performed them academically. From the start of Year 7 to the end of Year 10 inheritors consistently achieved a mean that was a grade higher than that of newcomers.

In their final VCE year inheritors had taken more hard subjects than newcomers and scored better in VCE English. They had been more inclined to take mathematics and when they did they took preparatory mathematics. They had been less inclined to take Further Mathematics, which was the lowest VCE mathematics. Inheritors had achieved better in VCE mathematics regardless of the level and the mean of their aggregate study score was higher than that of newcomers. The mean of their Tertiary Entrance Ranks fell into the second highest quintile, while that of their newcomer classmates fell into the third highest. This meant that the mean TER of inheritors in the graduating class of ’95 was over three hundred ranks more competitive than that of newcomers. Overall the inheritors from the Class of ’95 had done better academically than newcomers from the same class. Social division still remained in the academic achievement of Year 12.

If this division was still apparent, then could Soton College be seen as an effective school? Was there evidence of the Catholic school effect in the outcomes of the Class of ’95?

The criteria for an effective school were established some time ago in the work of Coleman and Hoffer (1987) in the United States of America and further developed by Bryk, Lee and Holland (1993) over the last decade of the 20th Century. These researchers found that effective schools had lower attrition rates and higher rates of university entry. They also found that students within these schools were upwardly socially mobile and that the schools acted to bridge the gap between disadvantaged background and the middle classes. What is more, these researchers showed that Catholic schools displayed this effect where Government schools did not.

In Australia the work of Flynn (1985) and later Flynn and Mok (2002) identified the existence of the same effect in Australian Catholic schools. But Riordan (1997: p 147)
in the United States had already observed that in the research carried out there was no attributable Catholic school effect associated with co-educational Catholic schools and that the Catholic school effect was pertinent to single sex schools only. Soton College is co-educational. What then would be the outcome?

For Soton College to be effective newcomers had to (a) stay and complete secondary school, (b) choose university at the end of school and (c) transcend the social scale when they did so. At Soton College all these criteria were met by most newcomers.

The most tenuous claim relates to attrition. A significant number of newcomers as well as a significant number of inheritors from the Class of ’95 did drop out of school. Even so, post-school outcomes were often positive and transition to work was by way of some form of training program such as an apprenticeship or traineeship. In fact for a number the term “drop-out” was a misnomer. Almost half those who participated in this research were involved in work with a future and for which they had trained. In addition those who had dropped out during Year 10 were just as well placed as those who made the most positive transition to work via the Year 11 “goat path” recognised as the informal school exit point by the Kirby Report (2000: p 53). Any increase in vulnerability in the workplace for these ex-students related to the timing of school exit and lack of school credentials. This would manifest itself through potential limitations in meeting future demands for re-training resulting from possible workplace change. Otherwise, providing the transition from school to work was accompanied by training, those from the Class of ’95 who took this pathway were well settled in interesting and secure work ten years later.

What is more, the proportion of newcomers who dropped out of the Class of ’95 was almost identical to the proportion of inheritors who did the same. But the achievement pattern of newcomer drop-outs from the Class of ’95 was superior to that of inheritors. Only the overall subject average at the end of the first semester of Year 7 was the same for both groups of students from the Class of ’95. From Year 7 to Year 10 those newcomers who intended to leave school for work before they completed Year 12
outperformed the inheritors who did the same. It would appear that inheritor drop-outs at Soton College were less engaged with schooling than newcomer drop-outs.

Soton College had attempted to address the problem of non-completion of school through programs that aimed at improving school achievement, the latter being a known influence on the decision to quit school. The college also established a broad school curriculum in an effort to meet the needs of all of its diverse student population and so encourage retention. The introduction of the VCE saw these policies maintained at the College. Despite these measures Soton College faced an attrition rate of around one student in five, regardless of social background, from the Class of '95 and there was room for improvement in the numbers of students who stayed on to complete Year 12.

The second criterion for an effective school relates to post-school aspirations. Coleman and Hoffer (1987: p 218) have argued that Catholic schools generate an increased interest in university education. Certainly this was the case with Soton College, where all but six of the graduating class in 1995 applied to enter university or TAFE and the overwhelming majority of 95 per cent of the graduating class chose university courses. Most of these applicants for university were successful, although not all took up the course offered to them nor did all complete the course they started.

Parents of newcomers who chose Soton College for their child’s secondary education were more likely to see their child achieve the offer of a place in a university degree than drop out of school or fail to get into a university course. Certainly every member of the Class of '95 met the basic criterion necessary to make the transition to tertiary level study: they all passed the VCE.

But the academic pathway each child followed differed from that exhorted by the early researchers of school effectiveness. Coleman and Hoffer (1987) held that the Catholic school effect emerged from the adherence to traditional curriculum. By this they meant that effective Catholic schools offered the more demanding mathematics and sciences subjects and the more challenging humanities subjects. Soton College did not restrict itself to only these subjects.
Since the foundation of the College, the curriculum offered to students was one designed to meet the demands of all those who would attend the school. The College offered the traditional high level mathematics subjects, the full range of science subjects and some of the most challenging humanities subjects including both French and Italian, but it also offered subjects that would appeal to less academically oriented students. This was essential because Soton College was a non-selective secondary school. The students of the College came because their parents wanted them to, not because they were academically gifted.

The new or less academically demanding subjects were popular at Soton College and their appeal was to all, not only newcomers. Only ten of the Class of ’95 chose only traditional or hard VCE subjects. There were a greater proportion of inheritors to newcomers in this small group and girls dominated it. Amongst the new or easy subjects was something for almost every member of the graduating class of ’95, from the academically most capable to those who struggled with their VCE subjects.

Studying subjects that were of interest must have proved satisfying and probably enhanced the post-compulsory years for the Class of ’95, but what seemed a good idea when they chose their VCE pathways during the final weeks of Year 10 was to become risky by the end of their first year in the VCE because the tertiary selection process was changed to the Tertiary Entrance Rank (TER).

This policy change adopted by the universities at the end of 1994 could have undone the value of the broad curriculum for Soton College because the TER modified VCE achievement by the subject in which it was gained. Achievement in so called hard subjects attracted rewards and achievement in so called easy subjects was discounted. The heavy commitment of members of the Class of ’95 to easy subjects meant that scores gained over most of the achievement range were discounted in the determination of the TER and so reduced the competitiveness of the candidate for a university course place.

The impact of subject choice, achievement and the adjustments of the TER on individuals from the Class of ’95 has been discussed in this study. So too has been the
size of the disparities in adjusted VCE achievement. For some, the introduction of the
TER led to compromise in post-school educational outcome and whereas most of this
compromise resulted from a lower than expected TER and therefore competitiveness,
some was in the other direction. An inflated TER could and did entice successful VCE
candidates to enter university courses that they had often not researched properly, but
saw as better use of their TER. Students who took this path were influenced by
consumerism. They were keen to get the full value of their inflated TER so they entered
a course that demanded a higher TER than they had previously needed. This proved to
be an imprudent move for at least two newcomers from the Class of ’95 and within the
first year of their university careers they had dropped-out and returned to their original
course choices.

But regardless of the post-VCE outcomes those who stayed at school until the end did
so because they wanted to. Generally the school climate was positive. Soton College
collaborated with parents and their children in the education process. Although by
1995 the formal representation of the two Catholic religious orders that had founded the
school had dwindled to one person, the ethos of the founding orders was still well in
place. The fact that Soton was a Catholic Regional College meant that the functional
community of the College was integrated with that of the partner primary schools from
which most of its students were drawn.

Added to this was a strong school emphasis on social justice. This program permeated
all activity within the school and for the Class of ’95 it was to take on a more personal
involvement, as they worked with the Director of Students to form the first college
Student Representative Council as well as to establish programs designed to remove
anti-social behaviours such as bullying and to acknowledge the value of every member
in the school community. In their final year, the Class of ’95 not only adopted the
motto “celebrating the gifts of each other” but made the celebration part of their
commitment to the college.

There was an underpinning assumption amongst all stakeholders at Soton College that
all students were going to succeed in getting their VCE and that all who wanted to
would then go on to university. It was a belief common to the College, the parents and most of all the students in the Class of '95 and it was justified. What is more this belief fostered a positive school climate that according to Flynn (1985: p 316) is a major contributing factor to school effectiveness of contemporary Australian Catholic schools. According to Flynn (1985) students who experienced a positive school climate or ethos achieved better in Year 12 regardless of family background.

That the Soton College school climate could be deemed positive can be seen from the fact that it had all those characteristics of a positive school climate identified by Flynn in his early work on school effectiveness (1985: p 316). Soton College values were apparent and focused on the development of the whole person of every student in a Catholic school environment. The morale of students appeared to be high. Most of the Class of '95 wanted to be at school. They enjoyed the school experience. Even those who had dropped out of Soton College often remembered parts of the school experience with fondness as well as rueful humour during their interviews. Amongst these students the common thread was the dislike of school work, not the actual place. This would have to indicate some positive levels of student morale amongst even these school “discontents”. In addition Soton College school structures such as student organisation fostered pastoral care for each child and at all levels of schooling and personal development. At an administrative level, the fact that every attempt was made to meet the requests of VCE students for certain subjects was a practical way to promote the care of the individual. Crucial in all this was the guidance of the principal who at this time was the first lay principal of Soton College. He was a person heavily and publicly committed to his faith and with the practical application of its principles in the real world of the Catholic laity of the late 20th Century. Flynn argued that all these characteristics contributed to a positive school climate that generated the Catholic school effect of enhanced holding power and achievement in the final years of post-compulsory education.

Almost every member of the Class of '95 chose at least one VCE subject in which their achieved study score was above the subject mean of 30. The small group of fifteen who did not achieve this were mainly boys and all but one were from newcomer family
backgrounds. Competence above the average in any VCE subject would indicate a liking for the subject. So, nine in every ten VCE students in the Class of ’95 were able to find at least one subject of interest to them from the curriculum available. This too should have enhanced the school experience for each child.

Parents of the Class of ’95 had asked Soton College to do more than simply shape a pathway through secondary school and beyond to work. They had asked that their children enter the professions and for 80 per cent of them this meant ascendency in the social status scale. In other words parents had trusted Soton College to bridge the social gap for their children between childhood and adulthood. These parents wanted their children to become inheritors. These parents saw Soton College as a “bridging institution” (Bryk, Lee and Holland. 1993: p 316).

The college was only partially successful in achieving this wish of parents. More than half the newcomers in the Class of ’95 did ascend the social scale through university and employment and thirty-two newcomers maintained their social position. This meant that the Soton College experience had led to a positive social position for over 80 per cent of newcomers. Where the maintained social position was without credential, however, the outcome was not as positive, and young people who went from the families of unskilled workers to become unskilled workers themselves had not been able to advance their social position at all.

But for most of the newcomers in the Class of ’95 Soton College, had acted as a catalyst in the journey up the social class ladder. Of the remainder almost all had taken post-school work that left them at the same social status level as their parents. Where this was in a trade, then it is difficult to see this as being less than a positive school outcome but rather an alternative one. Even the small number of students from a white-collar family background who chose a trade cannot be viewed as experiencing anything less than a positive transition to work. In a number of cases they owned their own business in the first ten years after leaving school. Business ownership meant that, with the exception of inheritors, these ex-Soton College students moved back up the social scale to non-professional white-collar workers.
Some appreciation in social background was slight, such as a movement from a family of tradesmen to adulthood in small business ownership, but some movement was from being the child of an unskilled worker to entering a profession. Eight of the seventeen members of the Class of ’95 achieved this.

All were girls and all had an ambition to complete a degree and take on a profession. But where Soton College had supported these girls, the TER penalised most of them. Only Sybil and Kara from this group were not penalised in most of their VCE subjects and that was because these two girls were better at mathematics than English and pursued a pathway through the traditional subjects of preparatory mathematics and physical sciences.

Although successful, the transition had been more difficult for some of these daughters of unskilled workers than for their inheritor sisters or even the girls from a non-professional white-collar worker background who shared their classrooms. Three of the eight girls studied at a country university because the TER they gained was too low for them to be offered a place at a metropolitan university. Three studied preparatory mathematics and although their scores were low (none achieved the subject mean of 30), this allowed them to meet the university course requirements and also rewarded them in the determination of the TER.

These girls are perhaps the best illustration of the effectiveness of Soton College. Each of them had used the subjects that were their strengths in the curriculum to achieve their VCE result but the choice had been largely of easy VCE subjects and almost all of the girls were penalised for this. If the argument that easy subjects were taken by less able students, which was implied in Professor Brown’s (1995: p 8) comment justifying the TER quoted above, then how is it possible that each of these less able students was able to graduate university and become successfully employed in the profession they sought.

Each of these girls was a competent student. What is more each had a post-school goal and the willingness to work to achieve it. They were supported by family who wanted
to see their daughters succeed and Soton College, which had the same ambition for each of them.

Their achievement challenges the thinking that only more able students are capable of studying a university degree. The things that these newcomer girls had in common were that they were daughters of unskilled workers, and that they had the determination and the ambition to study at university. Most of all they had the ability to be successful and overcome the barrier of being competent in VCE subjects in which achievement was penalised though discounting in the determination of the TER.

It is concerning that none of the boys from this social group scaled the social ladder to the same height. But amongst the children of tradesmen Anthony did achieve a high score and entered his most preferred course but then Anthony was an elite student.

It would seem that the package of education offered by Soton College had proved effective in allowing the non-traditional users of university education to transcend the social gap from newcomers to inheritors through accessing university and a profession. A broad academic curriculum coupled with a similarly broad program of extra-curricula activities, a leadership program in which each Year 12 student was expected to participate and a school experience focused in the Catholic tradition had resulted in a positive outcome for most of the Class of ’95.

That does not mean that there were not areas of concern that have appeared in this research. The mathematics program experienced by the Class of ’95 had not been inclusive and indeed girls had rejected VCE mathematics in large numbers. In particular this was the action of newcomer girls. The implications of this action were very serious because by not completing any final year VCE mathematics subject these girls restricted their post-school university course options.

The majority of the little Year 7 students who stood in that schoolyard in overlong blue check dresses and overlong dark blue shorts, hesitant and awkward in their new school environment, had become adults. They had decided on a post-school career destination
and six years later they were in a position to move from their school pathway to university, TAFE and finally work.

But social background was not the only factor by which school achievement varied even if it was the factor by which school effectiveness had been judged. Achievement was also unequally divided by gender. There were more girls than boys at Soton College but their numbers were only slightly greater than that of boys. Even after significant attrition in which almost two boys for every girl dropped-out of school in the post-compulsory years, the gender imbalance was doubled at 8 per cent, which meant sixteen more girls than boys from the total class size of one hundred and twenty-eight entered Year 12. This imbalance was far less than that of inheritors and newcomers amongst the Class of ’95.

Throughout the early school years of Year 7 to Year 10, girls achieved a grade higher than boys in English and overall all their subjects, but their achievement in mathematics was similar. After a shaky start in the hierarchical structure of Year 9 and 10 mathematics, where more girls were relegated to the lower levels than boys, girls regained an equal standing in the Year 10 mathematics hierarchy. But, as mentioned above, girls dropped out of mathematics during the VCE whereas boys stayed with the subject, albeit most of them in the lowest levels. When girls did take on VCE mathematics they concentrated on preparatory mathematics with mixed results. Certainly girls and boys both suffered relatively poor results in preparatory mathematics in the VCE with a mean below 30, which was the mean of the subject.

Girls slightly out-performed boys in VCE English and had a higher median aggregate study score than the boys from Class of ’95. Girls were more inclined to choose “hard” VCE subjects than boys and consequently had an improved chance of gaining a better TER than boys with fewer hard subjects. The median TER gained by girls was one hundred and ninety-one ranks ahead of that gained by boys. This made girls far more successful in gaining the offer of a university place. Boys from the Class of ’95 on the other hand were more inclined to apply to a TAFE course than girls and consequently more of them received the offer of a place in a TAFE course than girls.
As with social background, Soton College had not been able to address the differences in achievement between girls and boys evident when the Class of ’95 commenced at Soton College and still apparent six years later. Programs aimed at addressing poor achievement in English had been successful and some boys like Anthony had been able to reach a far higher level of achievement in this subject than could ever have been dreamt of in Year 7.

For most of the Class of ’95, Soton College, a co-educational Catholic Regional College, had been effective in collaborating with families to construct a pathway to work in an environment in which social transition could occur. Although the College never righted the social and gender differences in academic achievement, it was effective in raising most of the Class of ’95 to a level from which tertiary education, mainly by way of university degrees, was accessible. Through this process Soton College had contributed to newcomers transcending the social class background of their childhood. For most this meant entering the professions, a goal held by their parents when they chose Soton College as the vehicle by which their children would travel through secondary school.

Soton College bridged the social gap for most of the Class of ’95. Almost all who stayed to complete Year 12 aspired to university and nearly all got the offer of a university place. Most were to be upwardly socially mobile, even those who dropped-out of school. In this Soton College was an effective school, but there were differences between the effectiveness of the college and that identified by Coleman (in Coleman and Hoffer; 1987). Soton College provided breadth of curriculum rather than the traditional academic curriculum regarded as contributing to the Catholic school effect in the United States of America. Soton College was also a co-educational college. Flynn (1993) had not been able to detect the existence of a Catholic school effect in the culture of co-educational Catholic schools in his research over the last thirty years.

The experience of the Class of ’95 showed that Soton College had kept trust with the charge given to it by parents and had effectively supported most of the Class of ’95 as they moved up the social scale through education. But the selection process for
university and TAFE courses had disappointed many. Those amongst the Class of ’95 were not alone in experiencing this. Two years later and from the other side of Melbourne, a student from another school complained in the press that her TER was low because of her choice of VCE subjects (Boyce. The Age. 1997: A 16). In Victoria the story is repeated year after year through the life-time of the TER and its successor, the Equivalent National Tertiary Entrance Rank (ENTER).

A policy of tertiary course selection which uses a ranking system derived from adjusting the scores gained in subject assessment by rewarding those students who take VCE subjects which, “will prepare (students) well” for university study (Brown. 1995: p 8) and discounting those that don’t, effectively undervalues almost half of the VCE curriculum. These are the so called easy VCE subjects and some social groups chose these subjects more than others.

Easy subjects have been found to be popular with students from a lower socio-economic background than students from the higher socio-economic backgrounds (Lamb and Ball. 1999: p 11). Enrolment in the higher mathematics and physical sciences a combination which is favoured in meeting the requirements of university is dominated by boys and those from the highest socio-economic background (Lamb and Ball. 1999: p 11). In Victoria the lowest reported study score of 20 attracts a reward in each of the two higher mathematics and both Physics and Chemistry VTAC. Only some arts and humanities subjects (mostly languages with a few history subjects and one of the music subjects) are rewarded by the TER adjustment, one of the business oriented subjects (Economics) is rewarded by the TER adjustment. Lamb and Ball found that amongst all other combinations of subjects, particularly technologies, business and health oriented subjects almost of all of which are easy subjects, students from the lower end of the socio-economic background dominate enrolments (1999: p 11). After higher mathematics and physical sciences boys were most likely to be found in technology subjects or in Vocational Education and Training (VET). All of these are

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170 In 1995, the adjusted mean of thirty-eight VCE studies including three languages was below 30; the adjusted mean of thirty-five subjects of which eighteen were languages was above 30; enrolments in sixteen subjects were too low to establish an adjusted mean and the adjusted mean for Biology remained at 30. There were ninety VCE subjects available in 1995.
easy subjects that is the ones discounted in the adjustment of the TER (Lamb and Ball. 1999: p 8).

All of these findings led to Lamb and Ball stating that, “students from different backgrounds are located in different arts of the curriculum” (1999: p 46) and that the “senior school curriculum not only acts as a transmitter” but that, “school curriculum and students course-taking are influences on post-school outcomes” (Lamb and Ball. 1999:p 47). In the jockeying for university selection where the latter is determined by use of the TER then the student most advantaged in gaining a place is the student who attended a school where the curriculum included the most sought after higher mathematics, sciences, some languages and a small number of humanities subjects so the students could make an appropriate choice, and who also believe that they have the aptitude, interest and ability to study these subjects. The students most in danger of losing the university place they most wanted are those who cannot access these subjects or who feel that they lack the aptitude, interest and ability to study these subjects.

These social differences in both VCE achievement, choice of VCE subjects and TER are the experience of the Class of ’95 and have been discussed in this case study. There was however a strong goal of university access at the end of secondary school amongst the members of the Class of ’95. There was also a high level of achievement of this goal for the group but this does not extend to others as James (2002) has found.

Much as there is a need to investigate these differences in TER associated with socio-economic background and gender which mean that university courses are not as easily accessed by some social groups, there is an even greater need to investigate the possible relationship of the TER and retention. James has shown that amongst other things that secondary school students from lower socio-economic backgrounds were less confident that they would achieve the academic results needed to enter university courses which interested them and that they wouldn’t have the subjects they needed to get into their preferred university course (2002: p 34). Consequently these young people did not plan to get into a university course. There is passive acceptance in these responses. The post-school outcomes envisaged by these young people included training and
TAFE courses but there is a need to investigate whether the feeling that university is inaccessible also encourages students to drop-out of school before completion.

James was prompted by his findings to argue that there was a need to, “bypass competitive selection procedures” for university because “competitive entry based on school achievement is a major stumbling block for young people from lower socio-economic backgrounds (2002: p 53). There is also a need to further investigate whether the perception that both the demands in curriculum made by universities and the TER needed to get the offer of a university place, acts to encourage dropping-out of school.

Finally there are two other aspects of this work in need of comment. Firstly, the Catholic school effect evident at Soton College in 1995 was achieved using the broad based curriculum of the VCE not the academic curriculum connected by Coleman and Hoffer (1987: p 220) and later Bryk, Lee and Holland (1993: pp 268 – 270) with school effectiveness. Most of the members of the Class of ’95 had not limited themselves to only traditional academic VCE subjects although these had formed the core studies of Years 7 to 10. Academic curriculum had been experienced by all the Class of ’95 during the compulsory years of schooling and no doubt provided good background upon which to draw in the broader VCE curriculum.

Secondly, the VCE was introduced to provide meaningful post-compulsory education for all who wanted to stay in school to do it. It was aimed specifically at non-traditional school completers, new to a full post-compulsory education and termed newcomers in this research. Newcomers were the beneficiaries of the transformed post-compulsory credential but even with a curriculum broad enough to suit their interest and needs the success of newcomers was second to that of inheritors in VCE achievement and university access. Social background hindered academic achievement for newcomers and the TER favoured the traditional VCE subjects not those most sought after by newcomers. After the introduction of the VCE, Bourdieu’s inheritors were still dominant and the chance of entering university relied on a, “selection process which …..is applied with unequal severity depending on the student’s social origin” (Bourdieu and Passeron.1979: p 2).
APPENDIX A : VICTER ‘96

The following analysis of prerequisite studies for 1996 entry to courses at Universities and TAFE Colleges in Victoria is taken from the VICTER 1996 as revised 1994. In addition to the mandatory prerequisite subjects, University courses encouraged students to undertake certain preferred subjects by offering bonus points for the successful completion of nominated subjects.
Table 19: Summary of prerequisite subjects for entry to university courses in 1996.

<table>
<thead>
<tr>
<th>Mathematics prerequisite subjects nominated</th>
<th>Percentage of courses in the VICTER 1996</th>
<th>Total percentage of each category</th>
</tr>
</thead>
<tbody>
<tr>
<td>No mathematics subjects required- No prerequisite studies</td>
<td>19%</td>
<td></td>
</tr>
<tr>
<td>No mathematics subjects required- English only</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>No mathematics subjects required- Subjects other than English and Mathematics</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Percentage of tertiary courses not requiring Mathematics in VCE</td>
<td></td>
<td>48%</td>
</tr>
<tr>
<td>Units 1 &amp; 2 of VCE Mathematics only</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Any Unit 3 &amp; 4 VCE Mathematics sequence</td>
<td>17%</td>
<td></td>
</tr>
<tr>
<td>Unit 3 &amp; 4 sequence of Mathematical Methods</td>
<td>27%</td>
<td></td>
</tr>
<tr>
<td>Unit 3 &amp; 4 sequence of Mathematical Methods &amp; Specialist Mathematics</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Percentage of tertiary courses requiring Mathematics in VCE</td>
<td></td>
<td>52%</td>
</tr>
</tbody>
</table>
Far fewer TAFE courses than university courses which were applied to through VTAC in 1996. Most courses did not require any prerequisite subjects other than those required for the successful completion of VCE. In 1995 the latter required the successful completion of English, at least one subject from Group A (humanities) subjects and the successful completion of one subject from Group B (Mathematics, sciences and technology) as well as the satisfaction of the other requirements for the successful award of VCE. These requirements are also summarised in Table 20.
Table 20: Summary of Mathematics and Non-Mathematics prerequisite subjects for entry to TAFE courses in 1996.

<table>
<thead>
<tr>
<th>Mathematics prerequisite subjects nominated</th>
<th>Percentage number of courses in the VICTER 1996</th>
<th>Total percentage of each category</th>
</tr>
</thead>
<tbody>
<tr>
<td>No mathematics subjects required- No prerequisite studies</td>
<td>72%</td>
<td></td>
</tr>
<tr>
<td>No mathematics subjects required- Subjects other than English and Mathematics</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Percentage of tertiary courses not requiring Mathematics in VCE</td>
<td></td>
<td>76%</td>
</tr>
<tr>
<td>Units 1 &amp; 2 of VCE Mathematics only</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>Any Unit 3 &amp; 4 VCE Mathematics sequence</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Unit 3 &amp; 4 sequence of Mathematical Methods</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>Bonus points added for Mathematics (any) selection</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Percentage of tertiary courses requiring Mathematics in VCE</td>
<td></td>
<td>24%</td>
</tr>
</tbody>
</table>

There was a noticeable difference in the subject prescription levels of University and TAFE. There were far fewer TAFE courses requiring specific VCE studies for access to the available courses for 1996.
APPENDIX B: VCE subjects selected by social group

Curriculum requirements for the successful completion of the VCE

All VCE subjects accredited by the Board of Studies (BOS), the governing body of the VCE, contributed equally to the award of the VCE. The subjects were classified as Group A and Group B subjects and in 1995 successful VCE students passed at least two units of studies from the subjects in each group, in addition to three out of four units of English. Altogether the successful completion of 16 units of VCE studies was required for the award of the VCE. Units 3 and 4 must be studied as a sequence and an additional three Unit 3 and 4 sequences must be included in the 16 units studied for the award of the certificate.

VCE studies offered at Soton College in 1994 and 1995

Soton College offered all the accredited studies in mathematics and the physical sciences. In addition, subjects offered included the traditional subjects and a range of the new subjects. These are classified below.
Table 21: Summary of VCE subjects offered at Soton College in 1995.

<table>
<thead>
<tr>
<th>Traditional VCE subjects</th>
<th>New VCE subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specialist Mathematics</td>
<td>Studio Arts</td>
</tr>
<tr>
<td>Mathematical Methods</td>
<td>Graphic Communication</td>
</tr>
<tr>
<td>Further Mathematics</td>
<td>Drama</td>
</tr>
<tr>
<td>Physics</td>
<td>Human Development- Home Economics</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Physical Education</td>
</tr>
<tr>
<td>Accounting</td>
<td>Australian Studies</td>
</tr>
<tr>
<td>French</td>
<td>Business Management</td>
</tr>
<tr>
<td>Economics</td>
<td>Environmental Studies</td>
</tr>
<tr>
<td>English Literature</td>
<td>Materials and Technology – Wood</td>
</tr>
<tr>
<td>Italian</td>
<td>Technical design and Development – Food or Textiles</td>
</tr>
<tr>
<td>Texts and Traditions</td>
<td>Information Technology and Society</td>
</tr>
<tr>
<td></td>
<td>Information technology – Processing and Management</td>
</tr>
<tr>
<td>Music Craft and Solo Performance</td>
<td></td>
</tr>
</tbody>
</table>

The following subjects cannot be described as traditional. They existed prior to the introduction of the VCE but were not popular with the highest achieving students. These were Geography, Legal Studies, Australian History and Music.

Students at Soton College had a long and established history of favouring Geography, Physical Education, Australian History and Legal Studies, and having a great deal of success in these studies. These subjects too continued to be popular in the VCE.
Figure 59: Newcomers choices of hard and easy VCE subjects

Figure 60: Newcomers choice of VCE subjects
Figure 61: Inheritors choice of hard VCE subjects

- One hard subject: 12%
- Two hard subjects: 28%
- Three hard subjects: 12%
- Four hard subjects: 12%
- Five hard subjects: 12%
- No hard subjects: 24%
Figure 62: Newcomers choices of hard VCE subjects

- No hard subjects: 27%
- One hard subject: 34%
- Two hard subjects: 17%
- Three hard subjects: 11%
- Four hard subjects: 7%
- Five hard subjects: 4%

Figure 63: Inheritors choice of easy VCE subjects

- No easy subjects: 16%
- One easy subject: 16%
- Two easy subjects: 28%
- Three easy subjects: 12%
- Four easy subjects: 28%
Figure 64: Newcomers choice of easy VCE subjects

No easy subjects: 6%
One easy subject: 12%
Two easy subjects: 17%
Three easy subjects: 37%
Four easy subjects: 28%
## APPENDIX C: Comparative achievement

### Comparative achievement over time of Soton College

Table 22: Median grade in English – Years 7 and 10

<table>
<thead>
<tr>
<th></th>
<th>Inheritors</th>
<th>Newcomers</th>
<th>All students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(30)</td>
<td>(129)</td>
<td>(159)</td>
</tr>
<tr>
<td>First Year 7</td>
<td>B⁺</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>End of year 10</td>
<td>B</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>

### Achievement in English by social and gender groups

Table 23: Median grade in English of boys and girls – Years 7 and 10

<table>
<thead>
<tr>
<th></th>
<th>Inheritors</th>
<th>Newcomers</th>
<th>All students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(30)</td>
<td>(129)</td>
<td>(159)</td>
</tr>
<tr>
<td></td>
<td>Boys (14)</td>
<td>Girls (16)</td>
<td>Boys (61)</td>
</tr>
<tr>
<td></td>
<td>Boys (75)</td>
<td>Girls (81)</td>
<td>B</td>
</tr>
<tr>
<td>End of Year 7</td>
<td>B</td>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>End of year 10</td>
<td>B</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>
Achievement in English of newcomers by social subgroups

Table 24: Median grade in English– Years 7 and 10 by social groups

<table>
<thead>
<tr>
<th></th>
<th>Unskilled manual workers (26)</th>
<th>Tradespersons (38)</th>
<th>Non-professional white collar workers (65)</th>
<th>All students (129)</th>
</tr>
</thead>
<tbody>
<tr>
<td>End of Year 7</td>
<td>B</td>
<td>B</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>End of Year 10</td>
<td>C</td>
<td>C</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>

Achievement in English of newcomers by social subgroups and gender

Table 25: Achievement by newcomers’ social subgroups and gender – Years 7 to 10 - measured by median

<table>
<thead>
<tr>
<th></th>
<th>Unskilled manual workers (26)</th>
<th>Tradespersons (38)</th>
<th>Non-professional white collar workers (65)</th>
<th>All students (129)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Boys (11)</td>
<td>Girls (15)</td>
<td>Boys (21)</td>
<td>Girls (17)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Boys (29)</td>
<td>Girls (36)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Boys (75)</td>
<td>Girls (81)</td>
</tr>
<tr>
<td>Year 7</td>
<td>B</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Year 10</td>
<td>D</td>
<td>B</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>C</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td>B</td>
</tr>
</tbody>
</table>
Achievement – all subjects – by students at risk in English at Year 10

Table 26: Median grade of all subjects measured at the end of Year 7 and again at the end of Year 10

<table>
<thead>
<tr>
<th>Students cited at risk in Year 10 English (N = 11)</th>
<th>Median grade end of Year 7</th>
<th>Median grade end of Year 10</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C+</td>
<td>C</td>
</tr>
<tr>
<td>Remaining Year 10 English students (N=123)</td>
<td>B</td>
<td>C+</td>
</tr>
</tbody>
</table>

Decline in overall achievement from Year 7 to Year 10 inclusive was one grade although students identified by Year 10 English teachers achieved at a lower level than other Year 10 students from Year 7 to the end of Year 10.

Average students of English

The relative position of average students of English, that is those who scored a grade of C or B, remained unchanged from the first semester of Year 7 to the final semester of Year 10. The median grades of average inheritors were maintained at a B and those of average newcomers were maintained at a C.

Table 27: Relative position in English of average students measured by median at the end of their first assessment in Year 7 and their last assessment of Year 10

<table>
<thead>
<tr>
<th></th>
<th>Inheritors (30)</th>
<th>Newcomers (129)</th>
<th>All students (159)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Year 7</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>End of year 10</td>
<td>B</td>
<td>C</td>
<td>C</td>
</tr>
</tbody>
</table>
Table 28: Relative position in English of average newcomers – described by median grade - from the commencement of Year 7 to the end of Year 10

<table>
<thead>
<tr>
<th></th>
<th>Unskilled manual workers (26)</th>
<th>Tradespersons (38)</th>
<th>Non-professional white collar workers (65)</th>
<th>All students (129)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First assessment in Year 7</td>
<td>C</td>
<td>B</td>
<td>C</td>
<td>B</td>
</tr>
<tr>
<td>End of Year 10</td>
<td>C</td>
<td>C</td>
<td>B</td>
<td>C</td>
</tr>
</tbody>
</table>
APPENDIX D: Details of the former students’ survey

The survey instrument

The instrument was constructed as an interview schedule so that if lost or not returned information could be gained through a telephone call.
Table 29: Summary of survey and interview schedule questions asked of those of Class of ’95 who completed secondary school

<table>
<thead>
<tr>
<th>Question numbers</th>
<th>Information requested</th>
<th>Reason</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-4</td>
<td>Completion of VCE either are Soton College or at another institution</td>
<td>To determine who from the Class of ’95 commenced the post-compulsory education phase of their schooling and who completed this phase.</td>
<td>Some of the respondents to these questions transferred to other schools to complete their VCE for various reasons the most popular of which related to moving house. Students who transferred out of Soton College to another school were not included in the cohort for this work.</td>
</tr>
<tr>
<td>5-19</td>
<td>Access to university and TAFE courses, type of course, whether or not the course was completed, details of any transfer between courses at university or TAFE and if the course was not completed before going to full-time work the reasons for dropping-out from the course.</td>
<td>To determine post-school tertiary study outcomes and journeys of each of the Class of ’95 who completed Year 12.</td>
<td>Only some of these data were included in this case study. The data collected was rich and will contribute to any further study of the post-school educational pathways of the Class of ’95 but exceeded that needed to trace the Class of ’95 through school and into work even where the latter was by way of tertiary study.</td>
</tr>
<tr>
<td>20</td>
<td>Type of post-graduate study commenced if applicable</td>
<td>To add to the information gained about tertiary study options and journeys of the Class of ’95.</td>
<td>These data were also excluded from the case study but added to the information gained in questions 5 to 19 would complete a better picture of tertiary study experience for the Class of ’95 if this was studied.</td>
</tr>
<tr>
<td>Questions</td>
<td>Description</td>
<td>Notes</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td>-------</td>
<td></td>
</tr>
<tr>
<td>21-24</td>
<td>Experience at finding full-time work at the completion of formal education</td>
<td>Questions asked for information about the time spent in seeking full-time work as well as the role of experience in previous part-time work in the successful outcome to seeking full-time work. The length of time taken in seeking full-time work was referred to in the case study, but as with the tertiary study journey these data had to be ignored in completing this study.</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Whether job training was provided by employers of the first full-time job</td>
<td>Like questions 21 to 24 this information was sought with a view to exploring the post-formal study work accessibility for the Class of '95. Because the experience of the Class of '95 in seeking and gaining full-time work was not explored these data were not included in the case study.</td>
<td></td>
</tr>
<tr>
<td>26-27</td>
<td>Frequency of changing jobs.</td>
<td>This was to see which groups, if any, amongst the Class of '95 experienced lower job security that that experienced by others. This information was related to the time spent in the market for paid work. A student who graduated close to the time of the survey had little opportunity to change jobs but school dropouts had been in the market fro several years when the surveys were distributed and interviews done.</td>
<td></td>
</tr>
<tr>
<td>28-29</td>
<td>Self-description of main jobs held since completing school and any subsequent tertiary study.</td>
<td>In question 28 the Class of '95 were asked to describe their main jobs since school by ticking categories. The categories were the same as those used to classify their parents occupations provided at the time the families applied to Soton College for entry in 1990. In question 29, each member of the Class of '95 was asked to currently describe her or his current</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Information about small business ownership.</td>
<td>Type of business owned</td>
<td>By the time of data collection a small number of members of the Class of '95 had commenced business for themselves. The type of business activity was used in conjunction with the self-description of full-time occupation.</td>
</tr>
</tbody>
</table>
Table 30: Summary of survey and interview schedule questions asked of the school drop-outs from Class of ’95

<table>
<thead>
<tr>
<th>Question numbers</th>
<th>Information requested</th>
<th>Reason</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The school exit point.</td>
<td>This was the make sure that school records reflected the actual timing of exit. From time to time students exited the school without officially withdrawing. This meant that there could be a difference between exit point and the record of it.</td>
<td>Since Soton College was a fee paying school parents usually ensured that the withdrawal procedures were carried out in a timely way and records usually reflected the actual exit point.</td>
</tr>
<tr>
<td>2-5</td>
<td>Details of any further secondary education which might have been undertaken after the student dropped-out of Soton College.</td>
<td>To ensure that the students actually was a school drop-out</td>
<td>These data were asked for to check that the member of the Class of ’95 was actually a school drop-out.</td>
</tr>
<tr>
<td>6 - 10</td>
<td>Experience at finding full-time work after dropping-out.</td>
<td>Questions asked for information about the time spent in seeking full-time work as well as the role of experience in previous part-time work in the successful outcome to seeking full-time work.</td>
<td>The length of time taken in seeking full-time work was important in the analysis of Soton College drop-outs’ experience in the work place after school.</td>
</tr>
<tr>
<td>11</td>
<td>The type of training which accompanied entry to the first full-time work gained by each drop-out</td>
<td>This covered informal training, and formal training such as apprenticeships and traineeships.</td>
<td>This information was a key component of the analysis of post-school outcomes for drop-outs from the Class of ’95.</td>
</tr>
<tr>
<td>12-14</td>
<td>Whether the ex-student had studied any course after dropping –out of school and if so the type of education</td>
<td>These questions were specifically aimed at gathering information about drop-outs who might have returned to study in some way.</td>
<td>These data provided insight into the experience of each of the drop-outs after leaving Soton College.</td>
</tr>
<tr>
<td>15</td>
<td>Frequency of changing jobs.</td>
<td>This was to see which groups, if any, amongst the Class of '95 experienced lower job security that that experienced by others.</td>
<td>By the time these data were collected drop-outs had been in the work place for up to eight years and insecurity in the job had had time to become evident.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>17-18</td>
<td>Self-description of main jobs held since exiting Soton College.</td>
<td>In question 17 the Class of '95 were asked to describe their main jobs since school by ticking categories. The categories were the same as those used to classify their parents occupations provided at the time the families applied to Soton College for entry in 1990. In question 29, each member of the Class of '95 was asked to currently describe her or his current occupation using the same categories.</td>
<td>These data were then used to match the occupations of the Class of '95 and that of their parents at the time each family had applied to Soton College for their child to enter Year 7 in 1990.</td>
</tr>
<tr>
<td>19</td>
<td>Information about small business ownership.</td>
<td>Type of business owned</td>
<td>By the time of data collection a small number of members of the Class of '95 had commenced business for themselves. The type of business activity was used in conjunction wit the self-description of full-time occupation.</td>
</tr>
</tbody>
</table>
APPENDIX E: Details of respondents from the Class of ’95

Table 31: Former members of the Class of ’95 contact and participation numbers

<table>
<thead>
<tr>
<th>Eligibility</th>
<th>Survey &amp; telephone interview</th>
<th>Survey only</th>
<th>Telephone interview only</th>
<th>Declined to participate</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Contacts</td>
<td>132</td>
<td>90%</td>
<td>2</td>
<td>1.40%</td>
<td>12</td>
</tr>
<tr>
<td>Ineligible*</td>
<td>10</td>
<td>6.80%</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Eligible</td>
<td>122</td>
<td>83.20%</td>
<td>2</td>
<td>1.40%</td>
<td>12</td>
</tr>
</tbody>
</table>

* Ten students who were contacted and provided surveys and interviews were later found to have attended other schools for extended periods in their early years at Soton College or to have repeated a year of secondary schooling and therefore had not completed all their secondary education at Soton College and were not eligible to be part of the cohort. These student numbers have been removed from the cohort in the above table.

Survey respondents

Of the one hundred and forty-seven members of the Class of ’95 contacted for this research ten were found to have spent extended periods of time at schools other than Soton College during the earlier years of their secondary education. Since the cohort was comprised of only members of the Class of ’95 who had completed all their secondary education at Soton College to the point where they left for work, university or TAFE then the data provided by these ten students was not included with that provided by the remaining one hundred and thirty-six former students. As previously mentioned one student declined to be involved in the research. This was a return rate of 84 per cent.

The telephone interviews and completion of the surveys were carried out between 2002–2005. At this point it was harder to trace those who had dropped-out of Soton College before completion than those who had completed Year 12.
Table 32: Pattern of participation in research for students from the Class of ’95 who dropped out of school before completion of Year 12

<table>
<thead>
<tr>
<th></th>
<th>Traced</th>
<th>Untraced</th>
<th>Total drop-outs from the Class of ’95</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>17</td>
<td>49%</td>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>

Table 33: Pattern of participation in research for students from the Class of ’95 who completed Year 12

<table>
<thead>
<tr>
<th></th>
<th>Traced</th>
<th>Untraced</th>
<th>Size of the Class of ’95 at graduation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Included</td>
<td>Excluded*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>119</td>
<td>84%</td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

* Eleven of those from the Class of ’95, who completed Year 12, were found to have spent a substantial time during their secondary schooling at a college other than Soton College and therefore were not included in the cohort. In addition one student declined to participate in data collection by survey or interview. This meant that twelve of the former students from the Class of ’95 who completed Year 12 and were traced could not be included in the cohort for this study.

Girls were more easily traced than boys. Former students from an unskilled family background were the least likely to be tracked and all inheritors were tracked. Table 34 and Table 35 below show the pattern of participation.
Table 34: Pattern of participation by survey respondents who completed Year 12 (VCE)

<table>
<thead>
<tr>
<th>Data collection method</th>
<th>Eligible &amp; completed Year 12</th>
<th>Dropped-out of school before completing Year 12</th>
<th>Total number of eligible participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Survey &amp; interview</td>
<td>109</td>
<td>80%</td>
<td>13</td>
</tr>
<tr>
<td>Survey only</td>
<td>2</td>
<td>1%</td>
<td>-</td>
</tr>
<tr>
<td>Interview only using survey for structure</td>
<td>8</td>
<td>6%</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>119</td>
<td>87%</td>
<td>17</td>
</tr>
</tbody>
</table>

Table 35: Participation status in this research by drop-outs from the Class of ’95.

<table>
<thead>
<tr>
<th>Method of data collection</th>
<th>Included (N = 16)</th>
<th>Excluded* (N = 1)</th>
<th>Total traced drop-outs (N=17)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Survey &amp; interview</td>
<td>12</td>
<td>71%</td>
<td>1</td>
</tr>
<tr>
<td>Interview only</td>
<td>4</td>
<td>24%</td>
<td>-</td>
</tr>
<tr>
<td>Total (N=35)</td>
<td>16</td>
<td>95%</td>
<td>1</td>
</tr>
</tbody>
</table>

* Two former students, i.e. 6% of those from the Class of ’95 who had left school before completing Year 12, were found to have spent a substantial time during their secondary schooling at a college other than Soton College and therefore were not included in the cohort.

Profiles of non-respondents

Of the one hundred and sixty-three members of the Class of ’95 who completed all their secondary schooling at Soton College twenty-seven were not able to be traced or could not participate in the research.
Five of the former students were contacted as the result of social contact in the years after data collection had been finalised and for that reason did not participate in data collection. Three of these students had dropped-out of Soton College and two stayed on to successfully complete their VCE although neither accepted the offer of a tertiary level study place that they received. The two boys and a girl who had dropped-out of school before completion had been successful in maintaining employment. The girl had undertaken further study in the IT industry and was employed in that field until she married. At the time she contacted the research, having heard about this work, she was fully employed looking after her family. One boy had undertaken trade training and was, some thirteen years after he left school still employed in the business where he trained. The last boy had been employed in unskilled jobs but had been able to maintain employment over the thirteen years since he left Soton College.

Only two of those who completed Year 12 and were not able to participate in this research were contacted at all. One of these, a girl, spent years overseas in remote locations and did not return to Australia until long after all data for this research had been collected. She had worked when she needed to in unskilled jobs usually in the hospitality industry and had returned to Australia with the intention of now commencing a career in some area. The other student, a boy, had started up his own business in a remote area of Australia and after returning to Melbourne just before the completion of this research contacted the researcher.

Details of the socio-economic background of these young people who did not participate in completing the survey or undertaking an interview are shown in Table 36 below:
Table 36: Socio-economic background of the members of the Class of ’95 who were not able to be contacted at the time of data collection and therefore did not participate in this research

<table>
<thead>
<tr>
<th>Social group</th>
<th>Untraced drop-outs (N = 19)</th>
<th>Untraced school completers (N = 8)</th>
<th>Total (N = 27)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Inheritors</td>
<td>2</td>
<td>11%</td>
<td>-</td>
</tr>
<tr>
<td>Newcomers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-professional white-collar</td>
<td>8</td>
<td>42%</td>
<td>4</td>
</tr>
<tr>
<td>Tradesmen</td>
<td>3</td>
<td>15%</td>
<td>3</td>
</tr>
<tr>
<td>Unskilled</td>
<td>6</td>
<td>32%</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>100%</td>
<td>9</td>
</tr>
</tbody>
</table>

N.B: Five of the above were contacted some years after data collection was completed and they were interviewed but the data were not included in this research.

Table 37: Gender of the members of the Class of ’95 who were not able to be contacted at the time of data collection and therefore did not participate in this research

<table>
<thead>
<tr>
<th>Gender</th>
<th>Untraced drop-outs (N = 19)</th>
<th>Untraced school completers (N = 8)</th>
<th>Total (N = 27)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>Boys</td>
<td>10</td>
<td>53%</td>
<td>3</td>
</tr>
<tr>
<td>Girls</td>
<td>9</td>
<td>47%</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>100%</td>
<td>8</td>
</tr>
</tbody>
</table>

N.B: Five of the above were contacted some years after data collection was completed and they were interviewed but the data were not included in this research.

VCE achievement of non-participants in this study who completed Year 12

All the above eight students successfully completed the VCE and studied four VCE subjects and English. Their aggregate study scores ranged from 130 to 180 and their
TERs ranged from 24.75 to 80.30. There was no obvious gender or socio-economic dependent pattern of achievement.

Figure 65: VCE achievement, measured by aggregate study score and TER, of students who completed the VCE but did not participate in this research because they were not contacted.

Number of students = 8. Reading the chart: Beige bars represent the aggregate achievement of girls and blue bars represent the aggregate achievement of boys. The straight line plots the TER gained by each student. There is little relationship between achievement as measured by aggregate study score and the TER for these students. TER fluctuates even for the same aggregate study score. Blake achieved a better aggregate study score than Rae but a lower TER. As aggregate study scores increases however TER tends to increase more than it decreases.

When matched against the achievement of the whole of the Class of ’95, the VCE achievement of the above eight members of the Class of ’95 fits in the middle range whether it is measured by aggregate study score or TER.

This is illustrated in Figure 66 and Figure 67.
Figure 66: Situation of the VCE achievement of those not contacted for this research in relation to the VCE achievement of the Class of ’95 measured by aggregate study score

Number of students = 128. Reading the chart: The line plots the aggregate study scores of all the Class of ’95. The red upright line marks the boundaries of the aggregate study scores of the eight school completing students who were not able to be contacted for this research. These boundaries fall within the mid-range of full range of VCE achievement for the Class of ’95.
Figure 67: Situation of the VCE achievement of those not contacted for this research in relation to the VCE achievement of the Class of ‘95 measured by Tertiary Entrance Rank (TER)

Number of students = 122. Six members of the Class of ‘95 chose not to apply for a tertiary course and therefore were not eligible to be allocated a TER. **Reading the chart:** The line plots the TERs of all the Class of ‘95 who applied for a university or TAFE course. The red upright lines mark the boundaries of the TERs of the eight school completing students who were not able to be contacted for this research. All of whom applied to go to university or TAFE in the year following their VCE. These boundaries fall within the mid-range of full range of VCE achievement for the Class of ‘95.

**Achievement of Soton College drop-outs from the Class of ‘95 not contacted for this research**

Few of those from the Class of ’95 who dropped out of school before they completed Year 12 were high or even average achievers in the classroom. They were better at English than mathematics where they were usually found in the lowest achievement groups. There was no difference in the achievement of those drop-outs contacted and those non-contacted in Year 10 English and the only difference in Year 7 English was that the highest grades for those drop-outs contacted was A whereas for those not contacted it was B. (See Table 38 below).
Table 38: Achievement in English in Years 7 and 10 of drop-outs by contact status

<table>
<thead>
<tr>
<th>Statistical Measure</th>
<th>Drop-outs contacted (N =17)</th>
<th>Drop-outs not contacted (N = 18)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>English Year 7</td>
<td>English Year 10</td>
</tr>
<tr>
<td>Median grade</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Lowest grade</td>
<td>D</td>
<td>UG</td>
</tr>
<tr>
<td>Highest grade</td>
<td>A</td>
<td>B</td>
</tr>
</tbody>
</table>

As was a difficulty throughout this research the different treatment in Year 7 mathematics compared to that in Year 10 mathematics meant that no direct comparisons could be made between student’s achievement level in mathematics in either of these years. Nine of those in the higher levels of Year 10 mathematics participated in this research and five did not. Eight of those drop-outs in the lower levels of Year 10 mathematics participated in this research whereas thirteen of these students did not. Since being in a higher level in the Year 10 mathematics hierarchy could be regarded as having a greater mathematics competence than those in the lower levels of the hierarchy then it would appear that those with a greater competency in mathematics were easier to find.

This was the case and indeed could be related to a slightly more positive attitude to school and an improved level of post-school contact with Soton College or the students still attending the college. Tracking former students did rely heavily on student networking. This is the reason why so many students were located so long after they had completed secondary school. It seems possible then that those who stayed in touch with fellow members of Class of ’95 were those who felt more positive about their school experience. But English did not prove the indicator that perhaps mathematics
did. So it was only possible to posit the relationship between achievement in mathematics and connectedness with Soton College.
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