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Admission to Australian Universities for Accelerated Students: Issues of Access, Attitude and Adjustment.

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Publications

The following article is based on Phase 1 of the thesis:

Young, M., Rogers, K. B., & Ayres, P. (2007). The state of early tertiary admission in Australia: 2000 to present. *Australasian Journal of Gifted Education,* 16 (2), 15-25.

The following article is based on Phase 2 of the thesis:

Young, M., Rogers, K. B., & Ayres, P. (2009). Getting in: Australian university decision-making processes when gifted learners apply for early admission. *Australasian Journal of Gifted Education,* 18(2*),* 43-54.

Abstract

University admission is a significant issue for gifted students who have been accelerated. This study explored access to Australian universities for accelerated students, examined the attitude of Australian universities to admission of accelerated students, and investigated issues of accelerated students' adjustment to university. There is little research in Australia on these issues.

In Phase 1 of the study, information about early admission, dual enrolment, minimum admission age, and admission of students younger than 17 years to Australian universities was collected and summarised. In Phase 2 personnel from 11 Australian universities were interviewed about the decision-making process which allowed such students to gain admission earlier than usual. Issues of support, advertising and national coordination were also examined. Phase 3 focused on interviews with 12 accelerated students concerning their adjustment to university, and any hurdles they identified. A qualitative analysis compared responses and key themes from Phases 2 and 3.

In general, findings showed that while dual enrolment is widely practised across Australia, early admission – in which a student enters university without having graduated from high school – is little understood, known or practised in Australia. Information about admission options for accelerated students is not easily accessed; admission ages varied across Australia; dual enrolment results

were treated in different ways. For the universities which accepted accelerated students on a case-by-case basis, processes were ad hoc and decision-making was left to the discretion of a Dean or Faculty Head. While the universities showed some recognition of giftedness, overriding concerns were social-emotional issues, Duty of Care, issues of equity, and possible support costs. State differences made national coordination of early admissions processes unlikely.

The students interviewed seemed pleased to escape the boredom and social malaise of secondary school, and hurdles were mostly short lived. Succeeding with academic challenges, finding friendship, and participating in extra-curricular activities were significant factors in adjusting and responding positively to the stimulation of university. While being treated as regular undergraduates was appreciated, more formal support may have enhanced adjustment to the tertiary experience.

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Lastly, I would like to express my gratitude to my family for their patience, interest and support. My husband, my children, my brother, and my sisters have all played a significant role in the long journey, and I thank them for being a constant source of encouragement.

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Chapter 1: Introduction to the Study

Introduction

The objective of this study is to examine admission into Australian universities for accelerated students, through issues of access, attitude and adjustment. In Australia the appropriate strategy of accelerating gifted students in primary and secondary years is becoming more widespread than in earlier years and therefore has serious ramifications for tertiary admission, for both the students and the universities, from the academic, social and psychological perspectives. There are Australian studies researching acceleration in primary and secondary schools, and some Australian research touches on gifted students entering university; however, there has been little specific research into the tertiary experience of accelerated students, or gifted students.

The accelerated students may be 2-4 years younger than their tertiary cohort, who, in general, will have attained their majority of 18 years, and while the tertiary academic challenges are likely to be stimulating, the issues of social interaction, and psychological maturity, need to be considered. It is necessary to explore what access is available to the accelerated students, and to discover if there are limitations involved. It is also important that the universities be aware of the accelerated students and that they address any issues pertaining to admission so that the best outcome is achieved. The study aims to document the responses of Australian universities to accepting accelerated students, to map the policies across universities, and to identify common themes and issues. It also provides a personal view of some accelerated students of their tertiary experiences.

By raising awareness of possible admission access, students, parents and school educators will be better informed to make decisions. Investigating the

attitude of Australian universities to the admission of accelerated students, and in particular to early admission, may reveal what value universities place on nurturing the gifted students. It is critical to explore how accelerated students cope with the university experience, to ascertain what may help them adjust to university, and to understand what problems they may have. By considering a small sample of accelerated students' experience at university, issues of adjustment may be identified.

Background of the Problem

Exceptionally talented students, who have been accelerated in primary or secondary school, can progress to tertiary institutions ahead of their age cohort, and enter university as full time or part time undergraduates. There are four different categories of gifted students who enter university earlier than normal aged entrants.

Firstly, there are students who have accelerated 1 to 2 years ahead of their age cohort. They may graduate from high school and enter university 1 to 2 years ahead of their age cohort. Secondly, there are radically accelerated students who have moved ahead of their age cohort by more than 2 years; such students may graduate from high school and enter university when very young. Thirdly, there are very young, gifted students, who may have been accelerated, and who enter university without having graduated from high school. The term "early admission" refers to these students. A fourth category of students pursue dual enrolment: they undertake some university subjects concurrently with their high school studies. They may be young on entry to university, as they may have been accelerated during primary or secondary education.

Early admission to university is part of the continuum of acceleration options. Early admission, as defined by Rogers (2002), refers to "permitting a student to enter college as a full-time student without completion of a high school diploma" (p. 98). Sethna, Wickstrom, Boothe and Stanley (2001) believed that it is educationally desirable that intellectually capable students, who have demonstrated high academic levels of performance, be allowed to pursue learning in the company of intellectual peers. In the extensive report on acceleration, *A nation deceived: How schools hold back America's brightest students*, Brody, Muratori and Stanley (2004) analysed academic, social, and emotional considerations of early admission. They advised that a proper fit is essential when planning educational strategies for intellectually talented students. In other words, a student being considered for early admission should have demonstrated suitable academic achievement and suitable character traits such as motivation, independence, confidence and maturity.

Acceleration inevitably raises serious questions among educators about the wisdom of acceleration, especially in relation to social and emotional welfare. Cornell, Callahan, Bassin and Ramsay (1991) suggested that early admission raised even greater concern than other forms of acceleration because it centred on a significant rite of passage into the adult world and sometimes involved separation from family and home (Cornell, Callahan, & Loyd, 1991b). Southern, Jones and Fiscus (1989) reported that education practitioners are reluctant to employ strategies such as early admission and acceleration for fear of social and emotional harm.

Elkind (1981) did much to raise general concern and fear of structured programs of acceleration if the "hurried child" was not given time to enjoy

childhood. However, Elkind (1988) later clarified his position in terms of gifted and talented students whom he did not mean to include in his criticism of the hurried children "…since the students are not pushed ahead of their developmental level: the school is simply bringing instruction up to an appropriate level for them" (VanTassel-Baska, 1994, p. 24). The Australian Senate report *The Education of Gifted Children* (Senate Employment Workplace Relations Small Business and Education References Committee, 2001) noted that negative community attitudes from parents, educators and administrators as to the wisdom of acceleration was often based on misconceptions, ignorance, and lack of awareness of the research.

Early admission in the United States

Early admission, has been practised in the U.S. for more 50 years, and subsequent research has been conducted. With the experience of hindsight, the selection procedures for early admission have become more rigorous and refined. According to Muratori (2007) there are now 19 early admission programs operating in U.S.A. Based on her research of 37 studies of early admission to college, Rogers (1991, 2002) has identified a number of characteristics of the gifted student who is most likely to respond to early admission. In terms of cognitive functioning, the student processes and achieves well above most other students at current grade level in high school. In terms of personal characteristics, s/he is independent and motivated. In terms of learning preferences, the student prefers to work at his/her own pace, but not necessarily alone. As well, the student likes academic work and has interests outside the school extracurricular activities.

Significance of the current study

Acceleration has been available, and implemented, for gifted students in primary and secondary schooling in Australia. *The education of gifted children* (2001) argued strongly in favour of acceleration: Recommendation 6 proposed that there should be a "consistent policy encouraging suitable acceleration for the gifted" (p. 62). Of particular relevance to this study was Recommendation 11 which suggested that a policy be developed "providing more flexible university entry and study options for gifted students" (p. 77). It also reported that there " … is overwhelming evidence that appropriate acceleration of gifted students who are socially and emotionally ready usually has highly advantageous outcomes" (p. xiv).

The consequences of acceleration for the gifted students make university admission a significant issue. It is important, therefore, to know what admission opportunities are available in the Australian tertiary sector, to understand the attitude of Australian universities towards accelerated students, and to know what schemes have been developed, and what processes have been put in place. While dual enrolment is practised in many Australian universities, early admission is little known or practiced.

There is only one formal program in Australia. The Early Admission Scheme for Exceptionally Talented Students, at the University of New South Wales (UNSW), allows students of exceptional intellectual ability who are still in school to enrol in university courses or programs, even though they have not yet completed the New South Wales Higher School Certificate (or do not have other recognized UNSW entry criteria).

There seems to be very little information available on university admission for accelerated students in Australia, especially early admission, and little specific research has been done in Australia on this topic. Bailey (1992) recommended more research into acceleration be done "…so that long-term consequences may be better understood (e.g. what happens to accelerants at ages 15/16+)" (p. 66).

Ultimately, through the abduction process, this study may provide an overview of admission opportunities for accelerated students across Australia, highlight the attitude to early admission, and allow the voices of some accelerated students, who discuss their tertiary experience, to be heard. Results of this study will provide data to assist educators, student and parents in considering admission options to university for exceptionally talented students, and assist with informed decision-making.

Overview of the study

The study has three phases. The aim of Phase 1 is to map the terrain of all Australian universities in search of information on access – early admission schemes, dual enrolment programs, minimum age requirements for entry, and relevant statistics of young enrolments. The methodology and results for Phase 1 will be described in Chapters 3 and 4.

The aim of Phase 2 is to investigate the attitude of Australian universities towards the admission of accelerated students. It will look at the decision-making processes for such admission to university. Through interviews with key university personnel, the study will consider schemes, processes, student support, advertising and recruitment, and national coordination. The methodology and results for Phase 2 will be presented in Chapters 5 and 6.

The aim of Phase 3 is to develop case studies of accelerated students who have experienced early admission to university. Students will be interviewed about their experiences of school acceleration, tertiary admission process, experiences of university, including adjustment to university, and future plans. Phase 3 methodology, summary, and results will be given in Chapters 7, 8 and 9.

Chapter 10 will discuss and synthesise conclusions across the three phases, make recommendations, outline limitations, offer some reflections, and suggest implications for further research.

Key research questions.

The questions which will direct the study are as follows:

1. What access for admission – early admission in particular – is available to young gifted, accelerated students in Australian universities?

2. What is the attitude of Australian universities to early admission, and to the admission of accelerated students in general?

3. What issues, perceived by the students, facilitated their positive adjustment to university? What hurdles did they identify?

The next chapter provides a discussion of giftedness and acceleration, reviews of the literature on early admission, raises the question of tertiary admission of accelerated students in Australia, outlines the rationale of the study and its aims, and restates the research questions.

Chapter 2: Review of the Literature

The following chapter provides background to this study and develops the research questions. It outlines the nature of giftedness and the process of acceleration, reviews the literature about early tertiary admission in the United States and the outcomes of this practice, and then discusses tertiary admission of accelerated students in Australia. The literature review was limited to examining research material from the United States as its body of work spanned 50 years, and was the most relevant to my studies. The chapter concludes by stating the aims of the study, and the associated research questions.

Giftedness

This study has adopted the definition of giftedness and talent developed by Gagné's (2003) Differentiated Model of Giftedness and Talent (DMGT). Gagné argued that gifted students have the potential to use natural abilities to perform at a level which is considerably superior to age-peers in one or more domains of ability; talented students, by contrast, have skills which are distinctly superior to age-peers in one or more domains of performance. Levels of giftedness and prevalence (Gross, 2000, p. 179) can be defined by an IQ range, as follows:

Mildly gifted: 115-129,	or 1 to 1:40
Moderately gifted: 130-144,	or 1:40 to 1:1000
Highly gifted: 145-159,	or 1:1000 to 1:10,000
Exceptionally gifted: 160-174,	or 1:10,000 to 1:1 million
Profoundly gifted: 180+,	or fewer than 1:1 million

Acceleration

The influential Australian report, *The education of gifted children* (Senate Employment Workplace Relations Small Business and Education References Committee, 2001), described the broad concept of acceleration as follows: "Acceleration involves speeding the student's passage through school by curriculum acceleration within a year level, curriculum compression or compaction, subject acceleration or grade or year skipping" (p.58). According to the *Guidelines for accelerated progression,* relevant to school students in the state of New South Wales, (Board of Studies NSW, 2000) acceleration is appropriate for small number of high ability students beyond the enrolment cohort into a higher cohort.

The practice of acceleration, pursued in the U.S. since 1861, is a valid means of satisfying and stimulating highly gifted students; in-depth, longitudinal research on acceleration is overwhelmingly positive (Rogers, 1992, p. 10) and is supported by U.S. research from more than 50 years (Lubinski, 2004; Van Tassel-Baska, 1992). It opens up many possible pathways and can be achieved in a variety of ways. According to Rogers (2002) the various types fall into two basic categories: subject-based acceleration and grade-based acceleration. She identified the following subject-based options:

Early entrance to kindergarten or first grade enables the child to enter school prior to the very specific dates set down, based on birth date. Early entry to first class involves either skipping kindergarten or accelerating the child through kindergarten to first class.

Compacting curriculum means that the curriculum is streamlined or shortened. By assessing the student's subject mastery, new or more appropriate

material replaces curriculum already mastered. Less time is spent on introductory work, drill and practice so that enrichment activities or more advanced work can be introduced.

Single-subject acceleration involves giving the student advanced work, either by allowing the student to move into a higher grade for the subject, using higher grade materials within the peer age group or perhaps progressing through a summer school program.

Concurrent enrolment or *dual enrolment* enables the student to work at two levels simultaneously. The student may be working at the junior curriculum level but simultaneously working in a higher curriculum level. The student could be at operating at the high school level as well as receiving credit for working at university level.

Talent Search Programs offer students a chance to enrol in extracurricular academic programs at an advanced level and perhaps receive advanced credit.

Correspondence courses, independent study, on-line and *distance learning* enable the student to study outside the usual school program; it may be to further personal interest or to gain credit.

Advanced Placement courses are American college level courses that are taken by high school students whereby the student gains college credit when the course is successfully completed by passing an examination.

The International Baccalaureate (IB) program provides a similar opportunity for advanced coursework to the Advanced Placement courses. Many universities recognize the academic nature of the IB program and allow students first year college credit for some or all subjects.

College-Credit-in-the-School programs offer high school students college-level work while still in school. The external evaluations offer college credit. This acceleration is also known as credit by examination. Acceleration in college occurs when a student is placed ahead of the normal year, in an advanced level of instruction. This may be achieved because of earlier acceleration, perhaps through Advanced Placements or credit by examination.

Mentoring is the practice whereby an expert in a specific area teaches the student at an advanced pace and at an advanced level; this expertise is usually beyond what the educational institution can offer.

Rogers identified the following grade-based options:

Grade-skipping is the practice of placing a student a year ahead of his or her age-peers, thus cutting a full academic year, provided the student has mastered the previous level.

Non-graded classes are classes where the students are grouped in a way that is not based on grade-level or age but on achievement. Students move through the curriculum when ready and motivated.

Multi-grade or *combination* classes place learners of different abilities in a classroom which deals with two years' curriculum. This offers a type of acceleration to younger students by allowing them to interact socially and academically with older students. The practice, however, may be informal, rather than deliberate for it may be put in place as an administrative convenience for the school, rather than for the educational benefit of the students.

Grade Telescoping or *rapid progress* is a planned form of curriculum compacting where the student completes several years of schooling in less than a

year. Thus acceleration is deliberate, for the student has achieved mastery in less time than is usual.

Testing out or *credit by examination* is the option whereby a student may take a test in a subject area that covers a semester or year of work; if the student shows a particular level of mastery s/he is allowed to move to the next level.

Early admission to university involves admitting gifted students who have not completed formal graduation from high school. These students may be 1-2 years younger than their university classmates. In some instances they may be 3-4 years younger, when the acceleration has been more radical. They work at university level with the older students. They are almost always eager for academic challenge and seek more stimulation than a high school can offer. They enter with similar content knowledge as the regular college entrants as they may have attended college part time, used distance learning, or participated in summer schools. On the other hand, some early admission students may be radically accelerated and had little contact with intellectual peers at university level before matriculating.

Tertiary Admission

The practice of acceleration in high school in Australia creates a demand for tertiary study options. All students are faced with many choices in their studies but this is particularly so for accelerated students in the secondary school. Their options involve complex issues of academic challenge, and social and psychological adjustment. Early admission, well ahead of an age cohort, is one choice. Dual enrolment – simultaneous attendance at secondary and tertiary institutions – is another possibility, especially when students have accelerated in

one particular field and they need to pursue their high talent/interest area with their intellectual peers. Summer schools, where exceptionally gifted young high school students can study subjects not available in secondary schooling, open up the subsequent opportunity for dual enrolment by offering tertiary study while the students are still in a secondary institution. However, careful planning to deal with such choices is essential.

Early Admission in the United States

In 1951-54 the Ford Foundation gave scholarships to 1,350 young gifted students to enter university early before joining the military. Of these students, 42% had completed only Year 10 and 29% were under the age of 16. Pressey (1967) investigated 156 “Fordling” students (so named after their sponsor)10 years after their early admission. Pressey found the majority had obtained advanced professional training, some had outstanding careers, and reported little or no harm after the initial social difficulty as freshmen.

In her research covering 81 studies on the best-evidence of research on acceleration options for gifted students, Rogers (1991) calculated the effect sizes for academic, social and psychological outcomes. For early admission, in 37 studies, there was a significant academic effect size of 0.44, a positive psychological effect size of 0.11, and a social effect size of -0.06 which was not significant. The pattern of academic effect sizes for acceleration options, in general, was positive and showed that acceleration did not produce negative psychological or social consequences.

One reliable means of identifying suitable candidates for early admission is through talent searches. They identify young, academically precocious youth. In

the United States about 200,000 seventh and eighth graders annually (Lubinski, 2004) perform in the top 3% in conventional achievement tests and then achieve test results in the *Scholastic Assessment Test* (SAT) which mirror the scores of high school seniors who are 4 -5 years older. In their longitudinal study of a 10 year follow-up of the profoundly talented, Lubinski, Webb, Morelock, and Benbow (2001) found 95% of 320 talent search participants, identified before age 13 with mathematical or verbal reasoning abilities in the top 1 in 10,000, had used some form of acceleration. They were 50 times as likely to pursue doctorates compared to the general population. They found that 31% had secured a master's degree by age 23, 12% a doctoral degree, many had won notable awards in the 10 years and that 19% of the 320 students had taken early admission to university. Few had any regrets about their experiences of acceleration. In her summary of the research regarding academic and social performance of early admission to college, Olszewski-Kubilius (1995) concluded that the research was positive about the value of early admission, provided there was a good match between the student and the educational setting.

In their study on acceleration of profoundly gifted students Lubinski et al. (2001) tracked 320 students who were identified before the age of 13 as having exceptional verbal or mathematical reasoning skills over 10 years. They found that this population strongly appreciated having the chance to adapt their precocious rate of learning to appropriate developmental placement – 95% used some form of acceleration to tailor their academic, social and psychological needs. They had taken one or some of the following options: subject placement, Advanced Placement, exams for university credit, grade-skipping and early admission. On average, participants reported that acceleration had made no

detectable difference in their social life or in their interaction with age-peers. By their early 20s, 56% had pursued doctoral degrees and others had created substantial literary, scientific and technical achievements.

In another longitudinal study of 3,037 participants covering 30 years, Bleske-Rechek, Lubinski, and Benbow (2004) looked at Advanced Placement (AP) program participants in the United States. Students who took the AP courses, compared to those who did not, were more satisfied with the academic and intellectual activities of their high school and ultimately achieved more in terms of an advanced degree. They found a lack of challenge distressing and expressed positive reactions to working hard. Between 22% and 49% of the participants who took one at least one AP course nominated it as their favourite class in high school. The researchers concluded that the population from this study appreciated the intellectual challenge offered by acceleration which matched their precocious learning needs. For society, this is a way to develop exceptional human capital.

A vast quantity of research supports the notion that most acceleration options result in significant academic gains. This was shown by Rogers (1991) in her synthesis of the research from 1861 to 1988 on the educational acceleration of gifted students. In their long-term study of highly gifted students in the Study of Mathematically Precocious Youth (SMPY), Brody and Benbow (1987) concluded that the benefits of the variety of accelerative strategies for students, schools and society are many. Acceleration offers challenging options for meeting individual needs. Brody and Benbow looked at the long-term effects of various accelerative strategies on academic achievements, extracurricular activities, university selectivity, goals and aspirations, and social and emotional adjustment. Of

particular interest to this study were the researchers' findings about students who entered university early.

There were four groups. Group 1 (n = 143) was the most accelerated for it included students who had skipped grades, graduated from high school early or left high school without graduating. Group 2 (n = 277) was the second most accelerated, for the participants had taken AP tests or college courses during high school. Group 3 (n = 50) was the third most accelerated for the participants had taken subject acceleration or participated in special classes. Group 4 (n = 40) had taken no acceleration. The participants in Group 1, who had spent less time in high school, did as well or better, than the students in the other groups in academic achievements. Group 1 won more state and national awards. The accelerated students did as well or better than the non-accelerated students on standardised tests and in high school coursework. The researchers found no significant group differences and no discernible disadvantages of acceleration. Their conclusion was that through the acceleration strategies the students were stimulated, the schools were able to offer a challenging program, and society benefited by having young, achieving members.

Swiatek and Benbow (1991), in their 10-year longitudinal follow-up of ability-matched accelerated and non-accelerated gifted students, looked at both academic and psychosocial variables. Their study supported the concept that mathematically talented students have impressive academic achievements, as well as high personal satisfaction with self and school. There were few significant differences between the two groups on individual academic and psychosocial variables but the accelerated students achieved their academic gains at an earlier age. Swiatek (1993), in her study of a decade of longitudinal research through the

SMPY, concluded that acceleration, in all its forms, is an effective strategy to meet the academic needs of gifted students. In particular, she found that acceleration does not produce gaps in knowledge or produce “burn-out” in the students, that most students report satisfaction with psychosocial adjustment, and that self-esteem is positive.

The alumni study by Noble, Vaughan, Chan, Childers, Chow, Federow, and Hughes (2007) of graduates of the Early Entrance Program at the University of Washington, established in 1977, demonstrated the long-term personal and professional benefits of early admission. The individuals (n = 95) who responded to the questionnaire cited that excitement to learn, peer group interaction, intellectual stimulation, and faculty and staff support were, on reflection, positive factors in their experience of early admission. The study also reported that there were some differences in the findings from the three groups of graduates who entered at different points, the differences reflecting more positive outcomes as the program matured.

Academic Issues of Early Entrants in the United States

Academic progress associated with early admission has been researched over the past 50 years and in general, the outcomes seem to be very positive, given that attrition rates are not always reported and some studies relied on self-reporting. Rogers (1991), in her examination of 37 studies, found the positive academic effect for early admission was significant.

Some early admission students take advantage of the U.S. Advanced Placement Programs which offer advanced curriculum and external examinations to high school students in a wide variety of different subjects. According to

Bleske-Rechek et al. (2004) the AP program offered 32 courses and exams in 2000. Brody, Assouline and Stanley (1990) found from their study of 65 students from a highly selective private university, that entering university with a large number of Advanced Placement credits was an excellent predictor of outstanding academic tertiary success. The mean age of the 65 students on entering was 16 years 2 months, compared to the average age of 18 years 0 months of freshmen who entered in the same year and were used as a comparison group. Compared to the non-accelerants, the 65 students tended to graduate in less time and earn more honours. The authors recommended that young accelerated students, on admission, need to have exceptional ability as measured by the SAT scores and have content background in a variety of subjects as indicated by Advanced Placement credits.

Another study (Hertberg-Davis & Callahan, 2008) looked at gifted students' perceptions of Advanced Placement and International Baccalaureate programs. It reported that the students (n=200) enjoyed the greater academic challenge and the more favourable learning atmosphere, with similarly motivated peers and enthusiastic, competent teachers, compared to regular high school courses. However, the students also viewed the two programs as valuable for future benefits, especially in the college application process. AP and IB were often used in U.S. schools to meet the needs of gifted students but they were not always "the best fit". The qualitative research was based on student perceptions via student focus group interviews

Screening for early admission usually involves the use of the subtests, *Scholastic Aptitude Test-Math* (SAT-M) and *Scholastic Aptitude Test-Verbal* (SAT-V), as indications of academic ability (Brody et al., 2004; Brody & Stanley,

1991; Janos, Robinson, & Lunneborg, 1989; Lubinski et al., 2001; Wai, Lubinski, & Benbow, 2005). The test is normally given to high school students but highly gifted younger students who take the test early do perform programs such as The Study of Mathematically Precocious Youth (SMPY), conceived by Julian Stanley at Johns Hopkins University in1971; the SMPY program has been in operation for over 39 years. For early admission students, high SAT scores can be indicative of tertiary academic success. Wai, Lubinski and Benbow (2005) found that that the SAT-M was significant in predicting doctorates in the scientific domain. Even within that top 1% of SAT-M, the likelihood of getting a doctorate differed markedly from the top quartile (32.1%) to the bottom quartile (20%). High ability test scores and grade point averages higher, or at least average, for the older, "normal" age group they join, ensured content mastery for the young admission students (Janos et al., 1989; Schumacker, Sayler, & Bembry, 1995).

Good study skills, strong verbal and writing skills, as well as effective time management skills are essential for the early admission student. The Transition Year Program for the University of Washington has provided supervision in this area to ensure the gifted student achieves his/her potential and is adequately prepared to tackle university level work by Year 10. Schmacker, Sayler and Bembry (1995), in examining156 students in the Texas Academy of Mathematics and Science, noted that giftedness is not sufficient to help students in an early entrance program. Good study habits and time management skills are needed to support high ability and achievement levels; without these, students are at risk of not achieving. Academic readiness, as defined by ability testing, attitude to learning, sustained concentration and intense commitment are variables which

characterize an early entrant (Janos et al., 1989). Poor study behaviours can lead to underachievement (Janos, Sanfilippo, & Robinson, 1986).

Achievement at university.

Early admission to university can provide a suitable match between a gifted student's academic ability and academic placement (H. Robinson, 1983; Sayler, 1994). The successful academic outcomes for early admission students have been well documented in research and indicate that these students achieve as well or better than comparative groups of normal entry students and that they have higher aspirations (Brody & Stanley, 1991; Janos et al., 1989; Keating & Stanley, 1972; Pressey, 1967; Rogers, 1991; Sethna, Wickstrom, Boothe, & Stanley, 2001; Swiatek, 1993).

Keating and Stanley (1972) examined the issue of highly gifted students who were radically accelerated to university. They presented the case studies of two well-known, successful students who had already begun their careers and two lesser known radical accelerants who were undergraduates. They looked at the possible disruption to their academic studies with special reference to social and emotional development. All four students reported that early admission was the most suitable way to meet their precocious academic needs, for remaining in the high school would have met with boredom and intellectual frustration. All four achieved high academic success at university. Weiner received his doctorate at 18 years from Harvard University; Fefferman was a professor at 22 years; Bill (no surname given) was to have a B.A. and a master's degree by 17 ½ years and Eric (no surname given) was planning to have a very early doctorate at 20 or 21 years. However, Keating and Stanley noted that such radical acceleration would not suit

all students and that suitable strategies, such as academic counselling and psychosocial counselling, need to be in place to assist the students in coping.

Janos et al. (1989) studied a group of 43 early admission students who were radically accelerated to the University of Washington. The study's focus was on academic attainment and social adjustment during the undergraduate years. The early admission students were compared to two other groups: the first group of 24 students entered university at the conventional age and were similar in ability on pre-admission scores; the second group of 24 were National Merit Scholars who had similar academic aptitude to the accelerants. The researchers found that the young accelerants achieved significantly higher academic success compared to the normal entry group but did not attain the levels of academic performance or complete as many honours courses as the Merit Scholars. There was no psychological or social impairment. The students found intimate friendships and reported satisfaction with their academic environment. It must be noted that the University of Washington does have a special Early Entrance Program for early admission students whereby the needs of the young students are considered carefully. Each year the Early Entrance Program carefully selects approximately 12-15 students aged below 15 years. They complete a year in Transition School in which secondary school academic skills are addressed, emotional support is given, and a social centre provides recreational activities. Staff are trained in gifted education. This prepares the students, then, to enter university in the second year full time and complete a degree in 5 years.

The study, *Five years of early entrants: predicting successful achievement in college* (Brody et al., 1990) evaluated, retrospectively, 65 young entrants at an unnamed, highly selective, private university. This study made some comparisons

with non-accelerated college students, and it was found that the early entry students completed their undergraduate studies more quickly (in fewer than 4 years), achieved more honours and awards, earned more bachelor's and master's degrees, and more than twice the number of the non-accelerated group (26% versus 12%) were elected to Phi Beta Kappa or Tau Beta Pi, as excellent scholars. This study also made some attempt to track the 12% of students who withdrew before graduating. Four transferred to other universities and graduated. One moved to the evening classes and graduated with honours. Another became a part-time student but may not have graduated and the whereabouts of the last two were unknown. The non-accelerated students who withdrew could not be traced so no comparisons could be made.

Academic achievement after graduation.

Overall, research shows that early entrance students fare well academically after completion of tertiary education (Janos et al., 1989; Noble et al., 2007; Sethna et al., 2001). Early entrants, in general, achieve higher grade point averages than regular students and are more likely to graduate, earn academic honours, and pursue further studies (Olszewski-Kubilius, 1995) .

Lubinski et al. (2001) completed a 10 year follow-up of the 320 exceptionally able students from the Lubinski and Benbow (1994) Study of Mathematically Precocious Youth (SMPY). They found that 93% had secured bachelor's degrees, 31% had secured master's degrees by age 23 and 12% had secured doctoral degrees. A further highlight of this study indicated that 42% were pursuing doctorates in universities ranked within the top 10 U.S. universities. A similar finding was made concerning the Advanced Academy of Georgia (Sethna

et al., 2001) where some of the students continued at the State University of West Georgia but others sought to study at other excellent universities. The Lubinski study noted that, according to the U.S. Department of Education, 1997, the base-rate expectation for the general population for doctoral degrees is 1%. It also noted that specific identification of general and specific cognitive skills at 13 years examined a "population that is on a highly distinguished developmental trajectory" (p. 727). The link between the SAT scores at age 13 and the academic achievements of the SMPY participants could be generalized as an indicator of success.

Brody et al. (1990) noted that early admission students completed their degrees in a shorter time than normal entry students and were more likely to complete multiple degrees. Noble and Drummond (1992) reported that the students were pleased with the time saved as it allowed them to explore interests and career options or study overseas. Pressey (1967) commented that the students were able to get ahead with advanced degrees, advanced training and outstanding careers. Wai et al. (2005) confirmed a strong correlation between high SAT scores and doctorates, patents (creativity), and university tenure. Keating and Stanley (1972), by contrast, raised the issue of narrowing educational pathways at an early age as a possible negative, but also observed that creative achievements are sometimes best done at an early age.

Social and Emotional Issues of Early Entrants in the United States

The social and emotional aspects of early admission have been described as a "multifactorial construct" (Ingersoll & Cornell, 1995) and this term succinctly conveys the complexity of issues involved. In acknowledging that there is a

multiplicity of factors, the following discussion briefly addresses scepticism, possible harm, gender differences, residential arrangements, regrets, and friendships.

Scepticism.

With acceleration there remains the caution and fear about the young age of the students (Gross, 2004b) and the fear of social and emotional damage still troubles decision-makers. Cases (Gross, 1993; Rogers, 2002) such as that of William James Sidis, a radically accelerated early admission student who experienced serious emotional difficulties, support this attitude. Sidis was a brilliant mathematics student who entered Harvard at 11 years and graduated at age 15. His story was publicized nationally and reporters continued to hound him until his death 30 years later. His story was a very sad one of underachievement; he suffered social and emotional problems, pursued a menial job, and lived a lonely life, estranged from his family.

Early admission draws much scepticism from wary critics concerning social emotional issues which may develop when younger students are placed in an adult environment. The scepticism seems to be based on an assumption that it is imperative, socially and emotionally, for students remain with their age-peers.

To explore the scepticism, Southern, Jones and Fiscus (1989) surveyed gifted coordinators, school psychologists, principals, and teachers and found that the fear of potential harm to the social and emotional development of students was the major concern of acceleration. They also discovered that positive, personal experience of either self or family did affect views of acceleration. It was one of their conclusions that the research on acceleration is not well known and that the

positive results of acceleration have not been well demonstrated to the practitioners. Fifteen years later the same issues exist. *A nation deceived: How schools hold back America's brightest students* (Colangelo, Assouline, & Gross, 2004) supported the contention that teachers are unfamiliar with the research evidence of the benefits of acceleration.

Possible harm.

Research indicates that social adjustment of early admission students to university is at least positive and that no harm is done (Cornell, Callahan, Bassin, & Ramsay, 1991; Holahan & Brounstein, 1986; Janos et al., 1989; Keating & Stanley, 1972; Pollins, 1983; Pressey, 1967; Richardson & Benbow, 1990; Rogers, 1991). Holahan and Brounstein (1986) analysed 20 research studies from 1947 to 1985, dealing with social and emotional adjustment of intellectually able students accelerated at university. Their conclusion was that such students do adapt well but there are some casualties, because of social inexperience, loneliness, poor social skills, poor study habits and lack of social support. Gifted students have no more difficulties than their same-age-peers of average intelligence; they are not maladjusted. The authors did note that many of the studies were methodologically flawed. Control groups were absent, instrumentation was inadequate, and drop-outs were not surveyed. Nevertheless, no evidence was found that early admission students adjusted with more difficulty than non-accelerated students.

Richardson and Benbow (1990) used questionnaires, administered after college graduation, on 1,247 students in the SMPY study and found that acceleration did not adversely affect social interaction or cause social and

emotional difficulties. Rogers (1991) did a meta-analysis of 314 studies and showed that acceleration has no negative consequences socially or emotionally. Rogers and Kimpston (1992) concluded that gifted children thrive in an academically challenging environment and suggested that to enhance affective outcomes or counter potential affective issues, a counsellor or support group might be of assistance.

Gender differences.

In the issue of social adjustment it is interesting to consider gender differences. Pressey (1967), in his study of the "Fordling" accelerants, noted that the young males experienced some social difficulties initially because of the age differences, especially with dating, but that these social difficulties were of a temporary nature. Holahan and Brounstein (1986) noted that adjustment difficulties were usually overcome by the end of students' university training and that support services could have helped the students. Later, Richardson and Benbow (1990), in their study into the long-term effects of acceleration on emotional adjustment, found that no gender differences were significant. They looked at self-esteem, locus of control, self-acceptance and social interaction. Ingersoll and Cornell (1995), in their study of 64 females, compared the early entrance students, regular students, and boarding school students. They found that the accelerants in the residential program were as well adjusted as the comparison groups but they did complain that their age and the single gender environment limited social life. Noble, Robinson and Gunderson (1993) concluded that early entrance may have been particularly beneficial for gifted young women in enabling them to by-pass a social milieu at high school which was intellectually destructive. The young female students became empowered and motivated in their

special program. A follow-up study (Noble et al., 2007) on the early entrant graduates of the University of Washington found that the males had regretted the age differences for dating.

Residential programs.

The residential programs offer a social support system to help meet the needs of an accelerant facing a new situation at tertiary level. Janos and Robinson (1989) noted that the communality aspect of the Transition Program at the University of Washington, although not residential, provided social and emotional support. The study looked at 43 radical accelerants between 1977 and 1983 and found no link between early admission and social impairment. The radical accelerants were grouped together to facilitate social integration in the first year at university and, in later years, mixed more freely with the general university students.

In their 4-year study of The Advanced Academy of Georgia, Sethna et al. (2001) looked at a residential early-college-entrance program which was established in 1995. Their study confirms the rigorous criteria for entry may have been the key to the success of the students and that the transition year was a pertinent factor in nurturing social and emotional welfare; success was measured by academic performance in college as well as by non-cognitive factors such as leadership, communication, and initiative. The study was comprehensive in that it had data on all its students over the 4 years, used comparisons with traditional postsecondary students, and supplemented its evaluation with positive anecdotal comments from teaching staff. Reasons for withdrawals were analysed as well and it was noted that no withdrawals were for academic reasons. This study confirmed that there are particular measurable character traits and patterns essential for

success for early entry and reiterated that early entry students need social and emotional maturity.

The value of nurturing radically accelerated students, intellectually, socially and emotionally, is borne out by the study “Different strokes: Perceptions of social and emotional development among early college entrants”. The study of 31 students (Noble, Arndt, Nicholson, Sletten, & Zamora, 1998) confirmed the body of research which supports the social and emotional well-being of intellectually able students who have accelerated out of high school into an early entrance program. The students interviewed were participants in the University of Washington’s Early Entrance Program and were given support in their transition year; they all believed that they were more emotionally mature than they would have been had they remained in high school. They prized being with their intellectual peers and at the same time found it socially stimulating and exciting to be part of the program. They felt confident, intellectually challenged, and happy. The authors did emphasize that generalizations should not be extrapolated to all early entrance programs for various reasons: students with negative attitudes may not have participated, and much of the study was based on self-reporting and interview. Also the situation at the University of Washington is unique in that the transition year and the early entrance program is specifically designed, academically and affectively, for radical accelerants.

The study by Ingersoll and Cornell (1995), of 64 female early entrance students in a residential program, assessed social adjustment in the areas of social activities, social skills, social confidence, social conformity and social support. The comparison groups were similar-aged high school boarders and traditional college students. Their conclusion was that the early admission students were well

adjusted, socially, but reported dissatisfaction with being isolated from the family and being in a single gender environment. The authors also recognised that the non-participants in the study may have had a different social experience to the participants.

Possible regrets.

A study of students' perceptions of early college entrance at the University of Washington (Noble & Drummond, 1992) was based on structured interviews with 24 students representing a wide diversity of gender, age, academic classes, and social views. The participants were positive that they had matured socially, intellectually and emotionally; they expressed some regrets about skipping high school, encapsulated in the question "What about the prom?", but overall they were unanimous in their choice to forego major high school social events. The study highlighted the concept that early entrance does give able students an optimal setting in which social, intellectual and psychological needs are met.

Other regrets that early admission students included are missing out on positions of leadership at high school and being excluded from sports teams which are age dominated. By being young at university, students may have initial difficulties about dating, drinking, driving and participating in extra-curricular activities. Lubinski et al. (2001) found that 71% of the 320 profoundly gifted students interviewed 10 years after identification were happy with their acceleration experiences, and the majority of those who did not indicate satisfaction with their experiences, wished they had accelerated even more. In anticipation of regrets about missing experiences at high school, the 10 inaugural students in the National Academy of Arts, Sciences and Engineering (NAASE),

the early entrance program at the University of Iowa, were invited to attend high school functions. Six of these students were definite that they would make the same choice to participate in NAASE again (Muratori, Colangelo, & Assouline, 2003). Their possible regrets were compensated for by the positive experience of early admission.

Friendships.

Friendships and contact with intellectual peers are crucial for motivation and a sense of wellbeing; otherwise, a sense of isolation, frustration and distress can be a consequence (Gross, 1994b; Janos et al., 1989; Noble et al., 1998). Keating and Stanley (1972) found that the radically accelerated students fitted in well socially with their intellectual peers. For the early entry students in the Transition School of the University of Washington (Noble & Drummond, 1992; Noble et al., 2007), finding a peer group of equally intelligent students was a "relief after spending so much time being different" (p.110). To find kindred spirits (Noble et al., 1993) who understood and "got their jokes" (p.126) improved their lives in a way that high school never could. Likewise, the participants in NAASE, the early entrance program at the University of Iowa, found friends within and outside the group (Muratori et al., 2003). One claimed, "I had closer friendships than I had at my high school" (p. 231). Dr. Jane Charlton, a Ph.D. at 22 years of age, stated, "I found these new academic peers much more stimulating to be around than my own age-peers" (Charlton, Marolf, & Stanley, 2002, p. 148). For some students, radical acceleration enables them to experience intimate friendships with people who are at a similar stage, intellectually and emotionally (Gross, 1992).

Psychological Issues of Early Entrants in the United States

The affective area of acceleration is complex; both the social and psychological issues are inextricably connected to academic performance. The psychological issues considered here include motivation, self-esteem, character traits, and family support. Rogers (1991) found the psychological adjustment effect of early admission was small but positive.

Motivation.

Underlying the success of early entry is the psychological framework which explains the connection between motivation and the educational and social milieu in which a student finds him/herself. In their research over a 5-year period with 200 talented teenagers, Csikszentmihalyi, Rathunde and Whalen (1997) found that there must be a "productive tension between high skills and high challenges" (p. 233). If skills and challenges are not matched, underachievers do not experience the Csikszentmihalyi "flow"; that is, the "losing track of time and of being unaware of fatigue and of everything else but the activity itself" (p.14). Learning can be engaging, rewarding and intrinsically valuable; the learner becomes motivated when challenge and skills are matched. Furthermore, Whalen (1998) emphasises that the most powerful experiences of engagement happens when the engagement is shared; thus, the learner is drawn into the company of other learners who share commitments and interests. Being with like-minded peers is motivating.

It seems self evident that early admission students need to be motivated to succeed. Case studies reveal that a chance to be challenged academically often serves to refocus the bored student to be motivated and interested (Charlton et al.,

2002; Gross, 2004a; Keating & Stanley, 1972). Students (Noble & Drummond, 1992; Noble et al., 2007) who described high school as “pretty bleak” and an “academic dead end” (p.107), subsequently reported that they found the early entrance program challenging and interesting. The anecdotal comments about the students at the Advanced Academy of Georgia from the academic staff at the University of West Georgia reflected a joyful acknowledgement of working with enthusiastic, highly motivated students (Sethna et al., 2001). Janos et al. (1989) argued that for certain highly able students, being with like-minded, motivated peers in an early entrance program was academically enhancing.

Lack of motivation.

A nation deceived: How schools hold back America’s brightest students (Colangelo et al., 2004) raised the issue of the consequences of a bright student being presented with the curriculum developed for age-peers. Case studies (Charlton et al., 2002; Keating & Stanley, 1972; H. Robinson, 1983) have shown that extremely able students become bored, frustrated, and underachieve when they are placed in an inappropriate educational setting. Gross (1992), in her discussion of her longitudinal study of 40 remarkably gifted Australian students at the 10-year mark, outlined the positive changes to five radically accelerated students when the academic setting matched their ability. Before being accelerated, one student was suffering severe intellectual and social frustration and consequently displayed physical bouts of violence towards other children. He also suffered migraines, bouts of nausea, and abdominal cramps. When he was finally settled, at 11 years old with an 8th grade class of 13 year olds, he took some classes with the 10th grade and some with 11th grade. He was popular with the staff, welcomed by the students and enjoyed his accelerated curriculum. Another

of Gross's sample was bored, lonely and depressed, and deliberately underachieved. Radical acceleration, in stages, was implemented and at age 5, in Grade 2, the student began to enjoy school. Short and long-term effects, such as isolation and apathy, can be harmful when students are left in an unsupportive climate at high school (Bleske-Rechek et al., 2004; Noble et al., 1998).

It is apparent from the research that students who choose early admission to university do succeed in their academic performance as the intellectual challenges are motivating and accessible for able students (Keating & Stanley, 1972; Sethna et al., 2001). There are drop outs and some students return to high school; unfortunately there is a methodological problem in some research in that these students are not usually included in the studies, so little is known about the reasons for the attrition.

Self-esteem.

Research has found that early admission to university is not associated with maladjustment or lowered self-esteem (Cornell, Callahan, Bassin et al., 1991; Janos et al., 1989; Richardson & Benbow, 1990; N. Robinson & Janos, 1986). Some studies have indicated, however, that a lowering of self-esteem may happen during first semester (Cornell, Callahan et al., 1991b; Janos et al., 1986). As Gross (1997) explained, there is a shift in academic self-esteem when students move into a larger pool and they become more realistic in their appraisal of their own abilities. For gifted students, self-esteem remains high as they have academic challenge and a love of learning. In support of this, a particular examination of self-esteem of 113 students at the Texas Academy of Mathematics and Science (TAMS) (Lupkowski, Whitmore, & Ramsay, 1992) found that self-esteem did not

alter significantly from first semester to second semester, even though the researchers had expected an increase in self-esteem. The results, the authors suggested, may relate to a link between self-esteem and being freshmen, rather than being early entrants. Initial difficulties in adjusting to the university have been noted by others but these difficulties are usually temporary (Holahan & Brounstein, 1986; Janos et al., 1989; Pressey, 1967; Richardson & Benbow, 1990). The studies refute the notion that acceleration may be damaging to the self-esteem of intellectually able students.

High self-esteem and internal locus of control were used as indices of psychosocial development in the Study of Mathematically Precocious Youth (Richardson & Benbow, 1990). Responses indicated that 1,247 post-college accelerants and non-accelerants felt positive about themselves and the control they had in their lives. The limitation of the study data is its reliance on self-reporting; this was an expediency measure for data collection. Results for accelerants, including those radically accelerated, reflected a more internal locus of control compared to those who accelerated by one year (Swiatek & Benbow, 1991). In another study of 88 females, a study not concerned with gifted or early admission, Mooney, Sherman and Lo Presto (1991) confirm that locus of control and self-esteem are useful predictors of college adjustment. Caplan, Henderson, Henderson and Fleming (2002), in their study of 162 early-entrance college students at the Texas Academy of Mathematics and Science (TAMS), found that family environment factors and overall self-concept were predictors of adjustment to college. In addition, the same study found that academic achievement at college could also be predicted by the same combination of overall self-concept and factors of family environment.

Character traits.

The maturity of early admission students is a significant factor in their ability to cope with the different demands of tertiary education (Janos et al., 1989; Noble & Drummond, 1992; Noble et al., 1993; Sethna et al., 2001). Maturity is an important trait to be identified in the screening process for selection, either through standard psychometric tests such as the California Psychological Inventory, used to identify personality variables relevant to achievement, or through behavioural observations and recommendations of high school staff and counsellors. The research (Cornell, Callahan, & Loyd, 1991a; Noble et al., 1998; Noble & Drummond, 1992; Swiatek, 1993) lists various character traits to be identified at screening such as independence, persistence, curiosity, resilience, hardiness, and enjoyment of challenge and stimulation as part of the ideal profile of a potential early admission student. Mathis and Lecci (1999) defined "hardiness" as a combination of characteristics – control, commitment and challenge. Control was a feeling that all events were a consequence of one's own actions; commitment was an active attempt to infuse meaning into one's life; challenge was where changes in life are defined as exciting and stimulating, rather than stressful. Their findings indicated that hardiness is an effective predictor of long-term success with college adjustment. The sample of 63 was small and was not focused on gifted students. Nevertheless, the trait is relevant to gifted students seeking positive psychological adjustment in the tertiary setting.

Janos et al. (1986) noted in their study of underachievers in a group of accelerated college students that underachieving males seemed less psychologically mature than achieving males and that they suffered more internal conflict. They were procrastinators, erratic in achievement, and lacked enthusiasm

for their study; they were caught up in adolescent interests such as computer games and fantasy. By contrast, the underachieving females showed greater maturity than their achieving female counterparts, but were more committed to sport and social interests or experienced ill health. The authors suggest that screening procedures should stress the need for intense and sustained concentration.

Some studies have noted that a distinguishing trait of gifted students is being unconventional and less conforming (Holahan & Brounstein, 1986; N. Robinson & Janos, 1986; Southern & Jones, 1991). Radically accelerated students, in particular, are very different from other students. Thus, as Olszewski-Kubilius (1995) pointed out, character differences may be relevant to the research findings as much as the experience of early admission itself.

Family support.

A critical issue in early admission is adjusting to a new social structure. It may mean leaving home to participate in a residential program or at least seeking independence from the family at an earlier stage. Family support can be a powerful and positive influence in enabling the student to cope (Benbow & Arjmand, 1990; Caplan et al., 2002; Cornell, Callahan et al., 1991b; Holahan & Brounstein, 1986; Muratori et al., 2003). Mooney et al. (1991) noted that there was a correlation between perceived distance from home and college adjustment; it could be “too far” or “just right”, depending on the attitude of the student. Homesickness, loneliness and family conflict (Cornell, Callahan et al., 1991b) affect psychological adjustment to university. Peterson (2000), as a counsellor, also cited loneliness and homesickness as issues affecting adjustment. Family

characteristics such as parental education and parental encouragement have a predictive value for student achievement (Benbow & Arjmand, 1990). They also suggest that perhaps a relationship with a significant adult, perhaps a family member, has a critical influence on educational development and achievement. Janos et al. (1986) observed that family dynamics needed to be considered as a determinant, particularly affecting the underachieving males in their study. One study (Noble, Childers, & Vaughan, 2008) surveyed that attitude of parents to the early entrance experience in a non-residential program where student/parent contact was daily. The parents reported great satisfaction with many aspects of their children's experience.

U.S. Guidelines for Early Admission

Olszewski-Kubilius (1995) reviewed much of the literature on early admission in the United States covering the period from 1979 to 1993. The main thrust of her summary was that early entrance is successful, provided "there is a good match between an educational setting and a student's needs and characteristics" (Olszewski-Kubilius, 1995, p. 7). Her summary covered the variety of programs available and synthesized the issues which are, reasonably, the pertinent factors of early entrance: how students fare academically, socially and psychologically, any regrets that students may have had about early entry, and what happened to them after university. The main limitations of research, as noted by the author, were that the studies examined did not include attrition rates and the number of underperforming students. However, another limitation may be that not all of the studies examined the same issues and that the issues were examined in varying detail. For example, Janos et al. (1986) looked at a small number of gifted but underachieving students whereas Sethna et al. (2001)

showed that the students from the Advanced Academy of Georgia achieved academically at a higher level than regular freshmen but were surprised that the levels of anxiety were low amongst the students at the Advanced Academy of Georgia, compared to normal aged entry students. The Cornell, Callahan and Loyd study (1991b) did find initial problems with socio-emotional adjustment in the adolescent girls enrolled in a residential program in its first years but the problems may have stemmed from poor screening of the applicants as it was the first year of the program. The fact that the summary does not include any Australian studies indicates a dearth of research on this topic in Australia.

Broader reviews of the literature of early entry programs in the U.S. confirm that, in general, carefully selected and guided students do enjoy and succeed in the tertiary educational setting and go on to become valuable resources to society (Brody & Stanley, 1991; Janos et al., 1989; Sethna et al., 2001). Based on the U.S. programs, guidelines have been developed for future students contemplating early entry to university (Brody & Stanley, 1991; Olszewski-Kubilius, 1999; N. Robinson & Harsin, 2002; Rogers, 2002; Sayler, 1994; Sayler & Lupkowski, 1992). The attrition rate in the early days of one particular program was 30% (Cornell, Callahan et al., 1991b) and was reduced to 13% the following year; thus, experience has enabled the selection procedures to be refined. The Early Entrance Program at California State University, Los Angeles, established in 1983, has a provisional summer session for students contemplating early entrance, as well as a thorough admission process. Even so, 1-2 of the 30 students admitted each year are either withdrawn or removed (Maine & Maddox, 2007).

Sethna et al. (2001), in their study of 4 years of early admission students, noted that each program developed its own criteria for admitting students. The

general prerequisites of the students were high motivation, academic excellence, social and emotional maturity, as supported by parent /student interviews, and recommendations from high school personnel. Brody and Stanley (1991) noted that student motivation for early admission was a key factor. Neihart (2007) used analysis and synthesis on a broad body of research to determine the sociaffective impact of early entrance. One conclusion was that early admission to college was socioaffectively beneficial, if the students had been selected on three criteria: academic, social, and emotional maturity. She warned that not all gifted students should be accelerated, as some do experience adjustment problems. Screening was important to minimise risks. Therefore, students, as well as their families, need to be involved in the decision-making and planning about early admission.

Early Admission in Australia

Australian Research

Research on early admission in Australia is very limited, compared to the research in the United States, possibly because early admission is not offered at many universities and is therefore not widely practised. However, research on acceleration does touch on young students entering university, because some accelerants have progressed to tertiary study ahead of their age cohort (Bailey, 1997; Gross, 1992; Merrotsy, 2003, 2006; Vialle, Ashton, Carlon, & Rankin, 2001).

In her longitudinal case study of 15 radically accelerated students, Gross (2004a) reported on their young age on entry to university after graduating from high school, their academic success, and their outstanding careers. She also

reported on positive social and psychological adjustment at university. Merrotsy (2003, 2006) also used case studies to report on dual enrolment, that is, access to tertiary courses while still at high school, for radically accelerated students. The students progressed to full time at university in Australia but little detail of this was included in the study. One student commented that he found university study to be exciting and interesting, and he was never bored. Bailey (1995) also briefly referred to a case study of "Michael", an early admission student to a Sydney university, who completed his degree with First Class Honours and a University Medal. Two noteworthy points from the study outline were that firstly, Michael found people at university who shared his interests, and secondly, that high school appeared "as one great stretch of misery"(Bailey, 1995, p. 17).

Vialle, Ashton, Carlon and Rankin (2001) reported on three projects concerning cases of acceleration, and showed that acceleration was a positive intervention, despite resistance from educational practitioners. One study involved five accelerated students, one of whom was in his second year at university at the age of 16 years. The report mentioned, but did not focus on, his tertiary experience.

Shannon (1997) reported a short but very personal perspective on his own early entry to an Australian university at the age of 15 ½ years. His comments concur with the issue that challenging academic work was satisfying, that his self-esteem was positive, that he was accordingly motivated and that friendships were not a problem. The reflection is limited in that it is simply reminiscence and does not delve into academic achievement beyond a brief comment about completing a Science degree, doing honours and starting medicine. It is valuable in that it

endorses that the outcomes of early entry include academic challenge and positive social and emotional experiences.

It is unclear whether early admission of exceptional students, in the true sense of the concept, is widely available in Australia. A report on the University of Adelaide, entitled Outcomes of a Flexible Admissions Policies (Ramsay, Tranter, Sumner, & Barrett, 1996), did not even mention early admission as a possibility despite the title referring to flexibility of admission. The report from the Australian Government Department of Employment, Education, Training and Youth Affairs, *The Broadening of University Education: An Analysis of Entry Restructuring and Curriculum Change Options* (Rosenman, 1996), criticised the school/university links available to academically-able students for fear that these links encouraged a narrowing of study. The report considered that such students should be challenged through broadening their study at high school in a greater range of subjects, rather than being encouraged into an early specialisation of their education in a narrow range of fields which will follow through into university. The point was made that some Australian universities may be using the school/university link as a recruitment transition strategy rather than keeping the best interests of students in mind.

Tertiary access for accelerated students.

The education of gifted children (2001) reported that all their submissions stated that there was a problem with the education of our gifted students in Australia. “The problem, in brief, is children of high intellectual ability have special needs in the education system; for many their needs are not being met; and many suffer underachievement, boredom, frustration and psychological distress as a result” (p. 2). In regard to early admission, Recommendation 11 stated that there

is a need to "develop a policy providing more flexible university entry and study options for gifted students" (p. 77).

In most states of Australia it is mandatory to provide students with the appropriate level of educational challenge which takes account of their special characteristics as learners. The Adelaide Declaration on National Goals for Schooling for the 21st Century, in *The education of gifted children* (2001), enshrined this same principle in its first goal: that "schooling should develop fully the talents and capacities of all students" (p.14). The Guidelines for Accelerated Progression (Board of Studies NSW, 2000) directed that gifted school students should be provided with a wide range of challenging options to cater for their exceptional ability. Various forms of acceleration may be instituted by educators in schools in New South Wales, including radical acceleration. If the needs of the student cannot met by appropriate intellectual challenge at available schools, then early tertiary admission is a possible option.

The U.S. Templeton report – and Australia.

In 2004 the Templeton Report, *A nation deceived: How schools hold back America's brightest students,* was published in the United States. This national report on acceleration explored and "deliberated about what schools need to know in order to make the best decisions on educating highly capable students" (Colangelo, Assouline & Gross, 2004, p ii). As the title implied, bright students, and presumably exceptionally bright ones, are being held back. For many years the U.S. education system has developed and fostered acceleration as a viable pathway; through its research it has raised world wide awareness of the need for acceleration programs and shown justification for why students benefit from it.

Even so, the document detailed how students suffer from lack of access to opportunity. In summary, the report presented six reasons why schools hold back bright students.

1. Familiarity with research is limited. When educators and parents are unfamiliar with what the research says, they are likely to rely on the myths that surround the practice.
2. There is the issue that age cohorts in education are a priority. It is assumed that children like, and prefer, to be with their age cohort, and that the age cohort provides optimal conditions for academic, social and emotional development.
3. Acceleration hurries a child through childhood. By “hurrying” through stages, children will not have time to enjoy themselves.
4. Acceleration may damage a child socially. Interacting with older children may present irreparable social difficulties to a child; social confidence may be undermined.
5. Equity is a political concern. It is perceived that all children must be treated equally, and that it is unfair to provide gifted children with a different curriculum or to offer them different educational opportunities. This may be seen as violating equal opportunity.
6. Other children who are not accelerated will be affronted. There is a fear that the acceleration of one or two students may damage the self-esteem of the others who remain with age-peers.

A lack of pertinent and specific information about the effects of acceleration may also have led Australian parents, students, and educators to

accept uncritically the “myths” upon which to make decisions, as outlined in *The education of gifted children* (2001) . It reported that misconceptions about giftedness were closely connected to the negative attitudes used to justify lack of action or inappropriate action to assist the gifted. Eight myths and responses about gifted children were listed (2001, p.33).

- All children are gifted. [All children cannot be in the top 5%/3%/1%.]
- Every child has a gift. [All children have relative strengths not ‘gifts’.]
- They learn anyway. [They do not. In fact they learn not to learn.]
- Optimising their education will put them at risk of social and emotional harm. [While anecdotes about “my husband’s cousin’s child” abound the results of large, quantitative evidence is to the contrary.]
- They become snobs. [Research is to the contrary.]
- They cannot then fit into society. [Isolation occurs because their intellect is not tapped rather than the reverse.]
- Gifted children are male and from upper socio-economic homes. [In fact children of high intellectual potential come from homes at every level of income, every religion, every ethnic group, and there are as many girls as boys…]
- They “burn out”. [There is no quantitative data to support this…]

In response to a public awareness that American students were lagging behind their age-peers in other countries, the Templeton Report raised alarm about the waste of potential because acceleration was not being practised in the United States as widely as it might. While Australia does not embrace acceleration as

extensively as the United States, acceleration in its many forms is already in place in many Australian schools and some universities. Hence, in conjunction with the comments from *The education of gifted children* (2001), it may be fair to conclude that the criticisms made in *A nation deceived: How schools hold back America's brightest students* (2004) are also relevant to Australia. The next section provides some guidelines for structuring a system of early entry to tertiary education for gifted students.

Features of successful early admission programs.

Research in the United States has shown that successful early admission programs have similar guidelines. A composite, derived from sources such as those proposed by Brody and Stanley, Olszewski-Kubilius, Robinson and Harsin, Rogers, Sayler, Sayler and Lupkowski, follows:

- Students need to have Scholastic Aptitude Test scores, both verbal and mathematical, at least equivalent to the regular age students.
- The number of Advanced Placement (AP) Program credits at entry is a significant predictor of academic achievement at university.
- Sound content background is imperative. AP success and a variety of AP experiences indicate a broad range of interest and knowledge. Summer schools and honours courses provide good preparation for university; a Grade Point Average at least equivalent to regular age university students is needed.
- Choice of university may be important; a less prestigious one may be less selective and this might have later ramifications for the future.

- Matching the right university with the needs of the student should be explored.
- Academic profile needs to include a love of learning. Self motivation needs to be high and the student needs to be involved in the planning of early admission and course placement.
- Personality traits, including maturity, independence and confidence need to be considered.
- Study skills, time management, writing skills, mathematical skills have to be assessed, and where there are gaps, support and training must be provided.
- Family approval, support and positive family relationships are significant factors in adjusting to university.
- Radical accelerants have different needs to those accelerants of 1 to 2 years. There is a need to consider the location of the university, family support and commuting.
- Special early entry programs are very supportive for young students as they offer academic and social counselling, as well as a cohort of like-minded students.
- Residential schools have specific advantages whereas commuting has its own particular advantages.
- Self-selection by the student is critical for motivation.
- Recognition of possible problems of being young in a tertiary setting, as well as consideration of possible regrets at missing high school events

(sporting activities, leadership positions, social activities) must be considered.

- Extracurricular activities provide valuable ways to integrate socially with older students.
- Avoidance of publicity is advisable to assist with adjustment.

The context for this study

Early admission is part of the continuum of acceleration. It is vital for tertiary institutions to consider the consequence of acceleration programs which have been developed to meet the needs of students in primary and secondary school. There is a need to assess what is available in Australia; in general, options in Australia for admission for highly gifted learners appear to be limited. Australian data could be useful in providing information on access to university for accelerated students, and in particular information about early admission programs, case-by-case admissions, decision–making, and student support. Lack of coordination among Australian universities at the national level about their role in gifted education as noted by *The education of gifted children* (2001), coupled with individual admission policies, has led to great variation among universities in their attitude to accelerated students.

It is currently not known whether there are overriding social and emotional adjustment issues associated with early admission into Australian universities. By identifying issues of adjustment of accelerated students in the tertiary setting the study could provide significant help to Australian stakeholders with decisions about early admission to Australian universities. Through case studies of gifted tertiary students who have already successfully navigated admission, and early

admission, the study would seek to identify key themes which link to positive adjustment, as well as explore the difficulties identified. This would be particularly relevant in assisting with the ever-present fears and anxieties about the possibility of a negative effect of early admission on social and emotional development. Research is needed to see how best to support the gifted in the tertiary setting. If Australia is to forge ahead on the world stage as a “clever” nation, then it is imperative that the brightest students are not held back.

The results of the research would be relevant to exceptionally talented Australian students, and accelerated students, in all states; the project would add to the Australian knowledge base in this field. As well, the research could assist the future development of a checklist or guidelines to be used as a tool by a team of professionals when objective decisions need to be made about tertiary entry of accelerated students.

It is therefore highly desirable to conduct a systematic study on access to Australian universities for accelerated students, and in particular, on early admission. It is important to consider the attitude of Australian universities to admission of accelerated students, and it is crucial to listen to the accelerated students, who have experienced tertiary admission.

Rationale of the Study

The rationale for this study is multi-facetted. The key justifications for the study have been introduced earlier in this chapter. These justifications are now summarised as follows:

1. Acceleration of students in Australian high school has created a demand for early entry to tertiary education institutions;
2. The options for and process of early entry into Australian universities is neither uniform nor widely understood;
3. There is little research-based advice concerning early admission to Australian tertiary education, and the outcomes of such admission, available to students, teachers and parents;
4. The empirical studies of the experience of early entrants into tertiary education, conducted in the United States, have not been replicated in the Australian setting where the social and educational context is significantly different; and
5. This study both complements and extends the literature in the field of educational provision for the gifted in Australia by addressing the shortcomings identified above.

There is a need to study the situation of tertiary admission for accelerated students in Australia, to determine the options available, to consider how the options function, and to consider how the students adjust. It is important to establish the extent to which U.S. findings apply, as there are some differences in the cultural (Hofstede, 2009) and educational settings. The United States is used as a comparison because of the extensive research conducted there into early admission compared with other nations

Key research questions

In exploring the issues pertaining to tertiary admission for accelerated students in Australia, the following broad research questions are to be addressed:

1. What access for admission – early admission in particular – is available to young gifted, accelerated students in Australian universities?
2. What is the attitude of Australian universities to early admission, and to the admission of accelerated students in general?
3. What issues, perceived by the students, facilitated their positive adjustment to university? What hurdles did they identify?

Aims of the study

An appropriate methodology for this study is an explorative approach, involving three phases. The aim in Phase 1 is to categorise information about options available at Australian universities for accelerated students. In Phase 2 the aim is to identify underlying attitudes to admission of accelerated students. Interviewing will be the principal methods by which collective case studies of the universities will be made. From these case studies a number of themes will be identified that represent attitudes towards early admission and accelerated students.

The aim of Phase 3 is to explore student issues which affect academic, personal and social adjustment to university and to identify any hurdles encountered.

Two U.S. studies in particular will help guide the strategy for Phase 3. The first by Muratori (2003), who examined an inaugural group of students in an early

entrance program at the University of Iowa, by using a multiple case study approach, which entailed conducting both within and cross-case analyses. She used interviews, document (surveys) collection and observation. The second study, by Sayler (1990), examined early college entrants at Purdue University by focusing on their academic and social characteristics. He used academic records of students and a survey which combined open-ended and selected response items. This study will rely on interviews to investigate the general phenomena such as history of acceleration, academic and social experience at school, experiences at university, future plans and/or achievement after graduation. Making links from the themes developed from the student case studies will help to identify those which shaped a positive adjustment to the university experience.

Research phases.

Phase 1: Mapping the terrain of Australian universities since 2000.

Question 1: What access for admission – early admission in particular – is available to young, gifted accelerated students in Australian universities?

More specifically, this study will:

- Identify which universities offer early admission, where the student has not completed the final high school qualification.
- Identify which Australian universities currently offer dual enrolment.
- Identify which Australian universities accept students, younger than expected, who have completed the relevant state's final high school qualifications.
- Ascertain whether a minimum age has been set.

- Identify how many students, younger than the usual undergraduate, have been enrolled in Australian universities over this period.

Phase 2: Investigating early admission.

From Phase 1 it will be possible to calculate how many universities reportedly accept early admissions for students who do not complete the final Year 12 schooling credential through case-by-case admissions.

Question 2: What is the attitude of Australian universities to early admission, and to the admission of accelerated students in general?

More specifically, this study will:

- Investigate whether the university has an early admission scheme, and whether it accepts young, gifted students.
- Investigate the decision-making process by which university accepts for case-by-case admissions, and the decision-making process for accepting young students.
- Investigate sources of student support and monitoring.
- Investigate advertising and recruitment of gifted students.
- Investigate attitude to national coordination and to a national centre for research.

Phase 3: Student Interviews

A small sample of accelerated students will be interviewed about their experiences at university and, where applicable, after graduation. This will be achieved through individual interviews. All interview questions will be

constructed from ideas elicited from the literature review concerned with acceleration and early admission.

Question 3: What issues, perceived by the students, facilitated their positive adjustment to university? What hurdles did they encounter?

More specifically, this study will:

- Investigate past experience with acceleration
- Investigate the decision-making about admission
- Investigate the process of admission
- Investigate university adjustment
- Enquire about future plans
- Consider personal reflections on early admission or acceleration

This chapter has considered giftedness and acceleration, reviewed the U.S. literature on early admission, and the Australian research. It has set out the rationale for the study, reiterated the research questions, listed the aims of the study, and outlined the phases. The next chapter explains the methodology of Phase 1. Subsequent chapters will describe the results of Phase 1 (Chapter 4), explain the methodology of Phase 2 (Chapter 5), describe the results of Phase 2 (Chapter 6), explain the methodology of Phase 3 (Chapter 7), summarise the student interviews (Chapter 8), describe the results of Phase 3 through in-depth analysis of case studies (Chapter 9), and Chapter 10 will summarise the results, conclusions drawn, and implications to be gathered from all three phases of the study.

Chapter 3: Methodology of Phase 1

In order to map the terrain of Australian universities regarding access for accelerated students, one of the first tasks in Phase 1 was to contact all the Australian universities in search of information about admission practices. This concerned early admission, dual enrolment, minimum age requirements for admission, relevant statistics concerning young age on entry since 2000, and early admission programs for gifted students.

The Participants: Selecting Universities

The website of the *List of Universities in Australia* (Australian Education Network, 2007) was the starting point for a systematic search of each university. There were 41 universities listed on the website; however, the Australian Defence Force Academy (ADFA) and the Australian Graduate School of Management (AGSM), both part of the University of New South Wales, were deemed inappropriate to be included in the search. The AGSM is a postgraduate course and the ADFA requires that the candidate be at least 17 years on entry and to have completed final school qualifications. Open Universities Australia (AUO) was included in the search as a separate entity. Thus, 40 Australian universities were included for the study.

Searching the University Websites

From the website of the *List of Australian Universities*, each homepage was searched. As each one was set out differently, provided different information and used different key words, a number of search strategies were used.

To search for details of early admission from the universities' homepages, the first approach was to select the menu *future students,* and follow the links through to early admission. Most searches, however, led to a menu directed to Year 10, Year 11 or Year 12 students about choice of university, after completion of secondary schooling, and choice about school subjects connected with choice of future degree. Sometimes this involved the possibilities of dual enrolment. It was apparent that there were different denotations of the term "early entry" or "early admission".

To pursue the search for links to early admission, another key search phrase used was *school leaver,* but this was soon rejected as it referred to students who graduated from high school in the usual way at Year 12. Another search phrase, *alternative pathways* or *alternative entry*, led to information regarding entry for mature age students, Aboriginal students, Torres Strait Islanders, disability students, remote distance students and students with different qualifications, such as qualifications from overseas. It offered advice on foundation studies, enabling courses and bridging courses.

To seek information on which universities offered dual enrolment involved a further search of the university homepages. The document, *University Credit for School Students* (Figgis, Parker, Bowden, Money, & Stanley, 2002) was used as a starting point and cross-referenced with each university's homepage. When it was difficult to find information on the website about dual enrolment or extension courses offered to high school students, it became expedient to use a web search engine.

Another aspect explored for dual enrolment was the credit value of the subjects taken at university level. It was also noted where subjects were included

in the calculation of the tertiary entry score: Universities Admission Index (UAI), Equivalent National Tertiary Entry Rank (ENTER), Tertiary Entrance Rank (TER) or Overall position (OP). The names varied across different states.

Another factor considered was the age for possible entry of gifted young students. Each homepage was examined to see if a minimum age was stipulated for admission. The statistics of students who were young on entry to university was another possible source of information about the admission of young, gifted students. The compulsory starting age for Year 1, in each state, was 6 years or the year of the 6th birthday, but varied in terms of specific months (Western Australian Department of Education and Training, 2007).Thus, after completing the normal 12 year path of 6 years in primary school, plus 6 years in secondary school, the expected age of entry to university would be 17 years or 18 years. Because the universities presume, in general, that their population of school leavers has completed the statutory high school qualifications at 17 or 18 years of age, it is reasonable to consider that students under 17 years, beginning tertiary education, fall into the gifted category. This age group would include any students who had completed secondary schooling 2 years younger than their year cohort, any students who may have been accelerated during the schooling, or any students who were part of a dual enrolment program. Statistics were sought through links from the university homepage, and through the Department of Education, Science and Training [DEST] (Australian Government, 2007) in Canberra. The University of Western Australia (2007c) had a website whereby the statistics of other universities could be accessed to determine the age categories of students attending the universities but the site did not give the specific details of students under 17 years of age.

In summary, the university homepages provided some useful information about early admission schemes, early entry or registration schemes, and dual enrolment programs, but they were not informative about admission age or a useful source of statistics.

Emailing and Phoning for Information

After web-based searches were completed, a direct approach was made by email to each university as websites invited email contact about enrolment or admission. In the preliminary email to each university, four questions were posed:

- Does your university offer **early admission** where the exceptionally gifted student has not completed the final high school qualification?
- Does your university offer dual enrolment to students who are still at high school?
- Does your university accept students, younger than expected, who have completed the relevant state's final high school qualification?
- Is there **a** minimum age for admission?

The term "Early Admission" was put in bold to indicate its importance as a focus research question and to indicate that it is a term which has a particular meaning. It was assumed that the term "dual enrolment" did not need further explanation. "Younger than expected" was later made more specific when seeking the statistics of enrolment of students younger than 17 years.

The search for information on access for accelerated students, early admission programs, minimum admission age, statistics of young students admitted, and early admission guidelines was to be the main thrust of this exploration. At the outset, the term "early admission" was not clearly understood

and it was necessary to explain the specific meaning of the term when communicating by email. One university acknowledged a formal policy for admitting young gifted students who had not completed high school qualifications; information was available on the website. For many universities early admission was an option which operated on a case-by-case basis, and without a publicised policy. Information about the case-by-case basis was sought through email contact with the admissions officer, the registrar, a university information contact person or via a referred contact, often in Education faculties. Frequently the queries were forwarded to the relevant person; sometimes it required several email links to source the pertinent information.

Details about dual enrolment were also sought through email questions. The term “dual enrolment” was not always understood; hence, follow-up emails and phone calls, often to different people at the university, were required for clarification. To find out details on a dual enrolment program at one university, for example, it was necessary to search the homepage, use a web search engine, send four emails and make five phone calls. Even then, when in phone contact with the liaison officer, there was a reluctance to provide details about the program. At several universities, there was confusion about dual enrolment and foundation studies of which the latter are usually studies for international students who need to consolidate knowledge before entering tertiary study.

The email question about the minimum admission age was readily answered, often with an accompanying website address to source more information. Follow-up email communication advised that if a student was young, possibly as a result of acceleration at school level, there might be an interview

process for a case-by-case situation to ensure best fit into university life; this was sometimes done at the admissions stage or at faculty discretion.

Statistics were sought through email links from the university homepage and were sometimes achieved only by a specific request to each university. Finding the statistics on students, younger than 17 years, who were admitted to university, proved to be very time consuming. The initial contact person would sometimes forward the request or suggest emailing a different contact, usually through the statistical records section of the university. Some universities were helpful and very prompt to respond, some needed several email requests, and others ignored the request. Collecting data on the admission of students under 17 years was difficult.

Confirming Information

To confirm the accuracy of the information collected in Phase 1, a separate email letter was sent to each university, briefly outlining the pertinent information collected on the focus areas – early admission, early admission programs, dual enrolment programs, minimum age for admission and the statistics of students under 17, enrolled from 2000 to 2008. The email was sent to the contact person who had already responded with useful information.

Surveying for Information

After the internet searches, emails and phone calls, information was to be gathered about admission access for accelerated students. Specifically, detailed information about programs, number of students involved and guidelines were to be sought through a survey of the relevant contact person, or the manager of the early admission program. Approval for the survey was given by the Arts,

Humanities & Law Human Research Ethics Advisory Panel and is recorded in Appendix A.

The managers, once identified, were to be telephoned and asked to participate in a phone survey. The interview questions were to be emailed to them. An appointment was subsequently to be made for the telephone interview.

This chapter has outlined the search methods by which information was collected in Phase 1. The information concerned early admission, dual enrolment, minimum age requirements for admission, and relevant statistics concerning young age on entry. The next chapter describes the results of Phase 1.

Chapter 4: Results of Phase 1

This chapter presents the results of Phase 1 of the study and provides information about access for accelerated students to Australian universities.

University Response to Email Query

The homepages, initially, were valuable sources of information, but ultimately it was the email responses which provided and clarified more detailed information. Some universities were very helpful and responsive when information was requested by email; with other universities it was difficult to find an appropriate source of information. All 40 universities responded.

Universities Accepting Early Admission

The initial search revealed that few universities formally offer early admission in the accepted sense of the expression. In fact, it appears that there was little general understanding that early admission, as a specific term, refers to the early admission of young gifted students who demonstrate exceptional talent and are accepted by the university as undergraduates, without completion of the relevant high school qualifications at the time of entry to university. Many universities perceived early admission as early acceptance to a university, that is, the student is notified earlier than usual of acceptance to the university upon high school completion. The University of Wollongong (UOW) has a totally different and ambiguous concept of the term, early entry: it translated to early registration. UOW advertised an Early Entry program (University of Wollongong, 2006) which allows school leavers to apply early, using school records, trial HSC results and an interview. Successful applicants would either be guaranteed a place or a

place conditional upon their final school exams. Several times it was necessary to clarify the term by return email. As Table 4.1 shows, 13 universities reported admitting young students on a case-by-case basis, but only one – the University of New South Wales (UNSW) had a formal scheme in place for early admission, and advertised it on their website. One university reported conflicting information: the Registrar confirmed that early admission did occur while the Admissions Coordinator stated that to be eligible for a full degree program, students must have completed a high school certificate. One university admitted to actively discouraging early admission, without completion of final qualifications (Student Administration, personal communication, 5 September, 2006).

The website for the University of New England (UNE) also had an Early Entry pathway called School Recommendation Admission Scheme (SRAS) (University of New England, 2007b). On further investigation, this proved to be an early entry point for students who are eligible for a Universities Admission Index (UAI) and have commitment and "the ability to deal with difficulties". The difficulties referred to problems such as illness or family disruption students may have encountered. It was not a pathway for early admission of gifted students. An email response later reported that there was a special program in the Faculty of Arts for early admission, but this was not substantiated by the information on the website.

Charles Sturt University (CSU) had a Principal's Report Entry Program (PREP) (Charles Sturt University, 2005) whereby Year 12 students, who are consistent achievers with the potential to achieve at university, may be guaranteed a place prior to the release of their UAI, provided they had listed CSU as their university of first choice. This seemed to be a marketing strategy, not an early

admission program, as the website stated that “The object of the PREP Scheme is to attract current school leavers from high schools in the region served by the University”(Charles Sturt University, 2007).

The University of Notre Dame Australia (UNDA) also had a High Achiever Early Offer Scheme whereby the student deemed eligible was guaranteed an interview prior to the HSC examinations and offered a place that was conditional upon results. Information about this scheme was not available on the website as UNDA liaises directly with the schools. However, this was neither dual enrolment nor early admission.

This initial search revealed that only one university, The University of New South Wales (UNSW), had an early admission policy (University of New South Wales, 2007) and had accepted students since 1991. The University of New England reported a Special Admission Scheme for early entry in the Arts faculty as well as an Alternative Entry Admissions Scheme (University of New England, 2007c) which may enable case-by-case admission of young, gifted students. Eleven other universities indicated that early admission may happen on a case-by-case evaluation. The acceptance of a student, younger than the expected 17-year old, generally involved an interview, discussion with parents, and consultation with the high school to ascertain that the student’s maturity and ability would ensure success. It may, therefore, be the case that a university does not have a published policy on early admission but early admission may occur, informally, subject to the discretion of the Dean, the Academic Registrar, or the Vice Chancellor.

Table 4. 1

Universities Offering Early Admission and/or Dual Enrolment

University	Early Admission	Dual Enrolment Program
Australian Catholic University	-	Extension Studies (Melbourne), UniStep-Up Program
Australian National University	Case-by-case	Advanced Secondary Studies Program
Bond University	Case-by-case	Student for a Semester Program
Central Queensland University	-	School-Links Non-Award Program
Charles Darwin University	-	Higher Education Program for Secondary School Students
Charles Sturt University	-	Associate Student Program NSW BoS Distinction Courses
Curtin University of Technology	-	Endorsed Program WACE
Deakin University	-	-
Edith Cowan University	-	-
Flinders University	-	University Extension Program
Griffith University	-	GUESTS Program
James Cook University	-	-
La Trobe University	Case-by-case	Extension Studies – Discontinued
Macquarie University	-	School Partners Program

University	Early Admission	Dual Enrolment Program
Monash University	Case-by-case	Enhancement Studies Program
Murdoch University	Case-by-case	Advanced Placement Program Endorsed Programs WACE
Queensland University of Technology	Case-by-case	START QUT
RMIT University	-	-
Southern Cross University	Case-by-case	STAR Fast Track
Swinburne University of Technology	-	Extension Studies Program – Discontinued
University of Adelaide	-	University Extension Headstart Program
University of Ballarat	-	-
University of Canberra	-	Case-by-case
University of Melbourne	-	Extension Program
University of New England	Case-by-case. Special program in Faculty of Arts	Case-by-case NSW BoS Distinction Course
University of New South Wales	Early Admission Scheme Case-by-case since 1991	Early Admission Scheme - case-by-case

University	Early Admission	Dual Enrolment Program
University of Newcastle	-	Gifted and Talented Program with Merewether High School
University of Notre Dame Australia [Fremantle campus]	Case-by-case	Endorsed Programs WACE
University of Queensland	-	Enhanced Studies Program
University of South Australia	-	University Extension Program
University of Southern Queensland	-	Head Start
University of Sydney	-	Summer School Program
University of Tasmania	-	High Achievers' Program, Prelude, Overture
University of Technology of Sydney	-	Faculty of Business Program
University of the Sunshine Coast	Actively discourages	Headstart
University of Western Australia	-	ACCESS UWA
University of Western Sydney	Case-by-case	Case-by-case

University	Early Admission	Dual Enrolment Program
University of Wollongong	Case-by-case	HSC Endorsed Maths and Science subjects (Frontiers in Science)
University of Victoria	Case-by-case	Extension Studies
Open Universities Australia	-	Subject to Partner University

Universities Offering Dual Enrolment

Information about dual enrolment revealed great diversity in what each university had to offer. On some homepages, it was easy to access information about a dual enrolment program if the name of the dual enrolment program was either already known or clearly publicised. According to the document University Credit for School Student (Figgis et al., 2002), 23 of the 39 universities provided opportunities for dual enrolment in 2002. This document provided the names of some of the dual enrolment programs. The programs ranged from being clearly articulated on the website, to needing specific instructions by email communication to find the link to the program. An analysis of homepages, combined with personal communication by email, indicated that 33 universities have some participation in dual enrolment; only 7 have no involvement whatsoever. As Table 4.1 shows, 28 universities offer a formal dual enrolment program to school students. Four universities allow dual enrolment on a case-by-case basis, and four have formal, supporting links with secondary schools which

may lead to formal dual enrolment programs in the future. Currently, these programs do not offer undergraduate university subjects; rather, they offer high school students stimulation through extension work. The Open Universities Australia is another entry point, within Australian universities, for dual enrolment.

Some universities offered high school students university subjects, which could then be counted towards a degree, as shown in Table 4.2, and some university based subjects may contribute to the final score for calculating the final score for tertiary entrance rank (TER), as shown in Table 4.3. Subjects, offered for university credit, were categorised as award subjects. By contrast, some universities offered subjects which were categorised as non-award, for they are pitched at tertiary level but are not a regular university subject. Ones offered at summer schools fall into this category. The NSW Board of Studies offers three Distinction Courses: Comparative Literature, Philosophy and Cosmology. These are not bona fide university subjects but in some cases, when a student does well, the receiving university may give the student credit for that subject in the degree course. The university may offer credit to encourage the dual enrolment student to attend that particular university; this could be a marketing device. One Victorian university explained (Central Student Operations, personal communication, 13 September, 2006) that their dual enrolment program was a deliberate marketing ploy but no longer offered the courses as it was not deemed viable.

The Australian Catholic University (ACU) offers Extension Studies in Music (Australian Catholic University, 2007a) at the Melbourne campus (St Patrick's) to high-achieving Victorian Certificate of Education (VCE) students in order to provide them with the opportunity to extend their learning. Students are selected and assessed on having completed certain subjects in Music, their school

results, and supported by a recommendation from the principal. They study with first year students from the Bachelor of Music and Bachelor of Arts-Bachelor of Music out of school hours. The results may contribute to the Equivalent National Tertiary Entrance Rank (ENTER) scores as the 6th subject. Although the web page has been updated in May 2007, the website indicated that the course would be available in 2005. In response to the report *University credit for school students* (2002*)*, ACU has developed guidelines for the development of UniStep-Up Programs (Australian Catholic University, 2007b), partly designed to provide for Year 11 and 12 students who demonstrate excellence in designated areas of study. Consideration of the results to contribute towards the university entrance score varies from state to state; credit may be granted towards a subsequent degree. However, a search of the ACU homepage did not yield any specific information on this.

The Australian National University (ANU), in collaboration with the ANU College, offers an Advanced Secondary Studies Program (Australian National University, 2007) to Year 11 and Year 12 students in ACT non-government and government secondary schools. There are 12 subjects offered, 4 from each discipline of Mathematics, Physics and Chemistry. The program is designed to give high-achieving ACT students an experience of university life. The students must have studied Science and /or Mathematics at the highest level available in their high school and achieved A grades or the equivalent in these subjects. Students get credit both towards the calculation of their UAI and towards their degree studies.

Bond University offers the Student for a Semester Program to Year 11 and Year 12 students (Bond University, 2006). Subjects are available in the faculties

of Business, Humanities and Social Sciences, Law and Health Sciences, and Medicine. The program allows students to study for one semester, experience life as a university student, and gain credit towards future university studies at Bond University.

The Central Queensland University (CQU) offers a program called School-Links Non-Award Program (SNAP) (Central Queensland University, 2007) to Year 11 and Year 12 students who wish to undertake individual subjects at tertiary level. The students are able to complete one first year course a term at CQU and they can seek credit for courses completed in any university award program in which they subsequently enrol. Both on-campus and external study modes are available. Courses are available from the faculties of Arts, Humanities and Education, Business and Informatics, and Sciences, Engineering and Health.

Charles Darwin University (CDU) offers a Higher Education Program For Senior Secondary Students (HEPSSS) (Charles Darwin University, 2006) who are in Year 12. Students can enrol in one Higher Education unit per semester that will count towards their intended degree at CDU. There is a choice of subjects from 3 faculties, Law, Business, and Arts from the Alice Springs campus, the Casuarina campus (Darwin), and by external studies.

Charles Sturt University (CSU) offers a single session enrolment through their Associate Student Program (Charles Sturt University, 2005). This enables students to study one or more university level subjects on a fee paying basis, either by distance education or on campus; campus classes are at Albury-Wodonga, Bathurst, Dubbo and Wagga Wagga. Participating faculties are Arts, Business, Education, and Science. Credit may be given for a subsequent degree, where appropriate. The program is available to the wider population interested in

pursuing academic interests and is not specifically a dual enrolment program for gifted students.

In South Australia, the University Extension Program (University of South Australia, 2006) is offered at Flinders University, the University of Adelaide, and the University of South Australia. The program enables academically able secondary students to enrich their educational opportunities while still at secondary school and the students may receive credit in their subsequent university study. Flinders University offers subjects within 6 disciplines: Humanities, Information Technology, Languages, Mathematics, Science, and Social Sciences. The University of South Australia offers subjects within 5 disciplines: Business, Arts, Social Sciences, Languages, and Mathematical and Computer Sciences. The University of Adelaide offers subjects within 4 disciplines: Humanities, Business, Mathematical and Computer Sciences, and Sciences.

Griffith University Early Start to Tertiary Studies (GUESTS) (Griffith University, 2006) enables high achieving Year 12 students the chance to take a non-award subject simultaneously with completion of final secondary studies. Most on-campus undergraduate courses are available, including one on-line course. Students are not required to pay fees. If the student subsequently is accepted in a Griffith University degree course, credit is given.

La Trobe University offered Extension Studies to Year 12 students for approximately 7 years but has discontinued this for several reasons. There were fewer than 30 students each year, of whom only a small percentage continued at La Trobe. The market was well satisfied with what was on offer from 2 other neighbouring universities.

Macquarie University School Partners Program (Macquarie University, 2007) involves 64 member high schools. It offers two Philosophy courses, running in Semester 1, to Year 11 or 12 students. Approximately 30 students attend and fees are at a reduced rate. Some scholarships are available for the Partner School students who intend to study at Macquarie University, as well as an opportunity for bonus UAI points towards a Macquarie University course.

Monash University offers an Enhancement Studies Program (Monash University, 2007a) to Year 12 students throughout Victoria and interstate in 10 different subjects in the areas of arts, business and economics, information technology and science. Enhancement Studies is taught at Enhancement Centres in selected secondary schools, via distance education with tutorial support, or via distance education alone. The university study can be included as part of the final high school assessment and credited during first year university study. Course enrolments involve payment of fees.

Murdoch University (MU) works in conjunction with Murdoch College to offer an Advanced Placement Program (Murdoch University, 2007) whereby students in Year 11 or 12 may take a choice of four university subjects and receive university credit for them at MU. The subjects offered are Accounting, Chemistry, Economics, and Human Biology.

Queensland University of Technology (QUT) offers Year 12 students an enhanced study program START QUT (Queensland University of Technology, 2007) where two university subjects may be chosen from amongst 10 faculties. All are on-campus experiences, except for Justice Studies, which the Law faculty offers in external mode, using distance education. The students may gain

admission to selected QUT courses the following year and receive credit towards a degree course.

Southern Cross University (SCU) offers Year 11 and Year 12 students STAR Fast Track (Southern Cross University, 2007), a program with many subjects from a variety of faculties. Students may receive an early offer of admission and advanced standing towards a degree program at SCU. Delivery mode may be on-campus or by distance education.

Swinburne University of Technology offered Extension Studies in Media, Accounting and Psychology as a marketing initiative. However, there was a lack of marketing, and interest in the scheme waned. After its first 2 years, the program was discontinued in 2006.

The University of Canberra (UC) does not have a specific dual enrolment program but considers individual and extraordinary circumstances, and accepts students on a case-by-case basis. It has admitted “a few” students (Student Centre, personal communication, 8 June, 2007), in this situation, into University units while they continue their secondary schooling. There were 10 students, under 17 years, admitted to UC between 2000 and 2006, so “a few” is a very small number, given the student intake per year is between 3000 and 4000.

The University of Melbourne has an Extension Program (University of Melbourne, 2005) in which the student may choose one subject from a choice of 20. Successful completion earns an increment of points on the ENTER aggregate and may lead to credit in an undergraduate degree course. The program has been established since 1993 and has 400 participants each year.

The University of New England (UNE) may use its Alternative Entry Admissions Scheme (University of New England, 2007c) to accept case-by-case

dual enrolment. This scheme is not specifically for gifted and talented, young students; it is open to all applicants to enable a student to meet UNE's admission requirements as an alternative to a secondary Higher School Certificate. A Special Tertiary Admissions Test score (STAT), school recommendation and the relevant Executive Dean approval are the necessary criteria for admission. UNE does not have a specific dual enrolment program.

The University of New South Wales (UNSW), through its Early Admission for Exceptionally Talented Students Scheme, (University of New South Wales, 2007) allows students to study an individual course, as a non-award enrolment, where the results may be credited later towards an undergraduate degree or to take a part time study load which would lead to a recognised degree. Like UNE, it does not have a specific dual enrolment program.

The University of Newcastle (Newcastle) has a Gifted and Talented Program, linked to a local selective high school, Merewether High School. Students from Year 11 and 12 may complete first year courses in Engineering, Marketing or Mathematics. If they subsequently attend Newcastle, they receive credit for those courses. Information about the program was communicated by email; no information was found on the university webpage.

The University of Queensland offers Year 12 students the Enhanced Studies Program (University of Queensland, 2007), a program which includes a range of disciplines, including Mathematics, History, Philosophy, Economics, Psychology, Languages, Literature and Political Science. The students can obtain credit towards their degree.

The University of Southern Queensland (USQ) offers Head Start (University of Southern Queensland, 2007), a program for Year 11 and Year 12

students. Over 30 subjects are offered and it operates at 3 on-campus sites, as well as via distance education throughout Queensland. Students who successfully complete the course are guaranteed entry to USQ, and credit may be given towards a degree.

The University of Sydney offers Year 11 and Year 12 students a choice of 3 units of study in their Sydney Summer School (University of Sydney, 2007). The subjects are HSC Board-endorsed and can form part of the student's final HSC record, as well as credit towards degrees in Arts or Science. The marks do not count towards the UAI. The subjects are Mind and Morality, Problem Solving & Communication in Science, and Archaeology: Past and Future.

The University of Tasmania has a large range of subjects in the High Achiever Program (HAP) (University of Tasmania, 2006a), available for Year 11 and Year 12 students. Units successfully completed may be eligible to be included in the calculation of TER and may be credited to a relevant degree when the student enrols at the University of Tasmania. Courses are offered at either the Hobart or Launceston campuses, and a limited number of subjects are offered at the Cradle Coast campus. The University of Tasmania, through its Conservatorium of Music, has two advanced placement programs: a Prelude program (University of Tasmania, 2006b) and an Overture program (University of Tasmania, 2007), both available to Year 11 and Year 12 students. The two programs are part of the HAP program and follow the same guidelines.

At the University of Technology Sydney (UTS), the Faculty of Business offers a specific program to high school students whereby they may be granted credit in their first year of study at UTS. The information about the program was communicated by personal email; there was no link available on the website.

Another email from the Student Advisor section denied the existence of such a program.

At the University of the Sunshine Coast (USC) Headstart (University of the Sunshine Coast, 2007) offers 60 places to Year 11 and Year 12 students. It has over 50 on-campus courses in the faculties of Arts and Social Sciences, Languages, Business, and Science, Health and Education. Students may receive academic credit for courses in related USC degrees. Credit may also be granted for related degrees at other universities, subject to approval.

The University of Western Sydney (UWS) does not have a specific dual enrolment program but accepts students on a case-by-case basis, through direct application; it does not advertise that a process is available (Admissions Office, UWS, personal communication, 20 June, 2007).

The University of Wollongong (UOW) has Board of Studies endorsed subjects, offered by the School of Mathematics and the Faculty of Science, to students in the local high schools. The subjects are HSC level but the students receive two credit points towards a future degree. The UOW website did not provide this information; it was given by personal communication (UniAdvice, UOW, 27 June, 2007).

The Victoria University has a program, Extension Studies, (Victoria University, 2007) for Year 12 students. Of the 11 on-campus courses available, some are on offer at 4 four different campus sites, Werribee, Footscray Park, St Albans or Melton. Successful completion of the course is reported on the VCE statement, contributes to the ENTER as a 6th study, and may enable students to take up the subject at second year degree level.

Other Ways to Access Tertiary Study

The Open Universities Australia (OUA), owned by 7 Australian universities, offers on-line education. OUA is not a university per se but works with its partner universities. There is no admission process. The partner universities are Curtin University of Technology, Griffith University, Macquarie University, Monash University, RMIT University, Swinburne University of Technology, and University of South Australia. OUA does not have a specific dual enrolment program. However, many young, gifted students, under 17 years of age, live in an area where they cannot access courses in face-to-face mode and, through OUA, are able to access dual enrolment by studying Level 1 tertiary subjects. To include the results as part of the secondary qualifications would depend on the state education regulations. Conditions are set by the target university each student selects, and would determine whether university credit is given.

Dual enrolment for ACT and NSW students is provided through the Distinction Courses (Board of Studies NSW, 2007) offered by the Board of Studies NSW. Three subjects, Comparative Literature, Cosmology, and Philosophy, are delivered by distance education by the two participating universities, CSU and UNE. The subjects are Board of Studies approved courses, and, in 2002, credit or advanced standing, in a future degree course, based on the results on completion of the Distinction Courses, was considered by 13 Australian universities. Results may be used as the 6th study in the UAI.

An important initiative for linking high school students and universities is through the Queensland Academies (State of Queensland (DEA), 2006), begun in 2007. The Academies, which provide the International Baccalaureate Diploma

Program, have partnership links with specific universities. The Queensland Academy for Science, Mathematics and Technology, at Toowong, has links with The University of Queensland. The Queensland Academy for Creative Industries has a partnership with the Queensland University of Technology. Griffith University will be associated with the Queensland Academy for Health Sciences, to be opened in 2008. The partnerships, in their initial stages, offer enrichment activities, access to additional resources and a fast-track to university through the possibility of advanced credit.

For Year 12 students in 2008, the new Queensland Certificate of Education (QCE) (Queensland Studies Authority, 2007) provides for advanced courses of study to be part of the certificate. A one or two semester university subject may attract two or four credits points towards the final 20 points of the QCE; at least a pass, as defined by the university subject, is required as the set standard. University credit is possible, depending on the quality of the results.

Between 2005 and the present time, the Curriculum Council of Western Australia has introduced a new Western Australian Certificate of Education (WACE) (Western Australian Department of Education and Training, 2005) which enables Year 11 and Year 12 students to enrol in university subjects at Edith Cowan University, Curtin University, Murdoch University, and the University of Notre Dame. These programs will be used to extend students and to aid in the transition to tertiary studies. Subjects offered at Edith Cowan University are non-award, bridging courses, but the other three universities offer undergraduate university courses. The units provide credit towards the WACE but do not contribute to calculation of the tertiary entrance score. Depending on the quality of the results, university credit may be given.

The University of Western Australia (UWA) offers individual units to the general public through its program ACCESS UWA (University of Western Australia, 2007a). There are no entrance requirements so it is possible for high school students to access tertiary study as a continuing education student and to gain credit towards a degree. UWA also has established a program called Learning Links (University of Western Australia, 2007b) with three local schools. There is close academic interaction between UWA and Shenton College, Perth Modern School, and Belmont City College, one aim being to encourage students to consider tertiary education; however, this is not dual enrolment. The Memorandum Of Understanding (University of Western Australia & Belmont City College, 2005) notes “possibilities of senior Belmont students participating in programs to familiarise themselves with undergraduate student life at UWA” (p. 2).

Table 4. 2

Dual Enrolment Programs with Possible University Credit

University	Dual enrolment program	Possible university credit
Australian Catholic University	Extension Studies (Melbourne campus)	Credit
Australian National University	Advanced Secondary Studies Program	Credit
Bond University	Student for a Semester Program	Credit
Central Queensland University	School-Links Non-Award Program	Credit
Charles Darwin University	Higher Education Program for Secondary School Students	Credit
Charles Sturt University	NSW Distinction Courses	Credit or Advanced Standing
Curtin University of Technology	Endorsed Program WACE	Credit
Edith Cowan University	Non-Award Courses WACE	-
Flinders University	University Extension Program	Credit
Griffith University	GUESTS Program (Non-Award)	Credit
	Queensland Academies (2009)	Credit
LaTrobe University	Extension Studies – Discontinued	-

University	Dual enrolment program	Possible university credit
Macquarie University	School Partners Program	Credit
Monash University	Enhancement Studies Program	Credit
Murdoch University	Advanced Placement Program	Credit
	Endorsed Programs WACE	Credit
Queensland University of Technology	START QUT	Credit
	Queensland Academies	Credit
Southern Cross University	STAR Fast Track	Credit or Advanced Standing
Swinburne University of Technology	Extension Studies Program – Discontinued	-
University of Adelaide	University Extension Headstart Program	Credit
University of Canberra	Case-by-case	-
University of Melbourne	Extension Program	Credit
University of New England	Case-by-case	Credit
	NSW Distinction Courses	Credit or Advanced Standing
University of Newcastle	Gifted and Talented Program	Credit

University	Dual enrolment program	Possible university credit
University of Notre Dame Australia [Fremantle campus]	Endorsed Programs WACE	Credit
University of Queensland	Enhanced Studies Program	Credit
	Queensland Academies	Credit
University of South Australia	University Extension Program	Credit
University of Southern Queensland	Head Start	Credit
University of Sydney	Summer School Program	Credit
University of Tasmania	High Achievers' Program, Prelude, Overture	Credit
University of Technology of Sydney	Faculty of Business Program	-
University of the Sunshine Coast	Headstart	Credit
University of Western Sydney	Case-by-case	Credit
University of Wollongong	HSC Endorsed Subjects	Credit
University of Victoria	Extension Studies	Credit

Table 4. 3

Dual Enrolment Programs, Contributing to Tertiary Entry Score

University	Program	Tertiary entry score
Australian Catholic University	Extension Studies (Melbourne campus)	As 6th study
Australian National University	Advanced Secondary Studies Program	Contributes
Charles Sturt University	NSW Distinction Courses	As 6th study
Monash University	Enhancement Studies Program	As 6th Study
University of Melbourne	Extension Program	As 6th study
University of New England	NSW Distinction Course	As 6th study
University of Tasmania	High Achievers' Program, Prelude, Overture	Points System
University of Victoria	Extension Studies	As 6th study

Minimum Admission Age

The search for information on the minimum age requirements for entry to university was arduous. Generally, the websites seemed to assume that school leavers represented the usual age span of students who had attained the age of 17 or 18 years. On investigation of policy and enrolment conditions, some sites stipulated the minimum age of 17 years, but that was conditional upon having satisfied the academic entry requirements for their chosen course, usually involving completion of the final year of high school. Other sites stated that there was no minimum age, so long as the prospective student had met the requirements of the state's relevant final high school qualification. Monash University had an age restriction of 17 years but if the student were younger than 17 years, it was possible to be admitted, provided certain criteria were met. The criteria concerned final year ranking, and approval from the relevant Dean of the faculty. Some universities stated that there was no minimum age but that, if the student was younger than the usual school leaver, the admission of the student would be subject to specific approval by the university authorities; this would involve an interview or demonstration that the student would have the maturity to cope successfully with tertiary studies. The University of Technology of Sydney (UTS) commented that although there was no minimum age, some courses involved a compulsory component of practicum or industry experience, and age restrictions might be imposed by third parties such as employers, health, and education authorities in order to meet their obligations under legislation such as Occupational Health and Safety. UTS reserved the right to refuse minors admission to such courses, in order to comply with the restrictions imposed by the third party.

For most Australian universities, there was no prerequisite of a minimum age for admission listed in policies, provided the student had fulfilled university entry requirements. It was predetermined that satisfactory completion of final school qualifications was essential, regardless of age. This is summarised in Table 4.4.

Admission Statistics of Students Under 17 Years

The search for statistics on the admission to university of students, younger than 17 years, brought very mixed responses from the universities as shown in Table 4.4. Some universities (n=33) supplied statistics, some forwarded the request which sometimes brought information or resulted in no further communication, some (n=6) ignored the request, and one (n=1) university refused to provide these data. Some data, given by three universities, covered an age range, such as 16 to 19 years; hence, the statistics of the under 17 years could not be isolated. A special request to the university's statistics system, to separate the data, met with refusal as the request was not from a staff member. Some universities (n=4) were prompted to respond with data, after receiving the final email seeking confirmation of the details of the four basic questions. The statistics in hand, however, are subject to many questions. It may be that the statistics included summer school numbers, dual enrolment numbers, or students who were a month shy of the traditional admission age. Charles Sturt University raised the question about whether the statistics asked for should separate domestic and international students; this also brings the composition of the statistics into question.

Griffith University reported 880 students under 17 years had been admitted between 2000 and 2006; seventy-eight percent were enrolled in non-

award programs like the GUESTS dual enrolment program. Edith Cowan University, where there in no dual enrolment program, reported 223; however, their minimum age admission is 16 years. Monash University, which has an Enhancement Studies Program for Year 12, reported the admission of 128 students. The University of Wollongong, which has a case-by-case approach to early admission, and no formal dual enrolment program, advised, via personal email (UOW, 26 October, 2006), that at least four students under 17 years had been admitted in recent years.

Table 4. 4

Admission Age and Admission Statistics of Students Under 17 Years of Age

University	Admission Age	Conditions	Statistics 2000-2006
Australian Catholic University	No minimum	-	Not extracted
Australian National University	No minimum	-	62
Bond University	No minimum	Assessed individually	Not extracted
Central Queensland University	No minimum	-	41
Charles Darwin University	15 years		9 (2001-2006)
Charles Sturt University	No minimum	Under 16 need approval	34
Curtin University of Technology	No minimum	Individual basis	-
Deakin University	No minimum	Faculty discretion	39
Edith Cowan University	16 years	-	223
Flinders University	No minimum	Subject to approval	7 (Inc 2007)
Griffith University	No minimum	Under 16 need approval	880
James Cook University	No minimum	-	-
La Trobe University	16 Years	Individual basis	-
Macquarie University	No minimum	-	5
Monash University	17 years	Under 17 need approval	128

University	Admission Age	Conditions	Statistics 2000-2006
Murdoch University	No minimum	-	25 (2004-2007)
Queensland University of Technology	No minimum	Under 17, checks in place	89 (2001-2007)
RMIT University	No minimum	-	n/a
Southern Cross University	18 years	Need approval	-
Swinburne University of Technology	No minimum	-	0
University of Adelaide	No minimum	-	30 (2002-2006)
University of Ballarat	-	-	0
University of Canberra	No minimum	-	10
University of Melbourne	No minimum	-	135 (2003-2005)
University of New England	No Minimum	-	15 (2000-2007)
University of New South Wales	No minimum	-	8 (1991-2006)
University of Newcastle	No minimum	-	-
University of Notre Dame Australia (Sydney campus)	No minimum	Subject to interview	-
University of Queensland	No minimum	-	385 (2001-2007)
University of South Australia	No minimum	-	61
University of Southern Queensland	No minimum	-	200
University of Sydney	No minimum	-	97

University	Admission Age	Conditions	Statistics 2000-2006
University of Tasmania	No minimum	Case by case	Not extracted
University of Technology of Sydney	No minimum	Practicum issues	0
University of the Sunshine Coast	No minimum	-	Less than 10
University of Western Australia	No minimum	-	6 (2001-2007)
University of Western Sydney	No minimum	-	11
University of Wollongong	No minimum	Case by case	At least 4
University of Victoria	No minimum	-	-
Open Universities Australia	No minimum	-	168 (2001-2006)

The OUA reported the third largest intake of young students. Many of their students may be academically gifted but live in an area where they cannot access the courses they desire, in face-to-face mode. Table 4.5 shows the enrolments from 2001 to 2006 of students 11 years of age onwards.

Table 4. 5

Age at the Year of First Enrolment at Open Universities Australia

Age	2001	2002	2003	2004	2005	2006	Total
11	0	0	1	0	2	0	3
12	0	5	1	2	1	1	10
13	1	4	4	1	3	1	14
14	1	7	4	5	3	2	22
15	2	7	19	9	11	4	52
16	6	15	23	19	32	19	114

Personal communications, via emails, with university officials or with contacts from the Education faculties, suggested that some universities have enrolled students as young as 13 years old, but it was difficult to verify the statistics formally. One email commented that two 13-year-olds had applied to study Medicine and the admissions office merely confirmed their completion of Year 12 (University of Tasmania, personal communication, May 24, 2007). At the Department of Education, Science and Training (DEST) website, the format of the statistics did not isolate and identify the individual universities. Nor did it analyse ages younger than 16 and under. The DEST website (Australian Government, 2006) published a table for each year entitled, for example, *Table 20: All*

Domestic Students by Age Group and Broad Level of Courses, Full Year 2000.

Table 4.6 is a compilation of the data from the DEST tables 2000 to 2008.

Table 4. 6

Domestic Students 16 or under Enrolled in Australian Universities

Year	Postgraduate	Undergraduate	Enabling Courses	Non-Award Courses	Total Number of Students
2000	1	461	23	115	600
2001	-	513	18	209	740
2002	-	493	43	447	983
2003	2	489	17	542	1050
2004	-	464	17	592	1073
2005	-	547	29	665	1241
2006	2	530	91	928	1551
2007	5	531	133	935	1604
2008	4	684	181	1131	2000

In the column, Postgraduate, there is a listing of 0-5 students, 16 years or younger. This covers Doctorate by Research/Coursework, Masters by Research/Coursework, and Other Postgraduate which is a “catch all” category to include possibilities such as a postgraduate preliminary course, a qualifying course, or a bridging or enabling course for postgraduate study (Australian Bureau of Statistics, 2001). In the column, Undergraduate, the increase in numbers from 2002 to the following years is a steady one. The third column, Enabling Courses,

is of limited relevance to the current discussion. Tertiary enabling courses are foundation studies, or bridging courses or courses which allow students to improve specific skills to enrol in an award course. Nevertheless, it must be noted that the students are younger than 17 years and are enrolled in Australian universities.

The Non-Award Courses are single subjects which may, or may not, depending on the quality of results, count ultimately towards an award course. A non-award course may be one encompassed by dual enrolment. A Distinction Course, for example, from the NSW Board of Studies is a non-award subject but if the student achieves excellent results, the university may consider giving the student some credit for completion of the course. There is an 80% increase in numbers, from 115 in the year 2000 to 209 in the year 2001; there is a 114% increase from 209 in 2001 to 447 in 2002; the increase diminishes thereafter until 2006 – 21% from 2002 to 2003, 9% from 2003 to 2004 and 12% from 2004 to 2005. From 2005 to 2006 the increase was 40%, and from 2007 to 2008 it was 21%. It would be interesting to know why the significant increases occurred and in which universities they occurred. A personal communication from DEST (25 June, 2007) explained that the scope of the data collection changed in 2001 to include all enrolments throughout the year, not simply those up to 31st March. The change resulted in an increase of approximately 30 %, from 2000 to 2001.

For the column, Total Number of Students, there was an increase of 23% between 2000 and 2001; between 2001 and 2002 there was an increase of 33%; between 2002 and 2003 the increase was 7%; between 2003 and 2004 it was an increase of 2%; between 2004 and 2005 the increase was 16%. The increase in the subsequent years was 25%, 3%, and 24% respectively, seemingly affected by the

enabling courses. The numbers relating to domestic students, 16 years and under, who attended university throughout Australia during the years 2000 to 2008, were more than tripled. In 2000 there were 600 students; in 2008 there were 2000 students. This is in excess of that which might be extrapolated from the numbers given by some of the individual universities. Statistics for 2009 were not available.

Surveying Managers for Information on Early Admission

The search for information about early admission programs revealed that only one university had a publicised policy and an established program, so therefore only one university was surveyed. It took persistent searching to find which universities admitted very young students on a case-by-case basis. Even then, it was not clear that the case-by-case enrolments fitted the true definition of "early admission". It may have been that the very young students enrolled had either satisfied university entry requirements or had participated in dual enrolment. It was not clear where or how to find the person(s) responsible for the early admissions. Thus, no surveys were administered to universities which accepted early admission students on a case-by-case basis.

UNSW Early Admission Scheme

To gain an understanding of background information about the Early Admission Scheme at the University of NSW, two informal interviews were conducted. Interview Schedule 1 and Interview Schedule 2 are included in Appendix B. Firstly, the former university official who was a key figure in instigating the scheme, explained how the scheme, modelled on the program from the University of Washington, was developed and implemented in 1991.

Secondly, a current university official who was a member of the panel which interviewed potential candidates, explained how the scheme operated. Both university personnel were positive about the value of the scheme.

An administrative official of the Early Admission Scheme at the University of NSW was interviewed, initially, to gain a working understanding of the program. Interview Schedule 3 is included in Appendix B. She provided copies of the information sheet and the application form, both of which were available from the website. She reiterated that the process of interview, as stated in the information sheet, was "to establish the appropriateness of formal enrolment (eg whether for a course or program)" (University of New South Wales, 2007). She provided the statistics of the number of applicants (n=38) and gave some detail of gender and age of the eight students who had been accepted up until 2008. Seven students were 15 years old and one student was 16 years old. Seven applicants were male and 1 was female. Four males enrolled in an Advanced Science undergraduate course and 1 female enrolled in the Arts faculty. Three males undertook dual enrolment: two enrolled in a Non-Award Science course and 1 in a Non-Award Arts course. Ten months later the administrative official was invited to participate in a formal interview and to complete the schedule which had been approved by the Ethics Panel. The administrative official was very busy and chose to respond to the survey by return email.

According to the UNSW website (2004) on early admission, the academic profile of an exceptional student considering early admission includes three elements. Firstly, the student must consistently score in the very top range (possibly 98th percentile) in standardized ability and achievement tests; secondly, the student must have an outstanding school achievement record; and thirdly s/he

must perform exceptionally on the *Scholastic Aptitude Test* (SAT) at a level (possibly 90th percentile) which indicates potential capacity for university study. The other descriptors are that the student must be currently enrolled in high school but not yet in Year 11, have the maturity and family support to cope with university attendance, and have educational needs that cannot be met by remaining in school.

The results of the interview with the administrative official did not substantially add to the information, already known, and mostly available on the UNSW website. The purpose of the schedule, designed for managers of a gifted program, was to seek information about how the students fared academically at university, and to find out if there were issues of social and emotional adjustment. The interviewed person was in an administrative role, and not an official of the gifted program.

The responses of the administrative official indicated that support systems to assist the early entrant were no different from those available to the usual undergraduate. The extent to which the early entrants were supported was a voluntary function of the faculty, both academically and in social and emotional issues. Monitoring of the students in regard to their extra curricular activities has not been considered a responsibility of the university. None of the eight students who has entered UNSW early has failed to complete his/her studies, nonetheless. The university staff were not notified about the admission of the young, gifted students, and nor were they given any profile of the students; however, the students themselves may have chosen self-identification. All students completed their undergraduate courses.

The administrative official was unable to comment on the factors contributing to the success of the program and was unaware of any problems of social and emotional adjustment. Her role was to administer the admissions program and advised that an official of the Gifted Education Research, Resource and Information Centre (GERRIC) was in a better position to answer further questions.

The official from GERRIC, in an informal interview, confirmed that the screening process of the UNSW program was designed to enable young, gifted students to participate in the tertiary setting without special monitoring or supervision. The Interview Schedule Number 4 can be found in Appendix B. The screening process was a key factor in the success of the scheme: students were selected who were academically superior, and socially and emotionally mature enough to cope as well as usual aged undergraduates. Comprehensive support mechanisms for academic, psychological and financial issues were available through the Learning Centre and counselling services at the university for all students. The faculty members were aware of the presence of the early admission students and, therefore, took on an informal monitoring or mentoring process. To date, the scheme has worked well, and the official confirmed that there have been no drop-outs. In response to the question of how the program could be enhanced, the official from GERRIC suggested that it may be improved if it were opened up to include highly gifted students, and not just exceptionally gifted students (Personal communication, 2 July, 2007).

Confirmation of Information

Emails were sent to the 40 universities to confirm information collected was accurate on the four issues – early admission, dual enrolment, admission age and statistics on students admitted under 17 years.

Less than half (n=18) of the universities replied to the request for confirmation of the information, and others (n=22) did not reply. Of the 18 replies, 9 corrected some details, and 4 replies included enrolment statistics of under 17 year olds. Many (n=10) were unable to confirm that statistics of students under 17 years as this necessitated contacting the statistics section of the university. The shortcoming of the method of confirmation was that the person who responded to the email may not have been fully informed about all aspects of the four points of reference.

Summary of Phase 1

The first phase mapped the terrain of Australian universities, seeking information on access to tertiary study for accelerated students, particularly early admission, where students are admitted without having completed their final school qualifications traditionally completed in Year 12. It also sought minimum admission ages and the number of students under 17 years admitted to Australian universities between 2000 and 2008.This phase was designed to specifically address Research Question 1.

Q1 What access for admission – early admission in particular – is available to young gifted, accelerated students in Australian universities?

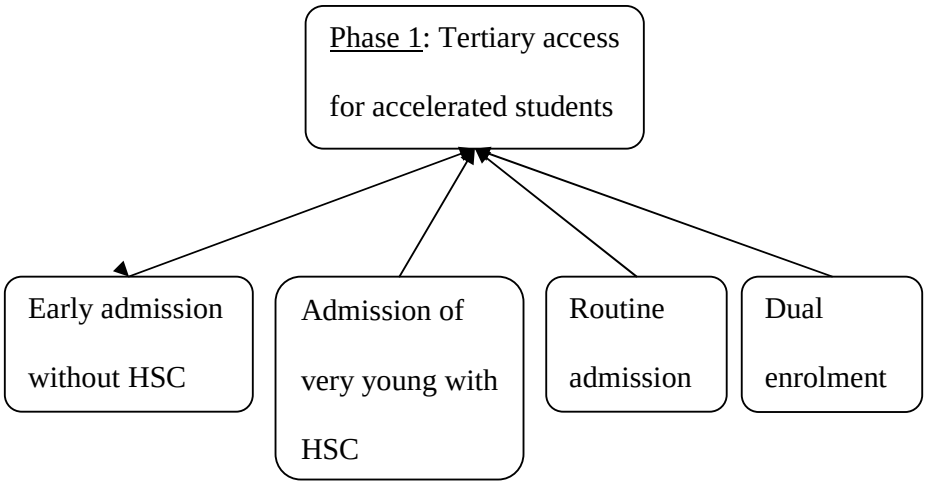
For accelerated secondary students, four methods of entry for tertiary study in Australia emerged from the findings, as shown in Figure 4.1:

1. Admission to university without having completed all secondary studies. This is known as early admission.
2. Case-by-case admission to university, after having completed all high school secondary studies through radical acceleration, and therefore much younger than the normal undergraduate student.
3. Routine admission with final school qualifications, but younger than the normal undergraduate student.

4a. Dual enrolment of non-award subjects, and university-developed board endorsed courses, which contribute to the final tertiary entry score and may provide university credit, or advanced standing, depending on the quality of the results.

4b. Dual enrolment of non-award subjects which do not contribute to the final tertiary entry score but may provide university credit or advanced standing.

Figure 4. 1 Tertiary Access for Accelerated Students



Only one university had a formal early admission program, with rigorous entry requirements. Other universities which were contacted, reported a willingness to accept such admissions but on a more informal basis. For these universities there were no formal policies, but “loopholes” existed that enabled to accept early admission, on a case-by-case basis, usually at the discretionary power of a Dean or Head of Faculty.

Thirty three universities participated in some form of dual enrolment program, with a wide variety of student enticement, in the form of course credit or advanced standing.

For 35 universities there was no minimum admission age, provided the student had satisfied academic university entry requirements. For 3 other universities contacted, admission age varied from 15 to 18 years. Statistics of student enrolments younger than 17 years were difficult to ascertain directly from the universities, but information from the Department of Education Science and Training (2009) showed that 2000 students, under 17 years, were enrolled nationwide in 2008.

This chapter has provided information on tertiary access in Australia for accelerated secondary school students. The next chapter explores Phase 2 of the study, the attitude of Australian universities to early admission, and to admission of accelerated students in general.

Chapter 5: Methodology of Phase 2

Introduction

This chapter discusses the methodology of Phase 2, investigating the attitude of Australian universities to early admission, and to the admission of accelerated students in general. It describes the sampling strategy, the development of instrumentation, and the details of procedures used to collect data for subsequent analysis.

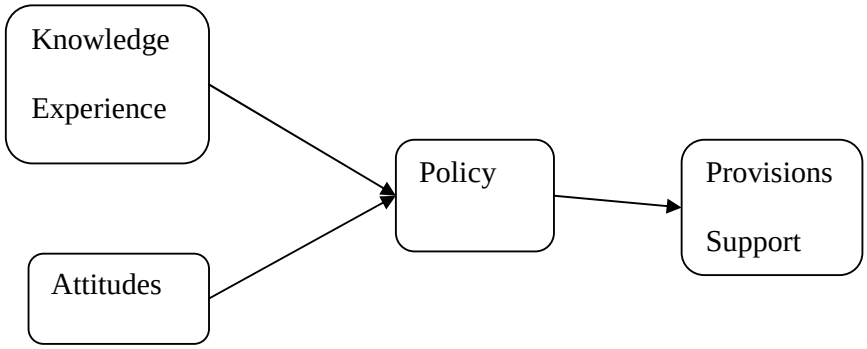
In Phase 1, information about early admission, dual enrolment, minimum admission age, and admission of students younger than 17 years at Australian universities was collected and summarised. In Phase 2 the research aimed to discover the university decision-making process which has allowed a student, younger than 17 years, to gain admission, especially on a case-by-case basis. Only one university in Australia, the University of New South Wales, has a formal program for early admission; hence it was necessary to find out how the other Australian universities accommodated accelerated students.

Methodology

The research in Phase 2 was largely explorative, investigating the attitude of particular universities, and peculiar to the Australian context of each university, towards the admission of accelerated students to university. The theoretical framework to support the exploration was embedded in the research question**:** "What is the attitude of Australian universities to early admission, and to the admission of accelerated students in general?" The particular issues to explore were chosen, based on the findings of Phase 1, and from the extensive literature

review. Some connections (see Figure 5.1) were theorised to exist about what affected the attitude of the university, and the attitude of the officials: knowledge of, and experience with, gifted learners, university policy, quality of opportunity, and affective support. Hence, a lack of opportunities and support might be indicative of less favourable perceptions and less knowledge about the capabilities of bright learners. Likewise, the attitudes of the university and officials might also be directly impacted by whether or not a university-wide policy for early admission, and admission of accelerated students, was established and implemented. Each of these theoretical links was explored through the questions in the interview schedule.

Figure 5. 1 Theoretical Framework



The methodology in Phase 2 was a descriptive multiple-case study of 11 universities. It followed the broad outlines suggested by Yin (2009) of describing separately each case study and its context, and through analysis, drawing out common themes. The purpose of the study in Phase 2 was to look at empirical data, using multiple-case design, based on interviews from the 11 universities

which claimed to admit students on a case-by-case basis. The criteria for judging the results of that exploration lay in the descriptions themselves, and in the similarities and differences of the multiple descriptions. Some quantitative analysis established patterns of response and the cross-case analysis enabled themes to be extrapolated.

To collect the empirical data, interviews were the essential source of evidence, and were analysed by comparing responses and eliciting themes, a relevant technique for descriptive case studies. The interview questions were logically linked to the research questions, and directed by the information gained in Phase 1. Cresswell (2007) suggested that the multiple case study presentation be as follows: "When multiple cases are chosen, a typical format is to first provide a detailed description of each case and themes within the case, called a within-case analysis, followed by a thematic analysis across the cases, called a *cross-case analysis*" (p. 75).

To achieve this, the personnel responsible for early admission at the other universities, such as academic chair-persons, registrars, admission officers and managers, were contacted by email and phone. This contact was preparatory to conducting a survey to investigate early admission, case-by-case admission, student support, advertising, and national coordination. In particular, the survey sought to determine if there was an early admission program, a policy for early admission, a specific process for such an admission, who made the decisions, how the decisions were made and if there was a mechanism in place to follow up on the student's academic, social and emotional welfare, while attending university. Further information sought focused on how the university might attract gifted

students and whether national coordination was considered possible, desirable, or viable.

The aim of this phase was to develop a detailed understanding of the key issues associated with early admission, by accessing and analysing the responses of key informants in differing university settings within Australia.

The President of the Academic Board at the University of New South Wales (UNSW), a member of the selection committee of potential students for their Early Admission Scheme for Exceptionally Talented Students, suggested that contact be made with people at other Australian universities in a position similar to his – Chair of the Academic Board. Consequently, through the university web pages, the Chair of each academic board at the selected university was emailed, with a request for a phone interview. This is considered "elite interviewing", which, according to Marshall and Rossman (1989) and Gillham (2000), focuses on particular respondents, where the "elites" are chosen for their expertise.

Participants: Universities and University Personnel

Based on information gathered from Phase 1, 12 universities, Australia-wide, were contacted to explore the decision-making process for early admission. The universities included were Australian National University, Bond University, La Trobe University, Monash University, Murdoch University, Queensland University of Technology, Southern Cross University, University of New England, University of Notre Dame Australia, University of Western Sydney, University of Wollongong and Victoria University. For the analysis, the universities were coded for confidentiality as U1, U2 etcetera. The University of New South Wales was not contacted in Phase 2, as it was fully investigated in

Phase 1. Two universities did not respond to the study after repeated contacts, and were removed from consideration. Although it did not claim to accept case-by-case early entrants, as no evidence was collected in Phase 1, another university was added to the sample, as it was known to have accepted a well-known Australian mathematics prodigy at the age of 14 years. Thus, it was included in the investigation. The final number of universities investigated in this phase for case-by-case early admission was 10.

The contact with university personnel began with the Chair of each Academic Board. At six universities the email was redirected to other university staff who were deemed to be more knowledgeable about early admission or who were not as busy. Sometimes the redirection involved several people from the one university. This trail is discussed more fully in the respective university cases, as each particular redirection varied from one university to another.

Because titles of position are not always indicative of area of expertise, to identify the ideal target population and to find the most eligible respondent in the case-by-case scenario were challenging. It was hoped that the various personnel contacted would have detailed knowledge of early admission, as well as a broad understanding of their own organisation, including academic, social, financial, political, legal and administrative aspects. The roles of the people who were contacted, as well as those who ultimately responded, included the following:

Academic Registrar

Acting Deputy Vice-Chancellor (Academic Planning & Renewal

Acting Executive Director of Administration

Admissions Assistant

Admissions Manager, Admissions Office

Admissions Manager, Student Services

Chair, Academic Board (n=2)

Chair of Academic Senate (n=2)

Course Coordinator, Combined Degrees in Education

Dean, College of Science

Deputy Chair of the Academic Board

Deputy Vice-Chancellor (Academic & International)

Director, Academic Services Division

Director, Office of Senior Deputy Vice-Chancellor (Education Programs)

Director, Prospective Students' and Admission Centre

Executive Director of Academic Services, and Registrar

Executive Director, Administration

Executive Manager, Vice-Chancellor's Office

Lecturer, Gifted Education (n=2)

President, Academic Board

Professor, Faculty of Arts and Sciences, School of Science and Technology

Pro-Vice Chancellor – Academic

Pro-Vice Chancellor (Planning)

Pro-Vice Chancellor – Students

Registrar (n=3)

Vice Chancellor

Vice-Principal, Resources and Administration

Instrument: Interview Schedule

An interview schedule was developed to gain information about Australian university practices. The questions were reviewed, following the guidelines outlined by Walker (1985), in terms of clarity, focus, scope and appropriateness by two senior academic staff of the School of Education (UNSW). Clarity focused on whether the interviewee would understand what was being asked; focus established whether the question would gather data to answer the study questions; scope focused on whether the data collected would be sufficient to fully address the research questions; appropriateness looked at whether the questions were ones that the subjects were capable of answering. The pilot interviews, conducted with four UNSW officials in Phase 1, provided additional confirmation as to the clarity, focus, scope and appropriateness of the interview schedule questions. Most of the questions were open-ended questions in order to allow the participant a chance to elaborate on the response, thus eliciting rich answers.

The interview, intended to utilise approximately 40 minutes per official, was designed to collect all data at one data collection point. It was planned that the transcripts of each interview would be submitted for “member checking”, that is, asking the participant to verify its accuracy.

The interview questions emerged from reviewing the literature on early admission to university, as well as from examining data collected from the UNSW program (Brody, Assouline, & Stanley, 1990; Muratori, Colangelo, & Assouline, 2003; Olszewski-Kubilius, 1995; Rogers, 1992). Subsequently, to investigate the whole picture about the admission of accelerated students, the ideas covered were as follows: (1) early admission; (2) case-by-case admission; (3) student support;

(4) advertising and recruitment; and (5) national coordination. The complete interview schedule is shown in Appendix C.

Each idea, or topic, was embedded in, and investigated through, a number of questions. The questions centred on gaining information about, and attitudes towards, possible early admission programs, policy for case-by-case admission, with or without final secondary qualifications, the decision-making process for admittance, and subsequent student support, both social and academic. There were further questions about advertising, attracting, and recruiting gifted students. The final questions related to the perceived feasibility of national coordination for flexible university entry and study options for gifted students, and on effecting change by establishing a national centre for research into the education of gifted learners.

Early Admission.

The first topic centred on early admission. It was significant that in Australia, there was only one university with a formal program for early admission. It was therefore important to find out whether the other universities had ever considered introducing a program, and whether they accepted very young students who had completed secondary schooling, or accepted students who sought single subject enrolment on a dual enrolment basis. In particular, it was also important to know how the university defined early admission, and whether it was condoned or valued. The questions, designed to answer these questions, were as follows:

Early admission.

1a. The UNSW has a formal Early Admission Program. It accepts very gifted students who are about 15 years old who have not completed the final secondary qualification. Under what conditions has your university ever considered having such an early admission program? Why or why not?

1b Provide examples of how your university has accepted young, gifted students who

(i) have not completed the relevant final secondary qualifications?

(ii) have completed final secondary qualifications but who are younger than the expected age of entry to university?

Case-by-case admission.

The second topic centred on case-by-case admission, and the process of admission. It was designed to find out if the formal university policy allowed for case-by-case admission or if there were any provisions for such an admission. The researcher needed to know, if there were no provisions, how the admission could be made, and why it would be made, and under what circumstances were accelerated students invited to attend university early. In the review of the literature, the guidelines about early admissions, offered by Robinson & Harsin (2002), Rogers (2002), and Sayler (1994), emphasised that careful screening of students for early admission was essential for ultimate success, for both the university and for the student. Indeed, the rigorous screening process at UNSW may be a key factor in selecting appropriate students who, ultimately, were successful graduates of the early admission program. The researcher sought to clarify where the final responsibility lay in the decision process, with or without a screening process. It was also important to determine whether the university

sought relevant advice from someone who had a specialised understanding of the academic needs of radically accelerated and/or profoundly gifted students. The questions were as follows:

Case-by-case admission.

2a. I have discovered that there are 13 universities in Australia who accept young, gifted students on a case-by-case basis. I understand your university might adopt, or has adopted, this approach. Does your university have a formal provision/policy for admission of young, gifted students? Why, or why not? Under what circumstances would you establish such a policy or provision?

2b. If there is no formal policy, under what category might young, gifted students be admitted?

2c. If there is no formal policy, what would prompt the university to accept young, gifted students on a case-by-case basis?

2d. When your university does accept such students, would there be a screening process?

2e. Could you tell me something about the process of screening the candidates?

2f. At what level – faculty or school – and under what circumstances would the decision made to accept a case-by-case gifted student? Are there some faculties where this type of decision is more likely to occur?

2g. Would there usually be someone at the university, familiar with gifted education, who would advise the Dean or Academic Registrar about accepting the case-by-case student?

Student Support.

The third topic was about support of the student. Robinson & Harsin (2002), Rogers (2002), and Sayler (1994) emphasised the need for support, both informal and formal, at university, to help with possible academic, social or psychological issues of early admission to university. Participation in tertiary education demands greater student independence, compared to secondary education, both in study and daily activities (Schumacker et al., 1995). Academically, the gifted student may cope well with the subject challenges, but may lack basic skills, such as study skills, or research skills (Sayler, 1994). For a young student to mix with older students brings its own social and psychological challenges; there may be issues, for example, with extracurricular activities, friendships, dating, drinking, or driving (Cornell, Callahan, Bassin et al., 1991; Lubinski et al., 2001; Noble & Drummond, 1992). From the literature review, it was noted that in the United States, some universities have set up particular support programs to ensure that counselling is available to cover academic, social and psychological issues (Ingersoll & Cornell, 1995; Janos et al., 1989; Sethna et al., 2001) . The questions that addressed these issues in the interview schedule were as follows:

Student support.

3a. The University of Washington has a specific program – academic, social, and psychological – to support early entrants. Would, or does, your university consider giving formal, follow-up support to young, gifted students? Why or why not?

3b. If there is no formal support, would there be informal monitoring of the progress of young, gifted students? Under what circumstances would this occur? What would that informal monitoring look like?

Advertising and Recruitment.

The fourth topic centred on advertising and recruitment. From the literature review, it was apparent that the universities in the United States advertised their early admission and dual enrolment programs widely. By contrast, Phase 1 results indicated that information about Australian programs was difficult to find. One Australian university was reluctant even to advertise its very successful dual enrolment program, for fear that the floodgates would open to allow in too many students. The questions to understand this issue were as follows:

Advertising and recruitment.

4a. Does your university actively seek to attract young, gifted students?

4b. If so, in what ways do you attract them?

14c. For what reasons would your university be reluctant to advertise that they accept gifted students?

14d. For what reasons would your university be reluctant to advertise a dual enrolment program?

National Coordination.

The final topic concerned national coordination, which had been suggested by the 2001 Senate Inquiry. In Phase 1 it was apparent that there was variation from university to university, and from state to state, on early admission, dual enrolment programs, and admission age. In 2001, the Senate Committee had

recommended, in Section 3.145 of *The education of gifted children*, that Australian universities develop national coordination in relation to gifted education, and mentioned, in particular, early entry to university (Senate Employment Workplace Relations Small Business and Education References Committee, 2001). Seven years later, there seems to have been no progress. Indeed, Matters (2008) stated that an Australian Research Centre for Gifted Education needs to be up and running by 2010 to support the current Australian political push for the "educational revolution". Hence, the interview questions were as follows:

Nationally.

5a. The Senate Committee proposed that the "Australian Vice-Chancellors' Committee, in consultation with school education authorities, should develop a policy providing more flexible university entry and study options for gifted students"? [Recommendation 11, 2001]. Could you suggest reasons why national coordination has not yet been achieved?

15b. How might the idea of a national centre for research into gifted education effect such change?

Interview Procedures

Telephone interviews were utilised for the administration of the interview schedule. Cresswell (2007) suggested that the telephone interview can be the most practical means when the subjects are geographically scattered, a situation certainly present in this national survey of Australian universities. Interviews are particularly useful for eliciting information concerning the context in which

decisions have been made, and subsequent reflections on those decisions. In many cases the interview questions can prompt the interviewee to respond spontaneously about issues that may not have been previously considered. To achieve these ends, interviews need to be well prepared and conducted (Gall, Borg, & Gall, 1996). Telephone interviews are often convenient and cost effective but have some limitations (Carr, 2001) such as the reliance on the skill of the interviewer. Many of these limitations can be avoided by ensuring that participants are suitably prepared. The interview questions can be presented to the participant in advance of the actual interview so that the participant has knowledge of the direction of the questions and the detail required. This was done in this study.

The method for data collection in this study involved "elite interviewing" (Marshall & Rossman, 1989), because the chosen participants were a particular type of respondent, selected for their expertise in the relevant area. Frey and Oishi (1995) claimed that elite populations, that is, people in socially elevated positions, were more likely to respond to a telephone interview than to another mode of interview.

The process of establishing contact with the initial participants, specifically the respective Chairs of the Academic Board of each university, began with an email. To gain an interview involved the email request and/or subsequent phone call to arrange an interview with the Chair of each Academic Board. In four cases, the introductory email resulted in an "elite" (Marshall & Rossman, 1989) interview being arranged; In eight cases, the request was forwarded to a seemingly more appropriate person, or to someone less busy; In three cases, the request was ignored and needed to be followed up on several

times. In two cases the case study was finally discontinued because of the continued lack of response from the university.

In five cases, there were multiple redirections. Eventually the emailed request was accepted, and a convenient time for phoning was established. The email served as an introductory statement, in an effort to establish interest, trust and rapport (Frey & Oishi, 1995). A copy of the email can be found in Appendix D. The questions were attached, so that the respondent could gain an understanding of interviewer's objective.

The type of response varied greatly, however. One university representative chose to reply to the email, rather than responding to the actual questions; three administrators gave written responses to the questions, without a phone interview; one responded by talking on the phone but not responding directly to the questions; and five responded by participating in the phone interview. In the latter group, not all of the questions were answered, as often the interviewee chose to transition to an issue of personal interest. Details of the type of response are provided in the case studies that follow for each university.

The phone interviews lasted from 20 minutes to a maximum of 40 minutes, to avoid respondent fatigue, as recommended by Seidman (1998). During the interview, notes were taken and later compiled as a transcript. To ensure accuracy, and to create trust that the interviewer was genuinely intent on research only, the interviewee was given a chance to check the relevant thesis entry for accuracy, to clarify points, and to clear contradictions, or ambiguities, as recommended by Brenner (2006). The interviews were not recorded, and the researcher's notes from the interviews did not constitute "transcripts". Member checking of the thesis entry, rather than the traditional transcript of the interview,

also provided an opportunity for the interviewee to provide additional information, and to understand how the researcher intended to use the information. Not every university responded to the opportunity to check the thesis entry. Where changes were made, the changes are discussed in detail in the separate case studies.

The interviews were undertaken with the approval of The University of New South Wales Ethics Advisory Panel (Reference Number 062149) as shown in Appendix A. Respondents agreed to participate on the understanding that their names and those of their university would remain confidential and that the views they expressed were their own perceptions of the current position of the university concerned and should not be construed as an official view. In most cases these universities had no stated position (policy) at that time.

In this study the separate responses were considered as a descriptive case study for each university. Thus, each descriptive case study becomes a part of a collective case study dealing with the same issues in other universities, an approach recommended by Yin (1993, 2009) and Silverman (2005). Stake (as cited in D. Silverman, 2005) uses the term *collective case study* to cover the situation in which the researcher studies a number of cases to investigate some general phenomenon, thus increasing the validity of any generalisation made.

Analysis of Results

NVivo 8, a software program for analysing qualitative data, has been highly recommended by Creswell (2007), Wengraf (2001), and O'Leary (2004) for content analysis of multiple interviews. The interviews and responses were transcribed, question by question, into the format required by NVivo 8. The topics were used as categories in the analysis by the NVivo 8 software. The

responses for each question were then broken down into various components such as yes, no, or no answer, good for student, good for university. Initially this allowed for quantitative results to be calculated and assessed. By using the coding process of NVivo 8, a secondary analysis was developed, based on the comments within the individual responses. The coding enabled the respondents' answers to be collected into different explanations. This method of analysis yielded a rich, very detailed pattern in the responses, which are described in the next chapter.

This chapter has outlined the steps taken in Phase 2 to contact Australia-wide universities which had stated that case-by-case early admission might be, or was, practised. The interview schedule was designed to seek information on early admission programs, and admission of accelerated students, policy of case-by-case admission of young, gifted students, the decision-making process for admission, the degree of student support, whether universities sought to attract and recruit gifted students through advertising, and attitude on national coordination. Chapter 6 sets out the subsequent analysis of Phase 2.

Chapter 6: Results Phase 2

This chapter outlines the results of Phase 2 which sought to investigate the decision-making process which allows a student, younger than 17 years, to gain admission to Australian universities on a case-by-case basis. Through in-depth interviews with the respective designated contacts, a case study of each university was developed. The following section, ***Case Studies into Early Access into University for Gifted Young Students***, provides a summarized descriptive case study of each university that participated. The case studies are primarily presented as narratives reflecting the reflections and answers of the participants. On occasion qualifying statements are made by the researcher in order to explain the context more clearly by linking the text more directly with specific themes. In addition, details about the communication procedures between the universities and the researcher leading up to the interviews were also documented.

A composite case study was also constructed for UNSW which had previously provided data in Phase 1. The interview schedules used for the four personnel from UNSW were different from the Phase 2 schedule because Phase 1 was an exploratory phase about early admission. In fact, each of the four interview schedules was different, as shown in Appendix B, and ultimately, the concepts derived from those interviews formed the basis of the Phase 2 Interview Schedule, shown in Appendix C. Unlike the Phase 2 telephone interviews, the four interviews were conducted face to face, and were not digitally recorded. However, a case study was constructed by feeding the information into NVivo 8 and matching the identified themes with the questions asked in the second survey. This composite response is therefore included in the next section.

Three universities who were contacted did not participate despite several attempts to include them. In these cases, only summaries of the communication procedures are documented. These are reported in a separate section entitled ***Reports on Non-Participating Universities***

Case Studies of Access into University for Accelerated Young Students

Each descriptive case study provided detailed information about a particular university and the accounts given by the participant.

University1 (U1)

Official A, of U1, was emailed with a request for a phone interview. He responded by email, stating that he was unaware of any provision for early admission of gifted students in their policy and directed the query and questions on to Official B.

Official B replied by email and confirmed that U1 did not any formal policy or program for early admission for gifted students, and that it had never been considered. He agreed to a phone interview and responded more specifically to the questions

Interview summary.

Entry was dependent on final secondary results. However, while no offers had ever been made to young, gifted students, he indicated that there was no reason why such offers could not be made. U1 would want to attract the most able students and the mechanism was in place for accepting students, outside the usual undergraduate pathway. This could be through the Portfolio Partnership Program

(Handbook, 2008) , an alternative entry scheme which “is designed for consistent achievers in the senior secondary years who have the potential to succeed in a university or TAFE”. The screening process would follow the guidelines set out for the Portfolio Partnership Program. Official B did express concern about the suitability of the social environment of a university for, say, a 15 year old student; social maturity would be an essential quality. The decision to admit a minor would be made at faculty level, within the parameters of the subject. He presumed that there was staff within the School of Education who would be able to give advice about gifted students, but no such person was actually identified. U1 had good support mechanisms in place for all students: it caters, for example, for students of culturally diverse backgrounds. There has been a mixture of formal and informal monitoring for all students.

U1 ostensibly has not sought to actively attract gifted students, because such students were more likely to attend higher profile universities in the state. U1 is very similar in student population to the U2, where issues of equity and diversity are paramount. To seek national coordination for the gifted was not a concern for U1.

Comment.

Official B was sent the thesis entry for checking. He made no changes.

University 2 (U2)

The U2’s policy indicated that gaining a competitive score via the Special Tertiary Admissions Test (STAT) was a possible option for an alternative pathway for admission, even though this catered usually for mature aged students.

Studying single unit subjects, as non-award subjects, was also possible. The policy did not mention admission of exceptionally gifted students, but Official A indicated (personal communication, 20 June, 2007), that admission of gifted and talented students has occurred via a direct approach to U2. Official B, who sits on the committee that approves academic policies and deals with academic matters, was contacted. She commented that most universities have developed ways to accommodate gifted students to access various pathways or miscellaneous units, and policies have assumed that there may be minors to consider. However, she referred the request for information on to Official C, and to Official D.

Official C was on leave but Official D agreed to a phone interview.

Interview summary.

There was no formal early admission program at the U2, and admission usually depended on completion of final secondary qualifications, regardless of age. Official D also said that case-by-case admittance was a possibility, and it would fit into the context of the recently constructed framework in the university's initiative for establishing better relationships with schools. This program had involved 700 schools and supports such ventures as HSC enrichment courses, and university courses conducted in schools. Their *Schools Action Plan 2008, Sub-strategy 3.1* (Handbook, 2008) listed one new initiative of investigating further options for Year 10 or Year 11 students to study university subjects. *Sub-strategy 3.2* mentioned exploring options for Gifted and Talented programs for disadvantaged, underachieving students, and indigenous students.

The STAT had never been used as a gateway for young students but, he admitted, it might be a possibility. Screening would be assisted by consultation with the school, and possibly the parents. The Head of the School of Education

would have access to academics familiar with gifted education who could offer advice on a case of early admission. At present there was no provision for support to young students as the category was non-existent. He considered that such students would need specialized support, similar to that offered to the students who enrol in U2's Advanced Leadership degrees; they are offered mentors and access to research. A coordinator would be needed and informal monitoring would be a possibility.

In regard to advertising, U2 has not sought to attract the very young student, but it has sought to attract gifted students through the Advanced Leadership degrees. Official D did not suggest any reasons why national coordination had not been achieved, nor did he indicate whether he thought it was a good idea. There was no official view or policy about the young gifted student, as that specific tranche was small, and "not on the horizon". In the priorities of U2, foremost was attracting the indigenous population, and other special admissions.

Comment.

The thesis entry was sent to Official D for member checking; there was no response.

University 3 (U3)

The U3 accepts students on a case-by-case basis. It has a formal early admission program in the Faculty of Arts. The Alternative Entry (Handbook, 2007) was also considered a possible point of entry for young students into other faculties, through the use of the Special Tertiary Admissions Test (STAT). For example, there have been 4 family members who were home schooled and did not

have UAIs (personal communication, 8 April 2008). They completed the STAT and were accepted by U3. The Australian Council for Educational Research (ACER), however, who constructed and managed the STAT, “would prefer to keep it clear in users' minds that STAT is for mature-age students” (personal communication, ACER, 1 April, 2008).

Official A indicated in Phase 1 that an admission policy was being established, and that it was the Head of School who gave permission for young students to be admitted. There was some restriction in choice of units, regarding appropriateness for minors. The students were monitored in an informal way by the Official A and the unit coordinator. Early admission students were treated in the same way as all other students; academic support was the same as offered to other students; extra-curricular engagement was not monitored. Official A added that, through his informal monitoring, he had not known of any social and emotional adjustment issues the students may have experienced. On the contrary, according to Official A, the students enjoyed having their academic achievements acknowledged and the subsequent kudos involved, and had spoken, unanimously, of how rewarding and liberating university study was.

To acquire further information, the initial email contact in Phase 2 was with Official B. However, he was too busy to be interviewed at that time, and referred on the request to Official C, who was part of a working party trying to establish ways of attracting gifted students to U3. The interview, with both Official C and Official A in attendance, corroborated and expanded on the information already known.

Interview summary.

For case-by-case early admission in the Arts Faculty, the screening process for students has centred on the student's interest. The application letter was judged as indicative of the level of motivation; there must also have been a school mentor who communicates with the parents. The decision to accept the students would involve the Dean and Official A. U3 did have a gifted education section but over the last four years that Official A has been there, he had never been contacted. His explanation for that lack of contact was that academics were extremely busy so did not take the time to seek further advice, or they assumed that Official A was too busy to be consulted. He continued his explanation by saying that perhaps it was assumed that it was unnecessary to involve Official A in the process. Perhaps the decision-makers did not know of his existence or of his expertise. Another reason was that there was no policy which said the step of seeking such advice was necessary. Official A also concluded that people tended to be insular in their work habits. Part of the new proposal was that two people would need to be responsible for an early admittant: the school mentor and someone from U3.

There was no formal support, academic or social, provided to young students, other than what is available for all students. Informal monitoring was the same for all students. Duty of care was considered very complicated for minors who became residential students, as parents were required to be on campus with them. It was less complicated for non-residential minors, but parents still needed to give permission.

U3 has actively sought new ways to attract gifted students and currently has a working committee on the issue. The Faculty of Arts has promoted its early

admission program through two sources: the English Teachers' Association and through the school course coordinators in the local region. One of the two U3 staff members considered that establishing a national centre for gifted would be the starting point for national coordination and collaboration among Australian universities. It would raise the platform of research, be the ideal place to change attitudes, and to sort out how national agreement could be achieved, on money matters such as sharing costs, content of syllabi, and advanced standing and credit for students. Currently U3 has been more generally concerned with equity issues which involve students with perceived disadvantage: mature age entry, non-English speaking background, indigenous Australians, difficult family circumstances, disadvantaged socio-economic background, rural or isolated applicants, women in non-traditional courses and personal disability or long-term medical condition. It has not included gifted students as part of this equity focus.

Comment.

A copy of this thesis entry was sent to both Official A and Official B. Minor amendments about accuracy of titles were suggested and altered.

University 4 (U4)

The initial request for a telephone interview at U4 was sent Official A. However, he did not respond.

A search on the web for an admissions policy concerning exceptionally gifted students was unsuccessful. Official B was emailed about the policy. He confirmed that although there was no age minimum, there was no such policy, as entry was conditional on the usual tertiary requirements of final secondary year completion. He also indicated that he was willing to provide relevant information,

and agreed to a phone interview. He responded, at length, to some of the questions.

Official B was sent a summary of the interview for member checking. He made some amendments which were duly noted. He also attached the recently published (August 2007) Admission Requirements for U4, which corroborated his explanation of how a young, gifted student, under 19 years of age, who had completed formal entry qualifications, may be considered for entrance to U4. The document stipulates that such a student, who, in addition had also successfully completed studies at a tertiary institution, may be considered for entrance as mature aged applicants, details of which appear in Section 2. However, there was no clarification whether what was accepted as "successfully completed studies at a tertiary institution" included dual enrolment subjects or units completed at the Open University.

The questions on support, advertising and national coordination were not addressed in the first interview. The interview schedule was emailed to Official B again, six months later; he agreed to the request to respond to these questions.

Interview summary.

Young students, 15 years and under, have been identified through the admissions data entry system and attracted an additional screening process. Provided the student had completed secondary qualifications and had demonstrated English language competence, he or she could be admitted under the same provisions as a normal school leaver. Official B was responsible for contacting the school, and interviewing both the parents and the student. It was his responsibility, and decision, whether or not to accept a student. He expressed his wariness about the social appropriateness of young students undertaking full time

tertiary study and cited Medicine and Veterinary Science as classic examples of where students wanted to start early. He had had applications from two young, prospective students whose overall TER was within the appropriate range but had rejected both students as neither had met all of the standard requirements, and he was not prepared to waive them as he considered that admission was neither in the best interest of the student nor the university. One 13 year old wanted to study Medicine (his primary choice was at another university), or Veterinary Science (his potential second preference); he was physically very small, “smaller than a sheep” (personal communication, October, 2007), very immature and had failed English Literature. The other 13 year old did not have adequate command of English, as shown in his English Literature marks in his TER score. By contrast, Official B did express approval of bright, young students taking single subjects as non-award subjects which, later, may attract undergraduate credit. He also proposed that Open Universities Australia was an ideal route for students to access single subject study.

There was no formal support system in place for young students, other than what is available for all undergraduates. It was not possible to have a formal cohort for these students as subjects could be taken across the six faculties: for example, one student may have chosen to study Physics and Media Studies. Guidance in the choice of subjects was imperative. Informal support was available through the teaching staff, as they would have been aware of a young student where the majority (60%) of U4 students were mature aged. For the university, the duty of care of under-aged students on campus was an important issue.

There was definitely no advertising for, or recruitment of, gifted students. Official B stated that U4 had a relatively poor suite of scholarships, although Commonwealth Scholarships were available.

Official B considered that national coordination in Australia was a good idea, especially in the area of credits and transfers. In response to the question about a national gifted research centre, he regarded gifted education as a small sector of the whole of education. He thought it more practical to have delivered professional development for teachers, who then would have been better able to have addressed the needs of the gifted in high schools. The concept of equity, which referred to people of low socio-economic status, indigenous Australians, prisoners, and victims of abuse etc, was a priority of U4. The concept did not include the gifted.

Comment.

Official B was sent the final thesis entry for checking, to which he responded, suggesting minor corrections of detail, and correcting a misreporting of the Admissions Policy. Corrections were made.

University 5 (U5)

The U5 Handbook, covering normal requirements for admission to U5, included in its admissions policy exceptional cases of Year 12 applicants which could be decided by the Dean of a faculty on an individual basis. However, the policy did not specifically refer to exceptionally talented students. U5 had several special entry schemes which require application through the Victorian Tertiary Admissions Centre (VTAC) but these are usually for students in difficult circumstances, such as illness, family crisis, cultural diversity, rather than

academic exceptionality. The VTAC ((2009) describes, on its contents webpage, its Special Entry Access Scheme (SEAS) as "…the umbrella program run by most institutions for applicants who have experienced educational disadvantage".

Official A was the initial contact for the telephone interview. He agreed to consider the questions which were then emailed to him. He redirected the questions to Official B. Official B sent the questions to the policy team who responded in writing. At that time, no subsequent phone interview was sought to clarify remaining questions.

Interview summary.

U5 had not considered formally introducing an early admission program. The university has accepted young students who have satisfied normal entry requirements, and on "rare occasions" has accepted a student who has not completed final secondary qualification, but who has completed university level subjects in secondary school. While there is an age limit of 16 years for admission, faculties have been given discretion to accept younger students in exceptional cases. The university policy, (Handbook, 2007) , in *Admissions*, subheading *Normal requirements for admission,* states that "In exceptional cases, the dean of a faculty may admit a Year 12 applicant who has not satisfied normal University entrance requirements. In such cases, the applicant must have satisfied course subject prerequisites and have achieved a level of performance which, as part of a complete certificate, would clearly merit selection into the course".

In the decision process to accept students on a case-by-case basis, U5 considered exceptional academic results in secondary schooling, sometimes combined with university level subjects which have been achieved through extension studies, that is, dual enrolment. For evidence of appropriate social and

emotional maturity, U5 considered such things as leadership activities at school, volunteering services and international experience. The decision would be made at faculty level and the Chair of the University Selection and Enrolment Committee would advise the Dean, at the request of the Dean or the selection officer. For academic, social and psychological support at university, young students were not offered special services; they were treated in the same way as all students. All students were given formal follow-up as part of normal procedure and, if at risk of unsatisfactory progress, there was a normal element of monitoring. Informal monitoring was not considered necessary.

U5 had not actively sought young, gifted students as there was an additional duty of care involved with under-age students. The questions about national coordination had been optional and were left unanswered by the policy team. An additional request for comment on national coordination was emailed to Official B, who stated briefly that national coordination had proved to be very difficult in matters affecting school education. He added that there was some hope of progress on a national curriculum, through federal government initiatives.

Official B relayed the final two questions about national coordination and a national research centre to Official C, from U5's regional campus. His lengthy response centred on the concept that national coordination encompassed an agenda much wider than the provision of gifted education. It included special education, curriculum provision and flexible coordination of Australian education systems in response to a very mobile population. During the last 12 years, the national agenda of the body known as the Vice Chancellors' Committee, now called Universities Australia, had been focused on managing diminishing financial input from the Commonwealth Government, and on managing international

education, now one of Australia's successful export industries. In Official C's opinion, the current situation was not in Australia's long term interests, as it did not nurture Australia's natural talent in the intellectual, creative, scientific and artistic domain. He added:

> Governments and universities in my view should be encouraging via scholarships and well-funded exchanges, our brightest young people to incorporate into their studies time studying at universities around the world. Other countries are doing this in their long term interests. More flexible entry arrangements between school systems and universities for very able learners would be a foundation for these sorts of developments to flourish. (Personal communication, 1 August, 2008)

Official C considered that a national centre needed to have a broad agenda, from pre-school to tertiary education, to be independent of any one university, and to draw on national expertise. Part of that centre should focus on the whole spectrum of gifted education. His final comments related to the changes that could be effected by the development of a national research centre for Gifted Education:

> 'Harvesting' national talents in an internationally competitive world is something that in Australia needs to be given much more attention ....and much more money. A national Centre for gifted education would be a very apt organisational structure to assist in facilitating this. (Personal communication, 1 August, 2008)

Comment.

A copy of this thesis entry was sent to Official B, who had indicated that their policy team would appreciate a summary of the research findings. The thesis entry was primarily based on the policy team's written responses. Official B suggested some amendments which were duly made. The later comments on national coordination, made by Official B and Official C, were added to the thesis entry. Official B also offered to respond to further questions by phone, but this

was not taken up by the researcher as further queries were able to be investigated by web searching the policies.

University 6 (U6)

U6's policy did not have a specific reference about the admission of exceptionally, gifted students. However, there was a section in The U6 Handbook, Part 2 – U6 Academic Regulations, (c) Criteria for Admission part (5), entitled Undergraduate Special Entry Provision, which did state that "Applicants would be assessed on an individual basis taking into account any special or extenuating circumstances" (Handbook, 2009). However, from reading policies from other universities, "special or extenuating circumstances" usually related to students with difficulties.

Official A responded to the initial email request for a phone interview with a confirmation that no early admission program existed, but that U6 had "sufficient flexibility to consider applications for admission from a wide range of applicants and in some cases without completion of Year 12" (Personal communication 19 October, 2007). He agreed to the phone interview, the questions were emailed, and a subsequent interview time was arranged. After the interview, Official A was sent a copy of the thesis entry for checking.

Interview summary.

Official A reported that the case-by-case situation has arisen from individual enquiries, sometimes from U6 regional managers, sometimes from parents. There were very few enquiries for admission of students younger than 16 years, sometimes one or two a year, sometimes none. The school networks provided referrals from feeder schools to U6 for consideration. Admission was

also dependent on being able to offer meaningful curriculum in appropriate courses, to meet the needs of the student. The decision process for admission was made primarily by the Dean of the Faculty but would require endorsement by the Academic Senate.

The screening process involved looking at academic achievement, school reports and interviewing the applicant. Academic records were consistently excellent among the applicants; hence, the weight of the decision about admission was related more strongly to the student's potential for adjusting to campus life. If the student was local, then commuting was a viable option. If the student needed to be in residence at the university, issues of social and emotional adjustment were deemed important as the young student would be mixing with older students. Official A expressed the strong concern for duty of care, and under age matters, such as drinking and use of the internet, factors that might be an issue for a young student, mixing with students of normal aged entry. In the experience of U6, young students have blended in well. Official A commented that high intelligence often went hand in hand with maturity and good coping skills. However, some of their young students, accelerated in high school, had found social adjustment challenging, especially if in residence on the campus. He recalled instances involving underage drinking, where duty of care had necessitated intervention. By contrast, Official A added, social displacement such as the television stereotype, Doogie Howser, MD, experienced, was eschewed by the university. Doogie Howser highlighted, even ridiculed, the extreme asynchrony of age and ability.

U6 had no-one on staff trained in gifted education to consult for advice; however, it did report staff trained in Special Education. Official A was confident that a very caring, teaching environment existed and, as it was a relatively small

university, a young, gifted student would be well monitored by an informal system. Supervision from a current, older student, perhaps a mentor, plus the informal care from staff, provided sufficient pastoral care to support the young student. The university had been able to closely monitor all students in residence.

U6 College offered a separate foundation program, which provided a pathway for both domestic and international students to meet the entry requirements for U6. It has focused specifically on the core academic skills required for entry into undergraduate degree programs at U6. U6 College has accepted students who have completed Year 11. Official A commented that it had also been an entry point for some gifted students, especially those unhappy with their current secondary schooling.

Official A considered that advertising for gifted students would create a potential logistical nightmare. His concern was that U6 was a small university, with a reputation as a caring institution. This might be lost if a large influx of young students were attracted to its foundation program. His opinion on developing a national policy, to provide more flexible university entry and study options for gifted students, was that it would be difficult and would depend on the capacity of each university to provide such possibilities. He commented that there were differences – and difficulties – across Australian universities for normal entry, based on final secondary qualifications leading to the Universities Admission Index (UAI). He added that the complexity within the variety of final secondary qualifications, across the different states in Australia, made national coordination problematical. Some universities accept some qualifications; some accept different qualifications.

Comment.

Official A was sent the transcript; he made some minor amendments, which were duly noted. He provided additional detail about the number of enquires about early admission, the social and emotional adjustment of young students, and the exercise of duty of care.

University 7 (U7)

The U7's policy did not indicate any special references to accepting young, gifted students. Official A explained in a personal communication (20 September, 2007), that admission at an early age, even when HSC studies had been accelerated, was relatively uncommon. Nevertheless, U7 had accepted three very young students who had fulfilled their UAI requirements. Dual enrolment was a viable option, and single subject study was possible through enrolling in the category of "miscellaneous subjects".

Three requests for a phone interview were made to Official A, during a period of 1 month, and the questions were emailed to him; despite one response that he was willing to consider the questions, he did not reply to the subsequent requests. Four more requests were made: to Official B, to Official C, to Official D, and to Official E. The latter two deferred to Official B who agreed to a phone interview.

Interview summary.

U7 did not have a program of early admission and it did not actively seek young, gifted students. Official B stated that in the past 20 years the university had accepted two students, one of whom had gone on successfully to study Mathematics and to complete a PhD overseas. U7 had accepted young students

who have completed the final high school qualifications but the university was very focused on its role in Duty of Care and Child Protection. Recently there had been some younger than usual international students on campus but they had participated in the Foundation College courses where close supervision was provided, compared to care offered in the traditional tertiary environment.

U7 did not have a policy on early admission and such admissions would have been on a case-by-case basis. The decision would have been made by the Faculty and then given to Official B for ratification. He considered that U7 was very conservative in its attitude, and the Duty of Care was a significant factor in any decision. A colleague familiar with gifted education would probably have been consulted in the decision process but the overriding concern was Duty of Care.

The question of formal support was considered a hypothetical issue. Young international students were supported through the Foundation College, both formally and informally. Advertising and recruitment of bright students was the province of the traditional scholarships. However, even though there was no specific policy on early admission, U7 had a range of options for attracting students such as the early entry program, and the extension program where the university worked with a particular local selective high school in some subjects. It participated in the Siemens Science Experience which aimed to nurture interest in Science for students who entered Year 10.

National coordination was problematic as the various states had different legislation. Policies for more flexible university entry and study options conflicted with Duty of Care. Official B stated that research was an important area and that a national centre was a good idea. However, gifted education was but a small part of

the larger picture of education, especially in the current situation of mass education. It was his personal belief that small numbers were involved in the gifted sector. For U7 equity was a more important issue.

Comment.

Official B was emailed a copy of the thesis entry and he acknowledged its accuracy.

University 8 (U8)

The University of New South Wales was coded as U8, simply for convenience in the cross-case analysis, and not for purposes of confidentiality. The University of New South Wales (UNSW) was not included in the Phase 2 sample as a case study, because of intensive study in Phase 1. Firstly, its program of early admission is very formal and well-publicised in the public domain; it has been in operation since 1991. Secondly, four informal interviews with UNSW personnel were conducted and reported on in Phase 1 and the formal, decision-making process was discussed in Phase 1. The interview schedules can be found in Appendix B. The combined findings from the four interviews follow.

Interview summaries.

UNSW had an early admission program which accepted students, for full-time or part-time undergraduate study, who had not completed their final secondary qualification. It had a formal, case-by-case policy and provision for early admission. It had a specific screening process for each student pursing early admission. This involved the student filling out an extensive application, supplying school reports, school achievement records, letters of reference, standard ability test results, as well as interviews with the student, the parents and

the student with the parents. The interview panel consisted of 5 university officials who were the Chair of the Academic Board, a psychologist, the Director of the Gifted Education Research and Resource Centre (GERRIC) on campus, the Head of Admissions and Equity Program, and the respective Faculty Head. Both sets of interviews took approximately 4 hours. Maturity, independence, motivation, personal and social readiness, and family support were all significant factors in the decision made to accept or not accept the underage student applicant.

Both formal support and informal support were the same as offered to all undergraduates; however, faculty staff was aware of the particular early admissions students and gave personal, informal support. UNSW actively advertised for gifted students through their website, through high school Career Advisors Newsletters, and through GERRIC. In response to the question about a university's reluctance to advertise a gifted program, the variety of ideas included possible university bias against gifted students, lack of expert knowledge among university personnel about giftedness, short sightedness, fear of "floodgates opening" to parents adhering to the "my child is gifted" syndrome, and a failure to see any link between meeting the academic needs of the gifted student and the subsequent accolades of success for the university's reputation. One official commented that the selection process was very resource intensive and was therefore a deterrent to supporting a more widespread early admission program.

In regard to the topic of national coordination, there were many ideas as to why it had not eventuated. These included a failure to address education, from both Liberal and Labor federal governments, a notion of egalitarianism, the difficulties arising from Duty of Care, a concern with equity, and the complexity of funding. As well, it was pointed out that national coordination was difficult,

because the states had too many agendas, different values, and different “axes to grind”. Even across the states, the schools could not agree on final school qualification certificates. One response suggested that it would take public demand and economic reality to instigate national coordination.

University 9 (U9)

The Student Handbook, at U9, in Rules, Section 2.2, stated that applicants, other than Current Year 12 applicants, may be considered for admission by the university by way of a personal competencies assessment, an interview, audition or other form of individual assessment. Applicants under 18 years of age could be considered for admission if the applicant’s qualifications and level of attainment were deemed acceptable to the relevant Head of School. Official A (personal communication, 24 August, 2006) had advised that students under 17 years would need the approval of the Executive Dean and that the faculty staff would be notified.

Official B was emailed a request for an interview; he acknowledged the email but referred the request on to Official C. Official D responded and requested the interview questions. He chose not to be contacted by phone; he replied to the interview questions in writing.

Interview summary.

U9 did not have a formal early admission program because the low numbers of applicants did not warrant a specific scheme. The institution had accepted young students who have completed final secondary qualifications. Official D recollected (personal communication, 26 March 2008) that over a

period of 7 years, two students had been admitted at the age of 15 years and they had completed the final secondary qualifications. To accept students who had not completed secondary qualifications would have to be a “very special case”, according to Official D. To accept students younger than 18 years would depend on whether the qualifications and level of attainment of the applicant were “acceptable to the relevant Head of School” (Handbook, 2008). When younger than usual students had been admitted to a School, the screening has involved an interview with the applicant, and perhaps the parents or the high school would be contacted. To seek advice about a case-by-case admission, from an academic familiar with gifted education, would depend on the discipline. No detail was provided about which disciplines might be involved or why that would affect seeking advice from a gifted expert.

Academic, social, and psychological formal support services were available for all students; young students would have the same access. Informal monitoring would take place, as staff in *Student Support* would be made aware of the gifted student. U9 has not actively sought to advertise for gifted students, for fear that most parents “feel their child is gifted”. The university would be reluctant to bypass the secondary school system, for it was accepted as an adequate vehicle for identifying, promoting, and providing for the gifted. Official D considered that one reason for a lack of national coordination was that it would create a hardship for regional universities in terms of workload and effort for a very small group of students.

Comment.

The thesis entry was sent to Official D to check for accuracy, as it was based on his written responses. There was no response.

University 10 (U10)

The admissions policy for U10 was being reviewed at the time of this writing but Chapter 6.1.1 of the U10 Statutes has set out the University admission requirements. U10 has offered courses about gifted education in the Education School for almost 30 years; nonetheless, there was no specific reference to the admission of exceptionally gifted students. However, there was, in Section 4.3, a reference to the situation of admitting a student who was under 16 years at the time of enrolment; the student had to satisfy the Academic Board with an ENTER score of 95 or more, and receive the consent of the dean of the appropriate faculty. This would provide potential access for young, gifted accelerated students.

Official A at U10 was the initial contact. He confirmed that U10 had an early admission scheme but he then referred the matter on to Official B Access U10 Committee, who did not respond. A perusal of the website, Access U10 (Handbook, 2007), indicated that the access was through scholarships in the categories of Merit, Equity, and Merit and Equity. Merit referred to scholarships available, based on academic merit in Year 12, and Equity referred to accessing U10 as a member of a disadvantaged group, faced with equity issues such as economic or cultural disadvantage. Consequently, Access U10 was not an entry point for early admission.

In the meantime, Official A passed on the request for the phone interview. Official C responded to the email and a phone call was arranged. She participated in the phone interview.

Interview summary.

The minimum age has been 17 years and an approval process to gain the Dean's permission is necessary for admitting younger students. The approval

involved discussion with both the parents and the high school. Completion of Year 12 was considered essential. Official C reported that their dual enrolment program catered well for gifted students. To study individual subjects was an appropriate path for gifted, young students but Official C expressed concern about the possible pressures on a young student entering full time tertiary studies, especially regarding issues of social and emotional adjustment. Informal monitoring of young students happened at the faculty level; she did not elaborate on the mechanisms of the monitoring process.

Comment.

The questions on advertising and national coordination were not addressed in the interview; at that point, the questions were optional. Official C was sent a copy of the thesis entry for member checking. She corrected some details which were duly amended. The amended version was sent but there was no further response.

University 11 (U11)

U11 did not claim to have case-by-case admission. However, it was known by the researcher to support high-achieving secondary students through its *extension program*, as well as having nurtured a world-famous Australian student. He entered U11 on a part-time basis at 9 years, and was a full time undergraduate at 14 years. He earned his doctorate in mathematics at 20 years and became a full professor of mathematics at the age of 24, at a prominent American university (Muratori et al., 2006). Thus, U11 was included in the search.

Help was sought in finding the policy from the Admissions office which subsequently sent the policy and procedures link; however, it did not have particular sections relating to exceptionally gifted students. Initial email contact was made for a phone interview with Official A. Official B responded via email, with information about the website which described its dual enrolment program. However, the request for an interview was ignored. The particular questions relating to Phase 2 were then sent to Official C who was on leave. Official D responded, but explained that her own time commitments precluded her from pursuing the matter. As suggested by Official D, Official C was the most appropriate person to contact; she was emailed again, but the automatic response indicated she was still on leave. Two months later another email request for an interview was sent to Official E's office but there was no response. Official F was also emailed with the same request, as he had been helpful in exploring the dual enrolment program in Phase 1. He responded in writing to the questions, and was prepared to clarify any subsequent queries.

Interview summary.

At U11 there is no formal policy for case-by-case admission but early admission was available to students who have completed some final secondary subjects. They may access university subjects through participation in the extension program as non-award students. For case-by-case admission, the Deputy Vice-Chancellor (Academic) would be responsible for the ultimate decision about the admission.

The screening process would be similar to the extension program screening process to ensure the decision would be in the best interests of the student. There would be discussion with the student, his school principal, and his

parents; as well, there would be discussion with the relevant faculty, school and relevant staff to ensure that U11 could provide appropriate support for the student. Advice would also be sought from the Director of Academic and Student Services, and staff with expertise in Gifted Education.

For support of the student, the extension program at U11 provided a specialised orientation program, in addition to the usual information about teaching and learning arrangements, academic contacts, dates and timetables and information about university facilities. Specific informal support for the young student was also provided. Official F, for example, prior to classes, had met one student with her mother, taken her to meet her lecturers, ensured she was familiar with bus stops, free on-campus bus service, library, food court, location of toilets, security staff and his office. She was given his phone details and was in touch with him throughout the year to monitor her progress. Had she experienced problems, there would have been contact with lecturers, school mentor, parents and /or relevant staff. Official F also pointed out that while the university did provide many support services and that duty of care applied, the university did not supply the same level of responsibilities of care that schools assume under legal legislation. The application form to participate in extension program specifically stated, in the approval section where parent/ guardian signed, that the university was a fully adult learning environment, and that parents/guardians had to explicitly accept any risks that may have been involved in participation of university study.

To advertise and recruit gifted students, U11 promoted the extension program in schools by distribution of an eye-catching, glossy brochure. As well, it held general and specialised campus tours, course advice sessions, and interviews

with students, families and teachers. Their prospective student advisors visited schools, with academic staff and student ambassadors. The university ran specialised “experience day” programs, open days, enrichment days, and regular laboratory based activities in the Science and Engineering Faculty. It also provided online “Chat” sessions through MSN Messenger. It offered various programs to primary aged students, Gifted and Talented Youth Workshops for Years 7 to 11, participated in the National Youth Science Forum, and held the Siemens Science Experience for Students about to enter Year 10.

At U11, high achieving applicants were offered an advanced entry program in Bachelor of Biotechnology or Diploma of Language in which the course could be completed in one less year; the student jumped first year and commenced enrolments in second year topics. The demonstration of “high achieving” was a score of 19 or 20 (out of 20) in the appropriate subject(s) in Stage 2 of the South Australian Certificate of Education (SACE) (or International Baccalaureate equivalent). Also an enhanced program in the Bachelor of Science (Honours) was offered to high achievers. High achievers were defined as having a Tertiary Entrance Rank of 95 or above and must also have completed at least three of the following Stage 2 subjects: Biology, Mathematical Studies, Specialist Mathematics, Chemistry, Physics, or Geology.

The three universities of South Australia cooperated to participate in the extension program. Official F did not offer a reason for the lack of national coordination. He supposed that a national centre for research into gifted education would have some impact but he added that universities were notorious for resisting national coordination.

Comment.

Official F was sent the thesis entry to check for accuracy, but he did not respond.

Reports on Non-Participating Universities

Of the universities which professed to accept case-by-case admission, three did not respond to the request to explore decision-making about early admission.

University 12 (U12)

Information gathered in Phase 1 indicated that the U12 accepted gifted students on a case-by-case basis. Its policy on admissions did not appear to have any references to admission of exceptionally, talented young students. However, contact with Official A confirmed that U12 did have an early entry program via the U12 Secondary College, in addition to a special research, undergraduate program, Bachelor of Philosophy (Honours) for exceptionally gifted students. Official A forwarded the interview request to Official B who was initially willing to provide information; however, his busy schedule interrupted the communication. Email contact with Official A was resumed, with several requests for assistance made, over a period of six months, with no results. Three months later another email request was sent to Official C, but there was no response. The request for an interview was therefore abandoned.

University 13 (U13)

The initial email contact was directed to Official A, U13. She responded directly to the email by commenting on the university's decision-making process

for admitting young students on a case-by-case basis. Their dual enrolment program allowed students to take individual subjects, and some gifted students, outside the dual enrolment program, have enrolled as visiting students in order to take individual units of study. U13 protocol for screening young undergraduates included that consideration had to be given to the students who were under the usual Year 12 leaving age and to their capacity to take university study. This involved the faculty reviewing the student course preference, considering risk or compliance for course completion, and for any restrictions for normal progression to graduate outcomes. The protocol also demanded discussion with the student and/or student guardian to establish clear understanding of the course, its environment, and any possible restrictions within the course or on completion. It was also incumbent on the Student Business Services to identify those students under 18 at the course commencement, to notify the relevant faculty, to include the review step prior to offering admission, to confirm that the faculty had given due consideration to the student and the students' choice of course, and that there was no impediment to the course offer.

Official A was emailed with a request for a phone interview; the survey questions were attached for her perusal. However, she did not respond, even though she had expressed in her initial response her willingness to communicate further. Official B responded by giving a website address for information on student admission. Website references to alternative entry and special entry programs referred to applicants from low income background, indigenous Australians, elite athletes and mature-age students. One program referred to dual enrolment. There was no information on early admission.

Official C was emailed for specific help on early admission. In his three subsequent emails, he confirmed that there was no policy on early admission, and that “early requests” were dealt with as a faculty decision. A search for information on early requests revealed that the phrase applied to early registration. After seeking information over a 12 month period, the case was abandoned.

University 14 (U14)

Official A, Campus X, passed on the request for a phone interview to Official B. She preferred to continue communication by email. Despite an earlier claim that U14 accepted case-by-case early admissions, it became apparent that there had been confusion about terminology – that early offers were considered, erroneously, synonymous with early admissions. Official B stated in a personal communication (13 March, 2008) that U14 had never admitted any students under 17 years old and this was corroborated by earlier statistical information acquired in Phase 1 of this study. She explained that each application was reviewed on a case-by-case basis, especially when courses had a practical component which placed students in schools, hospitals and work places. This necessitated that the student be 18 years old at the time of placement. The situation of under age admission had never arisen for U14 so no precedent had been set. Another email, asking whether U14 would consider the possibility of early admission if a request did arise, was not answered.

Because there was no telephone interview, the thesis entry about U14 was not sent to Official B to be checked for accuracy. The screening process, when each application was reviewed, was not explained in detail. The questions about support, advertising and national coordination were not addressed in the email

communication. Four months later, another email request for an interview was sent to Official C but there was no response. The interview was abandoned.

Overall Analysis of Interview Data

Eleven individual case studies from the 10 participating universities, and the combined data from UNSW, were described above. To analyse the data overall by comparing and contrasting universities, two further steps were completed. Firstly, the answers to the survey were analysed question-by-question. Secondly, all responses were analysed together to identify key overall themes. These two analyses are reported below in the sections entitled ***Question-by-Question Analysis***, and ***Thematic Analysis***.

Question-by-Question Analysis

For this analysis, answers to some questions could be easily quantified. For example, in being asked: "Does your university have a formal provision/policy for admission of young, gifted students?" (Q2a) or "Does your university actively seek to attract young, gifted students?" (Q4a) answers of yes or no were required. In such questions, these responses were tallied. This quantitative information is summarised in Table 6.1. Other questions such as "How you seek to attract gifted students?" (Q4b) were more open-ended and the participants gave varying explanations, some quite detailed and extended, and could not be tallied in the same way. For all such qualitative data the responses were collected together question-by-question by NVivo 8. For easy identification and labelling purposes the researcher then abbreviated each response by selecting key words or phrases. For example in response to Q2e "Could you tell me about

the process of screening the candidates?", one university replied " Academic record often very good; refer to school reports; put weight on the interview to see if the student is ready to cope", this was abbreviated to three items: "Academic record. School report. Interview". In this fashion all responses were uniquely identified as key words or phases and are summarised in Appendix F. If more than one university made the same point then a frequency score was kept. These key words were used as a basis for summarising the responses for each question.

Table 6. 1

Summary of Quantifiable Interview Responses

Question	Yes	No	N/A
Early Admission			
Q 1a Has your university ever considered having an early admission program?	3	8	-
Q 1b i Does your university accept young, gifted students who have not completed the relevant final secondary qualifications?	6	5	-
Q 1b ii Does your university accept young, gifted students who have completed the relevant final secondary qualifications?	11	-	-
Case-by-case admission			
Q 2a Does your university have formal provision/policy for admission of young, gifted students?	2	8	1
Q 2d When your university does accept such students, would there be a screening process?	10	-	1
Advertising			
Q 4a Does your university actively seek to attract young, gifted students?	3	8	

Section 1: Early Admission

Q 1a Has your university ever considered having an early admission program?

Two universities reported having a formal early admissions program, and a third university allowed for early admission through its extension program. Of the eight universities with a negative response, such a program had not been considered, either as needed or feasible.

Q 1b Does your university accept young gifted students who

(i) have not completed the relevant final secondary qualifications?

Six universities accepted, for undergraduate study, young students who had not completed secondary school requirements. Two of the six accepted such students for single subjects only; five did not accept students who had not completed final schooling qualifications. Overall, the responses implied that early admission, without completion of secondary qualifications, was a very unusual situation, but, if requested, may have elicited case-by-case consideration.

(ii) have completed final secondary qualifications?

All 11 universities were prepared to accept young students, provided they had completed the final secondary qualifications. If the entry requirements were met, age was not a significant factor. However, there were difficulties with industry placement and practicum for minors from the point of view of the sponsoring company.

Section 2: Case-by-Case Admission

Q 2a Does your university have formal provision/policy for admission of young, gifted students?

For case-by-case admission, two universities had formal provision in their policy; eight had no formal provision; of the eight, five stated that there were mechanisms in place; one did not respond to this question. While few universities had formal, early admission policies, there were, instead, early admission processes available, and mechanisms in place to accept case-by-case admissions of young students.

One official explained that …"our University sets an age limit of 16 for admission, but the limit is not absolute: faculties have discretion to offer below that limit in exceptional cases".

Q 2b If there is no formal policy, under what category might they be admitted?

Nine reported some special category – exceptional circumstances – which could be used for admittance, one admitted there was no special category, and one did not respond. The categories varied in name but ultimately the case-by-case admission relied on discretion.

Q 2c If there is no formal policy, what would prompt the university to accept young, gifted students on a case-by-case basis?

When asked why a university would consider a case-by-case enrolment, seven universities commented on why the student would be accepted; four did not respond. Reasons for accepting gifted students on a case-by-case basis reflected a recognition of the traits of an excellent or exceptional student, an acceptance that

a request to place a gifted student was worth consideration, and an understanding that such students are of benefit to the university.

Q 2d When your university does accept such students, would there be a screening process?

Ten stated that there would, or probably would, be a screening test, while one did not respond to this question. While the question required simply a yes/no answer, three responses elaborated on the need for a screening test to check for appropriate academic background and social suitability. Two of those responses included the onus on the university in making a decision about entry.

Q 2e Could you tell me something about the screening process?

The same 10 universities were prepared to describe elements of the screening test. Again the one university did not respond to this question.

The screening processes varied from an administrative check of academic requirements, applied to all undergraduates, to a complex set of requirements, including two 2-hour panel interviews. Satisfying academic requirements was integral to the screening process for all universities. Nine of the officials listed interviews or discussions with relevant parties as an essential element of the process. Other affective issues were listed as important in assessing the social aspects of the student such as maturity and coping skills. Part of this reflected the awareness of the responsibility of the university in its duty of care in placing a young student.

Q 2f At what level – Faculty or School – would the decision be made to accept a case-by-case student?

Ten responses indicated that the level at which the final decision to accept the student varied. Five suggested it was a collaborative decision, involving several people such as the Pro Vice-Chancellor, the Deputy Vice-Chancellor, and the Dean. Five responses suggested that it was made solely at one level – Faculty, School and Admissions Office. The responsibility for the decision to accept young students ranged from the discretion of the faculty, Dean, Registrar, Head of School, and the Director of Admissions. Discretion for admitting students seems to be a possible loophole for early admission. One officer did not respond to the question.

Q 2g Would there be someone at the university, familiar with gifted education, who would advise the Dean or Academic Registrar about accepting the case-by-case student?

Four responses indicated that advice from someone familiar with gifted students would be sought; five responded that advice would be sought from other sources, as a collaborative decision, such as Special Education or the Chair of University Selection and Enrolment Committee, and two did not respond to the question. One official admitted that there was no-one at his university who trained in gifted education but that there would be consultation. Another suggested that it would vary with the discipline involved. Additional advice from someone trained in gifted education was not often sought, even if available.

Section 3: Student Support

Q 3a Would your university consider giving formal, follow-up support to young, gifted students?

For formal student support, three universities offered specific support, and seven universities stated that the student would be offered the same formal support as any other undergraduate. One did not respond. In most universities academic results were formally checked, and progress monitored. Counselling was available for all students, and in some mentoring was in place. Specific formal support to the young was allied to specialised programs offered, and indicated a recognition of the need for support.

Q 3b If there is no formal support, would there be informal monitoring of the progress of young, gifted students?

Informal support was offered by seven universities, and three said the student would have the same informal support as any other undergraduate. One did not respond. Most universities relied on faculty staff awareness, and one on student support staff. In general, formal, and informal support, for the student was offered, but possibly not much beyond what was accessible to any undergraduate. Mentoring, counselling and incidental guidance was possible, especially where staff were aware of the presence of a young student.

Section 4: Advertising

Q 4a Does your university actively seek to attract young, gifted students?

Three universities actively advertised for gifted students; eight did not. Deliberate recruitment of gifted students was concomitant with two universities

that reported specific, formal programs. The third university which advertised its extension program, distributed brochures, and offered campus tours, course advice sessions, “experience day”, enrichment days, and regular laboratory-based activities in the Science and Engineering faculties. Other universities, without formal early admission programs, used traditional recruitment strategies, such as scholarships, to attract the gifted, but not necessarily the very young.

Q 4b If so, how does it attract them?

In answer to the question of how a university attracted gifted students, one university said it relied on its reputation, and on referrals from feeder schools. Five had special programs to attract gifted students and one relied on traditional scholarships, which were not necessarily targeted at the young. Four did not respond to the question.

Q 4c For what reasons would a university be reluctant to advertise that they accept gifted students?

Six universities provided comments on why universities would have a reluctance to advertise; one declined to speculate; four did not respond to the question. Reluctance to advertise was explained by fear of the negative consequences. Ignorance of gifted issues, short sightedness and prejudice were also cited as explanations for reluctance to advertise. One official explained: “Most parents feel their child is gifted. Universities would not like to bypass the secondary schooling system”; thus, trust in the school system to identify gifted students was a reason for not advertising.

Q 4d For what reasons would a university be reluctant to advertise its dual enrolment program?

Two universities reported that they did advertise their dual enrolment programs. One commented that it was about to open an extension program but that such a program was expensive for no significant return. One implied that no advertising was the result of a failure to make the link between student needs and ultimate prestige, and success, for the university. Seven did not respond to the question, for it was not always a relevant question, if the university did not offer a dual enrolment program.

Section 5: National Coordination

Q 5a Could you suggest reasons why national coordination has not been achieved yet?

The questions on national coordination were optional. Because the non-responses were frequent, universities which had not responded to those questions were given a second opportunity to respond. Ten universities made some comment on reasons why national coordination had not been sought or achieved.

The responses to the question of national coordination indicated a perceived degree of difficulty and many factors were advanced as impediments to it.

One official responded thus:

> This is a question which transcends the area of gifted education provision. It encompasses the entire special education needs area as well across Australia, as the 2002 Senate Report on Students with Disabilities concluded. It encompasses also wider curriculum provision, and there is a need for greater co-ordination across Australian education systems to be flexible and responsive to an increasingly mobile Australian population. Gifted education provision across Australia, and early

> University entry as part of this, are just part of this wider picture. (Personal communication, August 1, 2008)

Some reported on the other topics which took precedence over developing policy on flexible university entry and study options for gifted students.

Q 5b How might the idea of a National Centre effect change?

Six universities offered a comment on how a national centre for research into gifted education might effect change; five chose not to respond to the question.

The concept of a national centre for research on gifted education attracted some positive responses. One commented a National Centre needed to be independent of any one university. He added:

> There is a need for such a national research centre for research into gifted education, in much the same way as the Australian Institute of Sport was seen as a timely initiative to address the decline in Australia's elite sporting achievements in the early 1980s. At the present time, we are in a similar place with respect to the entire spectrum of gifted education, pre-school to university level.
>
> 'Harvesting' national talents in an internationally competitive world is something that in Australia needs to be given much more attention ...and much more money. A national Centre for gifted education would be a very apt organisational structure to assist in facilitating this. (Personal communication, August 1, 2008)

It was suggested that there was a need to pressure the federal government, to develop public demand and to see gifted education as an economic reality, if a national centre were to effect change.

Thematic Analysis – Patterns of Response

The data (11 interviews) was formatted and stored in the NVivo 8 program, and the coding function of the program was used to collect thematic

references from all of the interview responses, both across the various topics and within particular responses. An NVivo 8 node is a container to hold the references for each separate theme. Each node was labelled with the theme name; for example, *Duty of Care.* Eight nodes were labelled for the eight themes, identified by the researcher. The researcher then scanned through the data to collect – or code - references from each of the 11 sources (interviews), relevant to each particular theme. Each node stored the selected references relating to its theme. Thus, by coding the references, thematic data were grouped together at each of the 8 relevant nodes.

The coding is interpretative, for the nodes merely record the researcher's interpretation of the selected data. During the coding process NVivo 8 automatically recorded the number of sources (interviews) used and the number of references made to each theme. Sometimes there were multiple references made about a theme within the one interview. The researcher was then able to view and review all of the data coded at a node, and examine the themes, noting the trends and patterns in the Australian context. They are listed in Table 6.2.

Table 6. 2

Patterns of Thematic Response

Theme	Sources	References
1. Valuing giftedness	9	14
• Admission and promotion of gifted students	4	8
• Recognition of academic profile		
2. Social maturity issues	3	16
3. Attitude to student support	10	19
4. Undervaluing giftedness		
• Admission ad hoc	5	4
• Unacknowledged gifted issues	8	17
5. Duty of care impediment	6	9
6. Priority of equity issues	5	5
7. Lack of economic feasibility	4	4
8. Recognition of talent waste		
• National resource undeveloped	8	11
• National coordination complex	9	10

Eight main themes emerged from the coding procedure. The following discussion analyses these themes.

1. Valuing Giftedness

Underlying much of the overall discussion, as subtext, was the concept of giftedness. Within the comments in the interviews, there was a positive acknowledgement of gifted learners from officials, on an individual basis. On the

other hand, the concept of gifted learners, at the more general policy level, was not fully recognised, not taken into account, and thus not addressed in terms of early admission.

Admission and promotion of gifted students.

The starting point – that 11 universities were willing to discuss early admission – indicated a recognition that young, gifted students exist, and that the universities were prepared to consider a case-by-case admission. This showed an understanding that such students might not be covered by general admission procedures, and a willingness to consider the needs of high-achieving students. Some of the comments implied that the universities valued having gifted students and were prepared to promote gifted admissions. One (U8) noted the value of reciprocity of having gifted students, when he commented: *good for the student, good for the university.* Five universities (U2, U3, U7, U8, U11) actively promoted their gifted programs or sought gifted students through advertising, and advanced degree courses to attract gifted students. One explained the promotion thus:

> Our University Extension Program (UEP) is promoted in schools by distribution of a glossy brochure. We also offer general and specialised campus tours for young gifted students. We offer course advice sessions and interviews for students, families and teachers. As prospective student advisors, we visit schools with academic staff and student ambassadors. We run specialised "experience day" programs, open days, enrichment days, and regular laboratory based activities in our Science and Engineering Faculty. We also offer online "Chat" sessions though MSN Messenger. (Personal communication, 29 August, 2008)

Two officials (U1, U7) stated that they wanted to attract the most able students and relied on the traditional scholarships. However, the scholarship related to normal-aged undergraduate entry, rather than early admission. Another

university (U2) offered an advanced leadership degree to gifted students of regular, undergraduate age, but not to young, gifted students.

Recognition of academic profile.

There was an individual understanding of the academic profile of the gifted student by some officials. One university (U3) stated that it wanted to help those students who have “passionate interest”. Academic excellence was recognised by the comment that gifted students have “exceptional results in secondary study” (U5). As well, another university (U11) recognised that high-achieving students were able to “enrich their educational development” through dual enrolment; they were able to handle part-time university study, prior to completing high school qualifications. One interviewee observed that early admission met the needs of a young gifted student for it was “good for the student”. The officials from the two universities which had developed early admission programs, (U3, U8) expressed their belief in the academic abilities of gifted students by endorsing and promoting their programs.

2. Social Maturity Issues

There was a real concern about the issues of social maturity, of social readiness to cope, and the need to screen for social maturity. There was recognition that the social maturity was pertinent to the success of a student with academic excellence, especially where young students were mixing with older students. One official (U10) expressed a concern that young students were “not socially ready for tertiary study”. By contrast, another official (U6) commented that “some students blend in well”. However, he observed that social adjustment was sometimes difficult.

> Often high intelligence goes hand in hand with maturity and good coping skills. But having made that comment, we do have some students who are admitted at 16 or 17 because of earlier accelerated progress in the school system. Some of these find social adjustment a bit of a challenge, particularly if they are living on campus where their peers at university often socialize in circumstances involving alcohol and they cannot and feel excluded. We have had some instances where we have had to intervene out of duty of care to deal with underage drinking. (Personal communication, 10 March, 2008)

Maturity was an integral focus of the screening process for 5 universities. One university official (U5) stated that it sought "evidence of maturity (eg through leadership activities at school, volunteering, international experience)". Another (U6) relied on the screening process:

> Screening process, yes, to see if the student is appropriate and will fit in to the tertiary scene. Biggest issue is to see where the student resides. Can he commute? Does he have to become residential? The university has a duty of care and when young students mix with older ones there are often under age social issues.

The official added:

> Academic record often very good. Refer to school reports. Put weight on the interview to see if the student is ready to cope. (Personal communication, 10 March, 2008)

A third official (U11) considered that a screening process would be made to "ensure that we made a decision in his best interests". Another (U3) assessed appropriate maturity and social skills thus:

> The students have to have appropriate qualifications, write a letter outlining their interests (motivation). Support from a school principal. A school mentor. Parents are communicated with through the school mentor but not interviewed. (Personal communication, 8 April, 2008)

The University of NSW used a two 2-hour interview process including a student application to assess personal and social readiness and motivation. In its

information sheet for early admission placement of exceptionally talented students, Section 4, it advises the potential student of the need for maturity:

> A modern Australian university is a large and impersonal place, and merely getting to and from classes is no easy task. Students will require some maturity to deal with older young adults and to put themselves forward with requests for help and advice from university staff on academic, personal and practical matters. University students have a great deal more autonomy and independence than do students in the secondary school system. Early Admission students will need the maturity to sustain a constant stream of completed assignments and independent work throughout a two-semester program each year. Study at university is a demanding task and students will be heavily dependent upon family and friends for support. ((University of New South Wales, 2007)

3. Attitude to Student Support

While all universities (n=11) responded to the specific question, concerning both formal and informal support offered to students, the attitude underlying the responses was that the support offered was sufficient, and possibly adhered to the myth that bright students can look after themselves. Formal support systems existed for all students and gifted, young students were treated in the same way as any undergraduate. At the informal level, support was offered through the staff who interacted with the students, and some staff were specifically made aware of the young students. One university (U3) had a mentor in each faculty. Another (U2) conceded that “such young kids would need specialised support in the social, emotional context” and that “a coordinator would be needed”. Another (U9) noted that “staff in Student Support would be made aware of the gifted student”. One university (U11) was an exception, for the official described a personal supervision role which he adopted to monitor the wellbeing of the student.

> I maintained contact with the student, monitoring her progress. She did not experience trouble and as I reported above, she achieved very good grades. If she had experienced problems, I would have involved her

> lecturer/tutor, her school mentor, her parents and/or relevant people. (Personal communication, 29 August, 2008)

4. Undervaluing Giftedness

Admission ad hoc.

All universities were prepared to accept students younger than 17 years, provided the entry requirements were satisfied; however, this did not show an overt acceptance or understanding of gifted students. It simply indicated that the university was prepared to accept students who had been accelerated, as they had completed the necessary qualifications, and achieved the necessary mark for entry to the university. Two universities (U3, U8) had secured a sound entry point for early admission of young, gifted students and thereby have acknowledged the issues of gifted students, that is, of their advanced learning capacity. The fact that other universities were prepared to accept case-by-case admissions, without formal policy or program, suggested that the concept of gifted students had not been fully addressed, or formally examined. Admission points were ad hoc, for there were no special categories nominated, but mechanisms for case-by-case admission procedures existed, sometimes through a dual enrolment program, sometimes by portfolio, sometimes by special admission outside of normal admissions. One official (U2) explained:

> No formal policy, but in a broad context, we would consider case-by-case admission. The university now has a framework in place called “Initiative for Better Relationship with Schools”. This provides HSC enrichment, does uni courses in schools, has contact with 700 schools in the area. It would be this framework which would be used to cover the admission of case-by-case admissions. (Personal communication, 31 March, 2008)

Approval for admissions relied on approval from a variety of sources - the Dean, the Head of School or the Admissions Officer. This suggested that the notion of accepting a gifted learner was not a formulated, considered process; rather it was a one-off situation that depended on the understanding of the decision-maker – the Dean or similar – who may, or may not have knowledge, even expert knowledge, of gifted learners.

Unacknowledged gifted issues.

Collaboration with gifted experts about an early admission was neither mandatory nor a priority. This suggested that there was no formal consideration of the gifted student. One official (U6) said his university did not have staff with gifted expertise, but that consultation with other caring staff sufficed. Another (U11) claimed he would have sought advice from the Director of Academic and Student Services, and possibly sought advice from their gifted expert. Another (U9) said they would not by-pass the advice of the local secondary schooling system. Another official, who was trained in gifted education, admitted that he had never been consulted about any admission in 4 years. By contrast, the one university (U8) with a well established early admission program, had a gifted educator on the selection panel.

Two university officials referred to the myth that all children are gifted. One (U9) cited the argument that “most parents feel their child is gifted” as a deterrent to advertise for gifted students and one (U8) referred to “my child is gifted” syndrome to explain the general abhorrence of promoting gifted education and early admission. Another university (U6) did not employ a trained gifted expert but relied on a staff member, trained in Special Education, and on

compassionate staff, to respond appropriately to any problems which arose when they enrolled young, gifted students.

The general concern about the social maturity of gifted learners suggested a lack of knowledge, or a lack of awareness of the research about gifted students. The stereotype image of the clever student being intellectually out of synch with his age-peers, and socially out of synch with other older students prevailed, despite a wealth of research (N. Robinson, 2004) indicating that gifted students preferred to mix with older students who were their intellectual peers.

Allied with the idea that giftedness was not valued, an apparent reluctance to deliberately attract young students was evident in some of the responses. While universities offered the traditional scholarships to attract bright students at the usual intake year, and later, few sought to attract early admissions. One university (U6) did not seek overt advertising for fear of a “logistical nightmare”; it preferred to rely on reputation, word of mouth and or personal request (referrals). One official (U8) suggested the reluctance to advertise for young students was short sighted, and based on fear of the “floodgates opening’, associated with the parental syndrome “My child is gifted”.

5. Duty of Care Impediment

The interviews were focused on the process of making decisions about the admission of students, younger than usual: it was, therefore, not unexpected that administrators and officials raised the issue of duty of care in relation to minors. One official (U5) said there were “additional duty of care obligations” associated with minors. He did not elaborate. Another (U7) used the phrase “very wary because of Child Protection and Duty of Care”. He admitted that his university was very conservative in its attitudes and that duty of care issues were a concern,

and presented conflict between the issues and policies. There was no elaboration of the conflict mentioned. When asked whether advice from a gifted expert was sought concerning a possible student admission, he stated that the duty of care was more of an overriding issue than the suitability of the student.

In admitting a minor, one university official (U6) was aware that he had to keep in mind the best interests of the minor and consider that he would be mixing with older students; thus "under age social issues" were a concern – presumably, such issues were social activities, drinking, driving or use of the internet. That same official emphasised that the screening process, on admission, was a significant issue, in order to ascertain that the student was appropriate to fit into the tertiary scene. Two officials commented that place of residence was important, because if the student was living at home, then some concern with duty of care would be mitigated. It was best if the student was non-residential. Another university (U11) commented on the different levels of care:

> We do, however, point out that while we provide many support services and normal duty of care applies, we do not take on the same level of responsibilities of care that schools assume under the Teachers' Registration and Standards Act and other legislation. (Personal communication, 29 Aug, 2008)

By contrast, one official, (U8) who was a key figure in introducing a policy and program of early admission to her university, suggested that duty of care was often presented as an excuse, an impediment, for not admitting minors.

6. Priority of Equity Issues

Issues of equity were raised at various stages of the interviews by the officials. Equity concerned people from marginal groups such as low socio-economic status, prisoners, victims of abuse, indigenous population, and other

special admissions. It did not include the gifted students. For some universities equity and diversity was a high priority, especially in connection with the indigenous population, Technical and Further Education (TAFE) admissions, and Special Admissions. Consequently issues of the gifted population were not a high priority.

7. Lack of Economic Feasibility

Economic issues were mentioned in four interviews. One university (U9) stated that the extremely low numbers of gifted students did not warrant a specific scheme. Another (U4) suggested that it was wiser to put money into the whole of education, and not just into the gifted area. Another official (U5) admitted that gifted education would not be rated highly on the agenda of Universities Australia:

> Paradoxically,.... this issue [may not be] high on the agenda of the Vice Chancellors Committee [now Universities Australia], whose main focus in the past 12 years (under the Howard Government) has been managing diminishing financial input from the Commonwealth, and rapid growth of international education to the extent that Australia now has, on OECD comparisons, a proportion of 19:1 ratio of international students in Australia to Australian students studying internationally, ... to the extent that international education has become one of our most productive export industries. (Personal communication, 19 March, 2008)

In general, university resources were limited, and universities ignored the long term value of developing this small sector of the population. In fact, one official (U3) cited an example of a gifted student being penalised; she was ineligible for a scholarship because she had studied one tertiary subject while at school and thus was no longer designated be a school leaver.

8. Recognition of Talent Waste.

National resource undeveloped.

The fact that so few schemes have been set up within Australian universities to maximise the development of talented students suggested that the universities were not fostering or nurturing a natural resource, the talent of gifted students, as early as possible. The universities seemed content with their status quo, had not introduced formal early admission programs, and were not concerned about it as a long term investment for Australia. It must be remembered, however, that the universities contacted were prepared to consider early admission on a case-by-case basis. One official (U5) deplored the current situation where universities fostered international education as an export, instead of fostering Australian talent:

> However this state of affairs is undesirable in terms of nurturing Australia's natural highest intellectual, creative, scientific and artistic talent. Governments and universities in my view should be encouraging via scholarships and well-funded exchanges, our brightest young people to incorporate into their studies time studying at universities around the world. Other countries are doing this in their long term interests. More flexible entry arrangements between school systems and universities for very able learners would be a foundation for these sorts of developments to flourish.

He continued:

> Harvesting national talents in an internationally competitive world is something that in Australia needs to be given so much more attention. (Personal communication, August, 2008).

National coordination complex.

Another link to the talent waste was the complexity of the Australian educational setting which did not facilitate coordination across the states, and thus

there was a lack of support for nurturing talent nationally. There were difficulties and problems across the states for transfers, awards, advanced standing, entry differences, curriculum content, values, funding, costs, differences in values, and differences in capacities of universities. Despite such obstacles, perhaps a negative attitude was an ingrained one: one official (U11) commented that the universities were “notorious for resisting national coordination”.

One official (U8) considered that underlying the resistance to focus on gifted students was the notion of egalitarianism – that it was fairer not to identify- and then to have to foster – gifted students. She also considered the lack of national coordination a failure on the part of national governments – both Liberal and Labor - to fully address educational matters. By contrast, there was a sense of approval (n = 5) for the development of a national research centre to focus on, among other things, gifted education. One official (U11) thought it would impact on universities; another (U5) commented that it would be an ideal way to foster national talent. Another (U3) thought that raising the platform of research was a good starting point for national coordination and recommended lobbying the federal government. Another (U7) considered that research was important, but because our education system addressed mass education, gifted education was but a small sector of that mass. Public demand and economic reality were considered to be the driving forces for overcoming the waste of the national resource by another official (U8). Another commented: “It would be a good idea to consider the young, gifted students and to develop a consistent policy”. (Personal communication, April, 2008)

Summary of Phase 2

The second phase surveyed 11 universities, including UNSW, which reported accepting students for early admission on a case-by-case basis. The survey aimed to discover the universities' attitude to early admission, and to admission of accelerated students, as determined by their programs, procedures, student support, advertising and recruitment, and attitude towards national coordination of such students. This phase was designed to specifically answer Research Question 2.

Q 2. What is the attitude of Australian universities to early admission, and to the admission of accelerated students in general?

All universities in the sample were prepared to accept young students, provided they had completed the final secondary qualifications. The universities were prepared to accept young students for single subject study – dual enrolment – but it was most unusual to accept early admission, full-time undergraduate students who had not completed the final secondary qualification.

One university had a formal, early admission scheme, and two reported specific processes. Eight universities had informal early admission processes available, and mechanisms were in place to accept case-by-case admissions. The responsibility for the decision to accept young students was usually at the discretion of the Faculty, Dean, Head of School, or the Director of Admissions.

In general, neither formal, nor informal support, for the younger student was offered, beyond what was accessible to any undergraduate. Deliberate recruitment of gifted students was concomitant with the universities which reported specific processes in place. Reluctance to advertise was explained by fear of the consequences.

National coordination was perceived as involving a degree of difficulty, especially given that the systems of secondary schooling varied from state to state. There was also difficulty in developing national policy across the states and territories. Provisions for gifted education were seen as just a small section of the wider picture of education. A national centre for research on gifted education was seen as an ideal, a place to begin national coordination, and to develop a consistent national policy

From the qualitative analysis of the 11 case files, including UNSW, eight themes emerged that generally reflected an ambivalent attitude to gifted students. On one hand, there was a positive attitude which valued gifted students – recognition, understanding, willingness for inclusion - but on the other hand, there was a lack of substance to support that attitude – lack of processes, difficulties and concerns outlined. The eight themes were as follows: valuing giftedness in general but not a specific university student's level of ability; concerns about social immaturity issues; belief that a unique student support system might be needed; undervaluing giftedness in terms of lack of advertising; legal concerns about underage students and reckless behaviour; considering priority of equity issues; lack of economic feasibility of accommodating gifted students; and lack of recognition of talent waste.

Overall, the university officials interviewed showed an interest in, and understanding of, gifted students. However, in general, there were few formal processes put in place to substantiate that interest, and there were many issues of concern which offset that. Appendix E has sections from four university handbooks addressing issues relevant to the admission of young students.

The next chapter presents the methodology of Phase 3 which involved interviewing 12 accelerated Australian students, across four universities, to report on their experiences of admission to university in Australia.

Chapter 7: Methodology of Phase 3

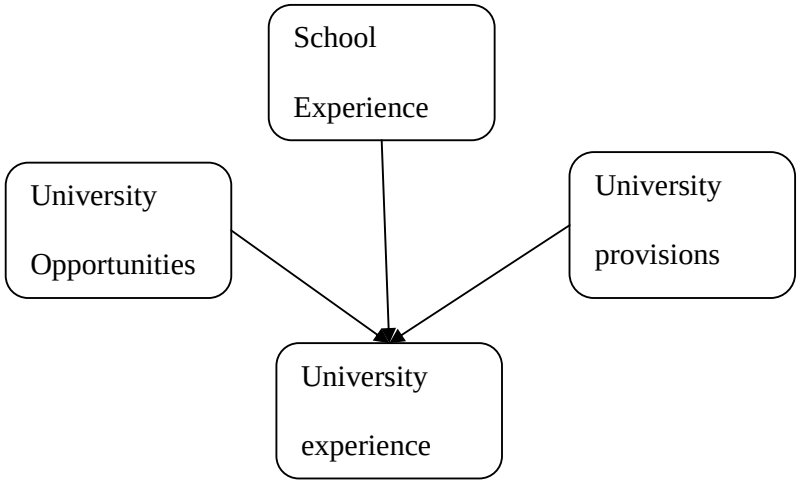
This chapter discusses the methodology of Phase 3, in which students who had experienced early admission to university, were interviewed. It describes the sampling strategy, the development of instrumentation, and the details of procedures used to collect data for subsequent analysis.

Methodology

The design for the methodology used in Phase 3 followed the descriptive case study protocol suggested, in particular, by Yin (2009). The research design of the descriptive, multiple-case studies was an exploratory one where the logical sequence was guided by the issues which arose from the US literature, which, in turn, also directed the research questions: " What issues, perceived by the students, facilitated their positive adjustment to university. What hurdles did they identify?"

The theoretical framework was based on issues stemming from the earlier research, and from the literature review, and directed the exploration of the students' experience of adjustment. Connections (see Figure 7.1) between the experience of school acceleration, university opportunities, and university provisions may have affected their experience of university, and hence their adjustment to university.

Figure 7. 1 Theoretical Framework



As the study is an exploratory one, there were no propositions; the lack of propositions is, according to Yin, “a legitimate reason” (Yin, 2009, p. 28) when using the exploratory framework, or a descriptive theory. The design linked the empirical data to the research questions and ultimately to its conclusions. The purpose of the study in Phase 3 was to look at empirical data, using multiple-case design, based on interviews from the 12 students who were accelerated in primary and/or secondary school, to explore their tertiary experience of adjustment. The criteria for judging the results of that exploration lay in the descriptions

themselves, and in the similarities of the multiple descriptions, where the analysis established patterns, or themes, in a cross-case synthesis.

According to Yin (2009), the criteria for judging the research design usually revolved around four tests: construct validity, internal validity, external validity, and reliability. In order to establish construct validity, multiple sources of evidence – 12 student interviews in Phase 3 – were used. Internal validity was not applicable to descriptive or exploratory studies and therefore, was not applicable to Phase 3. External validity concerned whether the study's findings could be generalised beyond the immediate case studies, and depended on replication logic in multiple-case studies. To satisfy external validity, the same approach and interview questions were used for each case, for each student. According to Evans and Gruba (2002), the case study approach is an appropriate way to develop, with reservation, some generalizations. Reliability concerned whether the data collection, with the same case, could be repeated with the same results. Every attempt to document the procedures was made so that an external auditor could repeat the same procedures.

To collect the empirical data, interviews were the essential source of evidence, as in Phase 2, and were analysed by comparing responses and eliciting themes, a relevant technique for descriptive case studies. As Cresswell (2007) suggested, the case studies were described in detail, themes were examined and a cross-case analysis followed. The themes were then aligned with the published literature; both similarities and differences were noted, and the conclusions were linked logically to the research questions.

The aim of Phase 3 was to consult the students themselves about their experiences with early admission. According to Seidman (1998) the in-depth

interview is about “an interest in understanding the experiences of other people and the meaning they make of that experience” (p.3). Through interviewing, it was possible to explore their past history of acceleration, the procedure of entering university under 17 years of age, their academic, social and emotional adjustment to university, their academic future, and their subsequent reflections on their experiences. It was imperative to listen to the voices of the students in order to understand their experience of early admission, as well as their views about their adjustment to university.

An interview schedule was developed, and personal interviews were conducted. Ethics approval had been given by the University of NSW Arts, Humanities & Law Human Research Ethics Advisory Panel, as recorded in Appendix H. Where possible, the interviews were conducted in a face-to face situation; however, when face-to-face interviews were not possible, either a phone interview or an emailed response was substituted. Four interviews were conducted in the students’ homes; one was an emailed response; one was a phone interview; six were conducted at the University of NSW.

Participants

In order to find appropriate participants, five paths were followed. Initially the researcher sought possible contacts from her own knowledge of students who had been accelerated in primary and secondary school. Four such participants were contacted directly by phone or email and invited to participate in the research. Secondly, two participants were traced through the public domain of a university website and were invited by email to participate in the research. Thirdly, one student, who had been mentioned anonymously in correspondence with a university official in Phase 2, was asked by that official if s/he was willing

to participate in the research, and the participant voluntarily contacted the researcher. The fourth path was the result of the snowballing technique, whereby a participant suggested another suitable candidate, and contacted that candidate; the latter, in turn, voluntarily contacted the researcher, and offered to participate. This path led to 2 participants. The final path was word of mouth, whereby colleagues, after having suggested possible participants, were sent a general email outlining the research request, as shown in Appendix I. The prospective candidates were informed of the research and were then given the email address of the researcher. Subsequently, 3 such subjects voluntarily contacted the researcher and offered to participate in the research. In all, 12 participants were interviewed.

All participants had been accelerated in primary school, some had experienced further year acceleration in secondary school, and some had experienced subject acceleration in secondary school. All were relatively younger than their cohort, and their age range was 12 -17 years on entering university.

Instrument: Interview Schedule

The questions were developed to explore the students' past experiences of acceleration, their decisions about and process of early admission, their university adjustment, their academic plans for the future, and their reflections on their experiences. As Patton (2002) explained:

> The purpose of interviewing, then, is to allow us to enter into the other person's perspective. Qualitative interviewing begins with the assumption that the perspective of others is meaningful, knowable, and able to be made explicit. We interview to find out what is in and on, someone else's mind, to gather their stories. (p.341)

The interview schedule was prepared and used standardised open-ended questions for four reasons. Firstly, because of the preparation, the interview

questions were focused, and the participant had early access to the prepared questions. Secondly, it assisted in minimising the length of the interview. Thirdly, it gave consistency to all of the participants. Fourthly, it facilitated in making comparisons of responses. However, according to Patton (2002), the standardised approach had serious limitations in that it is difficult to explore unanticipated topics or issues during the interview, and differences between the experiences of the interviewees cannot be investigated.

By contrast, the informal conversational interview had distinct benefits for examining the personal journeys of students, for it allowed the flow of questions, and pursuit of other topics, generated spontaneously from the conversation. Thus, the researcher combined the standardised open-ended questions interview with the informal conversational interview. In response to the standard questions, the student comments often invited probes and follow-up questions, thus eliciting enriched responses in the style of an informal conversation.

The interview schedule was reviewed by a senior academic staff member with expertise on gifted education from the School of Education (UNSW) in terms of clarity, focus, scope and appropriateness, as suggested by Walker (1985). Clarity centred on whether the participant would understand what was being asked; focus established whether the question would gather data to answer the study questions; scope concerned whether or not the data collected would be sufficient to fully address the research questions; appropriateness looked at whether the questions were ones that the subjects were capable of answering. Advice was also offered on the sequencing of questions, in order to make the participant feel at ease, and to create trust. According to Patton (2002) the initial questions should encourage the participant to talk descriptively; hence, the first

section asked about the past experiences with acceleration. Opinions and values could then be sought, once the experience had been revisited. Much of sections two, three and four of the interview schedule related to opinions and values, where the questions referred to the decision, the entry and the experience of adjustment to university. According to Patton (2002) questions about the future involved "considerable speculation" and are therefore less reliable than questions about the past or present, and he therefore suggested that these should only be broached later, when rapport had been established. Section 5 of the schedule asked about the students' plans for the future, and Section 6 about their reflections on early admission. In order to address participant fatigue, it was planned that the student be given the option of answering Section 6, in writing, at a later time, and it could be emailed to the researcher, at the convenience of the student.

The interview was planned to take 40 minutes, a time span recommended by Seidman (1998) to avoid participant fatigue. This time span excluded answering Section 6 "Reflections on your early admission experiences".

The Questions

The questions emerged from a review of mainly U.S. research on early entrance to university (Benbow & Arjmand, 1990; Brody, Assouline, & Stanley, 1990; Lubinski, Webb, Morelock, & Benbow, 2001; Muratori, 2003; Noble & Drummond, 1992; Rogers, 1991; Sayler, 1994; Sethna, Wickstrom, Boothe, & Stanley, 2001; Swiatek, 1993). The preliminary strategy was to ask the students about their past, the present and the future. The approach became more specifically tied to particular concepts: (1) past experiences with acceleration; (2) making the early admission decision; (3) process of early admission; (4)

university adjustment; (5) your future; and (6) reflections on your early admission experiences.

Each topic was investigated through several questions; however, as particular interviews proceeded, more spontaneous questions and probes were used to clarify, or to tease out more detail.

Past Experiences with Acceleration

Early admission students had to have experienced some form of acceleration during their schooling, and it was important to seek information about that acceleration, especially how the student viewed and valued the acceleration. The area of social and emotional adjustment during their schooling may have been a key issue in their adjustment at the tertiary level. The catalysts in promoting and/or supporting the acceleration may have affected their attitude to their tertiary experiences.

The personal narratives of 11 students who had experienced early entrance in the United States (Olszewski-Kubilius, 1998) revealed how their experiences at high school coloured their attitude to early admission: teachers' attitudes to acceleration, parental attitude, social niche among age-peers, catalysts, mentors. The questions were as follows:

Past Experiences with Acceleration

What kinds of acceleration (give examples) did you experience in school before you went to university?

How willing were your schools to do this for you?

How hard did your parents have to push for the acceleration to happen?

What was your route to entering university earlier than the usual age? Dual enrolment? Matriculation without completing your secondary qualifications?

How were you able to find your social niche while growing up?

Who or what were the catalysts that moved you forward before you went to university? Mentor? Sibling? Family? Peer? Teacher?

Making the Early Admission Decision

The second topic was about making the early admission decision. If the student undertook the early admission without having completed the final school qualifications, it was important to find out who made the decision, why the decision was made, and who supported that decision. If the students had completed the final secondary qualifications, it was of interest to know about their attitude to an early entrance to university. In both scenarios, it added to the social and emotional profile of the student to know if there were any regrets about early admission. The questions were as follows:

Making the Early Admission Decision

How did you find out about early admission possibilities?

What motivated you to try for it?

What concerns did you have about making such a decision?

Any regrets about leaving high school early?

Who was most supportive in the decision making process about where to go, to actually do it, and the courses to enrol in?

Process of Early Admission

The third topic sought information about the actual university process of early admission. It was designed to consider the admission process from the student's point of entry, and to know what information the university required the student to supply and what difficulties, if any, the young student experienced in

being admitted to an undergraduate program. Much American research has been done to show a predictive link between student academic skills on entering university and later success at university, and the value of screening young entrants to ensure later success (Brody et al., 1990; Lubinski et al., 2001; Schumacker et al., 1995). The following questions were designed to see if any of the Australian universities had expressed a concern to the student and family about the age of the undergraduate, and if the young students were then required by any Australian universities to produce particular information. Choice of degree was a point of interest, as it has been observed that acceleration has been predominant in Science and Mathematics. The questions were as follows:

3. Process of Early Admission

How old were you exactly when you started university? And how old are you now?

What kind of information were you asked to supply in order to be accepted early?

Was your process fairly routine in terms of university policy or were there difficulties you encountered and had to overcome? Explain.

What degree(s) are you taking/did you take?

University Adjustment

The fourth topic involved questions relating to personal opinions and values, in examining the social and emotional adjustment to university experiences. Since the students were comparatively young, it was significant to try to see any connection between issues of academic adjustment, and social and emotional adjustment. This may be the area of greatest concern to the general public which, sceptical of the value of acceleration, accepted that gifted students

capably addressed academic challenges, but queried whether it might be at the expense of age-appropriate social and emotional development.

Research has shown that the social adjustment of early admission students is, at the very least, positive and that no harm has been done (Cornell, Callahan, Bassin, & Ramsay, 1991; Richardson & Benbow, 1990; Rogers, 1991). Holahan and Brounstein (1986) noted that any adjustment difficulties were overcome by the end of the students' training and that support services may have assisted them. Noble, Robinson and Gunderson (1993) concluded that early entrance may have benefited young female students by allowing them to escape an untenable social milieu at school. It would be valuable to know if the Australian students had experienced similar social adjustment.

To explore with the Australian participants the issue of friendship with intellectual peers was an important factor in considering the value of early admission. For gifted students, friendships and contact with intellectual peers were crucial for motivation and well-being, whereas social isolation, frustration and boredom can result from mixing with age-peers (Gross, 1994, 1999; Janos, Robinson, & Lunneborg, 1989; Muratori, Colangelo, & Assouline, 2003; Noble, Arndt, Nicholson, Sletten, & Zamora, 1998).

Psychological factors such as motivation, self-esteem and family support have been well researched (Csikszentmihalyi et al., 1997; Noble & Drummond, 1992; Rogers, 1992; Whalen, 1998) and showed that for certain highly able students, being with like-minded peers is academically enhancing. The questions were pertinent in seeking out the Australian students' perception of their psychological experiences at university. Their stories would be useful in

confirming whether or not the U.S. research was relevant to the Australian context.

Family support has also been shown to be a powerful and positive influence on the early entrant (Benbow & Arjmand, 1990; Caplan, Henderson, Henderson, & Fleming, 2002; Holahan & Brounstein, 1986; Muratori, 2003). The U.S. research focused on students who had moved away from the family to pursue tertiary studies, as well as students who had remained with the family. The Australian participants in the current study were mostly from a metropolitan area where their access to university did not necessitate leaving home; family support would be an important, direct influence. The questions were as follows:

4. University Adjustment

a. How did you cope with the academic challenges of university work? How long did the adjustment take? What kinds of setbacks did you encounter?

b. What skills did you already have that made your adjustment to University a bit easier? What skills did you need to develop?

c. What have you enjoyed most about your university studies? Not so much?

d. Were there any support systems at University to help you make the adjustments? Fellow students? Teachers? School counsellors? Staff?

e. Were there any factors or experiences at university that made you feel conspicuous because of your age or ability? (Drinking? Dating?) Any factors that helped make your adjustment a positive thing? (e.g., Living at home? Acknowledgement by staff that you would prefer to be treated like everyone else? Special program set up for you? etc.)

f. Were there any issues that really impacted you during your first year or two at University? (Friendships? Dating? Driving? Drugs? Extracurricular activities?) Which were easy to deal with and which were more difficult?

The Future

Having explored some of the past and present, the fifth topic concerned the students' academic future. It was anticipated that a gifted student would want to pursue a challenging career path and that lofty goals would be within reach. For some of the participants who were still enrolled as undergraduates, this was a question about dreams and possibilities; for other participants, first degrees had been completed and their career path was in progress.

Overall, research has shown that early entrants fare well academically after graduation (Janos et al., 1989; Noble et al., 2007; Sethna et al., 2001). Early entrants, in general, are more likely than regular students to graduate, earn academic honours and pursue further studies (Olszewski-Kubilius, 1995). Lubinski, Webb, Morelock and Benbow (2001) found that, of 320 exceptionally able students in their study, 93% had secured bachelor's degrees, 31% had secured master's degrees by the age of 23 years, and 12% had secured doctoral degrees. The questions were as follows:

5. Your Future

a. What goals have you set yourself to accomplish and what plans do you have for the future studies and career? How likely do you think these are to be accomplished?

Reflections on Early Admission Experience

The final topic concerned the students' reflections on their experiences of acceleration, and the subsequent ramifications of early admission to university. The reflections were intended to seek a personal evaluation from each student on specific aspects of the journey: on the initial acceleration; on factors of success; on the value of university support; their advice to future students; their advice to universities; on overall advantages of early admission; on the most important benefit; and lastly, it sought words of wisdom to pass on to other gifted students. This section was, perhaps, the most significant of the topics explored as it asked the students to reflect – to analyse, evaluate and generalise – on their personal story, in order to help future early admission students with decisions.

Studies have shown that the long-term effects of acceleration, and in particular early admission (Brody & Benbow, 1987; Brody et al., 2004; Noble et al., 1993; Noble et al., 2007), had positive benefits on university selection, goals and aspirations, and social and emotional adjustment. Rogers (1991) showed, in her synthesis of research from 1912 to 1990 that acceleration resulted in positive academic gains, and that for early admission the positive academic effect was significant. Another study (Keating & Stanley, 1972) looked closely at 4 students who had been radically accelerated to university and all 4 reported that early admission was the most suitable way to meet their precocious academic needs. A study of young women (Noble & Smyth, 1995) found that early college entrance was stimulating, both academically and socially, personally and professionally, with some participants citing time saved as valuable. Noble's later study (2007) of graduates from the University of Washington's Early Entrance Program showed

positive reflections of early admission on their personal and professional lives. The questions were as follows:

6. Reflections on Your Early Admissions Experiences

a. Would you make the same decision about early admission again? Why or why not?
b. If you feel you have been successful, what personal and environmental or external factors have contributed to this success? Which have detracted from your success?
c. What support at the university was or would have been the most useful to you?
d. What advice would you offer other students considering early admission?
e. What advice would you offer universities providing early admission to advanced students?
f. What would you say are the advantages and disadvantages you have encountered as a result of your early admission experiences?
g. Most important outcome or benefit of early admission to you?
h. Any words of wisdom to gifted students in general?

Interview Procedures

After the initial verbal agreement to participate had been established, the interviewees were sent a general preliminary email letter, shown in Appendix I explaining briefly the purpose of the research and outlining what was involved. Then followed email contact to arrange a suitable time for an interview. Once interview arrangements had been established, each participant was forwarded the interview schedule, shown in Appendix J, so as to become more familiar with the direction of the interview. One participant lived overseas; thus, it was expedient to

pursue the email communication. Consent forms were scanned and signed, and the participant responded in writing. One participant chose to be interviewed by phone; the other participants (n=10) were interviewed face-to-face.

The interviews were recorded on a digital voice recorder, and brief, written notes were taken. As Patton (2002) pointed out, taking brief, pertinent notes allows the researcher to concentrate on the direction of the interview, focus on probing questions, gain early insights before the transcript is done, and helps with the subsequent analysis. As a professional courtesy, as well as a validating procedure, recommended by Yin (1984), the interviews were transcribed and sent to each participant for checking and/or amendment. Yin suggested that this was "a way of corroborating essential facts and evidence" and in some cases, it "produces further evidence, as the informants and participants may remember new materials that they had forgotten during the initial data collection period" (p.138) which, in turn, "will enhance the accuracy of the case study" (p.139). Some (n=4) participants did not respond to this checking process; one responded and made no amendments; some (n=3) made small amendments and some (n=4) made extensive amendments.

Analysis of Results

The interviews were put into NVivo 8 format to facilitate analysis. Firstly a recount of each interview was summarised as a case study. Secondly, the responses were analysed question by question; thirdly, themes which emerged from the responses were examined.

This chapter has outlined the methods used in Phase 3 whereby 12 early admission students to some Australian universities were interviewed. The interview schedule explored the students' experiences of early admission, looking

at their past history of acceleration, their experiences at university, their future plans, and their subsequent reflections on those experiences. In particular, the interview sought to elicit the students' views on adjustment to university. Chapter 8 summarises the transcripts of all the interviews, and Chapter 9 sets out the subsequent analysis of Phase 3.

Chapter 8: Summary of Phase 3 Interviews

This chapter summarises the interviews with 12 students who entered university at a young age. The interviews sought to investigate the educational experiences of these students who gained admission to Australian universities earlier than usual, having been accelerated during primary or secondary schooling. Nine students were younger than 17 years, the usual entry age for undergraduates; three students were 17 years old. In particular, the investigation looked at their past experiences of acceleration, their process of early admission, adjustment to university, academic plans for the future, and their reflections on their experiences. The participants were given a chance to respond to Question 6, their reflections, at the interview, or at home and later emailed to the researcher. Embedded in the process was a systematic investigation of the main influences, which they believed affected their social and emotional adjustment.

From in-depth interviews, a comprehensive case study of each student was developed, which included details about making the contact, and a summary of the responses to the structured interview schedule. Each student was emailed a transcript of the recorded interview to check for accuracy and to make any amendments required for accuracy. All student quotations cited in the case studies are personal communications, verbatim, from the interviews.

Categories of Early Admission

Within the 12 case studies there are three categories of early admission students. Firstly, two students were early admission students who had not completed their final secondary qualifications. The universities accepted them without their having completed the NSW Higher School Certificate (HSC). Both

were 15 years old. One was admitted to the university having completed Year 9, and the other after having completed Year 11.

In the second category, dual enrolment, one student began single subject study at university at the age of 12, and continued his secondary schooling simultaneously. He was admitted to full time university study when he was 15 years old, when he had completed his HSC.

The third category included nine students who had completed their secondary qualifications and were admitted to university at 15 years (n=1), 16 years (n=5) and 17 years (n=3). All students had been accelerated by 1, 2 or 3 years and therefore entered university earlier than their age-peer cohort.

Case Studies of Early Admission Students

Category 1: Early Admission Without Completing HSC

Case study 1: Sean.

A university colleague mentioned Sean to the researcher, and suggested that his parents might be traced through the state Association for Gifted and Talented Students. Contact was made with Sean through the Association, and he agreed to a face-to-face interview in his home. He was 29 years old when interviewed on 9 December, 2008.

Interview summary.

Acceleration history.

Sean was radically accelerated by 3 years during his school years. He skipped Years 3, 9 and 12, and began university when he was 15 years old. He

was admitted to the University of New South Wales (UNSW) under the Early Entry Program, after completing Year 11 without a University Admission Index (UAI).

His parents initiated the first acceleration to Grade 4 from Grade 2.The school was very hesitant about acceleration. They allowed Sean to be moved to a composite Grade 3-4 so that he could be dropped back if necessary. At secondary school, in which he skipped Year 9, he was advanced in Science and Mathematics but the school implemented one-on-one classes for a term for History and English to cover the Year 9 work. It was his own initiative to pursue the early admission to UNSW because he wanted to pursue a challenging year, rather than be unmotivated in Year 12, and his parents were supportive.

School social experiences.

Sean does not recall any social problems with skipping Grade 3. He did not have any social problems with the next two accelerations and he attributes this, in some measure, to his experience of playing in a community band. From Grade 6 through university, he joined a local band of some 200 people of all ages. This experience of participating in an outside interest, which was not age specific, he believed, enhanced his social skills to mix, work and cooperate with all ages.

> One of the really interesting things about the Youth Club Band environment is that there are all ages, from primary school kids right up to 60-70 year olds, retirees, who…and everybody sort of mixes in together and talks together and there's very little…there is some…distinction because of age.

Support.

Sean's parents were supportive, especially with the first acceleration, and with the early admission to university. Through his high school years his Maths

teachers allowed him to work at an advanced level in the class. One particular computer teacher encouraged his interests in graphics, using an old plotter/printer.

> This was an old piece of equipment that he'd rescued and you could do these fantastic shapes with it…I played with that. That actually got me interested in programming which is what I do as a job. I'm an engineer: I work at Google. It's really good.

Making the early admission decision.

Sean felt challenged when he skipped Year 9 as he had to catch up in subjects other than Science and Maths; his performance improved and he was happier at school. He felt competitive and responded when friends challenged him in Physics and Chemistry. In Year 11, the challenge subsided, as he had mastered his subjects; he was getting bored and he relied on self-directed learning to stay interested. He was not looking forward to a similar experience in Year 12, and feared that he would not achieve his best. He began to consider early admission to university.

> The kind of challenges I got from going from Year 8 to Year 10, I could sense again, plus so much you hear about university environment and it is so self directed learning that it would suit me very well. It was that kind of thinking.

Sean was not concerned about fitting in at university as he was used to mixing with the older Year 11 students, and he did not have regrets about missing out on the Year 12 activities. His parents supported his decision.

Process of early admission.

To be accepted as an early admission student, Sean had to complete a written application, which included school references, performance results of special competence, intelligence profile, samples of work, and references. An extensive face-to-face interview, with a panel of 5 university personnel, followed.

Then it was necessary to sit the 4-hour Scholastic Aptitude Test. As an early admission student he was not allowed to apply for Law or Medicine; he chose Bachelor of Advanced Science for one year, and then transferred to Science Medicine. Over a period of 8 years he completed a Computer Engineering degree and a Masters degree in Biomedical Engineering.

University adjustment.

Sean coped readily with the academic challenges of university. His self-directed learning style was an asset. He described his adjustment thus:

> Like a duck to water! It was just right. I was an independent sort of person. Fantastically interesting stuff, almost set your own schedules in terms of how you learn and where you learn. It was just great. There wasn't really a period of adjustment.

Initially, Sean found it difficult to cope with rote learning, necessary for the biological sciences, but after 6 months, he acquired the skill. He found that he had not learnt to rote learn.

> …a lot of people I have talked to have done the same thing – derive Physics and Maths formulae, in the middle of exams, because it is easier to remember the process to get to the formula, than the formula itself.

He found examinations stressful and worrying. Eventually he adopted a more relaxed attitude which enabled him to respond more naturally.

Sean loved the work and the interactions with the other students, especially with those computer engineering students, who worked as a special group, under the leadership of a professor. It was this type of environment – "independent people" who have "amazing ideas" – that led to his choice of work. He enjoyed some of the lecturers whom he found inspirational.

In his first year support was minimal and private and that was the way he liked it. One of the admission panel *chose* to keep in contact, and was very helpful in sorting out subjects and courses; lecturers were aware of his age, but he did not feel he was treated any differently from other students. He acknowledged that there was a lot of support available, if needed. Other factors such as dating, drinking, drugs or extra-curricular activities were not issues of significance for him. He made some great friends at university, with whom he still keeps in contact.

His future.

Sean reported that his current work was very satisfying and he had no goals in place, other than a PhD at some time in the future. His work was stimulating.

> The stuff we are working on now, a lot of the stuff we do, gives you a buzz. They'll release it and people will download it and…it's got to be a bit of a buzz! That kind of thing, yeah! That's kind of cool! It's just nice to be part of that sort of excitement. Share it with your team. Feel proud and that you've accomplished …You know that there was a purpose to what you are doing, a point to the late nights. I think most people are happier at work when they think what they are doing makes a difference.

His reflections.

Sean is pleased about his accelerated pathway, and he has been really happy ever since he started university. He considers that an element of luck was involved: his supportive parents, his education in Australia and his fortuitous career situation. Personal factors contributing to his happiness included being a quick learner, as well as a self-directed learner. He describes himself as introverted, and is therefore slow to make social connections. His advice to students considering early admission was that the advantages outweighed the disadvantages.

> There's [*sic*] lots of advantages to doing it. Very few disadvantages. Although there are many apparent disadvantages which do not turn out to be problems. Yes, go for it! Some things you might be concerned about what might happen, probably won't happen. They might be worried about – losing their school friends, or fitting in – the problems go away.

His advice to universities is to allow more early admissions, and perhaps to "lower the bar":

> …if you've got a student at Year 9, or Year 10, who could go onto university and get credits and distinctions, then – and you don't let them do that – you push them though 10, 11, 12…Well, I reckon at best, at absolute best, they've wasted 3 years. …At worst? They'll get a lot worse. May not attend university. Why push them through 2 years of boredom, if they're capable of achieving at that level, at university?
>
> And in the end, if even if a kid had a problem adjusting or had some emotional problems or social problems…you're not measuring it against the perfect world…It is measured against reality: they are going to spend 2 or 3 years bored at school and probably going to develop some social or emotional problems. At the very least, they're going to get very, very bored.

For Sean the advantage of early admission was spending time at university, a "great place to be" and having the luxury of time to change courses.

> There are really no disadvantages for me. I've had the luxury of finishing the Science-Medical degree, looking around saying "Actually no, and this is not what I want to do after all" and changing tack completely…It's still not being behind. That is, that was… a major, major thing, being able to do that.

He admits that social and emotional issues may be a concern:

> If there are social and emotional problems like that, my guess is that they are going to go away. They are not going to be long lasting or impactful, in the long term….If there are going to be emotional and social problems, then it's up to the schools to find a way to make that work. It's not up to the kid to sit bored, out of his – or her – brain, twiddling their fingers, waiting for the school day to end.

Case study 2: Peter .

Another university colleague forwarded a university web page which notified the public that, Peter a young graduate from that university, had secured an overseas scholarship to pursue his doctoral studies. After finding his academic web page, email contact was made with the Peter who was living overseas, studying to complete his PhD at an overseas tertiary institution. He agreed to respond to the interview schedule by email. Ethics consent forms were signed and scanned, and he replied by email. He neglected to answer one of the questions; however, when later he was asked to address that question, he complied with the request. He was 21 years old when interviewed, 19 December, 2008.

Interview summary.

Acceleration history

Peter was accelerated by 3 years in Maths, in second grade at primary school. He continued to take accelerated Maths in high school while he took all his other subjects with his age-peers. In Year 8, he studied Year 11 Physics while he was also taking Year 11 Maths. In Year 9 he was studying two Higher School Certificate (HSC) subjects: 4 Unit Maths and 2 Unit Physics, as well as his other Year 9 subjects.

His primary school was not at all cooperative about the acceleration, but with very strong persuasion from his parents, as well as from a local district superintendent, the primary school reluctantly allowed the acceleration. The high school, by contrast, was very cooperative and did all it could to help Peter, especially when subject timetables clashed. For example, he was able to study

English by correspondence so that he could continue with his accelerated Maths studies.

Peter had early admission to university, after completing only two HSC subjects and Year 9 for all other subjects. Because he had not completed 10 HSC units, he did not have a University Admission Index (UAI).

School social experiences.

During his high school years, Peter spent most of his time with his age-peers. This was where he found his *real* friends. When he participated in the accelerated classes, his older class mates welcomed him, and took care of him. When he attended university, he became *proper* friends with those older class mates. They made him feel like one of them; he did not feel like an outsider.

Support.

Peter found his main support was his family. He explained: "Before I went to university I guess the people who had the greatest effect on me were my family as without them I wouldn't have completing (sic) things the way I did."

Making the early admission decision.

Peter did not have any regrets about leaving high school early, as he saw that the only possible route available to him was to attend university, in order to continue with his accelerated subjects. "I don't think at the time I had any real concerns, [sic] University seemed exciting and High School isn't the most forgiving place".

He continued:

> My family always supported me (although they would have preferred that I stayed at High School for an extra couple of years). I believe my family were the most supportive, people were generally worried (understandably) that leaving for university would cause me to miss out on all the social

> aspects of HS, however that being said none of the teachers ever opposed my decision.

His parents did not allow him to leave home, as he was young, so he chose to attend a local university.

Process of early admission.

Peter was enrolled at university just before turning 15 years. His process was not a routine one as he had not completed his HSC. He had interviews with the Head of the Faculty and with a Mathematics lecturer. His HSC trial results for 2 Unit Physics and 4 Unit Mathematics were taken into account. The fact that he had progressed through several rounds of selection for the Physics Olympiad was seen in a favourable light.

He completed his Bachelor of Arts, with Honours in Advanced Mathematics. After graduation, he spent a year at Cambridge where he completed his Masters Degree. Currently he is working on his doctoral studies in Paris.

University adjustment.

At first Peter encountered usual undergraduate difficulties in adjusting to university lectures as a method of teaching:

> I don’t think the problems were academic, more so at the beginning there was a bit of adjusting just because university lecturers etc are quite different to what one has in HS, however it was just the standard thing which most people go through, nothing special nothing too difficult.

He did not find any real academic problems, and he enjoyed the experience. A significant highlight of his early undergraduate years was when he met a computer studies lecturer who employed him to work on different projects in computer programming:

> In my undergrad [*sic*] there was a fantastic computer science lecturer who employed me to work on all kinds of projects (computer programming things) however they were incredible as it was sort of the realization that I could do interesting (or not so interesting things).

This led him to the realisation that he was capable of doing interesting things, and lead ultimately to his doctoral studies in Number Theory. On the webpage of the overseas institution where he is undertaking his doctoral work, he has a personal testimony: “I have as long as I can recall [sic] loved mathematics whose relationship to which [*sic*] was first developed during my undergraduate studies at home…”

At university his intellectual peers were his “big brothers”, for they were taking similar subjects, and made him feel part of the group.

> I think the single most important factor though was just that the people I were [*sic*] studying with were nice and friendly, even when I was too young to go out drinking etc with them [*sic*] they were always including me and never made me feel alone…

There were difficulties in that he was much younger than they, and he could not go out with them if drinking, for example, was involved. For the first couple of years he concentrated on his studies, attended lectures with his year group and associated with them, but he continued to socialise with his high school friends, his “real” friends of the same age, whom he saw on the weekend.

> The first couple of years at university were difficult I guess in that regard, as I was obviously too young to be friends with the people I was studying with yet I had left all my friends behind in HS (once I reached 3rd year everything was fine as then was old enough to actually be friends with the elder [*sic*] students). I think for the first couple of years though I lived through my friends I had in HS, that is at university whilst I would go to lectures etc talk to people, my "friends" at uni there were simply people who had finished HS with me and were more big brothers.

He felt envious of his age-peers for the social life they enjoyed.

> I think for those first couple of years I was a pretty nerdy kind of guy and at the time was rather interested in my studies, however I did miss my friends at HS and was almost jealous in some ways of the things they were doing etc as I obviously didn't have the same social life. Even after the first couple of years at university, by then I was proper friends with the people I studied with (went out drinking etc etc), however I obviously couldn't date any of them and at the same time I didn't really fit in with people my own age then (as they had all formed their own social circles which I wasn't appart [sic] of).

He felt that living at home, rather than on campus, made life easier for him. When he had turned 18, he was able to go out drinking with his "proper" university friends, but he was unable to date any of them. It was not until Peter reached Cambridge that his genuine social life began.

> As such even though those years were enjoyable as I had a nice group of friends etc, it wasn't actually until I arrived at Cambridge that I actually had a proper social life (started dating people etc), so I guess all the way through my undergrad honours I had a very mixed social life. I don't think anyone treat [sic] me at uni as if I were different (which was very nice)

His future.

Peter aims to complete his doctoral studies, and perhaps pursue an academic life, or a computer career with a leading world web based search engine.

His reflections.

Peter would make the same decisions again about acceleration and early admissions. He commented: "…the moment I arrived at Cambridge, and finally had a proper social life it felt as if that alone validated every decision up until then". Along his journey his parents had been a constant support, and the university academics were always willing to offer a helping hand. In particular, the encouragement given by the computer science lecturer was very important: "The support of the aforementioned lecturer in computer science was invaluable,

everything from his friendship down to the programs we worked on, he made the first couple of years amazing."

His advice to other gifted students considering early admission to university is to make sure they are doing what they really want to do, because it would be "…a painful time since you are probably going to be giving up friendships to attend". He later communicated that it was important to enjoy what one had chosen; otherwise the early admission would be a painful experience. His advice to the universities providing early admission was to consider each case on its merits, and allow the student to make the decision, rather than deter and alienate him.

Peter explained the advantages and disadvantages of his early admission as follows:

> I think especially when I just started the advantage was that everything was so interesting, so new and exciting, where as [sic] if I had of [sic] remained at HS perhaps in a couple of years time maths would have lost its shine, perhaps even study in general, [sic] at least by attending university things were always going to be interesting, the only disadvantage was social however i'm [sic] not sure that I would have been better off staying at HS, as HS isn't the most conductive [sic] environment and as I said once I left university everything fitted into place.

Category 2: Dual Enrolment

Case study 3: Daniel.

A university colleague sent the researcher a public domain university media release about a young PhD graduate who had returned to the university to give a special keynote address. The media details included his name, and mentioned a love of soccer. His name was located through a web search engine, and the soccer detail pursued: someone with the same name had won a *Best and*

Fairest Award at a local soccer club. The soccer club was emailed and after several contacts, Daniel himself emailed the researcher. He agreed to be interviewed in his home. Daniel was 30 years old at the time he was interviewed on 24 January 2009.

Interview summary.

Acceleration history.

Daniel was accelerated by both grade skipping and radical subject acceleration. In the infant years, when his family lived overseas, he attended a small school of about 30 students where the students were all working on individual programs. At age 5 he was working on Grade 6 Maths. On returning to Australia, he attended a small school of about 42 students, where once again, there was no strong demarcation of the grades; students were classified on ability, rather than age, and he continued to work on an accelerated Maths program. There was another change of schools at the age of 7 where he was placed in Grade 2 but was grade skipped to Grade 4 the following year. He continued to work on his Maths and Science through home schooling. The following year he was grade skipped to Year 6.

Daniel was 10 years 10 months when he was in Year 7; at that stage he was working on Year 10 Maths. When he was in Year 9, he completed HSC 3 Unit Maths. At the age of 12, he began university Maths at the local university, while working on Year 10 subjects. In Year 12 he completed 15 units for the HSC and entered university as a full time undergraduate at 15 years. He had been grade accelerated by 2 years and radically accelerated in Maths by 3 years.

The first two schools Daniel attended initiated and supported his acceleration in Maths. His parents were surprised by the assessment of his ability

but accepted the accelerated program. At the third school, his parents and a progressive headmaster agreed on Daniel's program of school classes and home schooling for Maths and Science. When Daniel needed to attend secondary school his father had to become very proactive in his advocacy by writing letters to the government, and lobbying to get public policy changed to allow students younger than 12 years to attend high school. He was supported by the New South Wales Gifted and Talented Association. Ultimately, after demanding evidence through general ability and IQ tests, a private school agreed to allow Daniel to enrol, and provided a bursary for him. The school recognised his giftedness; it supported and supervised his progress. However, a Year 12 Maths teacher did not approve of acceleration and refused to teach Daniel the 4 Unit course, a highly specialized Maths extension subject. Nevertheless, the school allowed Daniel to complete his secondary studies whilst he attended university for Maths from the age of 12 years.

The local university accepted Daniel's HSC results for 3 Unit Maths as proof of his ability, and allowed him to enrol in tertiary Maths subjects, even though he had not completed the HSC in any other subjects. He enrolled as a full time undergraduate when he had completed 15 units of HSC, including 4 Unit Maths.

School social experiences.

Daniel recalls some social dissimilarity when he was home schooled for some subjects, for it highlighted the fact that he was academically advanced compared to the students with whom he spent some time. The separation was also apparent when he was out of class, working alone in the library on Year 9 Maths.

> I remember a conversation, you know, that I shouldn't play with so-and-so because he's…we only play with people our age or…sorry…it's the other way round – you should go and play with people your age. I was generally accepted by people who were older; but people who were my [age] peers didn't feel as if I belonged with them. And I guess there might be a bit of fear with this kid who knows a lot of stuff. They're kids. People who are 9 or 10 years old, they don't have the tact older people have. So that went on.

As he was growing up he disliked small talk and the ways that primary and early high school students interacted.

> I wasn't accepted so I always enjoyed hanging out with people who were older than me, because they treated me like an equal, equal to my face at least, and they were willing to spend time with me.

He was reasonable at sport so he was able to play handball with the older students at lunchtime. With his age-peer neighbours, he interacted through sport – trampolining, kicking a ball, playing backyard cricket – and although there was recognition of "something different" about Daniel, it did not matter.

Academically, he became quite bored in Year 11 Physics and so he was quite disruptive in class, making jokes, reading the paper, and doing the crossword. But socially, by Year 11, things started to change and he gained a sense of belonging, when mixing with students 2 years older:

> I started getting invitations to parties and things like that which didn't happen previously. So then I'd started to feel that I had friendships, although looking back, maybe it was more the case of someone being a patron of myself, like they're looking after me, just making sure that I'm getting by and stuff like that. So people were looking out for me, it happened a lot more.

Overall, school was socially challenging:

> I moved from school to school, I had different groups of friends, so if I played soccer, I was with my peer group. If I was with the neighbours, I was with my age group, so if I was at school, I was with one group, and if I was at uni I was with a different group, so I was scattered amongst a lot

> of different people. That's not helpful for dealing with relationships, to some extent.

Support.

While Daniel's parents were initially surprised by his first teacher's observation of his academic gifts, they were his constant support, especially as they moved around to different places.

> Mum and Dad remember quite vividly, where back in '85 when I was in Year 2 … that I would come home from school crying because I was utterly bored. And that they were impelled do something about the situation because there was no remedy for this without acceleration or some other form of education.

He continued:

> The only catalyst was my parents, fighting the system, but some teachers were negative and thought I had pushy parents. And there is no objective test for pushy parents. Their advocacy is sometimes difficult to distinguish from the advocacy of the parents whose children aren't as gifted.

Making the early admission decision.

After completing 3 Unit Maths at high school, university was automatically the next step, which his father organised. Daniel trusted his father's vision, his wisdom, and he did not want to waste time being slowed down at school. He has no regrets about his pathway through school, though he realises that staying with age-peers may have facilitated gaining social awareness:

> So, whereas, I think, a kid going through with the same group of people gets a lot of feedback, and you reach an equilibrium state where everyone's comfortable with who you are and that doesn't happen so much when you are mixing it up with different groups of people.

Process of early admission.

Daniel's father had discussions with the Head or Dean of Informatics, as it was an unusual enrolment, and the decision was in the power of the faculty. The university accepted him for the single subject based on his HSC 3 Unit Maths result. He explained:

> It's about success of your course, that's their primary concern….it's up to the individual faculty to say whether they have the facilities. The other thing too – I never felt this way – but looking back, I think the trade-off for early admissions is publicity so the school, the university, gains opportunities to publicise themselves or gain prestige or whatever by accepting. It can work both ways.

When he began full time study he had a UAI score. His undergraduate double degree was a Bachelor of Mathematics and a Bachelor of Computer Science (Honours) which he completed by the age of 19. He then completed his PhD in Computer Science (Informatics) and is currently working as a computer programmer.

University adjustment.

As a 12 - 14 year old, Daniel adjusted to the academic challenges well and his results in the four Maths subjects were a second place, a fourth place, a credit and a pass. Later, when he was a full time student, he had forgotten much of the early course work and he failed a third year course, which put at risk his graduation in Maths. This was humiliating for him but he was also relieved that he had experienced failure. It forced him to recognise that his talent needed to be supplemented by work.

Daniel achieved a credit average in his undergraduate years and he attributes this lesser achievement as a result of the freedom at university.

> When I reached uni, all of a sudden, it was no longer compulsory to attend classes. I also had a class at 8:30 in the morning and at 5:30 in the afternoon. You've got 8 hours to kill so I'd play games all day, enjoy that time when you can do whatever you want. So instead of dedicating myself to study, I just took it easy, especially in Computer Science. I wasn't exceptional at uni, really. The only reason I did well in those 2 maths subjects was because I could basically devote myself to that because it was the only form of maths challenge.

He enjoyed the Computer Science studies in which he considered he was more gifted than in Maths, but he never felt driven to succeed. He was more focused in his honours year because his university friends had left; he relied more on his outside group for social contact. Daniel did not enjoy his PhD academically which he found "an incredibly challenging experience". He was not motivated by passion, but by a sense of inevitability:

> Then Honours year was nearing an end, I was thinking I don't want to work 48 weeks a year, so I'll just do a PhD! I know Dad did a PhD. It's entirely the wrong attitude. The other misconception I had was that PhD was just like course work, so course work, you turn up to class…
>
> He did not like the topic he had chosen, he had taken an outside job, and he did not work hard; he took 6 years to complete it.

He chose subjects that he liked and he wanted to learn as much as he could. He was not focused on outcomes or his future job. However, as he matured, he changed his mind.

> I always thought university was about learning. It's really not. It's about preparing people for solving problems in the broader community and I never figured that out. I never got to the bottom of it. It's only now, when I'm in the community, that I see it… I think learning for the sake of learning is not one of the best reasons to go to uni. I think learning to make a difference is a better reason. It's more about giving than receiving.

Daniel enjoyed playing computer games at university because they were an advanced form of problem solving. As well, he enjoyed the camaraderie of computer games. He enjoyed the courses he studied as each one became a useful

tool in his career. Daniel had come from a “sheltered existence” so he found some cultural aspects of university life confronting, for there was a “plethora of cultural identities” and each student used his given freedom in different ways – through drugs, alcohol, social activities. He also found some behaviour trying; his sense of fairness, for example, was offended when students began talking to one another about the examination questions when the actual examination had been temporarily interrupted by a bomb scare.

Daniel felt he was treated the same as any other university student, except, perhaps when he was very young, when his tutors would spend time with him. One factor that helped Daniel to adjust to university was, he said, his “notoriety”.

> “There’s that kid!” which meant that wherever you went, people would sort of be friendly to you, and it’s different to school where you are in a closed environment. So wherever I went people would…were willing to let me sit next to them, maybe I could help them, but it was supportive. And the lecturers they gave me no special treatment but the tutors, as I said, were helpful in class.

His friends were his greatest support; his parents were a constant source of support. He felt conspicuous about his age, especially in his school uniform when he first entered university, but his lack of social awareness largely protected him from caring what people thought of him. He coped with media attention from time to time. He did not feel conspicuous about his ability as he felt he fitted in; he believed he was average or below average. Drinking was not a problem as he did not drink alcohol, even when he went to the university bar. Dating was not an issue either, perhaps as a result of social inexperience, an introverted nature, and a lack of self-confidence, all of which contributed to a self denial that anyone would be interested in him. He felt a little conspicuous about not driving; he had to use public transport. Living at home was a very positive aspect of his successful adjustment to university.

The most important issue which impacted on Daniel was his inability to communicate socially with other people, and to contribute to conversation to engage a variety of people. He deliberately, and successfully, worked to develop his conversational skills, especially with friends outside university. The second most important issue was the freedom that the open environment of university brought freedom to miss lectures, to be accountable to himself.

> Just the freedom. All of a sudden I was no longer under my parents' supervision. I could do whatever I wanted to do, play computers for a lot of time. That was the big thing.

His future.

Daniel has completed more that 10 years at university and has no particular goals for future study or for his career. He has the potential to tackle more complex tasks, to return to academe where his interest would be in teaching, rather than research. His future is to be "seen through the prism of family commitments", for he is married with children and has a job he enjoys because it affords him the luxury of learning.

His reflections.

Daniel would make the same decision about acceleration "because there is no alternative". Through the acceleration he averted boredom; otherwise there would have been problems. He felt motivated by the enjoyment of Maths, and his parents cleared the path of obstacles, supported him, and provided a stable home life.

He considered that the factor which detracted from his success was, ironically, his "charmed existence". Learning came easily to him, and he did not always maximise his achievements. He was not sufficiently motivated to do his

best. For example on the evening of his 3 Unit Maths exam, he attended a soccer match – Argentina versus Australia – and did not get home until 12:30 am. He did not enjoy his PhD for he had not thought it through carefully. His lack of social awareness was a hurdle, which he addressed.

Daniel did not feel that the university should have given him more support. However, he did suggest that universities should recognise and harness the passion of its students to achieve greater outcomes. He may have become more motivated by a mentor, who could have helped him psychologically to see the long term value, for society, in a particular task. He also reinforced the value of the university programs developed for advanced school students, as a prelude to attending university. They provided the students with experience of broader subject matter, a taste of difficult concepts, motivation, a chance to pursue questions without fear of ridicule, and a chance to meet like minds. For Daniel the advantages of acceleration were clear:

> The advantage is that you get to live life sooner. So you get to…it sounds kind of weird …but I get 2 more years of life to work, to achieve. Why would I choose to be consistently bored, for years of my life so that I finish at the same time as other people? Would it not be better for me not only to enjoy school, but then to have extra time?

His advice to students considering acceleration – or early admission – is that it is not a matter of choice, but rather a matter of being prepared to adapt, to deal with changing environments. He considers that two myths – that "the world is your oyster" and "you can do anything you want to" - are a disservice to gifted students. Being gifted is about opportunity, motivation, discipline, perseverance and determination. His advice was as follows:

> …pursue what you enjoy, because I think that's the spark of passion, the ability that they [*sic*] can achieve. Another thing I would say is to practise

> things you find less comfortable. It's easy to do the things you're good at; it's hard to do the things you're not good at.

He added:

> …[and] manage those social factors, they're the important issues.

Category 3: Completion of HSC

Case study 4: Suzanne.

Suzanne was known to the researcher, as she had been a participant in a residential program for gifted students where the researcher had taught her. Suzanne had published an anthology of poetry, so a search on the internet for her webpage enabled email contact to be established. Suzanne accepted the invitation to participate in the research. Suzanne was 17 years old when interviewed on 1 December, 2008.

Interview summary.

Acceleration history.

Suzanne was accelerated from Grade 1 to Grade 3 and while in Grade 5 and 6 she studied some Year 9 and 10 semester courses. In Grade 5, aged 9, she was offered a chance to accelerate to Year 7 but she declined as she had found some good friends and wanted to experience the rites of passage in Year 6. In secondary school she was accelerated in various subjects. In Year 8, she did her School Certificate in English, History and Geography. In Year 10 she studied HSC Modern History and Extension History; in Year 11 she took HSC 3 Unit English and 3 Unit French; in Year 12, she completed her HSC in other subjects –

Extension English, 3 Unit Maths, Physics, History, Chemistry and Cosmology, a university based Distinction Course. In all, she had 19 units for her HSC.

Suzanne has bitter memories of her school life, for she had some very unpleasant experiences in clashing with staff and executives. However, she also found some very supportive staff in both primary and secondary school.

> Generally the pattern was that I had a couple of really great inspirational, amazing teachers who [sic] I can say nothing but good things about, who encouraged and who mapped out this educational plan for me and then the school executive sort of trailed haplessly along in their wake.

A lecturer from the Cosmology Distinction Course was a source of inspiration and mentored Suzanne in her learning during her final high school year. During that period of study she also corresponded with an academic in Canada who helped her with her Cosmology studies.

> You know, it's funny because the school structure pretends to provide structure to help students in quite an invasive and mandated way, whereas my greatest mentors have come through some reasonably unlikely sources. He's incredibly nice and I was a nobody; I was a school student in Australia! He took such time to talk to me. I thought it was an interesting contrast, I think, between school and the real world.

Her parents did not have to initiate the acceleration, but when they found she was bored and unhappy, they did have to agitate for change, by asking for extra work, and for subject acceleration.

School social experiences.

Suzanne was bullied, physically and verbally, from a young age at school, and especially in secondary school.

> I'm quite a social person…so I think part of the issue was that I wanted to be popular, I wanted to be part of the popular group, which was never going to happen because we had nothing in common and they hated me and I hated them but I think that is quite a common adolescent girl thing.

However, in Year 8, she finally accepted she was different. She found a strong group of friends who accepted their differences, and had friends outside the school. Her social life was a happy one, especially in Year 12.

Family support.

Suzanne was an only child who lived at home and enjoyed the company of her parents. They supported her acceleration choices in order for her to be challenged and happy.

Making the early admission decision and process of early admission.

Suzanne explored the possibility of early admission but instead chose to complete her HSC. Because she was young – 16 years – she also considered taking a gap year to work and travel. However, she finally chose to pursue her tertiary studies. Her enrolment was routine for an undergraduate with a UAI. At the time of the interview she had just finished her first year of studying a Bachelor of Advanced Science, hoping to major in Physics.

University adjustment.

Suzanne chose to study subjects about which she was passionate, rather than choosing the humanities in which she excelled. She took two semesters to adjust academically to Physics, her weakest subject, and two semesters to overcome anxiety issues about Maths exams. She has always been a highly motivated student who enjoyed working independently. She embraced tertiary studies with joy and enthusiasm, and enjoyed the freedom from school authority.

> …I love uni, absolutely. I love my classes, I love the culture of university…People treat you with respect, they treat you as an adult…At university, no-one cares! That's the thing. If you don't turn up, you may fail and that's your problem and I'm not going to yell at you because it's your life. So that's fantastic.

Suzanne appeared extroverted, gregarious, and exuberant, and had a busy social life. She participated in university activities: she a member of the Talented Students' Program (TSP) and president of the Physics Society. Thus, she had a wide informal support system of friends who help her. She had found the lecturers helpful, without being intrusive; her TSP mentor was most encouraging and helpful. She did not use any of the formal counselling structures available at university. Her age had not been an issue socially, and none of the lecturers made an issue of it.

Her future.

In the short term, Suzanne would like to undertake an honours course, and postgraduate studies. In the long term she would like to "make a difference".

> Generally I'd like to do – a big ambition – what people like Richard Dawkins and Ayaan Hirsi Ali are doing. She is my idol. I think my life ambition is to be a…well…someone teasing me once called it "troubadour of the zeitgeist". So to have some role in shaping that kind of debate because…if you feel a strong way about certain issues, it's nice to think of having some role in doing things you care about.

Already Suzanne is a published poet. At the age of 10 years, she published a volume of her own poetry, and many of her poems are included in published anthologies.

Her reflections.

Suzanne regards her experience of early admission as "an overwhelmingly positive experience". She attributes her success to her own hard work, help from faculty staff, and support from friends, both her undergraduate peers and her older friends, including former teachers. She appreciated the role her mentor played in assisting and guiding her during her first undergraduate year. She would advise other students contemplating early admission to follow their instincts; the decision

does not lead to a limited course of action and does not block off other options. She would encourage students to become involved in the extra-curricular activities - societies and clubs – especially as a means of interaction with older students. The most important outcome of her acceleration was “getting to uni and over the psychological scars of a twisted and evil school system”.

Case study 5: Felicity.

Felicity, 17 years old was invited to participate in the research as a result of snowballing sampling, when another student mentioned a friend who had been accelerated. The contact gave the researcher a phone number, phone calls were made, and Felicity agreed to participate. She was 17 years old at the time of the interview on 23 January, 2009. A transcript of her completed interview was sent but she did not respond.

Interview summary.

Acceleration history.

In primary school, Felicity was accelerated in some subjects such as Science, English and Maths but finally she skipped Grade 4 and Grade 6; thus, she was accelerated by 2 years. Her primary school was very cooperative and willingly presented her with opportunities, such as attending an external accelerative cluster group for Maths; her parents did not initiate the acceleration. However, during her secondary schooling, that same K-12 school was not responsive and Felicity changed to a selective high school for Years 11 and 12, where a wider range of subjects was offered.

Social experiences.

In primary school Felicity never felt socially comfortable, but enjoyed like-minded friends she made during extension class:

> Well, I had some friends … and we had another group. I didn't like them that much. I had friends and we used to go to the Maths Club…Most of the people were probably older than me but I'm still friends with a lot of them. It was like a really good thing. It was…once a week, and it was really good.

During Year 7, at the age of 10 years, Felicity was verbally bullied. She recalls incidents where she was subjected to the wrath of the class when she did not participate in the class pranks. She disapproved of the constant chatter in class. She remembers running away to escape, to go home. She enjoyed the final move to the selective high school for she felt comfortable: "... they were all smart girls. Nice, yeah…".

Family support.

Felicity's parents supported her in the acceleration and helped her make the decision to change schools. The family supported each other, especially around examinations and assignments.

Making the early admission decision and the process of early admission.

Felicity completed her HSC and proceeded to university with a routine admission, at 16 years of age. She had no regrets about her earlier acceleration. There were no questions about her age and she enrolled in a 4-year Bachelor of Advanced Science, including an honours year.

University adjustment.

Felicity took a couple of weeks to adjust to tertiary studies and coped well with academic challenges: “I don’t do that much work for uni. It seems to be all right .It’s fairly different to school. It’s good: you get more time to learn things, over a whole semester.” At secondary school she had always relied on her independence and anonymity, for she disliked seeking help. When she found difficulty with essay writing in Semester 1, she did not seek any help, and managed to pass. She felt comfortable talking and mixing with adults; she did not have a problem talking to lecturers and staff. However, she did not seek their help.

Felicity enjoyed the freedom of university as the following quotation illustrates:

> Independence. Going wherever you want to, you know. No need to turn up to class. Do what you like, and go off to the other uni for the day…They’ve got lots of smart people there, and things to do. I joined the Science Revue in second semester. That was cool.

For academic support, Felicity relied on her friends and did not seek out any of the formal support systems available at university. As friends, they studied together, worked on assignments together, and took a serious approach to the work. She did not feel conspicuous about her ability at university, for she did not always tell her friends her results; she achieved a distinction average over the year. Socially, she managed to conceal her age, using a fake identity card, until she turned 17 years. She was a lot happier at university that she was at school, where she was closely supervised.

Factors which assisted Felicity in her positive adjustment to university included living at home, having good friends and participating in extra-curricular activities.

> Living at home is good. I have a friend …who lives around the corner from me. She and I are good friends, and she…is doing Science as well. So that's really good. I have another high school friend doing Science but she doesn't live near us. That really helped as far as making other friends and stuff. I joined the Revue and some of the stuff I was involved in. I did have good friends in the faculty; a lot of them are like the smart or more interesting kids.

Felicity also had a strong interest in sailing, a pastime she developed during her final years at school, when she learnt to balance work and sailing commitments. She enjoys the fact that it is not age related and she has had the chance to meet good friends who are older. This outside interest she continues to pursue while at university.

> Sailing? I don't know whether it detracts from it [success] or whether having a distraction is a good thing. I don't think it takes up too much time. I think you work quite hard if you haven't got much time to do it in, compared to people who don't do anything else other than uni.

Her future.

Felicity has some specific goals for combining her academic and sporting interests:

> I'm going to keep studying Maths. I'm going to major in Maths. Then, I don't know, do research or something and find some useful thing to do with it. I don't mind staying at uni. I don't know what's going to happen… I always have stuff to do with the sailing as well, possibly. Maybe doing some navigating like…There are things you can use Maths for – writing weather programs or going into oceanography or something.

Her reflections.

Felicity considered that the decision to accelerate was worthwhile, for it averted boredom and got her out of school sooner. She was pleased she went directly to university from high school, rather than doing a gap year. Family, friendships and her interest in sailing contributed to her success; she did not need

to seek any formal support from the university. The most important aspect of her early admission was that she went to university while she was still excited about academic work.

Her advice to students considering acceleration centres on whether the student likes academic work and is prepared to work hard. Enjoyment is a key ingredient. Her advice to universities considering young students is to accept them and to check for any poor subsequent results, for they probably can be prevented. The student may need some kind of support, perhaps more in developing study habits than in actual tutoring for course content.

Her final words of wisdom to gifted students: “Try and find other gifted students: That’s the best way to have friends”.

Case study 6: Lucinda.

Lucinda was also known to the researcher. She was 20 years old. Lucinda was telephoned, invited to participate in the research, forwarded the interview schedule, and an interview was arranged to take place in her home on 25 November, 2008. Subsequently, the transcript was sent to her, and she made minor amendments.

Interview summary.

Acceleration history.

Lucinda was accelerated by 1 year when she skipped Grade 5. Prior to this she had participated in extension groups, both within and outside the school. Her kindergarten teacher had suggested that she be accelerated but the advice was not heeded by the school; her parents thought it might have been a big a social jump. By Year 4 her *prima donna* behaviour had become very disruptive for the whole

family at home, and disruptive in class at school. A behavioural psychologist suggested that she be accelerated; she was bored in class and her reading was very advanced. Her parents requested the acceleration, and the school agreed to put it in place. Thereafter, her behaviour improved in class, and at home. After Grade 6, Lucinda proceeded through high school, completed her HSC and enrolled at university.

School social experiences.

Lucinda did not find her social niche at school:

> I didn't…find one … at school I didn't find one. I didn't have one. And I believe, quite vehemently, that it was that lack of a social connection that was a major factor in me getting sick, in developing anorexia and depression. Major factor. In high school because I didn't find a niche because… at the most basic level because I was physically younger, but essentially I had no interest in the way my peers amused themselves, or spoke/engaged with each other. I wanted to read and learn, to the inclusion of very little else.

She found companionship, but not with her intellectual peers:

> So I ended up attaching myself onto the bottom of the social rung, group, and they were generally social misfits, [laughs] as well, but for different reasons, but they all seemed to have a better idea of where they were than I did. They weren't particularly intelligent, but they weren't as much into hard fast drinking, boys' culture thing so I identified with them on that level but I got absolutely no intellectual sustenance, or anything close to that from them.

Her school life was lonely:

> And because of that all through school I felt totally, totally isolated and obviously school was so all encompassing that you don't have friends outside of school. [It] was my only…social sphere and one which I didn't fit into. [Laughs].

Family support.

Lucinda's parents had always been supportive; she did not consider them to be pushy or ambitious. It was mainly her own ambition and academic determination which moved her forward.

Making the early admission decision and process of early admission.

Lucinda had neither qualms about the acceleration nor hesitation about attending at university; she enrolled through the routine admission system, having completed Year 12. She was 17 years 6 months when she began to study for a double degree: a Bachelor of Arts/Law, with honours in English.

University adjustment.

At first, Lucinda found university a "major jump" in terms of academic expectations of analysis, essay writing, argument, citations and research but she thoroughly enjoyed the challenge. It was dispiriting when her marks went from 98% at school to 68% at university but she was still suffering from anorexia and depression which had begun in high school. Gradually, her health improved and her marks improved. In her honours year she was getting a high distinction average. Her love of learning motivated her:

> I finally felt that I was on the road to doing something that actually meant something…whereas at school it seemed like a bit of a game, like being sort of stuck in a fairly boring, mindless limbo. And so at uni I had that determination from the very start, and the love of it, from the very start.

Academically, she enjoyed her studies, especially the reading, but Lucinda had to develop her critical reading skills, speed reading and research methods during her early experience of university. Socially, she enjoyed the intellectual stimulation of fellow students who were like-minded and fun.

> All of a sudden, I didn't have to make friends based on convenience any more…If you think of the Olympic rings maybe: I've got several groups [of friends] and they all overlap…I'm in each one of them and bouncing in between. It's really fantastic because, all of a sudden, it was just so…it was one of the most fantastic things about uni was not having to alter my vocabulary anymore. That was the most wonderful, wonderful thing.

She continued:

> …at uni you find your equals, you know, you find your true peers and the most revealing thing about uni is knowing people who are smarter than you, who are so much more intelligent than you. It's really …it's fantastic because, you know, you read part of their essay or you listen to them speak and it's like …it's extraordinary – mind stretching.

At first Lucinda found she missed the structure of high school:

> I felt, especially in first year, that I was suddenly given this incredible amount of freedom that I almost didn't want. Because I still felt, while mentally I felt much older, I still felt, from a social point of view, much younger, and I would have liked to have had a steady support network… It was all a bit freeform and especially at that age, and especially being sick. I found I missed a lot of my lectures and my tutes because I just couldn't deal with it and I just had to go home. It was just too much of it and it wasn't nice and self-contained like it is at school. Possibly it was a lot to do with that [sickness] but, yeah, possibly also to do with the fact that it is such an extraordinary change from school.

Lucinda found there was a great deal of support for her at university when she was ill but there was no support system for helping her to adjust socially and academically. She did not join any clubs or societies until her third year, as she was not an extroverted person. She considered that she might have found support, had she alerted staff that she had trouble "settling in", but she persisted independently. Socially she felt conspicuous about her age in that she did not seek to socialise.

> …and I still had that youngish sort of nervousness about boys as well that really didn't work well, in an environment where boys and girls were mixing and talking and are right in it all together and I had a lot of trouble with that. And also doing Law you've got to be able to drink.

Being underage meant that Lucinda was excluded from many social events; she was cut off from developing early ties with Law students during her first year. Her first year was also a lonely one as she was still unwell, and had a major crisis with intellectual confidence, especially because fellow students did not share their marks.

> I felt totally…swallowed up, lost. I don't know how best to put it. I wish I had been firing from all cylinders in first year. I mean I really do… 'cos I think that would have made a difference… And I remember feeling really, really stupid which was really awful. Really invalidating, especially when you've prided yourself on your mind before then. Yes, it was difficult, difficult.

Living at home with her very supportive family was a positive factor in adjusting to university, especially when Lucinda was still struggling with her illnesses.

> I know that home was obviously an important mental space, if not just a physical space, because at uni, if I was having a really tough day, all of a sudden I was totally disabled by thoughts of home and being at home and being inside with the doors shut and no-one looking at me and so yes….

Another factor to ease social adjustment was leaving school associates behind:

> Then all of a sudden you start at square 1, at uni, which I found a little bit dismaying at first…but no, that… yeah… I found it…really helpful, actually, that they treated me and everyone else exactly the same because it was like…it is a totally a fresh start and I could do with it what I wanted.

Socially Lucinda found that university had been a very positive experience: "I went from being a total loser at school to being socially valued at uni. It was a wonderful turnaround".

Her future.

Lucinda's short term aim was to get first class honours in English in her 4th year. This was to be a stepping stone towards her main goal: a Masters at Oxford, or, as second choice, at Cambridge. She hoped, then, to return to Australia to complete her final two years of Law. Another dream was to win the Miles Franklin Award for literature, before she was 25 years old. At the time of the interview she had already published a small reflective account of her experiences with anorexia, written to help other sufferers.

Her reflections.

Lucinda would make the same decision again about acceleration, as it made her battle through social and mental issues and, as a consequence, made her stronger. Her illness made early admission to university a difficult time, and it was impossible to separate cause and effect. She maintained it was her family – her mother in particular – who provided the stable base that she needed to cope with university; that support, combined with time and patience, and friends at university, enabled her to move forward.

The university provided excellent support for her illness. Most importantly, for Lucinda, was the intellectual satisfaction: "I finally felt challenged, and *that* was worth everything".

Her advice to other students considering acceleration was positive, but with a warning:

> Do it – but be aware that it will not necessarily be easy. You'll be satisfied and stretched intellectually, but you may find yourself coming up against some more mundane hurdles. Just be conscious that your age will be an issue when it comes to being able to socialize and find your place, but that every day you're growing older, and more capable.

Her advice to the universities about enrolling young gifted students included a suggestion that staff be made aware of the presence of younger students who may struggle with adjustment at some point. More specifically, she suggested the following:

> I also think universities should have a facility similar to the Disability Services at X University for kids who are having trouble adjusting. Just something that gives them the opportunity to speak to an older lecturer, or student, to address some of their concerns.

Her final words of wisdom to gifted students were cautionary about social and emotional issues:

> Don't beat yourself up, too much. Take a running leap – but be aware that not everything is always easy. Don't forget yourself. Take every opportunity thrown at you, and seek out more. Don't be ashamed of yourself – years pass, people fall away, you will grow. It just takes patience.

Case study 7: Gena

Gena was known as a student at the school where the researcher had once taught. She was phoned, and invited to participate in the research. A transcript of the first interview was sent, as well as several reminders, over a period of 3 months, to finish the reflection which she had elected to write at home. The researcher arranged a second interview to complete Question 6, the reflection. A transcript of the whole interview was sent to her; she did not respond but she had commented at the second interview that she had read the first transcript, but offered no amendments. Gena was 26 years old when interviewed on 12 November, 2008.

Interview summary.

Acceleration history.

Gena was a profoundly gifted student who experienced both grade skipping (n=2) in primary school and radical acceleration in several subjects in high school. She was also accelerated in Physics at university. Her first grade skip was from Kindergarten to Grade 2; the next was from Grade 4 to Grade 6. In high school she was very advanced in Maths, Chemistry and Physics. She was also gifted in Music and foreign languages.

Gena entered high school when she was 10 ½ years, and she was already advanced in Maths. In Year 9, she completed 2 and 3 Unit HSC Maths; in Year 10, she completed 4 Unit HSC Maths; In Year 11 she completed 2 Unit Physics and 2 Unit Chemistry for HSC, as well as Grade 6 violin. By the end of Year 12, when she was 16 ½ years old, she finished her HSC in Biology, English, French and Japanese, as well as Grade 7 violin and a university based Distinction Course in Cosmology. She had also represented Australia in the Physics Olympiad.

The primary school initiated the grade skipping and her parents agreed to it. Her parents supported her in her acceleration and sometimes contacted the high school to suggest changes in pace and sequence of subjects, based on Gena's academic needs. By the time she enrolled at university at the age of 16 ½, Gena had completed 16 units of her HSC. She entered university through the usual UAI procedure, and there were no questions about her age from the university personnel.

School social experiences.

Gena declared that she had never found her social niche, until she reached university. She found primary school very difficult; she refused to go to school, had tantrums and was "just generally not getting through".

> The whole process of ... growing up and becoming an adult **is** about finding our niche. Nobody really does until they…have worked their way through. Some people might feel they belong with certain people, when they're in primary school or when they're at high school. You take the roles that are assigned to you really, but…you never really know what …where you belong …until you come out of school. Until you're an adult.

She continued her analysis:

> Most people will still be working out their roles throughout high school. But…when you are accelerated or when you're apart, you don't get as much of an opportunity to find out that... role until you get into a group of people who are …with your interests same interests. I guess that you can't really fit in until you have a group of people to fit in with, …and when you are completely different from other people who are supposed…who are… put into the same peer group as you, its…the problem is like you are not even playing the game.

Family support.

Her family was constant source of support, and her father, in particular, was attuned to her academic progress, guiding and supervising her in her challenges.

Making the early admission decision and process of early admission.

Gena's early admission was routine in that she had satisfied the university's requirements. There were no questions about her age. For her, university was automatically the next step. She had no regrets about leaving high school as she had completed the various stages, and even though she had social difficulties fitting in, she did not consider that this was equivalent to regret. A

professor of Gifted Education had supervised and guided her in some educational decisions, as well as her father.

Gena took a double degree: a Bachelor of Medical Science and a Bachelor of Medicine. At the time of the interview she was completing the requirements to be registered as a doctor.

University adjustment.

It took Gena approximately one week to settle into university. She attended a transition workshop in the first week of the term; there she met students who were doing the same course and with whom she became good friends. Academically, her adjustment was easy but group work a new experience:

> Ah…well…the work itself I did not find challenging at all, but it was a lot more based on self study and I had to get used to group study. Well, I guess I was new to working in groups but...it was the idea of voluntarily having a study group that was completely new. Group assignments? It was all right.

Gena had developed her self study skills during high school and these held her in good stead for university study. Her participation in the Physics Olympiad had helped her develop some social skills for group work, but much of her university course was very ordered:

> ….I mean, my course was fairly involved in that, being a Science degree, there was a large number of contact hours, which made it more like school. If I'd been doing say a law degree or an arts degree I would have found it a lot harder because most of my time was actually spent in lectures and tutorials. And it was very structured and so it wasn't very hard to get into.

Gena enjoyed the lectures because they presented her with new information. She confessed: "I didn't find university to be…tough academically or particularly involved. I mean it was time consuming but it wasn't…difficult". She found the 24 contact hours per week demanding, especially with an hour and a

half travelling each way. She did not seek support from university resources, although she was a participant in the Distinguished Scholars Program and in the Talented Students' Program. Her mentor from the latter program was there to offer career advice; she did not need help with her academic work. In fact, Gena was academically accelerated at university: her Physics Olympiad experience enabled her to go straight into second year Physics. Thus, because she was academically advanced, she was able to offer academic support to other students in her year.

Gena did not feel conspicuous because of her age, and she did not feel socially awkward.

> Well, in my group of friends, we were a bunch of girls and dating really wasn't an issue. And drinking really wasn't either. I guess the groups that I was in just had reasonably similar interests and a little bit academically focused.

For Gena, the impact of travel was a negative issue, and friendship through the Madrigal Group was a positive influence in adjusting to university life:

> Travel. It made me tired. Other than that...I guess it was more that…well, one, it made me tired but also my family did not appreciate me spending so much time away from home. That caused a little family tension….A little, yes, especially when I was doing extra curricular things like Madrigal Society. It just meant that I was coming home a bit late ... a bit difficult with buses – an hour and a half one way – three hours a day...

Her future.

At the time of the interview Gena had completed two degrees. Her future plans included becoming registered as a doctor, and working for a few years as a resident doctor in a hospital. Then she planned to take 3 years' training as a physician, to become a member of the College of Physicians, and then 3 more years of training in microbiology to become a specialist. She recognised that her

pathway was a tough one, as the volume of work was enormous. She did not think the degree of difficulty would be onerous.

Her reflections.

Gena would make the same decisions again about her acceleration.

> In terms of early admission to university, definitely. University is a bit more of an accepting environment than high school is, for a gifted person.
>
> In terms of acceleration? I would, because well obviously I was very lucky in terms of …the way mine was managed, and I had a lot of opportunities. I think I would want more support – psychological support – at the school level. Not necessarily by the school, but at that time.

Academically, Gena felt most successful in high school, where she was challenged in a variety of subjects through acceleration. Socially she felt more successful at university, because of the culture of freedom. However, she experienced some mental illness at university, and did not develop essential skills to manage her own life:

> I think [there] is a difficulty for gifted children – no, for gifted young adults who find themselves in the freedom of university. We do not need to study. You can cruise through university and pass everything with high distinctions, and not do much. And that doesn't prepare you for challenges.

She continued:

> I would be interested to know how other gifted people have gone through university, not doing… well, not having to do a whole lot, and learning skills like project management, time management.

Support, she admitted, was available at university:

> …I guess there is guidance out there for people who have difficulty finishing a piece of writing but it wouldn't necessarily occur to someone – who has always been ahead – to go and look for that, to look for help.

For Gena acceleration bought her time to get on with her life and choice in her career path. It enabled her to meet with like minds, and to meet her husband. Her advice to students considering acceleration was direct:

> Go for it! And seek support, because there's an opportunity…university is an area of opportunity, of every sort but, while there isn't the academic focus that there is in high school, there are opportunities to develop in a lot of other area…music and sport, for example,…Yes. It is also a time to grow up, to have fun, to develop socially, to develop emotionally, to go out and do things.

Her advice to universities was to look to areas, other than academic, where bright students may need help, "other avenues of support and counselling, child care, law advice, library support". She felt there would be value in having a mentor "…who actually gives you a challenge of improving something you've never worked on before", rather than a career advisor.

Her words of wisdom echoed the concept embedded in her advice to the universities about considering the non-academic aspect of gifted students:

> …gifted students, I think, have more opportunity to be introspective and work these things out for themselves but they need to…No-one is going to look at your weaknesses, because you are doing well, and that's something that needs to be looked at. Because you're doing well, you have more opportunity and time to work on other areas.

Case study 8: Steve.

A university colleague mentioned Steve to the researcher, and asked him for permission to forward his email address. Steve was then invited, by email, to participate in the research; he agreed. A transcript of the interview was sent to him but he did not respond. Steve was 18 years of age at the time of the interview on 12 December, 2008 and had completed the second year of his degree.

Interview summary.

Acceleration history.

Steve was first accelerated from Kindergarten to Year 2. In primary school, Steve was placed in a gifted and talented class, and then placed in an opportunity class (a selective class for bright students) for Grades 5 and Grade 6. He then progressed to a selective high school where he had a series of subject accelerations with a cohort of peers. In Year 9, the accelerated class completed Year 9 and Year 10 Science in one year; in Year 10, the class completed Year 11 Chemistry; in Year 11 the class completed HSC Chemistry. At the end of Year 11 he participated in the Chemistry Olympiad Summer School but was not included in the final team. In Year 12, Steve was able to undertake a Distinction Course in Cosmology which he thoroughly enjoyed.

The initial grade skipping of Year 1 was instigated by the school, and all other accelerative options were instigated by the various schools Steve attended. Steve's mother was positive about the grade skipping, but his father disapproved of acceleration in general. However, his parents were divorced at that time, and his father was powerless to oppose the move. Steve completed his HSC, including a Distinction Course, and his enrolment at university was routine.

School social experiences.

Steve felt "out of place' as he was growing up. When he was accelerated into Grade 2, he continued to mix with his Grade 1 friends in the school yard; he had no special friends in Grade 2. He changed schools at Grade 3, so he was able to start afresh in making friends, and he adjusted, thereafter, to being with students a year or two older.

Family support.

Steve's mother had approved of the grade skipping, and thereafter did not oppose the subject accelerations. He found that in the selective high school there was little choice about acceleration.

> … It was like there was a culture that it was a good thing to get into the accelerated class…so because that means you're smart…so you were selected by, like, the Science department. It meant you were in the top 20 something students in the grade so, you couldn't say no.

Making the early admission decision and process of early admission.

Steve turned 17 years in the January of his first year at university. He followed the usual undergraduate routine for enrolling and no questions of age were raised. He enrolled in a Bachelor of Computer Science. He was treated like any other undergraduate and that was the way he liked it.

University adjustment.

When he had chosen subjects he liked, Steve responded to university study with ease; he persisted, nevertheless, with wrong choices:

> There weren't really…there weren't challenges…Well…OK…the courses that I've had trouble with have been courses that I shouldn't have taken because I wasn't really interested in them. So like…even if I wasn't interested in…I thought I was interested, but [when] I found out what they actually were, it was too late to change. I could never drop – I could have dropped them but, you know… I don't [sic] want to. I kept thinking that I should give it a go.

Steve reported that the university based Cosmology course in Year 12 was excellent academic preparation for university, as he had learnt to do research, write essays and compile bibliographies. Steve also found that the skill of "coding," or programming, acquired in HSC 4 Unit Maths, helped with the tertiary computer science subjects.

What Steve enjoyed most about university were the student societies, especially the Computer Science Revue, and the hockey club. He did not enjoy all the lectures, especially the ones that lasted 3 hours. He found the Computer Science Mentor program useful for getting to know the older students when he was in his first year, as well as simultaneously getting to know fellow students in his own year. When he later became a mentor, he found it a useful way to get to know the younger students and to get them involved in the Revue.

Steve found that being underage for drinking was difficult as it limited social activity. His tutors knew he was younger than his peers but did not treat him differently. Dating was not a problem and he continued living at home

His future.

Steve aimed to do an honours year in Computer Science, but he had not articulated his goals beyond that.

> I have no idea what I'm going to do after I have finished at uni, no idea. I like…I haven't decided whether to continue the academic studies or to go into work. At the moment I've got a casual job, and before that I was casual tutor, for 1st Year students.

His reflections.

Steve found it difficult, in hindsight, to evaluate his early grade acceleration. He presumed that he "would have been more bored". He commented on that grade acceleration thus:

> I don't know. Because of a lot of social problems. Well, you feel out of place a bit… and then you are continually, you know, a year younger than everyone else in your cohort, or alternatively, you are a year ahead of everyone else in your cohort, like mentally, and being a year younger is more sustainable.

Social dislocation in high school and university was caused by the fact that he was unable to do some age-appropriate activities with friends, such as participating in paintball, donating blood, or drinking.

He did enjoy the subject acceleration in high school, because "it is a lot easier to do the course if you have all your friends there with you and you can study together". He also appreciated the chance to participate in the Chemistry Olympiad Summer School and to study Cosmology.

He considered that at university having friends was the best way of getting support. His advice to the universities considering enrolling young students was to take each one case-by-case. His advice to gifted students about acceleration was as follows:

> I'd probably say "Do it", if you're well…if you're interested. Like if I was offered a chance, you know, to accelerate in some subjects that I really didn't like, like English, then I probably wouldn't do it.

Case study 9: Sophie.

The researcher had known Sophie as a secondary school student where the researcher had once taught. The student's name was put into a search engine, and her name was identified as a staff member at an Australian university. Emails were exchanged, and the invitation to participate in the research was accepted. Sophie was 30 years old at the time of the interview on 20 March, 2009.

Interview summary.

Acceleration history.

Sophie was accelerated by 2 years. She skipped from Grade 5 to Grade 7; Year 9 and Year 10 were collapsed into one year. Sophie's parents instigated both

of the accelerations and each involved changing schools. The first move was from a primary school to an all girls' secondary school; the second was from the country secondary school to a city private girls' school where she spent half of the year in Year 9 and the second half in Year 10. The receiving schools were happy to accommodate Sophie, especially the private school which then willingly accelerated her to Year 10.

School social experiences.

As a child in primary school, Sophie did not have many friends. She was a solitary person; she did not get on well with her age-peers.

> …it's funny – when we were talking about the acceleration at first and people would say to my Mum "You know, it's really socially disruptive". She was just like, you know, "Oh she doesn't have a social life anyway and it's not going to affect things".

Sophie was keen to leave primary school as she was bored, unhappy and wanted to move on. She was much happier at her secondary school, after the first acceleration, as she had more friends than before. She also had friends outside school – neighbourhood friends and ones from gifted and talented courses. It was a very large school, where "all the smart kids who were into school hung out together". However, when the "rough" girls realised that Sophie had been accelerated, they caused trouble by picking on her and threatening her.

Sophie found the second acceleration was challenging and interesting, as she had to "catch up". The mid-year move, however, from Year 9 to Year 10, was socially disruptive, as she was new to the school and self conscious about being accelerated.

> …so, you know, I always felt like basically people treated me like a bit of a freak, really so I think, after that, especially after the second time that I got accelerated, I really started, in a way, to act out. Like I made friends

> but a lot of that was based on like going out heaps, just started to drink a lot, like the girls at school who took drugs, you know, really trying, I think, to prove that I was one of them and just normal.

Sophie did have friends then, but she did not work hard in Year 11. In Year 12, after the school called her parents in for a meeting, she settled down and achieved an excellent HSC. She discovered punk music whilst she was in secondary school and that interest was sustained for the first few years of university; the friend with whom she shared that interest has remained a good friend. However, friendship in general, seemed to have eluded her:

> …when uni started, pretty much immediately, I fell out of contact with all of my friends from school. And then, you know, I had another couple of good friends, then fell out of contact with all of them. And did that quite a few times until, probably, I was about 21, I guess. And it's only, like, now – 'cause I'm 30 now – and I have friends still that I met then, but apart from that… I was 15 when I finished school, and that whole period, apart from now, I don't [*sic*] have any friends.

Family support.

Sophie's parents were the catalysts for her acceleration. When Sophie moved to the city, they remained living in the country and she boarded with her older step sister. It was during these later years of high school that Sophie "acted out" by experimenting with alcohol and drugs, and attending punk gigs.

Making the early admission decision and the process of early admission.

For Sophie the next automatic step was university. She was pleased to have accelerated:

> … the main reason I was happy to do it was because I wanted to get out of school, fullstop. I was excited about the idea of going to university but I didn't really like school. So …in that way, I didn't really have any regrets.

Sophie did not consider that her parents were supportive. Her mother displayed her ire when Sophie's HSC marks were not sufficiently excellent to merit mention in the newspapers.

> My parents at that time were more pushy than supportive. I definitely did feel, by that stage, like we didn't have a very good relationship around that time, end of school and beginning of uni. And I did actually feel very pushed by them.

She enrolled in Medicine. She had considered changing to Law, but by the end of the first year she swapped to an Arts degree. Her parents approved of her doing Medicine but were very angry when she changed to Arts for they were disappointed that they "had wasted all this time and money and effort" for her to do an Arts degree.

Sophie was 16 years old when she enrolled at university. She had completed the HSC and was accepted through the usual UAI process. There were no questions about her age. She began her degree at one university and completed a Bachelor of Arts, with honours, at another university. For the next 2 years she tutored at the university and worked part time. At the time of the interview, she was completing her PhD at an interstate university on a scholarship.

University adjustment.

It took years for Sophie to adjust to university. She had problems with an anxiety disorder which had begun in secondary school but which became much worse at university. She had panic attacks when she had to write major essays or assignments, and she needed outpatients' psychiatric treatment.

> The academic challenges were just fine, in terms of academic stuff but just I ended up having serious problems…I had other social [sic] and the psychological thing about submitting being the main problem. When I wasn't affected by that, I liked it .So that wasn't really a problem.

Her academic record shows that Sophie was able to cope with tertiary studies, but was disabled by her anxiety. Her academic record was a mixture of High Distinctions, Withdrawals or Absent Fails. She did not have any academic problems with Medicine; she decided it was not the career she wanted. She explained: “I didn’t like my Medicine subjects. I thought they were really boring. You know, that kind of rote learning stuff”.

Her study time at university was not continuous. She became involved in student activism and student protests, and she took time off. The following year she worked in a paid capacity, for the National Union of Students. There were personal problems, as well as the anxiety disorder, and she did not complete any of her subjects. Finally she applied to a different university where she repeated and completed her third year and an honours year in politics.

Although Sophie took a long time to complete her first degree, she did not consider her difficulties in adjusting to university were connected to her acceleration or her age.

> I think it was a combination of things. It was more to do with stuff from my family, than that [personal] stuff, then I don’t think – and thinking back now, I had problems I had to deal with and I don’t think…I actually don’t think they were exacerbated by going to uni. I don’t think I would have been happier or better adjusted by still being at school an extra two years.

Having changed schools several times helped Sophie cope with new institutions; thus, adjusting to university was not an overwhelming experience. Her academic skills were fine. She had lived away from home for 3 years and had learnt to be independent. However, the freedom at university was a challenge:

> …it’s mainly those normal things like not getting too carried away when, you know, you realise that you can just not go to class. No-one cares. But you do have to control your own life very much more.

Once she had sorted out her course, and her problems, Sophie enjoyed her university studies.

> Actually, I loved the subjects I did in my Arts degree like, you know, the critical thinking, finding out about the world by challenging yourself – I loved writing – it's one of the reasons I really like doing my PhD so yes, that was good for me. I loved the humanities. Recognising that I didn't want to do Medicine was really good. That's something, finding what you are passionate about is a big thing…Like what I'm doing now is what I really want to be doing.

Sophie used the counselling services at university to help her sort out her personal problems, and her lecturers were very supportive. She was at pains to dissociate these issues from her acceleration. What she wanted was "… basically, for no-one to know that I was accelerated. And to go through and just be normal".

She did not feel conspicuous because of her age; she used fake ID and socialised with her undergraduate peers. Drinking and drugs did not have a great impact on her at university as she had experimented with them during high school. She did not feel conspicuous because of her ability, as there was a wide mix of abilities in the Arts students; she was aware that lecturers noted her ability, her keen interest and her good marks.

Her future.

Sophie's goal in the immediate future was to complete her PhD. She would like to apply for a post doctoral position and, within the next 5 years, work in the United States where her particular field of cultural studies and feminist theory is vibrant. She would also like to take advantage of her passion for writing by publishing her doctoral findings. In the long term she would like to work in academe, either overseas or in Australia.

Her reflections.

Given a second chance, Sophie would make the same decision about acceleration:

> … I did want to get out of school and I did want to get to uni and I really wanted to start my life. I felt like things were just on hold and I don't think it would have been very good for me to stay at school any longer. Definitely…I don't have any regrets about it.

Having found strength to overcome her personal problems was her great achievement and made Sophie happier and more confident. She felt she had also been successful in achieving her academic goals, even though it had taken many years to move forward. She listed factors for achieving her success: "Academic success, academic support along the way, from academics, I've had good friends – friendships have been a big thing for me, in my life". Her greatest delight and encouragement has been to have found her passion for what she is currently doing.

With hindsight, Sophie considered that, during her first year at university, support in the form of a mentor or a supervisor may have been useful. To have kept an eye on all students as they adjust to university may have mitigated problems, especially for the younger students. She was quick to admit, however, that with her personality, she may have resented any such help and been keen to deny any such need; she did not want to be treated differently. As well, she considered that it would be beneficial for universities to advertise more widely the support services available. As an afterthought, she added:

> …if things were just more flexible in general, like … having better services for mature aged students, for instance. I think it would make universities much more interesting place [*sic*] if they weren't so focused on between the ages of 18 and 22.

For Sophie, the acceleration had been stimulating, for she had been able to do the things she wanted to do. The social adjustment in school had been difficult, but overall, it had been worthwhile.

> …it gave me more time. It gave me more time at uni…I stayed at uni in my undergrad time a long time – and that was actually good. And it gave me a bit more time to discover myself, I suppose, and to change courses.

Her advice to other students considering acceleration was as follows:

> …if people want to do it, it's a good thing. I think there are things about it that are hard… But actually what the difference is, is that problems change; it's just that they are different problems. You do feel, I think, a lot of pressure…are you going to accept that you are different? And younger? Or are you going to try to fit in?

Case study 10: Tim.

A professional colleague suggested Tim, a 24 year old, would be a suitable candidate for the research, and emailed him a request to contact the researcher. After the initial contacts, he agreed to be interviewed. Later, he his amended script, and completed Question 6, his reflections. He also clarified some points by email. Tim was 24 years old at the time of the interview on 31 October, 2008. .

Interview summary.

Acceleration history.

Tim was generally unhappy and disconnected at his first primary school and he moved to another school to participate in a gifted and talented extension program. It proved to be a good opportunity for change. When Tim was halfway through Grade 5 in the program, it was suggested that he sit for the Selective Schools Admission Test. He was accepted at a selective high school for Year 7 for the following year, and the school decided to grade skip him to Year 6 for the

final term that year. He spent 3 successive terms in three different grades. His parents were supportive of the acceleration, but were concerned, nevertheless, whether it was the right decision. He was quite bored in primary school and lacked a sense of direction: “I was bouncing around in primary school without really knowing what I was doing”. He completed his secondary schooling in the usual sequence. His high school experience was, academically, disappointing.

> I thought, to be honest, I imagined that moving to high school would be like going to university really is, which… that there’d be kind of …more freedom and open-ended…staff with more a focus on actually doing something. I don’t know… some kind of objective, rather than kind of sit in classrooms and be instructed, be told.

School social experiences.

In primary school Tim found it difficult to connect to his age-peers, and his behaviour was poor. When he joined the gifted and talented program, a special program attached to the primary school, he slowly began to readjust and made friends with fellow students in the program, some of whom have remained friends in his adult life. He was 10 years old when he accelerated into Grade 6, and 11 years old when he was accelerated into high school, and he felt some social displacement:

> I hadn't really done enough growing up to have a well developed social niche. I'd been to a couple of schools by then. I'd had no genuinely close friends at the first and a small group of nerds for friends at the second. In high school I was something of a loner again for the first couple of years and then became part of a fairly loyal group of social outcasts midway through school. We played a lot of card games. Most of us still play soccer together.

He was ambivalent about how his acceleration affected his social adjustment in high school:

> Well... I mean…the regret about making this decision is that it is the kind of decision which differentiates you from your peer group and it took a while for me to socially find my niche, at least in high school, as I understand it. I don't really know that, if I'd stayed another year, that it would have been any different.

He continued:

> I know that I didn't really fit in socially at high school until the later years.

Family support.

Tim felt that his parents were supportive of his acceleration; his mother was relatively keen on the move but his father was more ambivalent. Making the decision to accelerate into high school was not a difficult one, though naivety had led Tim to expect that high school would be more of a challenge.

Making the Early Admission Decision and Process of Early Admission

Tim entered university at 17 years 4 months, after completing his HSC. His enrolment was routine for an undergraduate, and even though he was a year younger than he would have been, had he not accelerated, he felt he had adjusted to any age differences. He completed a double degree: Bachelor of Engineering (Software Engineering) and Bachelor of Science (Pure Mathematics). He gained first class honours in Software Engineering.

University adjustment.

From an academic perspective, Tim coped well with university.

> …aspects of university are challenging, there's no question about that. During my second session I overloaded more than I should have and that was actually quite difficult, but mostly I coped with university work without much of a problem.

His biggest struggle was with time management, when he chose subjects but was unaware how much work was involved with each subject. He enjoyed the more flexible social environment of university, as well as his actual studies.

> I liked a lot of things about university I've been involved in. The normal thing to point out was that I liked the student clubs…get [*sic*] involved in different groups of people…There were a few different groups but…Look, I actually really kind of enjoyed some of my university studies. I liked the subjects I was doing.

Tim did not seek any of the support systems the university offered, as he did not feel the need; rather, as a senior student, he volunteered to be a mentor to the first year students. In his first year he had found informal support from the older students when he joined one of the university clubs:

> …it's a very big group and it's a very broad group and it's not particularly difficult to meet people who were very supportive, to point out the obvious to you…just the kind of people to point out the obvious things which you wouldn't have known, if you were kind of bumbling through without help, or just staying together with your high school year who were as ignorant as you are.

Tim found support through the academic staff in his faculty. He had participated in the Mathematics Olympiad in Year 12 at high school and, therefore, knew some of the Maths staff who understood the academic perspective of gifted students:

> …and there's this kind of …[understanding] that …we do things differently and …[they asked] can we find something for children with more background in mathematics than the average do? And so in that sense, that was very academic, very academic perspective, very good…very academic.

One such staff member adopted a supervisory role whereby, at 6 monthly intervals, he conducted informal interviews to discuss possible career paths with

Tim. After his third year, the Maths department provided an extra intellectual challenge through a program of subjects which were beyond the curriculum.

Tim did not feel conspicuous because of his age, as he was only 12 months younger, or his ability. He had joined a lot of different university social clubs – Game Players Society, the Christian group, the Debating Society – and coped with social situations involving alcohol when he was underage. Living at home was a positive factor in his adjustment to university life, and he was able to keep in touch with former high school friends; university was not such a big shift for him. College life, by contrast, may have presented social challenges which he did not discuss.

His future.

Tim was employed as a research engineer in an information communication technology firm which was associated with computer science research in universities. After his position as a research assistant, he hoped to undertake PhD studies at a different university. He did not articulate any further goals.

His reflections.

Tim would make the same decision about acceleration, to skip one whole year. He attributes his success at school and university thus:

> I guess I'd have to thank good teachers and lecturers and good friends for making it an interesting and enjoyable time. My experience has been that, on the whole, myself [sic] and my friends have succeeded at what we found interesting and challenging.

He did not seek extra support at university. “I think that a healthy campus community which allows people to meet others, particularly those outside their year group, is important”.

His advice to other students considering acceleration depended on the individual view point.

> It's easy to look down on the official curriculum, but at the same time, going too far out of order tends to mean you miss things…On the other hand, the flexibility of uni can be really valuable and refreshing to frustrated high school students. So I think it would have to depend on the extent to which the student thinks these various problems and benefits might impact them.

Tim had no particular words of wisdom to offer gifted students.

Case study 11: Nanette.

Another university colleague suggested Nanette as a likely candidate, and arranged for an exchange of email addresses. She accepted the invitation to participate on 17 December, 2008. Nanette, a Vietnamese-Australian, was 21 years old, and had just completed her university studies. The complete transcript was sent to Nanette for checking; three weeks later a reminder was sent, and she then sent her amendments.

Interview summary.

Acceleration history.

Nanette was accelerated by 2 years. When she was half way through Year 1 the school moved her to Year 2. After experimenting with her scholastic year – without explanation – by moving her into different classes, the school principal consulted her parents who agreed that she be moved from Grade 3 to Grade 5. She was moved to an Opportunity Class (OC) for Grade 6. The accelerations were totally instigated by the school and, on reflection Nanette considered it all felt very experimental. There had been no testing done until the move to the OC class.

Nanette's parents were Vietnamese, and trusted the Principal, whom they believed knew Nanette well. She had been very bored in class.

> …I was accelerated mainly because of my skills in English and reading. Because I started reading when I was quite young so – probably about 2ish, 3ish. So I was reading little teenage novels when I was in kindergarten. You know, my parents didn't know any better, because they couldn't really speak English that well. And they were not aware of the level I was reading at. My parents just said "Well, she's reading a lot. That's probably a good thing, so let's encourage her".

For her secondary schooling she attended a selective high school. Nanette then proceeded to university at the age of 16 years.

School social experiences.

Nanette did not find her accelerations disruptive to her friendships as the primary school had composite classes. She explained: "I had a few friends who were in the same classes despite the difference in grades, and since I was at the same school I didn't lose touch with my friends in other classes."

In secondary school the age difference was not an issue for her:

> When I went into high school, I pretty much forgot about the age gap. And I kind of just went along so anything that my peers did, I was just like expected to do the same. There weren't any different expectation of me whatsoever.

Family support.

Nanette's family was her chief source of support, and pressure:

> I always had some amount of pressure from my parents to perform well. As well as that, since I was at a selective school, there was the usual pressure of being in a cohort of high-performing peers which forced me to try to perform my best. The fact that my own brother was one of my peers also added to the pressure.

It was an awkward situation for her brother who was 2 years older than Nanette, for they ended up in the same scholastic year, but at the same high school.

Making the early admission decision and process of early admission.

There was always an assumption that Nanette would attend university, so after she had completed her HSC, it was simply the next step. Her parents were a little concerned about her being young at university but Nanette attributed this to be parental protectiveness. She was just 16 years old when she enrolled in her double degree: Bachelor of Science and Arts. There were no queries about her age and her enrolment was routine.

University adjustment.

Academically, Nanette found that university was as she expected and she had no issues in adapting to it. She enjoyed selecting subjects which catered for what she wanted to study. Her experiences in going from high school to university, she claimed, were no different to any other undergraduate adjusting to the change.

Socially, there were minor setbacks because she was only 16 years old – she was unable to go to bars. She did not drink alcohol very much so it was not an important issue, even though it did affect some of her social life in dating situations or when other students discovered that she was unable to participate in social activities.

> "Oh, we're having a training camp and there'll be drinking. What do we do about you? You're not 18." So they just said "Oh, OK. Well, just don't drink. You're not allowed to, and be sensible." I was just like "OK. I'm used to that. I'm fine."

However, she had long adjusted to being with a cohort of older students at school so she did not find it difficult at university.

> I've learnt to adjust. I've had to mature a little bit more quickly than others because, you know, I was put in an environment where I had to, you know, behave and learn in a group of peers who were, like, a little bit older than me…

Nanette enjoyed the freedom of university:

> And there was a lot of flexibility you know, what I could do and when I could do it and so on and so forth. And since the [Science and Arts] timetables are different, I had some time to do extra curricular activities, get a job and that sort of thing. I participated in volunteer programs at the university.

Studying, examination cramming, and examinations were not Nanette's preferred style of learning. She favoured assignments where she had time to think about her work; she enjoyed her Arts course more than her Science course. However, she hastened to qualify her comment by stressing that this was a personal preference and had nothing to do with her acceleration.

Nanette did not seek any support from the university in terms of her acceleration.

> In terms of general support, I was…since I participated in the volunteer programs, I was always aware of things like counselling, Access and other schemes like that. I did go to counselling a few times because I was aware of it, but other than that, there wasn't anything major or specific to me.

She was treated as a normal undergraduate and that was the way she liked it. Nanette did not feel conspicuous because of her ability. It was merely a small, interesting point, for friends noted that she was younger and so deduced that she was very smart. It was only ever a side issue, stemming from her age. It was never an issue in her studies.

Living at home was a positive factor in Nanette's life. It was a cultural matter, and she was still with her family, at the time of the interview.

Her future.

Nanette had completed her double degree and had applied to do honours at another local university. She had dreams of continuing her studies in microbiology at the Masters level, and teaching at tertiary level. If those plans failed, she would start work in the scientific or medical field, such as the Red Cross.

Her reflections.

Given the same chances over again, Nanette conceded that she would hesitate about the early acceleration of 2 years:

> I think one grade is not too bad because there is a fair amount of variation between, you know, ages and maturity gaps in one grade of school but 2 years might be a little too much. I'd probably take a bit more time to think about it.

However, in terms of early admission to university, she was very positive about her own experience. She viewed herself as having had a "distorted time line" and that, having arrived at the end of her degree, she had achieved her goal, rather than having saved time. Personal motivation to succeed, coupled with the pressure generated by the Selective High School, contributed to her success.

Her advice to the universities was to acknowledge that young students had enrolled, and to point out what support services were available to them. She considered that it would be worthwhile screening and evaluating the younger student to ensure that s/he was ready for the different environment and different learning atmosphere.

Her advice to students considering early admission was that in order to balance the social and academic life, it was important to consider the social factors which difference in age caused:

> Just the fact that you may be a little bit different to your peers and…if that is something that makes you uncomfortable, then you may have to think twice. [If they] don't enjoy what they're doing, and don't have the right motivation, then they are just not going to succeed. So you [*sic*] need to have that push in you as well.

Her final words of wisdom were as follows:

> …just make sure that you are doing it for the right reason, and the main thing that is important is you, yourself, not your parents, not your school, or whatever. Just make sure you're happy with what you are doing.

Case study 12: Adrian.

Adrian was the brother of another research participant, and had been mentioned by a university colleague as a possible participant. His brother gave the researcher the email address, so the researcher was able to email Adrian. He agreed to be interviewed by phone. The researcher took notes during the conversation, which was not recorded. The transcript was forwarded to Adrian, and he replied with additional comments, including a response to Question 6, his reflection. The additional comments complemented the somewhat brief telephone responses, which may have been induced by the fact it was a not a face-to-face interview. Adrian was 19 years old at the time of the interview on 3 December, 2008.

Interview summary.

Acceleration history.

Adrian was radically accelerated by 3 years. He experienced early entry to Kindergarten at 4 years. After Kindergarten he was accelerated to Grade 2; he was then accelerated from Grade 2 to Grade 4.

His parents had to push hard for the acceleration. The school was most uncooperative. The school rejected references supplied by Professor Miraca Gross, UNSW, on the grounds that she was not a NSW Department of Education (DET) psychologist. The school doubted the claims made by his parents, as there was no proof or evidence. It insisted on having 4 hours of objective tests which were administered at school, beginning at lunch time. The school verbally offered Adrian's parents some choices, but never followed through. Eventually, his parents sought help from a NSW DET arbitrator and communicated with the school by letter and fax. Unexpectedly, the school acquiesced and Adrian's parents accepted the offer of a 3-year acceleration; they had been seeking a 2-year acceleration but accepted the school's offer for fear of getting nothing.

Adrian then proceeded through Year 4 to Year 12 systematically, and at 15 years of age, after completing his HSC, enrolled at the local university.

School social experiences.

Adrian found it difficult to mix socially with his class mates as they were about 3 years older. He felt he had no friends in high school.

> I had regrets about the acceleration in high school as I felt excluded from social activities. I was a recluse and an outcast, socially. It was not until I was 17 -18 that things turned around. Academically, from Year 7 to Year 12, I felt I was marking time, waiting for the piece of paper at the end to show I had completed the course. It was not enjoyable…

He did not find his social niche until he moved out of home in 4th year university, when he moved to college.

> There I was finally close to people my age (as I was 18) who were also in uni, so I could relate to them. Also, when I lived with my parents, I lived 1 hour south of uni, so it was really hard to socialize with anyone from uni, especially as I didn't have a [driver's] license [*sic*].

Family support.

Adrian's family was a constant source of support, and his older brother was particularly encouraging during Years 11 and 12.

Making the early admission decision and process of early admission.

Adrian completed his HSC at 15 years and so going to university was the next step. His enrolment was routine, through the UAI process.

> I both regret and don't regret leaving high school early. I regret it, as my high school experience was awful and I had very few friends, I don't regret it, as I managed to escape high school a lot earlier, and now it is very useful in applying for PhD placements to top unis.

He enrolled in a Bachelor of Advanced Mathematics with Honours, majoring in Applied Statistics.

University adjustment.

Adrian found mathematics academically difficult in first year at university, as he did not like the subject and he felt very keenly the comparative competition with his brother who had preceded him, and who used to get high distinctions. After he swapped to statistics, he coped well with the academic challenges, and went on to do honours.

> Socially it was a different story: “I was younger. I lived further away than others. It took an hour’s traveling [*sic*] on trains. They stop at midnight. I didn’t drive so it was a disaster”.

He did not enjoy his first 3 years of university as he felt excluded, but he did cope through his own resilience:

> I was used to coping. Acceleration had made me resilient, it made me more mentally tough. Pretty much I just had to be incredibly resilient and plough through the hard times waiting until I was old enough to properly socially interact with my fellow students.

He felt conspicuous about his age: “Because I was young, I was singled out. I could not go to a bar. I tried fake ID. I couldn’t drive so had to use the train. I was not invited out”. He found dating a problem as well:

> I felt incredibly alone, as I couldn't go out with any of the girls at uni. I eventually I started going out with…a girl my age (still going out with her) which made me a lot happier, but was still very hard, as it was hard to socialize with friends and girlfriend, as everyone is at different stages of emotional development/maturity.

Adrian suffered depression in his first year at university. It was a challenge to cope with that, as well as his social isolation. He worked hard, academically, in order to achieve his dream of eventually attending a world class university. Adrian only began to enjoy university life when he moved into college, where he had friends and felt normal.

Adrian appreciated the lecturers treating him like everyone else. He did not find any support at university but nor did he seek any, although the lecturers were willing to give the able students extra work, challenges and opportunities.

> Uni lecturers generally view acceleration as a bad thing, unless you excel in your field with acceleration, then they think it's really good. They waited until after I had proven my "worth" (which took until the 3rd year of uni) before they started offering me things, such as an honours internship…and a PhD placement at Harvard.

His future.

Adrian had definite plans in mind:

> I hope to go to Harvard to do my Masters for 2 years. If I like it I will do my PhD there. I want to get that piece of paper. Otherwise I would like to go in the Army. Be a diplomat or a firefighter. I do not like academe.

He continued:

> I really want to try an American College. Doing my Masters will be like a holiday in the USA. I will be able to do ice hockey and rowing. I want to try for the 8 man sculls. I want to go to a world class university to prove to myself (and everyone) that I'm the best.

His dreams were all encompassing, perhaps making up for his earlier unhappy times:

> I also want to go to harvard [sic] to have a real "university experience" i.e. living on campus (I already do that, but I'd like to do it over there as well), and getting involved in sports (rowing, ice hockey, snowboarding) and campus activities (photography for the university paper and possibly joining the orchestra – I play the violin….

His confidence about accomplishing his dream to study abroad was justified. In April 2009, it was announced that he was awarded an overseas scholarship to undertake postgraduate studies. After university, he wants to include enjoyment, excitement, and adventure in his future plans, perhaps initially as a firefighter, or in the defence force, but ultimately as a diplomat or as a medical doctor.

His reflections.

Adrian would make the same decision about acceleration – and his admission. He had learnt to be emotionally and mentally tough, and he saw long term benefits:

> If I wasn't going to a world class uni, there really wouldn't have been much point to accelerating…As it is, I will get an incredibly good qualification from Harvard, while being the proper age to enjoy all uni things at harvard, [*sic*] and I'll get out into the workforce at a good age (25).

Adrian's dominant success factor reflected his determination:

> The only real personal factor that contributed to my success was being mentally tough. I had to be very mentally tough in high school as I knew the only way to escape high school …was to go well at school, so no matter what, I had to work hard.

Social isolation and lack of friends affected his accelerated journey. It made him unhappy, and distracted his focus on work. However, he was able to turn his social isolation around:

> The best thing that ever happened to me was that by being socially excluded so often, I eventually realized that I had to fit in or risk being a loner the rest of my life, so I spent all of my time at uni trying to fit in.

His advice to other students considering acceleration highlighted the fact that his own journey had been lonely, stressful, long, and painful:

> It's only worth it if you will be the best. And by best, I don't mean a big fish in a small pond, I mean the best in the world. If you aren't going to be the best, don't bother with it as it's a lot of hassle, pain, and torment, and the payoff won't be worth it.

His advice to universities about early admission was equally bleak:

> It probably won't be worth it 9 times out of 10, and the students will either get poor marks, drop out of uni, or be a socially awkward freak, but for the 1 time out of 10 it will be worth it.

Adrian's words of wisdom for gifted students centred on the importance of social skills, and sporting skills:

> Learn how to socialize properly, not just with accelerated students as they are usually maladjusted freaks. If you can socialize with real people in the

> real world, then eventually you will get old enough that the age gap won't matter any more, and you will have friends and have a real social life.

He continued:

> …people are a lot more forgiving to fit and attractive people, and as you're an accelerant, you're going to need all the advantages you can get when trying to socialize, and no one is going to want to socialize with a fat nerdy accelerant who has bad personal hygiene.

This chapter has summarised the transcripts of the student interviews and included verbatim quotations. The next chapter presents a comparative analysis of the results of the interview, as well as a discussion of the themes which emerged from those responses.

Chapter 9: Results of Phase 3

Overall Analysis of Interview Data

The first stage in the data analysis was to summarise the transcripts into twelve individual cases which were described in the previous chapter. The next stage was to analyse the data overall by comparing and contrasting the responses of the participants. To do this, two separate analyses were completed in a similar fashion to the method employed in Chapter 6. The raw data from the student transcripts was loaded into NVivo 8. Then, firstly, the responses were analysed question-by-question and secondly, all responses were analysed together to identify the overall key themes that could be identified from the questions asked. These two analyses are reported below in the sections *Question-by-question analysis and Thematic analysis.* All student quotations were personal communications with the researcher, taken from the interviews with each participant. The dates of the interviews were recorded in Chapter 8.

Question-by-question analysis

For this analysis, some answers could be quantified. For example, the question “What kinds of acceleration did you experience in school before going to university?” (Q1a) the responses could be categorised. Questions such as “How were you able to find your social niche while growing up?” (Q1e) were open-ended questions and the responses could not be tallied simply. For those responses the researcher identified key responses.

Section 1: Past experiences with acceleration.

Q 1a What kinds of acceleration (give examples) did you experience in school before you went to university?

Acceleration fell into three categories: grade acceleration, subject acceleration, and a combination of these two. Four students experienced a grade skip of 1 year, five students a grade skip of 2 years, and two students a grade skip of 3 years. The grade accelerations mostly (n=9) took place in primary school but two students experienced grade acceleration in both primary and secondary school. Five students experienced subject acceleration: two began by taking accelerative maths in primary school, as well as multiple subject accelerations in secondary school; three students took multiple subject accelerations in high school. Four students undertook a combination of grade acceleration and subject acceleration. One student experienced both options in primary school; three students were grade skipped in primary school and then, in secondary school, took subject acceleration as well. A complete summary of each participant's personal history is recorded in Table 9.1.

Table 9. 1

Student History of Acceleration

Name	Primary School	Secondary School	Entered University
Suzanne	Grade acceleration: 1 to 3	Subject acceleration: HSC 2U History in Year 10 HSC Extension History in Year 10 HSC 3U English in Year 11 HSC 3U French in Year 11 Distinction Course in Year 12	Age 16.5
Daniel	Grade acceleration: 2 to 4 4 to 6 Radical subject acceleration: Maths Age 5 - Yr 6 maths	Subject acceleration continued: HSC 3U Maths in Year 9 [Age 12]	Dual Enrolment: Maths - Age 12 Full time undergraduate Age 15
Lucinda	Grade acceleration: 4 to 6	-	Age 17.5
Gena	Grade acceleration: K to 2 4 to 6	Subject Acceleration: HSC 3U Maths in Year 9 HSC 4U Maths in Year 10 Physics Olympiad in Year 10 HSC 2U Physics in Year 11 HSC 2U Chemistry in Year 11 Distinction Course in Year 12	Age 16.5
Steve	Grade acceleration: K to 2	Subject Acceleration: HSC 2U Chemistry in Year 11 Distinction Course in Year 12	Age 17
Felicity	Grade acceleration: 3 to 5 5 to 7	-	Age 16.5

Name	Primary School	Secondary School	Entered University
Sophie	Grade acceleration: 5 to 7	Grade acceleration: 9 to 10	Age 16
Tim	Grade acceleration: 5 to 7	-	Age 17.3
Sean	Grade acceleration: 2 to 4	Grade acceleration: 8 to10 11 to university	Early Admission: Full time undergraduate Age 15
Nanette	Grade acceleration: 1 to 2 3 to 5	-	Age 16
Peter	Radical subject acceleration: Maths by 3 years	Subject acceleration: HSC 4U maths in Year 9 HSC 2U Physics in Year 9 Grade acceleration: 9 to university	Early Admission: Full time undergraduate Age 15
Adrian	Early entry to K Grade acceleration: K to 2 2 to 4	-	Age 15

In general, grade skipping occurred mostly in primary school and subject acceleration in secondary school. The two students who began radical subject acceleration in primary school were gifted in maths. Daniel was 6 years ahead of his peers and Peter was 3 years ahead of his peers. Those who took subject acceleration in secondary school seem to have taken multiple subject accelerations.

Q 1b How willing were your schools to do this [acceleration] for you?

For six students, the grade acceleration had been suggested and instigated by the primary school, with the approval of parents. For five students, the primary schools were uncooperative, hesitant or reluctant to respond to a request for grade acceleration. It was a struggle to get the schools to implement the strategy. One student explained:

> The school was not at all willing. It was uncooperative. The school insisted that I have references …and that I had objective tests. The Primary School refused to accelerate me, and refused to accept Prof. Miraca Gross's [sic] references because they claimed they weren't valid as they weren't from a NSW DET psychologist… The school would offer things verbally to my parents, but then would never follow through and claim that my parents were making things up, as they had no proof, so eventually my parents would only communicate through the school by letter/fax and managed to get a NSW DET arbitrator (or something like that) to arbitrate the acceleration process. (Adrian)

Two students, Daniel and Peter, had early radical subject acceleration in Maths –3 years or more – in Primary School. One school was prepared to teach Daniel at his individual level, and when he moved from that school, it was a matter of his parents finding the various schools which would allow the radical acceleration to continue. Peter, who needed radical subject acceleration, found his school was most uncooperative, but it was finally was forced to accept the acceleration.

In summary, five primary schools were willing to accommodate grade acceleration; six primary schools were unwilling or uncooperative. The students then changed to other schools which were prepared to accept the acceleration. Subject acceleration mostly took place in secondary school, and the schools themselves instigated it, or were prepared to accommodate the acceleration.

Q 1c How hard did your parents have to push for the acceleration to happen?

Sometimes the school instigated the grade acceleration (n=5) and thus the parents were passive bystanders who accepted the move. However, some parents (n=7) had to actively advocate for their child by demanding that the school accommodate the student's needs. It seems that once the initial grade acceleration was in place, parents were then able to be more passive and let the school take the initiative for subject acceleration. If the student needed to change schools, then parents had to search for an appropriate school. It seemed that parents were active when they saw a need to advocate for their child.

Q 1d What was your route for entering earlier than the usual age?

Sean and Peter were enrolled through early admission. Sean had completed Year 11 and was accepted for an Early Admission Program at the age of 15 years as a full time undergraduate. The process was a formal case-by-case admission. Peter had completed two HSC subjects, and his other subjects at Year 9 level. There was no formal early admission program but the university accepted him on a case-by-case basis as a full time undergraduate at 15 years. This was out of the ordinary.

Daniel had dual enrolment: he had completed his HSC in maths and began university maths when he was 12 years in Year 9. This was also a case-by-case enrolment for it was unusual to accept a 12 year old at university. He continued with his university subjects while he attended high school and completed his HSC. He enrolled as a full time undergraduate at 15 years.

Nine students had completed the HSC and were enrolled as undergraduates in the usual way.

Q1e How were you able to find your social niche while growing up?

Nine students commented on their unhappy social experiences whilst in primary and/or secondary school; three students did not expand on their early social experiences. All students made some comment on the triggers or situations which helped them to find social ease.

The early negative social experiences were characterised by comments such as feeling “out of place”, “unhappy”, “disconnected”, “excluded” and “socially isolated”. The feelings of difference between the student and his age-peers were marked by comments focusing on lack of common interests, lack of intellectual commonality, lack of communication. Four said they had no friends at school. Three reported having experienced bullying. For some, a similar pattern of social isolation continued into high school.

The reasons for the social situation changing for the better were varied. Some found that the acceleration put them with an older group in school which they preferred; one found a multi-aged class eased the friendship separation. Three found that a change of school, with acceleration, alleviated social isolation. Three mentioned that Year 11 and Year 12 were socially happier years, perhaps because all of their other classmates were more focused and mature. Two

mentioned that participating in a talented class had enabled them to find friends. One found sport –handball, backyard cricket – was a passport to mixing with both age-peers and older classmates. Three found company in school with a "set of misfits". Friends outside of the school situation were an important resource for two interviewees, and two found participation in music outside of school a significant way of creating social connections. Two stated that their social situation did not change or improve until they reached university; one did not find a social niche until 4th Year university, when he lived in college. He was 18 years old by that time.

Q 1f Who, or what were the catalysts that moved you forward before you went to university?

Seven participants mentioned a single catalyst which helped move them forward during their school lives, and five participants listed multiple catalysts. For the single catalysts, four participants mentioned parents, two mentioned school, and one believed that it was a chance factor.

> …moving to the extension program at St Ives North seemed like a good opportunity for change, which is pretty much what happened. That didn't really need a catalyst, it was there, it seemed like a good idea, and everyone agreed it seemed like a good idea. Again with the acceleration into high school, the opportunity appeared more or less by accident, and no-one seemed to think there was any good reason not to take it. (Tim)

For multiple catalysts, five participants included parents, three included particular teachers, one included school and one considered her own motivation was her dominant catalyst. From this analysis, it is apparent that parents/family (n=9) were very important advocates, individual teachers/mentors (n=4) were key inputs, and school (n=3) in general was important.

Section 2: Making the Early Admission Decision.

Q 2a How did you find out about early admission possibilities?

Nine participants completed the HSC and entered university in the normal way, and therefore did not need to seek an early admission program. However, three participants were in need of being accepted as early admission students. Daniel, who began single subject study at university Maths at 12 years old, relied on his father to organise the enrolment. He believed that the university was willing to accept him on the basis that he had satisfactorily completed HCS 2 Unit and 3 Unit Maths. Peter, 15 years old, had completed HSC 4 Unit Maths and 2 Unit Physics, and relied on his parents to organise the enrolment. His local university was apparently letting it be known that students could be accepted through early admission. Sean, at 15 years of age, had heard about the formal early admission program through his school and so organised his own enquiries and application.

Q 2b What motivated you to try for it?

For the nine participants who had completed the HSC, there was no additional motivation to seek early admission beyond the fact that university was simply the next step. Daniel, who took single subject study of Maths, trusted his father to look after his best interests. For Peter, who accepted early admission without completing his HSC, it seemed the only way to continue to progress with his accelerated subjects. Sean, by contrast, was seeking a challenge through early admission as a full time undergraduate. He explained:

> I had noticed, jumping to Year 10, that my performance improved and I was a lot happier at school and I was able to do a lot better. I felt competitive again. Challenged, yes… And then I was finding in Year 11 that that I was starting to drop off. I have always done a lot of self

> directed learning and I was increasingly relying on that to stay interested and it seemed that this trend would only continue, if I continued into Year 12 and …I'm probably not going to go that well, as well as I could. At the time I was very interested in Medicine and so it was kind of, you know, I'm starting to get bored, this isn't very exciting anymore I'm not looking forward to another year of this.

For Sean, motivation was particularly important as he had personally sought information about early admission, and had articulated his need for challenge. For the other participants, motivation did not seem to be a pressing issue; university study was simply the next step.

Q 2c What concerns did you have about making such a decision?

Of the nine participants who had completed their HSC, none expressed any qualms about going to university at a young age, as each was used to issues associated with acceleration, such as mixing with older students. Suzanne had considered taking a Gap Year but parental guidance decided against that option. Sophie was excited to go to university and was pleased to get out of secondary school.

For the other three students, early admission was not a concern. For Daniel, it was a natural step which otherwise would have made acceleration pointless. Sean had concerns about fitting in but he was accustomed to being with older students, and was aware that there would be fellow students who were legally able to drink alcohol. For Peter "university seemed exciting".

Overall, none of the students expressed any real concerns about going to university.

Q 2d Any regrets about leaving high school early?

Sean and Peter, who did not complete high school, had no regrets at all about leaving early. Sean commented that being a prefect would not have excited

him much. None of the students who completed HSC expressed any regret about leaving high school; some were pleased to leave. Lucinda was adamant about having no regrets: “Absolutely not!” Sophie was pleased to leave school; Gena admitted that she did not fit in socially but that she did not miss out on anything; Adrian found his acceleration was difficult as he was lonely and socially an outcast, and leaving school was a welcome “escape”.

No participants articulated any regrets about leaving high school.

Q 2e Who was most supportive in the decision-making process about where to go, to actually do it, and the courses to enrol in?

For nine participants, the decision about early admission was not totally relevant as their entry to university was the next step after HSC. However, Suzanne declared that she was the decision maker about which university to attend and course selection. Gena commented that her father was a great help in helping her decide on courses. In contrast, Sophie did not find support from her parents about courses:

> My parents at that time were more pushy than supportive… like we were having big problems, around that time – and big fights and so, like I enrolled in Medicine… but by the end of the year I had switched out of it and gone into Arts. So they were happy about me doing Medicine; they were very unhappy about me changing to Arts.

For the three early admission students, family was the supportive element. For Daniel, while his Dad supported him, course selection was his own decision. Sean’s father was a positive influence. Also, one of the selection panel on the Early Admission Program was a great help in sorting out courses, especially when Sean wanted to do Medicine, and the Dean was very concerned that he was too young to deal with the subjects. Peter found that his family was a great support,

although course selection was not a problem as his accelerated subjects were key determinants.

Thus parents, and family, were the main source of support and advice in making decisions about early admission and course selection.

Section 3: Process of Early Admission.

Q 3a How old were you exactly when you started university? And how old are you now?

Table 9. 2

Age in Years on Entering University and at Interview.

Name	University	Interview
Daniel	12 Single subject 15 Full time undergraduate	30
Sean	15	29
Peter	15	21
Adrian	15	19
Nanette	16	21
Sophie	16	30
Felicity	16.5	17
Suzanne	16.5	17
Gena	16.5	26
Steve	17	18
Tim	17.3	24
Lucinda	17.5	20

The youngest, Daniel, was 12 years old when he took Maths as a single subject. Daniel, Sean, Peter and Adrian were 15 years old when they began university as full time undergraduates, and all were admitted on a case-by-case basis. The other accelerants ranged from 16 years to 17 years 6 months.

At the time of the interview, four students were currently undergraduates, three had graduated from their first degree but were still studying, and five were in the workforce. Table 9.2 summarises the information on ages at the time of entering university and ages at the time of the interview.

Q 3b What kind of information were you asked to supply in order to be accepted early?

Nine students enrolled using the UAI process and, even those who were 15 or 16 years old, were not asked for any special information. Daniel, aged 12 years, was accepted for dual enrolment on the basis of his HSC results in Maths. Sean, aged 15 years at the end of Year 11, had to satisfy the requirements of the Early Admission Program. He had to supply school reports, references, objective tests results, a written application, and he participated in two interviews. Peter, aged 15 years at the end of Year 9, was accepted as a full time undergraduate on the basis of his HSC results in Physics and Maths. The fact that he had participated in several rounds of testing for the Physics Olympiad added weight to his application, he believed.

With the exception of the requirements of the formal Early Admission Program, HSC results were seen as sufficient and necessary requirements for university study.

Q 3c Was your process fairly routine in terms of university policy or were there difficulties you encountered and had to overcome? Explain.

Nine participants had routine enrolments. Sean's enrolment was routine in terms of the formal Early Admission Program. For Daniel and Peter, there were no significant difficulties other than having informal case-by-case admission with the approval of the Head of Faculty.

Q 3d What degree(s) are you taking/did you take?

The accelerated students studied, or were studying, a variety of degrees. Four were still undergraduates. Seven students took honours, and one was about to take an honours year. One student had completed a PhD and two were undertaking doctoral studies. It is interesting to note, however, that there was a marked bias towards Maths, Science, and Computer Science in the choice of degree; this is possibly the result of ease of acceleration in these subjects in school. Only four students took a degree in the Arts, two of which were combined with Science or Maths and one with Law. All of the accelerated students interviewed had graduated or were in the process of completing their studies, and further study such as honours, and postgraduate study, were considered options. Table 9.3 summarises the degrees undertaken and completed.

Table 9. 3

Degrees Undertaken and Completed.

Student	Current Degree(s)	Completed degree
Suzanne	B.Advanced Science	
Daniel		B Mathematics, B Computer Science (Honours), PhD
Lucinda	B Arts (Honours)/Law	
Gena		B Medical Science (Honours), B Medicine
Steve	B Computer Science	
Felicity	B Advanced Science	
Sophie	PhD	B Arts (Honours)
Tim		BE (Software Engineering) Honours / B Science (Pure Mathematics)
Sean		B Science Medicine, B Computer Engineering (Honours), M. Biomedical Engineering
Nanette		B Science/Arts
Peter	PhD	B Arts (Honours in advanced Mathematics), M Mathematics
Adrian	Masters Doctor of Public Health in Biostatistics	B Advanced Mathematics (Honours)

Section 4: University Adjustment.

Q 4a How did you cope with the academic challenges of university work? How long did the adjustment take? What kinds of setbacks did you encounter?

Nine participants found that the move to university study did not present any difficulties in terms of academic challenge. Sean commented that he took to it "like a duck to water"; Sophie said "it was just fine" and Tim found "no problems". For the three participants who found that university presented academic challenge, there were specific, personal reasons. Suzanne chose her weakest subjects - Physics and Maths - as these were the ones she was passionate about, rather than choosing "what comes as easily" such as English and History. Adrian found Maths difficult as he did not like the subject, and felt he was battling with his brother's reputation as well. When he changed to statistics, he coped well and went on to complete his honours year, and post graduate studies. Lucinda found it was a "major jump":

> … because I'd worked out how to melt the Year 12 formulae perfectly by the end of it. And so by the time I hit uni and researched essays and citation [*sic*] and a different way of arguing and a more thorough, broad learning base and analysis – that sort of thing – it was a total change and I loved it [laughs]. It was so great! It still is fantastic.

Four participants found that there was little or no adjustment to university studies to be made, beyond getting used to the university system of lectures, and five participants did not respond specifically to the question. However, Suzanne took time to adjust to university:

> By the end of the year, I was still working things out but I think that now I've arrived at a place where…it took me 2 semesters and now I'm pretty OK. This is what's going to happen, this is what I need to do. Yeah. That's what 1st Year is for, really.

Two participants took "years" (3-6 years) to adjust, but both experienced very serious personal problems which impacted on their daily lives. One reported that she experienced anorexia and depression, and the other had family and relationship problems. It is notable that both students completed an honours year and one was completing her doctorate at the time of the interview.

Ten participants reported that they experienced setbacks, one experienced no setbacks and another made no comment.

There were four participants who reported serious setbacks. Lucinda was devastated by her low marks, as she was used to very high marks in school. However, as she conquered her personal problems, her marks improved to high distinctions. Sophie was beset by social and psychological problems, and anxiety attacks. She took 6 years to complete her undergraduate degree, including an Honours year, and 1 year of Medicine She continued on to her doctoral studies. Daniel found that he was socially inept, and set about changing his behaviour and conversational skills. He found balancing work against the freedom of university of university life difficult, and when he experienced a failure in a crucial subject, he realized that it was necessary to learn, rather than rely on his skill of "sight reading". He was very disappointed with his doctoral study as it took 6 years to complete, because he did not like the topic, among other issues. Adrian found his social age difference (3 years), plus 2 hours of travelling, very difficult until he moved into the college campus at 18 years of age.

There were some participants who experienced less serious setbacks. In her first year as an undergraduate, Suzanne had issues with studying Maths, where she had anxiety attacks, a condition carried over from high school. Steve found it difficult that there was no-one to advise him on course selection, and as a result he lost interest in Chemistry, one of his favourite subjects from high school. Tim found it difficult to anticipate work load, and the balance of work needed; he found he was overloaded one semester. Sean found rote learning was necessary for the biological sciences and took 6 months to come to terms with it. Minor setbacks included Felicity's difficulty with writing essays, and Nanette's social difficulties of exclusion as a 16 year old in first year.

Overall, the accelerated students enjoyed the academic challenges of university, found the adjustment to university manageable, and in time, were able to overcome setbacks, including the four participants who had serious personal difficulties. Serious setbacks lengthened the period of adjustment, and affected the overall quality of the university experience, while the minor setbacks were comparatively short lived.

Q 4 b What skills did you already have that made your adjustment to University a bit easier? What skills did you need to develop?

This question brought responses which ranged from social skills through to academic skills. The three comments referring to the social aspect of adjustment indicated that existing social skills assisted in making friends, that the social environment at university was more flexible and that one accelerant was used to mixing with an older peer group. Adrian recognized that his earlier experience of acceleration was crucial:

"I was used to coping. Acceleration had made me resilient, it made me more mentally tough."

Sophie pointed out that she had changed schools several times and that helped her adjust to yet another institution; she had lived away from home for several years and that, too, held her in good stead.

Of the other comments, linked to positive academic adjustment, two mentioned self motivation, three mentioned self directed or independent learning, one mentioned acquired skills in essay writing and coding, and one found little need for adjustment, as university was similar to high school academic demands. Lucinda, who had found university to be a huge change, commented thus:

> …the love of learning probably helped. (Definitely helped!) Probably not strictly a skill but [I had the] motivation to learn and so [was] ready to do things properly because I finally felt that I was on the road to doing something that actually meant something…

Daniel, as a 12 year old, found his "notoriety" as a prodigy of great assistance in coping with university, as that notoriety brought him welcome and support, from staff and fellow students.

The skills which needed to be developed also ranged from academic skills to social/psychological skills, and even included Felicity's need to learn to wake up really early! Four students did not list any skills. The academic skills to be developed included critical reading, research methods, group study, and rote learning. Four students listed social /psychological skills. Suzanne had to learn to conquer anxiety attacks; Sophie had to learn to deal with her personal problems, and to direct her own life; Adrian had to develop a patience to wait until he was old enough "to properly socially interact with my fellow students". Daniel had to come to a new realization about the purpose of university education: "I always

thought university was about learning. It's really not. It's about preparing people for solving problems in the broader community and I never figured that out."

Overall the accelerants seemed well prepared academically; some listed particular academic skills they had, or needed to develop. Social/ psychological issues were of a more serious nature.

Q 4c What have you enjoyed most about your university studies? Not so much?

There were nine positive comments on the enjoyable work aspect of university studies, and eight comments pertaining to the enjoyable social aspects of university studies. Some participants commented on one aspect only, some on both aspects. Table 9.4 lists phrases from the comments, reflecting a variety of delight in university studies:

The things that the interviewees did not enjoy ranged from trivial complaints such as "getting up early", "Maths lectures 4 times a week at 8 am", and " long boring 3-hour lectures" to the confronting experience of coping with freedom, facing different behavioural values, or totally hating being at university. The trivial complaints may simply have been listed in an attempt to answer the question, or perhaps reflected a response that any undergraduate might give. The serious matters reflected each student's individual situation – a sheltered life, an illness, a dislike of examinations. One negative response, however, was a direct result of having been accelerated. Adrian did not enjoy his school experience as he was 3 years younger than his classmates, and he did not find friends until he was 18 years old: "What did I not enjoy? The whole deal. I felt excluded, but in 4th year friends and college turned things around".

Table 9.5 summarises the issues identified as negative.

Table 9. 4

Comments Expressing Delight in University Studies

Classes, culture, adult treatment, subjects, popularity.
Reinvent oneself –fresh start – no baggage. No school rules
Freedom
Extra curricular activities
Intelligent friends
Everything!
Computer games – intrinsic enjoyment, competition, camaraderie
Age not relevant
All courses useful
Loved Computer Science
People –fun, interesting, stimulating, mind-stretching
Work: reading, critical analysis, thinking, argument, thrilling to learn
Certain lectures – new information
Student societies, revue
Hockey club
Independence, freedom
Smart people
Student activities -revue
Subjects, critical thinking, challenge, loved writing
Discovering what one is passionate about
Student clubs
Different groups of people
Subjects/ studies
Interaction with good students
Really good lecturers –amazing people
Loved the work, environment – set pattern for future work
Choice of subjects to study
Flexibility of time, able to have a job
Extra curricular activities, voluntary programs.
Fantastic lecturer in computer programming. Opened doors to interesting things
Studies were fantastic
Moving into college – fitted in socially, felt normal, had friends

Table 9. 5

Comments Expressing Negative Attitude to Issues

Sickness – dragged out undergraduate study – repetitive
Freedom – confronting. Missed structure of school, initially
Found uni culture confronting – people have the freedom to do whatever.
Sheltered existence
PhD – not enjoyable; just a certificate
Some behaviour trying – different values
Compulsory lectures and no textbooks – just notes
Course badly structured –made assignments difficult
Some subjects difficult to understand
Exam cramming in Science. Prefer assignments- time to think
Maths lectures 4 times a week at 8 am!
Lectures- long [3 hours], boring.
Getting up early
Lectures, tutorials not always done well
Some subjects better than others
Long hours 24 contact hours + 3 hours traveling
Wrong choice of subjects

Q 4 d Were there any support systems at University to help you make the adjustments? Fellow students? Teachers? School counselors? staff?

For these young, accelerated students in the study, there were no specific, official support systems at university, either academic of social. Although the students were aware of the availability of general university assistance, such as counselling services, four students mentioned that they did not seek out any

services and three relished not being singled out for special attention, preferring to be treated as normal undergraduates.

Three students were part of a mentor program. Steve belonged to a program which was run by the Computer Science School, and he found it useful for getting to know fellow students. Suzanne and Gena had mentors through the Talented Students Program [TSP]. As the website indicated, TSP is run by the Faculty of Science and membership is restricted to students of exceptional merit. Students "receive special individual supervision by academic staff", and are offered "additional challenging material to enable them to maximize their intellectual growth and potential" (University of Sydney, 2009). Gena met her mentor a couple of times a semester; his role was useful for career advice. Suzanne found great support from her mentor, whom she voluntarily visited frequently. Seven students listed friends or fellow students as their main support, especially those found through university clubs or societies, and seven listed lecturers or tutors as being a source of informal support.

Q 4e Were there any factors or experiences at university that made you feel conspicuous because of your age or ability? (Drinking? Dating?) Any factors about you that helped make your adjustment a positive thing? (e.g., Living at home? Acknowledgement by staff that you would prefer to be treated like everyone else? Special program set up for you? etc)

For this question the age of the student on entry to university was important, so the analysis was completed according to three different categories. Firstly, Daniel felt very conspicuous as he was 12 years old, and wore his school uniform. He enjoyed his notoriety, for he attracted attention, as well as media

attention, and the older students looked out for him. Most of his responses for this question relate to his experience as a full time undergraduate.

Secondly there were four students, including Daniel, who commenced full time university at 15 years of age. Neither Daniel nor Sean felt conspicuous about their age; drinking, driving and dating were not big issues. For Peter the first few years were difficult: drinking, dating and driving were not issues, but he socialized with his high school friends and felt at odds with both worlds. It was not until he attended Cambridge, at 18 years of age, that his world became "normal". Adrian felt most conspicuous as he could not go to bars – though he tried fake ID, he was not socially active and he resented having an hour's train ride each way. Three of them said that living at home made adjustment easier, and three of them enjoyed the fact that the lecturers treated them like the other undergraduates.

Thirdly, there were eight students who were 16 or 17 years of age on entry. Six participants did not feel conspicuous because of their age, but two students felt conspicuous because of the social exclusion. Three used fake ID to get around the official drinking age of 18 years, but most were used to being younger. Nanette explained it thus:

> In the first two years, until I turned 18, which was at the end of 2nd Year, I was obviously under 18 which is a huge thing in Australia seeing as a lot of things become legal as you are 18, such as drinking and smoking and that sort of thing. That was the major one but even then it was not too major to me since I don't really drink all that much. It was just like "Oh. I can't go to the bar" and that sort of thing, so it influenced some of my social life…like I said, I'm very much used to being slightly younger.

However, Lucinda felt isolated:

> But I basically eschewed all Law Society events, and they had a lot of them, for the entire first year until I turned 18 which meant that, all through Law, I basically had no friends in Law at all other than, you know, friendships you make in tutorials because I couldn't go out with

> them…Yeah, I couldn't go out with them because I wasn't allowed. So that was tricky. It was a major inhibitor, because it played such a big role in their social life.

Dating and driving were not problems, as dating was a more personal issue, and most undergraduates used public transport.

Seven of the eight students did not feel conspicuous because of their ability, and it was not an issue. Suzanne, at 16 years old, was delighted to be at university:

> …people just called me The Child or The Munchkin. It's not a big deal. Ability-wise, I'm in a class of people – not all of them – but there are people who stay at home on Saturday nights and read Gauss. I don't stand out in that sense. Yes, I'm up there – I'm in the Talented Students' Program. But, yes, everyone's able, at this stage.

Gena quickly acquired a reputation for her ability, as she was taking accelerated courses at university. Felicity commented that "there's such a range of abilities"; Sophie echoed that sentiment with "there is a very, very big mix of people". By contrast, Lucinda, beset by illness, declared very different feelings:

> I think, I felt, being young and being in a new environment in a pool of so many people, all of whom were fairly intelligent, I felt totally swallowed up, lost. I don't know how best to put it. I wish I had been firing from all cylinders in first year. I mean I really do…'cos I think that would have made a difference. I think that would have made the transition very different. I don't remember much of first year, really, at all. I can remember general feelings, like feeling conspicuous, but I can't work out where they came from and feeling lost and feeling lonely and feeling thrilled and exhilarated.

The pattern of responses for this third group was similar to that of the 15 year old group. Four students mentioned that living at home helped in the adjustment to university; four mentioned appreciating being treated as normal undergraduates, and two mentioned the importance of finding friends.

In summary, age was an issue socially, especially concerning alcohol, but dating and driving were not important issues. Advanced academic ability was not an alienating pressure, and students appreciated having no special treatment. Living at home was a positive element in adjusting to university, as well as finding friends.

Q 4f Were there any issues that really impacted on you during your first year or two at University? Which were easy to deal with and which were more difficult?

This question did not produce valuable responses as it was too similar to the previous question, and reiterated ideas the students had raised earlier. There were 11 non-responses to parts of the question. Nevertheless, some of the positive issues which students mentioned (again) were as follows: the pleasure of joining clubs, the challenge of new found freedom, development of good, lasting friendships, and positive support by living at home. On the negative side, socializing was “awful”, a personal relationship was problematic and a busy schedule, plus traveling, caused tiredness.

Section 5: Your Future.

Q 5a What goals have you set yourself to accomplish and what plans do you have for the future studies and career? How likely do you think these are to accomplish?

The analysis was broken into four categories: firstly, students who were still undergraduates; secondly, students who had just graduated but were neither working nor studying; thirdly, students who were postgraduate; fourthly,

graduates in the workforce. Seven did not comment on the likelihood of achieving their goals.

The age range of the four undergraduates in the first category was 17 - 20 years. While three of them were indefinite about their future, all had goals. Suzanne, 17, wanted to do an honours year, her PhD at Cambridge, and work in the academic world. She felt this was likely: “Yes, why not? I’m able, I’m determined. I work insanely hard.” She was enthusiastic about her dreams, and liked the label “troubadour of the Zeitgeist”. She thought it “not impossible”. Lucinda, 20, was quite definite about her plans. She wanted to get first class honours, do an honours year in English, a Masters at Oxford or Cambridge, finish her Law degree, and win the Miles Franklin Award before she was 25 years old. Steve, 18, wanted to do honours in Computer Science but was unsure about further academic work or joining the work force. Felicity wanted to keep on with Maths, do research, and perhaps combine that with her love of sailing by doing something like oceanography. She was not sure of her career path.

Recently graduated, Nanette, 21, and Adrian, 19, were in the second category. They hoped to continue studying. Nanette was hoping to be accepted for honours, then a Masters, and finally teach in a university, specialising in microbiology. If that did not eventuate, she wanted to work in fields related to Science or Medicine. She was trying to be positive and realistic about her goals. Adrian was very keen to do a Masters at Harvard, followed by a PhD. He did not want to work as an academic but had dreams of working in the Defence Force, or as a fire fighter, or a Diplomat or a medical doctor. He was very hopeful of achieving his goals.

The third category consisted of three graduates who were still studying. Peter, 21, was completing his PhD, hoping to do post doctoral studies, and then work in academe or in the workforce in computers. Sophie, 30, was finishing her PhD, hoping to do post doctoral studies, perhaps in the U.S., work in a university, and turn her thesis into a book. Gena was completing her registration as a doctor. She would work as a resident doctor for 3 years, then spend another 3 years of study to join the College of Physicians, and a further 3 years of study to become a microbiologist. She conjectured that she had a 50-50 chance of achieving her goals, not because of the degree of difficulty, but because of the volume of work.

In the fourth category were graduates in the workforce: Tim, 24, Sean, 29, and Daniel, 30. Tim was currently a Research Assistant who had possible plans to do his PhD. He thought it was “quite likely, but you can’t tell exactly”. Sean had “always wanted to be part of something big, part of something that changes the way people do something” and he found his current work in computing very stimulating and exciting. Nevertheless, at the back of his mind, he thought he may do a PhD in Maths or Computing. Daniel saw his goals “through the glass prism of family commitments”. He was “very happy” in his current work, but thought he might eventually return to the academic world to teach.

All 12 participants were relatively articulate about their goals and/or their career path. Each one had either completed post graduate study or envisaged that their career path would involve further study.

Section 6: Reflections on Your Early Admissions Experiences.

Q 6a Would you make the same decision about early admission again? Why or why not?

The response was unanimous "yes" with a variety of reasons, as described below. Most of the responses alluded to acceleration, rather that early admission, as it was a necessary prelude to early admission to university. The reasons were mostly positive, and included such notions as finding happiness at university, experiencing personal growth, providing postgraduate opportunities, giving time for other activities, and early entry to the workforce. One participant gave a warning about ensuing problems if acceleration was not implemented, and two expressed some doubt about the social displacement associated with acceleration. Table 9.6 lists some comments about acceleration, and early admission.

Table 9. 6

Comments on Acceleration, and Early Admission

Problems if not accelerated
Very happy since attending university
Postgraduate opportunity validated every decision
Provided excellent post graduate opportunities – qualifications, social experiences, early entry to work force
In general, an overwhelmingly positive experience
Wasn't easy but essentially self forming, mentally, socially
University an accepting environment. School acceleration provided opportunities
Compacting Chemistry –good. Grade skipping? Some social issues
Provided extra time to make choices
Wanted to get out of school, to start my life
Not worth wasting time in primary school
Uni – no doubts. Two years of grade skipping – maybe too much

The following quotes are indicative of some of the reasons given. The first four comments were made by Daniel, Sean, Adrian and Peter who were 15 years old on entering university.

> Yes, because there is no alternative. Certainly. It was an excellent choice at that stage…the options that were afforded me were excellent. If they hadn't been provided, then there would have been problems. (Daniel)

> Yes, of course. The fact is that I'm really happy now and have been for the past 8 years, ever since I started university. I wouldn't want to change it. (Sean)

> Yes, the moment I arrived at Cambridge and finally had a proper social life it felt as if that alone validated every decision until then. (Peter)

> Yes, it gave me opportunity to go to Harvard…to get an incredibly good qualification, while being the proper age to enjoy uni things… and I'll get out into the workforce at a good age (25 years) (Adrian)

The following are quotations from the eight 16 -17 year olds:

> Yes, I think so. …In general, it has been an overwhelmingly positive experience. (Suzanne)

> Yes, I would. It certainly wasn't easy but it was essentially self-forming.I wouldn't be who I am now if I hadn't had to battle through some of the mental and social issues that arose as a consequence of being accelerated. I wouldn't be as strong as I am now, nor as well adjusted. (Lucinda)

> In terms of early admission to university, definitely. University is a bit more of an accepting environment than high school is, for a gifted person. In terms of acceleration? I would, because well obviously I was very lucky in terms of the way mine was managed, and I had a lot of opportunities. (Gena)

> Yes. [Compacting] chemistry was good. [Grade] skipping? Not sure. Because of a lot of social problems… because society is based on age and not on ability. (Steve)

> Yep! [Acceleration] That's good. And there is a decision, of course, about taking a year off to go overseas or do something before uni. (Felicity)

> Yes. I did want to get out of school and I did want to get to uni and I really wanted to start my life. I felt like things were just on hold. (Sophie)

> Yes, I think I would. I don't know what I've missed but it would not be worth spending another year in Primary School to offset any difficulties ..at high school. (Tim)

> I would make the same decision [about university]… no doubts about it. Earlier acceleration? I think one grade is not too bad because there is a fair amount of variation between, you know, ages and maturity gaps in one grade of school but 2 years might be a little too much. (Nanette)

Q 6b If you feel you have been successful, what personal and environmental or external factors have contributed to this success? Which have detracted from your success?

All participants articulated positive factors which contributed to their success; the seven negative responses relating to detraction from success ranged from minimal to extensive. Table 9.7 is an abbreviated list of the personal and external factors, both positive and negative.

Table 9. 7

Positive Personal Factors

Enjoyment from learning and success
Mental toughness, determination to succeed
Time and patience
Personal growth through dealing with personal problems
Sense of achievement
Personal motivation
Success from High School challenges
Academic success
Own hard work (n=2)
Finding that passion – encouraging
Finding interest and challenge
Being a quick learner, self directed learning, fun

Positive External Factors

Support of friends (n=5)
Academic staff (n=5)
Very supportive family (n=4)
Charmed life
Luck: with family, Australia, career path, opportunities, schools, university
Culture of freedom at university for social success
Good school with high achievers.
Pressure to achieve - expectations
Hobbies - manage time efficiently

Negative Personal Factors:

Lack of life skills for coping with freedom of university
Not prepared for challenges, academically always cruised.
Procrastination
Not used to seeking help

Negative External Factors

Cocoon of family, sheltered existence
Social isolation
Lack of friends

For success, it would seem that the intrinsic personal factors, such as motivation, challenge, and achievement, were well supported by a range of external factors, the most important being support from family, friends and academic staff.

Q 6c What support at the university was or would have been the most useful to you?

Four participants nominated what they had found useful in terms of support. Friends were mentioned twice, and university staff mentioned 3 times. The concept of a mentor was raised by four students. One university staff member, whom Peter found "amazing", was more like an informal, personal mentor to him, as he was inspiring, gave direction and suggested special projects. Daniel suggested that the university needed to recognize "raw talent", where the student may not be intrinsically motivated – as opposed to motivated students who get excellent marks – and encourage that student to harness the talent into a passion. This could be interpreted as a psychological facet of a mentor's role. Gena also suggested that a mentor could be concerned with the personal challenges confronting a student, rather than advising on career paths. Sophie considered that a mentor could provide a safety net for all students, but particularly the young accelerants, as attending university was initially a confronting experience. Nanette did not mention a mentor, but she suggested that the university should acknowledge the presence of younger students, not by giving them special treatment, but by making sure that they were aware of all the services available to support them.

Tim commented that a healthy campus community was one which enabled students to meet other students, especially from other year groups. However, he

considered that universities were already aware of this, by encouraging the existence of clubs and societies. Lucinda acknowledged that support services worked well but a change of name–from Disability Services – or greater visibility was be recommended.

Two participants commented that their social, personal problems had to be addressed by themselves and neither considered that it was the role of the university to have to deal with such issues.

Q 6d What advice would you offer other students considering early admission?

Daniel, an early entrant at 15 years, observed that "there is no choice, really" as early admission is a natural, and inevitable, consequence of acceleration. It was more about the concept of adaptability, and being prepared to deal with changing environments. Two of the 15 year old early entrants emphasized that motivation was crucial, especially for dealing with problems. Five participants corroborated that personal attitude was significant because problems did arise, but the problems could be dealt with. Tim presented a more positive aspect:

> On the other hand, the flexibility of uni can be really valuable and refreshing to frustrated high school students. So I think it would have to depend on the extent to which the student thinks these various problems and benefits might impact them.

Three participants were more enthusiastic with the advice "Go for it!" Sean, one of the 15 year old entrants, observed:

> There's [sic] lots of advantages to doing it. Very few disadvantages. Although there are many apparent disadvantages which do not turn out to be problems. Yes, go for it!

In general, the advice of the participants was positive and included that motivation was a key issue, that caution should be exercised, and that "mundane hurdles" could arise.

Q 6e What advice would you offer universities providing early admission to advanced students?

Two participants suggested that the case-by-case process was the best way to evaluate early admission students. Nanette considered that screening was essential to evaluate motivation and probable success in the tertiary setting. Lucinda proposed that tutors or convenors be made aware that younger students may struggle, and Felicity supported that same notion because if poor results were occurring, they could probably be prevented. Sophie, Gena and Suzanne all suggested that a support system would be useful – a mentor system, perhaps – especially as bright students may need help in areas other than academic support. Two participants also considered that contact between first year students and older students would be useful, perhaps through fostering societies and clubs.

Sean's advice was that early admission should be practised more, and that the universities should not "make the bar so high".

> You don't need to excel for it to have been a success but just need to be a solid student … that would let a lot more students through and would probably make such a lot of difference in their lives. You know, solid distinctions or a mixture of distinctions and HDs, or lots of credits and distinctions. Still a mark of a very, very solid academic career. You know, the real question in my mind is if you've got a student at Year 9, or Year 10, who could go onto university and get credits and distinctions, then – and you don't let them do that – you push them though 10, 11, 12 and then I reckon at best, at absolute best, they've wasted 3 years. Why push them through 2 years of boredom, if they're capable of achieving at that level, at university?
>
> And in the end, even if a kid had a problem adjusting or had some emotional problems or social problems, it's probably…you're not measuring it against the perfect world …It is measured against reality: they are going to spend 2 or 3 years bored at school and probably going to

> develop some social or emotional problems ...at the very least they're going to get very, very bored.

In summary, the participants suggested that early admission should be practised on a case-by case basis, with screening for motivation and likely success. Once young students are admitted, awareness of them is needed, and some kind of support made available, as well as informal links with older students encouraged. Greater use of early admission could enable students, other than those who excel, to avoid boredom at high school and to achieve solid tertiary results.

Q 6f What would you say are the advantages and disadvantages you have encountered as a result of your early admission experiences?

Some of the participants commented that this question was repetitive as it was quite similar to one about acceleration, and thus gave similar responses. Of the 15 year old entrants, Daniel and Sean included time saved to enjoy study, to complete a degree and change tack. Peter found university "exciting, new and interesting" and Adrian found it provided him with mental toughness, an excellent opportunity to study abroad, and good career prospects. Daniel and Sean found there were no disadvantages, Peter was ambivalent about social issues, and Adrian listed loneliness, stress and the difficult journey as disadvantages.

Among the advantages listed by the 16 -17 year olds were intellectual satisfaction, intellectual stimulation, personal validation, like-minded peers, time gained for career, less boredom, get out of school sooner, and the sense of moving forward. The disadvantages were some minor social issues (n=4), and temporary loss of structure (n=2). Felicity commented that being with older students was not necessarily a solution for finding like-minded peers.

Q 6g Most important benefit of early admission or acceleration to you?

Eleven participants identified *the* most important benefit for them but Tim was unsure of his choice. Of the four 15 year old entrants, Daniel did not get bored and thus did not go "off the rails". Sean loved the extra time at university, as it was a great place to be. For both Peter and Adrian, it was the chance to study abroad on scholarships. Table 9.8 lists the abbreviated responses of the other participants,

Table 9. 8

Benefits of Acceleration or Early Admission
I finally felt challenged, and *that* was worth everything. (Lucinda)
I was in the same year as my husband – social, emotional, psychological, academic bonds. (Gena)
Less bored. Opportunities such as Cosmology, Chemistry Olympiad. (Steve)
Remain excited about learning. Otherwise bored, uninterested. (Felicity)
More time at uni was useful – to discover myself and change courses. (Sophie)
Time – less pressure, as you know you are ahead of the cohort. (Nanette)
Getting to uni and over the psychological scars of a twisted and evil school system. (Suzanne)
Not sure. (Tim)

Time, excitement about intellectual challenge, overcoming boredom, and opportunities presented are the key benefits of acceleration and/or early admission.

Q 6h Any words of wisdom to gifted students in general?

Ten participants responded; Tim had no response and Sophie felt she had no wisdom to offer! In general, the participants urged gifted students to follow their passion (n=4), to do what was enjoyable, to take opportunities, to accelerate for their own benefit, not to please others, and to seek friends among like minds. Acceleration was not always easy, but it was important to work on weaknesses, such as social skills, and to resist becoming the nerd stereotype. Acceleration should be managed- it should not be experimental. Problems were inevitable and needed to be addressed.

Daniel encapsulated the wisdom thus:

> And where motivation is lacking, you need a mentor to come along side and help them to get to spark it. But even just the alleviation of boredom is the important outcome. The most important outcome, how to manage those social factors, they're the important issues.

Thematic Analysis –Patterns of Response

The NVivo 8 program, as described in Phase 2, was again used in this phase, identifying six themes which emerged from the student interviews. The themes were School Experience (43 references), Motivation (69 references), University stimulation (66 references), Friendship (26 references), Hurdles (90 references), and Support (50 references). The following discussion analyses these themes.

Theme 1: School experience.

There was a significant similarity in the attitude of the participants when they spoke about their school experience. Some of the phrases which described the school experience in negative terms were “bitter memories”, “hated school with such a passion”, “lack of freedom”, “someone is always watching you”, “never felt comfortable” or “similar to a prison”. Four participants spoke of the benefits of acceleration in terms of escaping from school:

> Get out of school sooner. (Felicity)
> I wanted to get out of school. (Sophie)
> I managed to escape school sooner (Adrian)
> Getting to uni and over the psychological scars of a twisted and evil school system. (Suzanne)

In discussing the academic experience of school, nine participants mentioned boredom. This was sometimes after acceleration, sometimes prior to entering university.

> Like being stuck in a fairly boring, mindless limbo. (Lucinda)
>
> I’m presuming I would have been more bored, if I had not been accelerated. (Steve)
>
> …if you are at school longer and then you get bored and become uninterested in academic work. (Felicity)
>
> I’m starting to get bored, this isn’t exciting anymore. (Sean)
>
> Like I know personally I felt very bored in my classes. (Nanette)

The academic school experience was not always positive for other reasons as well. Lucinda found that her year group had a “really anti-intellectual bent”, Adrian “felt like he was marking time, waiting for the piece of paper at the end” and Peter found that “High school [was] not the most forgiving place”. Two participants indicated that some teachers were very negative towards them, and perhaps felt threatened by them.

The school social experience was often an unhappy one. Three participants reported that they were bullied; Tim explained that his behaviour showed he was "poorly adjusted" but improved when placed in a gifted class. Five participants did not find a social niche at school. The general unhappiness was characterised by the following comments:

> I would start to feel some social dissimilarity… I was generally accepted by people who were older; but people who were my [age] peers didn't feel as if I belonged with them. (Daniel)
>
> …It was a lack of social connection… because I didn't find a niche. (Lucinda)
>
> Yes, I felt out of place, very much, as I was growing up. . (Steve)

Not all participants were unhappy at school all of the time. Felicity found peers when she changed to a selective high school; Tim found some friends in his gifted class and later bonded with "a fairly loyal group of social outcasts". Nanette kept in touch with her friends through the composite system. Overall, however, a persistent pattern of negative school experiences – academic and social – emerged from the responses of the participants.

Theme 2: Motivation.

The theme of personal motivation emerged as an overarching quality of all the participants. All undergraduates, and all graduates still studying, were able to outline specific academic goals they wanted to achieve. Being able to articulate their goals suggested that their sense of purpose – specific motivation –was a spur for their studies, and encouraged them to cope with any hurdles encountered. The three graduates in the workforce were less specific about their goals, but had considered a return to academic study. They were beyond the immediate focus of

tertiary study; possibly their current motivation was allied to their work situation, as well as their more personal goals.

Ten participants indicated their personal motivation was based on such attributes as determination, delight in academic studies, a love of learning, personal realisation, intellectual satisfaction, and acquired resilience. The following quotes are indicative:

> And so at uni I had the determination from the very start, and the love of it, from the very start. (Lucinda)
>
> I've chosen to go with what I'm passionate about. (Suzanne)
>
> I think finding, having the passion for what you are doing and having that, has been driving and really encouraging as well. (Sophie)
>
> I'm able to do self-directed learning, especially in those areas I'm interested in. I can just filter in the information and that's a real buzz. It's really fun. (Sean)
>
> I'd say a lot of it is personal motivation…like "I want to do better…I want to finish this by…this time or whatever". (Nanette)
>
> …it was sort of the realisation that I could do interesting things. (Peter)
>
> …I just had to be incredibly resilient and plough through the hard times…(Adrian)

Two participants expressed ambivalence about their motivation. For Daniel it was enjoyment of his studies which motivated him but he confessed to a lack of drive to succeed:

> I have not been particularly motivated. …I enjoyed it [maths]. Not because I wanted to succeed, not to beat someone; it's purely out of interest….I could have done a lot better- but I just didn't want to. (Daniel)

Steve reported that at university "there weren't any challenges" but nevertheless was planning to complete his undergraduate studies, and he was motivated to do well, especially in the computer science subjects.

> I want to get all HDs in my Comp subjects but I got a D in …one. That was slightly disappointing.(Steve)

Even when he undertook subjects which did not interest him, his personal motivation dictated his action:

> I thought I was interested…but when I found out what they actually were, it was too late to change. I could never drop – I could have dropped them but…you know…I don't [sic] want to. I kept thinking that I should give it a go. (Steve)

Steve had also been motivated by the pleasure of academic studies at school, for he found delight in studying Chemistry. When he participated in the Chemistry Olympiad Summer School he found it to be "a really good experience… It was really fun, although most people don't think of three lectures a day and one lab a day as fun."

For Daniel and Steve, their motivation may not have been as transparent as the motivation of the other participants, but nevertheless, they were motivated and their motivation was personal.

Another compelling source of motivation was the idea that, through acceleration, the participants had saved time, and this allowed them to change courses, to study overseas, to have extra time in the workforce, or simply to have more time to do other things.

> The advantage is that you get to live life sooner…I get 2 more years of life to work, to achieve. (Daniel)

> …it bought me some time to get on with my life. (Gena)

> …I'll get into the workforce at a good age. (Adrian)

> …then I'll have more time to do other things but…I'm more a goal oriented so it's not a huge issue for me. (Nanette)

> It gave me more time at uni…and it gave me bit more time to discover myself, I suppose, and to change courses. (Sophie)

> I've had the luxury of finishing the Science-Medical degree…and changing tack completely…That is, that was, a major, major thing, being able to do that. (Sean)

Personal motivation was a key common element in all of the participants – specific goals, intrinsic delight in academic study. Motivation was intricately tied to the next theme: the stimulation of being at university.

Theme 3: University stimulation.

The university was a place of stimulation for the 12 participants. It offered academic stimulation, intellectual peers, freedom for independence, and allowed them personal freedom by treating them as any other undergraduate..

Eight responses revealed a sense of excitement about attending university which included academic stimulation, joy in finding knowledge, and responding to challenges.

> Everything. I love uni, absolutely. I love my classes, I love the culture of university which sort of…it's something that … its like a meta thing that I like because it manifests itself in all sorts of ways. (Suzanne)

> I have enjoyed actually that I have used every one of the courses I did at uni at some stage following it. (Daniel)

> I found knowledge a fulfilling thing of itself. (Daniel)

> Actually, I loved the subjects I did in my Arts degree like, you know, the critical thinking, finding out about the world by challenging yourself – I loved writing. (Sophie)

> Look, I actually really kind of enjoyed some of my university studies. I liked the subjects I was doing. (Tim)

> Fantastically interesting stuff, almost set your own schedules in terms of how you learn and where you learn. It was just great. (Sean)

> Loved the work and that kind of environment is the one I've been seeking out - post university - this kind of environment for work. (Sean)

> I don't think I have any real complaints about my university studies [sic] it was all fantastic each in its different way…at least by attending university things were always going to be interesting. (Peter)

The participants appreciated interacting with other university students, where there was no teasing about being intellectual; "I'm amongst peers". It was "a meeting of minds". Sean commented: "I loved the interactions with the other students, especially the good students".

The freedom of university was appreciated, where individual responsibility, and independence were fostered. The flexibility, and comparative lack of rules, appealed to the participants.

> At university, no-one cares! That's the thing. If you don't turn up, you may fail and that's your problem. (Suzanne)

> But the big thing was that whole freedom, so you move from a closed environment to an open environment where you are no longer accountable to anyone, to any individual, so I had the freedom to miss lectures. I had the temptation to miss lectures. And my friends would. (Daniel)

> University is a bit more of an accepting environment than high school is, for a gifted person. Socially, I was most successful at university. And that's because of the culture [of freedom] there. (Gena)

> Independence. Going wherever you want to, you know. No need to turn up to class. Do what you like, and go off to the other uni for the day. . (Felicity)

> On the other hand, the flexibility of uni can be really valuable and refreshing to frustrated high school students. (Tim)

Two participants expressed some caution about the freedom. With the freedom came responsibility, and sometimes the freedom was confrontational.

> …it's mainly those normal things like not getting too carried away when, you know, you realise that you can just not go to class. No-one cares. But you do have to control your own life very much more. (Sophie)

> So people use that freedom in lots of different ways and so yeah, it was quite confronting … it was something I had to adapt to. So I didn't enjoy some of that. (Daniel)

Nanette pointed out that wide choices in subjects were part of the freedom, for students could choose what to learn. The freedom also involved an absence of concern about age, academically.

> So I was amongst people who – age is no longer relevant when you attend university. You are known in a group, not by age, but by degree. So you've got people there who are 60, who are 20, who are 12 who are doing the same course – it doesn't matter. You're there, you're doing the same course, you sit the same exam, and you are treated the same way by the lecturer. So that's really a great feeling. (Daniel)

How they were treated at university was mentioned by 10 participants. All were very positive about being treated with respect, as adults, and as any other undergraduate. The four 15-year old entrants made the following comments:

> The lecturers treated me well. Overall, I think I was not treated…not given any special treatment compared to anyone else. (Daniel)

> I really relished the opportunity to just be like everyone else.Yeah, I was kind of glad, I guess, that what support systems were around were minimal and private, not exposed…and I think that [being treated as any undergraduate] is a really important thing, actually. (Sean)

> I don't think anyone treat [*sic*] me at uni as if I were different (which was very nice) and that definitely made things much easier (Peter)

> On the positive side I was treated like everyone else by the lecturers. (Adrian)

Two 16 year old entrants expressed a similar notion that they did not want special treatment.

> The thing was, that by the time I got here, what I wanted was basically, for no-one to know that I was accelerated. And to go through and just be normal. And I was old enough that I kind of could. I was 16. (Sophie)

> I think that the fact that I just entered the same as everyone else was .. helped … because that meant there wasn't anything special in place for me. I was just adjusting just the same as everyone else was adjusting. So I went through… I guess there weren't any particular…I had the same challenges as everyone else. (Gena)

Gena also took a long term view of the stimulation and opportunity university brought: "It is also a time to grow up, to have fun, to develop socially, to develop emotionally, to go out and do things".

Theme 4: Friendship.

The theme of friendship appeared to be a vital element in the participants' positive experience at university, and possibly an important link in their adjustment to university. For some participants (n=5) who experienced a lack of friendship during their school experience, finding friends at university was a joyful occurrence. Lucinda explained: "I went from being a total loser at school to being socially valued at uni. It was a wonderful turnaround". Peter commented: "… the moment I arrived at Cambridge and finally had a proper social life it felt as if that alone validated every decision up until then". Adrian had a similar experience: "…my high school experience was awful and I had very few

friends…Moving into College [*sic*]. There I fitted in socially. I felt normal, as I had friends".

Participating in university clubs and societies was an important means of establishing friends (n=5).

> So that [the Transition Workshop] involved meeting people who were in the same course and were doing the same classes …Well that's where I met all of the friends I have made. There was a group of about… we were put in a group of 7 on that day and I think we've all stayed friends since then. (Gena)
>
> I'm in a lot of clubs and societies which provides its own support, informally, because it means that I have friends. (Suzanne)
>
> …that I liked the student clubs [in order to] get involved in different groups of people. (Tim)

Three participants mentioned that belonging to groups outside of university – sailing club, church group or music band – was also a source of friendship, and one that was not necessarily age related.

> Sailing is good because you get to be with people who are different ages…People in sailing don't really pay much attention to whether who's older and who's younger. I have a really good friend who is like 22 or 23 now and I would not have met in my normal life. She is like a bit of an older mentor to me. (Felicity)

At university participants were able to make friends with like-minded peers who provided social equilibrium and challenge.

> I made some great friends at university, and I still know some of them. That was through classes. (Sean)
>
> …at university I related to people just fine because I started doing computers and the people around me did computers and that fitted in quite well. So at university, socially, things were really quite good. (Daniel)
>
> I did have good friends in the faculty; a lot of them are like the smart or more interesting kids. (Felicity)
>
> …'cos at uni you find your equals, you know, you find your true peers and the most revealing thing about uni is knowing people who are smarter

> than you who are so much more intelligent than you. It's really …it's fantastic. (Lucinda)

Theme 5: Hurdles.

Many of the interview questions elicited responses which indicated that participants encountered several kinds of difficulties - academic, personal and social. Two participants referred to them as "hurdles" which conceptualised that the difficulties were not obstacles, were varied in degree, and were manageable. Several participants described the less serious difficulties in phrases such as "was not too major to me", "wasn't a big thing", "not really a problem", "not a huge thing" or "just a hurdle". On the other hand, some difficulties such as anorexia, depression or an abusive relationship, were serious difficulties which four participants encountered and were managing, or had managed, to address over a period of 3 – 6 years.

Of the academic hurdles, some were related to adjusting to differences between school and university teaching style:

> …it was just the standard thing which most people go through, nothing special nothing too difficult. (Peter)

> I overloaded more than I should have and that was actually quite difficult, but mostly I coped with university work without much of a problem. (Steve)

Adrian chose subjects which he did not enjoy, Felicity struggled initially with essay writing – but passed, and Gena, unused to group study, adapted. Rote learning, coping with exam tension, and with exam cramming, were other issues which were managed over time. At the serious end of the spectrum, Lucinda did overcome her early crisis of intellectual confidence, as she was able to take an

honours year in English in her 4th year. After struggling with personal problems, Sophie, whose academic record showed a mixture of High Distinctions, Withdrawals, and Absent Failures, went on to complete her PhD.

Of the personal hurdles encountered, and managed, the range varied from tiredness, family issues, relationship issues, illness, panic attacks, poor social communication, to coping with the freedom of university. Daniel recognised his own social ineptitude, for he disliked small talk, sought peer approval by making jokes, and felt he could not contribute to meaningful conversation. At the age of 21 years, he deliberately set about improving his communication skills, and succeeded to the point where he was able to mix socially, to date, and to marry. Coping with the freedom of university was mentioned by some of the participants, but it may have been a general hurdle for all undergraduates:

> …it's an experience of university seems to be that ...it's a little bit difficult to balance how much work you are going to have to do. This is common to everyone. (Tim)

> It was all a bit free form and especially at that age, and especially being sick. It was hard because I felt I was going off in all sorts of directions and I had nothing to keep me… (Lucinda)

> Difficulties were through sickness, not because of being young. (Lucinda)

> I disliked maths exams but that's nothing to do with uni, that's everything to do with me. (Suzanne)

The social hurdles, in the context of the interview questions, were the restrictions imposed on the participants' freedom to take part in social situations because they were younger than their cohort. In particular, the social situations discussed were dating, driving and activities which involved alcohol.

Dating did not appear to be an issue with the participants. Some were not yet interested, some of the girls dated older people, and only one participant,

Adrian, complained that “he couldn’t go out with any of the girls at uni” as he was 3 years younger. Driving was not an important issue either, as students tend to use public transport and getting a licence was optional.

> I’m on my L’s. It is not really an issue. (Felicity)

> I got my red Ps in March, of 1st Year, so not really a problem. I said most people don’t drive but use public transport. (Steve)

With some social activities, the participants were officially restricted because of their young age but they worked around the restriction by using fake identity cards or waited until they attained the appropriate legal age.

> Look, to be honest, yes, I have a fake ID and I do go to bars with my friends and I’m not a big drinker but I’m not teetotal and I go out partying and I think that my age is made less conspicuous by the fact that I am one of the most social people there, so it doesn’t have any real impact. (Suzanne)

> I used to have fake ID but I had it from a friend and I have given it back now. There was a bit of a problem. It didn’t happen that much. The university bar didn’t check I had my false ID. (Felicity)

> And then I just went out anyway –occasionally got fake ID – that stuff probably did make me feel conspicuous but it wasn’t huge…I got over it - it was not a huge thing. (Sophie)

> Drinking? Oh, they didn’t have any guards at the pub, did they? Fake ID? That’s the thing - they didn’t put any security guards in the pub before 6 so if we went down for a drink after class, we’d just wander down and wouldn’t make a big deal about it. (Sean)

For other participants the restriction of being under age was not an impediment.

> I’d always resisted the temptation [to drink alcohol]. (Daniel)

> so…you'd think in some situations it would be a factor that I was a minor…until what? Essentially all of the course work of Session One. To be honest I never really thought that to be a problem. (Tim)

> It sorted itself out, as long as I didn't go and touch anything it wasn't going to matter and it probably wasn't going to matter. (Tim)

> …there are social factors such as, you know, being able to go out, being able to drink, being able to drive. I wouldn't rate them as serious, but you do have to consider that they are there. Considering that I was relatively social and I did like to go out with friends and such, I did have to think about it. But, you know, it wasn't like a huge issue. (Nanette)

Some participants observed that alcohol was an integral component of social life on campus and restrictions incurred were divisive.

> It is alcohol that everything revolves around as far as a social event goes and they had a lot of them, for the entire first year until I turned 18 which meant that, all through Law, I basically had no friends in Law at all (Lucinda)

> It did kind of limit social activity in first year. (Steve)

> Because I was young, I was singled out. I could not go to a bar. I tried fake ID. I couldn't drive so had to use the train. I was not invited out. (Adrian)

However, the problems associated with age restrictions lasted only until the participants reached the adult age.

> Some things you might be concerned about what might happen, probably won't happen. They might be worried about – losing their school friends, or fitting in – the problems go away. (Sean)

Overall, academic, personal, and social hurdles were encountered by the participants. The resilience of the participants enabled them to deal with the hurdles, and dependent on their age or stage, they completed – or intended to complete – their undergraduate degree, further study or joined the workforce.

Theme 6: Support.

The theme of support emerged, with three different sources – academic, friends and family. In the academic sector, participants identified lecturers (n= 7), mentors (n=3), tutors (n=2), faculty staff (n=2), and academics (n=3) as very positive support. The participants acknowledged the kindness that the academic sector offered.

> And along the way (especially at university) there have always been academics willing (offering) a helping hand, all of this was invaluable. (Peter)

> The lecturers are kind in that they look after the bright students and offer them help with positions and courses. (Adrian)

The second source of support came from friends who were fellow students. By participating in campus clubs and societies, or by interacting with fellow students in class, a support network developed and thus, help was available.

> Chances are you are close friends with someone who can help you. (Suzanne)

> Fellow students were very supportive (Daniel)

> I think [friendship] is the best way of getting support. (Steve)

> I've got friends there…people to study with (Felicity)
> …it's not particularly difficult to meet [the] kind of people who were very supportive. (Tim)

The third source of support came from the family. One participant, Nanette, thought her parents' support was predominately of a protective nature. All but one participant found that the family was supportive. Sophie had "major problems" with her parents, and she did not live at home. Tied in with family support was the fact that all participants but one lived at home, at least for the first

3 years of undergraduate study. Eight participants mentioned living at home was positive, as it provided stability.

> Living at home…was a constant. And it was always supportive, always here. (Lucinda)

> Living at home? Yes. It's lovely. I'm very close to my parents. (Suzanne)
>
> I think my parents have always been very supportive. (Sean)
>
> …living at home definitely made things easier although by the end I couldn't wait to leave. (Peter)

Support, from at least two sources, and possibly all three – academics, friends and/or family – was a positive issue in the university experiences of all of the participants.

Summary of Phase 3

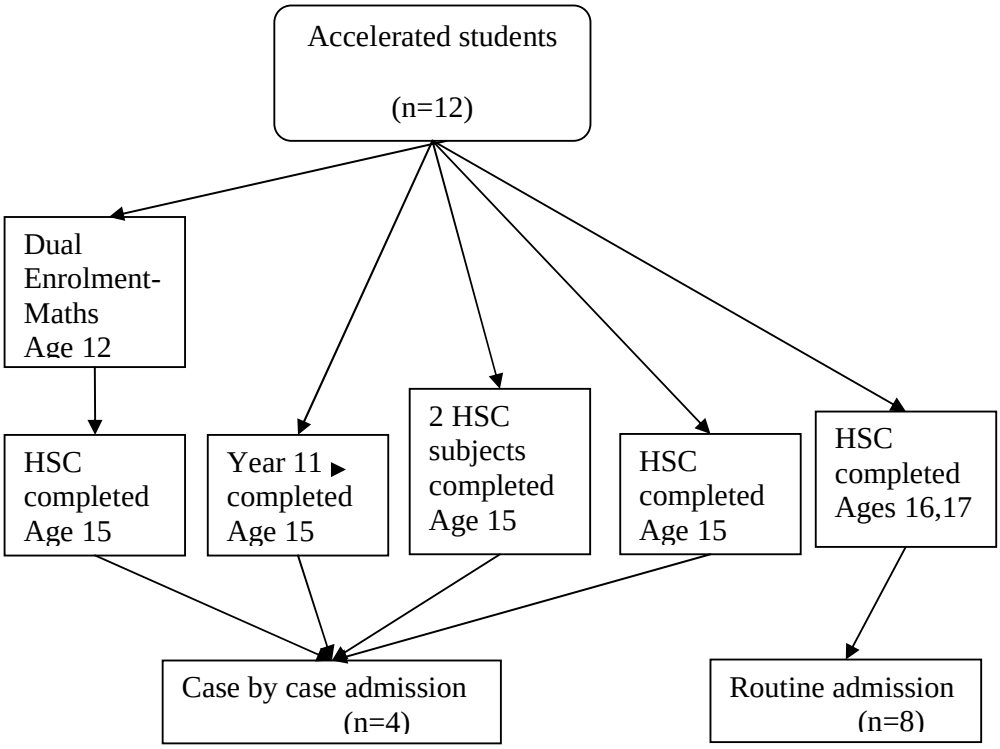
The third phase involved interviewing 12 accelerated students who had been admitted to university, to explore their experiences of university adjustment. Their experiences at school, acceleration, university entrance, university, future plans, and their reflections were investigated. This phase was specifically designed to answer the Research Question 3.

Q 3 What issues, perceived by the students, facilitated their positive adjustment to university? What hurdles did they identify?

Twelve participants, accelerated in school, were interviewed. In exploring the students' past experience, three categories of acceleration were found: grade skipping, subject acceleration and a combination of these. Admission routes to

university were varied, as shown in Figure 9.1. One participant began dual enrolment at 12 years, and at 15 was admitted as a full time undergraduate through case-by-case admission. Another 15 year old had early admission through a formal program and a third 15 year old had early admission through an informal case-by-case process. The 4th 15 year old, who had been radically accelerated, had case-by-case admission as he had completed his HSC. Eight other young students, aged 16 to 17, had completed the HSC and experienced routine admission.

Figure 9. 1 Admission Pathways of Accelerated Students Interviewed



The theme of school experience related to both the academic and social issues. A general pattern of negativity emerged from participants who were pleased to “escape” from school. Some reported boredom, relieved to some extent

by acceleration. Lack of like-minded friends made it difficult to find a social niche at school life before university.

Personal motivation for achievement was characterized by the ability to articulate long term goals, determination, and joy and excitement generated by academic pursuits. Acceleration had given the participants' motivation an edge; by having saved time, there was the chance to change courses, do other things such as study overseas, or enter the workforce early.

The stimulation of university was a predominant theme. Participants expressed delight in the academic stimulation and challenge, finding intellectual peers and the freedom of university where the few restrictions allowed for independence. They enjoyed the anonymity of age, and being treated respectfully like any other undergraduate.

Another powerful theme was that of friendship, acquired while at university. Like-minded friends, perhaps true peers, were acquired mainly through class, clubs, societies, and some through activities outside university studies. Participants were very positive about having established friendships, and it seemed to be crucial in the process of adjusting to the tertiary scene. Linking in with friendship was the theme of hurdles, for it was friends who often helped navigate the various hurdles – academic, personal, and social. For most of the participants the hurdles were not serious obstacles, and were possibly common to any undergraduate. However, some participants did have serious problems - such as illness, difficult relationships, and social discomfort – which took up to 3 years to overcome. The social restrictions for minors existed – dating, driving, alcohol related activities - but again these lapsed by the age of 18 years. The theme of

support was also vital, it seemed, to the successful negotiation of university, and the three sources were academic staff, friends and family.

The final chapter discusses the conclusions of the overall findings, suggests recommendations, considers limitations and outlines implications for further research.

Chapter 10: General Discussion and Conclusions

This chapter discusses all three phases of the study. It draws together the final conclusions and makes some recommendations. It also lists the limitations of the study, and proposes directions for further research.

Discussion and Conclusions

While it is evident that dual enrolment opportunities are increasingly available for young gifted students at Australian universities, information on university websites was often difficult to find. Early admission was possible, but the concept was generally unfamiliar to university officials, and consequently not broadly advertised by universities. Moreover, there is a difference within Australia about the definition of *early admission*. The University of NSW provides the definition used in this thesis (final school qualifications are not completed) whereas the Victorian Department of Education defines *early admission* as any student who completes final school qualifications after radical acceleration, and who enters university significantly younger than the usual 18 years of age. This study found that *early admission* was, erroneously, often synonymous with *early registration* or *early acceptance*, and in many cases early registration seemed to be a marketing device to attract students. In essence, this confusion at the university level makes it difficult for students with a need for early admission to even begin to explore their options. It is clear most universities in Australia are happy to attract gifted students to their campus. This might suggest the need for (1) a consistent definition, and (2) what the university's policy is on early admission.

Initial contact with university administrations indicated that early admission was an unusual pathway, and possible procedures were often inconsistent, unknown or ad hoc. The case-by-case scenario, described by university officials, suggested that much was left to the discretionary powers of deans or faculty heads. This, at least, acknowledged indirectly the existence, ability, and needs of exceptionally talented students. According to Gross (2006; Gross & van Vliet, 2005) early admission is a valuable and successful practice for radically accelerated students and yet only one university had a formal scheme in place for early admission. By contrast, there are 19 formal early admission programs in the United States (Muratori, 2007). The universities interviewed, which reported accepting case-by-case admission, had very few formal policies or processes for early admission in place, suggesting a very ad hoc approach across Australia. Furthermore, the sample investigated in this study covered approximately 25% of Australian universities indicating that early admission for many Australian students remains a slight possibility, rather than a certainty. From the experiences reported both by the universities and the students themselves, if early admission is to be a viable option for bright students, its processes need to be consistent across all universities and formalized. And, as this and previous research has pointed out, early admission could be practised more widely.

Acceleration in schools, which would include the option of early admission for university, is a viable and positive intervention (Lubinski, 2004; Rogers, 1991; Swiatek, 1993). However, the findings from this study suggest that the potential flow-on benefits for Australian universities are being addressed in a very limited way. There was little advertising of opportunities to attract young,

gifted students; perhaps advertising is not addressed because the early admission is ad hoc. Traditional scholarships for students were often perceived by universities (n=7) to be sufficient for attracting gifted scholars. This seems a short-sighted measure for this “clever country”, both in terms of nurturing and supporting the individual, and in terms of seeing Australia’s brightest learners as a the national resource. *The education of gifted and talented students* (2001) proposed that the role of the universities was “an appropriate matter for national co-ordination”. Recommendation 11 stated: The Australian Vice-Chancellors’ Committee, in consultation with school education authorities, should develop a policy providing more flexible university entry and study options for gifted students” (2001, p. 7). Eight years later Australia is still waiting for the recommendation to be implemented. As this study has established, more flexible entry and study options for accelerated students, and greater exposure of those options, should result in getting Australia’s brightest students ready for the work force and for becoming productive contributors to society considerably earlier than current systems allow.

Final school qualifications were well accepted as sufficient and necessary, regardless of age. Accelerated students were able to access the universities which had no minimum admission age, and possibly those with a minimum age restriction - with permission, but the universities’ website information was difficult to access. There was variation of admission age across the universities. Consequently there may be a need for consistency of admission age across Australia as this would facilitate, for the student, the process of assessing and selecting options when applying for university admission.

Dual enrolment programs were available in all states and, in some cases, the results were factored into the UAI calculation. In most cases, university credit, or advanced standing, was given, albeit by the providing university. Dual enrolment was delivered mainly through specific programs, initiated by the universities, or through university developed courses, endorsed by State education systems, or sometimes through individual initiative in seeking tertiary enrolment. The different programs had quite varied aims, including enrichment of educational opportunity to broaden the range of subjects studied, familiarising students with undergraduate student life or as a marketing tool to encourage students to enrol in their particular university. Admission numbers of students under 17 years, especially at Open Universities Australia, indicated that young students were enrolling in tertiary education and that there was a need for tertiary access. Clear information on university credit or advanced standing from dual enrolment is needed because without this it would be difficult for students to assess and make careful subject choices.

A nation deceived: How schools hold back America's brightest students (Colangelo et al., 2004) reported on why acceleration was not valued and practised in America. The authors reported a lack of knowledge about the research on acceleration, misconceptions about the needs of gifted students, and stereotypical views on social and emotional issues in the U.S. Similar patterns emerged from the interviews with Australian university personnel about early admission, one form of acceleration.

All 11 universities interviewed reported that they accepted case-by-case admissions, thus suggesting they valued giftedness at the tertiary level. All 11 universities accepted young students, provided they had completed secondary

qualifications. All indicated some recognition of the gifted profile. However, the common patterns of responses suggested that there is very little recognition of giftedness or advanced learning. One official admitted that "…it would have to be a very special case" (U9); another said it may happen "…on rare occasions" but that "…extremely low numbers do not warrant a specific scheme". The universities, in general, seemed to accept an education system based on the lockstep of age. The national flexible entry and study options, proposed by ***The education of gifted children*** (2001), according to this study, remain a recommendation only and have not been implemented.

The universities' issues of concern, militating against the implementation of early admission, were social adjustment, duty of care, issues of equity, and economic feasibility. There was genuine concern for social and emotional wellbeing of students. However, research has shown that if acceleration is well planned, there is an absence of anticipated harmful effects on affective development (Muratori, Colangelo, & Assouline, 2003; Robinson, 2004). If the lack of knowledge about the capabilities and needs of gifted students were rectified, the university authorities might not be concerned about inadequate social adjustment. While the university personnel interviewed were mindful of the presence and needs of gifted students, and conceded that talent was undervalued, it appeared that they were possibly unaware of the research (Caplan et al., 2002; Colangelo et al., 2004) which indicates that affectively, early admission students adapt readily to university.

The success of the Australian child prodigy Terry Tao (Muratori et al., 2006) attested to the fact that existing educational practices can work for child prodigies and for talented children. Through careful planning with educators,

parents and experts, and using existing systems to creatively individualise an educational program, Tao was offered a unique path of early admission at Flinders University. Greater awareness of the research available, of case studies, and of possible options, is necessary if the success of such individualised, accelerated pathways for gifted children is to be more systematically repeated (Bailey, 1992; Colangelo et al., 2004) .

There appeared to be a lack of awareness of the research about the needs of gifted students found among the universities in this study. Csikszentmihaly, Rathunde and Whalen (1997) have shown that there are students who flourish in a stimulating environment. Robinson, Reis, Neihart and Moon (2002) emphasized that social and emotional difficulties are often dissipated when the educational fit of academic level and pace is appropriate. Olszewski-Kubilius (1998) researched the stories of young learners in university settings, and reported their overall success. The evidence from the Australian students interviewed supported the notion of flourishing in the stimulating environment of university. When challenge and skills are matched, and engagement is shared with like-minded students/friends, then students are motivated to succeed. Accelerated students adjust appropriately when given access to appropriate tertiary stimulation.

The similarities of the responses of the 12 student participants contributed to the development of the common themes which explored the very positive university experience of these participants. Escaping from the social and academic disengagement of school to go to the tertiary environment made for a welcoming experience. Personal motivation for achievement spurred the participants to enjoy aspects of the stimulation offered by the university. Finding friendship was crucial for social adjustment. Both friendship and support were positive factors in

overcoming the hurdles encountered. In this way academic, social and emotional adjustment to university for the 12 participants seemed a relatively smooth journey, and perhaps, for some, contributed to a process of self-actualisation for the first time. Finding academic passion, academic fulfilment, freedom, and friendship may be key elements for the process of self-actualization.These findings were similar to the findings of a U.S. study (Hébert & McBee, 2007) of 12 university honours students who found intellectual stimulation, academic challenge, an intellectual and social network of like-minded peers, and an effective mentor. That is also echoed in the findings of Rinn (2008) who found that students enrolled in honours programs, and students enrolled in early entrance programs, were both likely to have positive academic, social, and emotional development.

There was sometimes a stark contrast between the misery of earlier school experience and the joy of university studies. Three aspects of the school experience were important: academic, social and personal. Alleviating boredom and escaping from the social malaise were recurrent school issues in the student interviews. By contrast, their needs were satisfactorily addressed at university. The honours students in the Hébert,and McBee study (2007) had also experienced a similar sense of isolation at school. Asynchronous development (L. K. Silverman, 1993) may have accounted for much of the early negative school experience, and by the time the participants had reached university, the asynchrony may no longer have been significant, for academic, social and personal needs had been met. It is important that educators be aware of the research on the needs of gifted children, especially in primary and secondary school, so they are aware of the asynchronous development of gifted students.

Bailey (1995) suggested that wider publication of case studies would assist in overcoming teacher wariness about acceleration. Understanding the needs of gifted students, such as academic challenge and a stimulating social environment, beyond the age cohort, might enable educators to combat the disengagement of gifted students from school.

For some participants friendship at university was in direct contrast to the friendship experienced in their earlier schooling. As Gross (1994a) pointed out, adults seek out friends who have similar values and interests, and highly gifted children often are lonely because they mix with age-peers who do not necessarily have the same interests or values. At university, however, friendship with like-minded peers, was valued by the participants, some having found friends for the first time. The forced-choice dilemma (Gross, 1989) between finding companionship with people of like abilities and interests, and a need to be accepted into a social group of age-peers, no longer existed. As Sayler (2008) argued, talent development is necessary for thriving, but in addition "the gifted individual must develop good friendships in order to thrive" (p3). Friendship offered vital support and seemed to complement academic stimulation. Therefore, for these students, friendship may be a crucial factor in positive social and emotional adjustment at university.

Ghosh (2009) developed a hierarchy of different types of friendships, and among the seven types he distinguishes social, intellectual and self-actualised friends and school friends. The latter he characterized as "lots of friends in this group" who mostly become acquaintances, whereas the self-actualised friends are "very rare to find" and had "an amazing appetite for intellectual conversation", and intellectual friends are of a "very curious and intellectual mindset". Perhaps

the Australian participants were able to find various friends at university who satisfied both academic and social needs, and thus friendship facilitated their adjustment.

At the personal level, the participants appreciated being treated as any other undergraduate at university, and this may have been a reaction to their previous treatment at school. In the earlier school years, participants sometimes felt a sense of separation and isolation, because of treatment by educators, and because of friendship issues. Two commented that when one was accelerated one was set apart, and were not necessarily aware of one's weaknesses in the same way that age-peers responded to the rough and tumble of growing up. It was at university that two participants learnt to address their weaknesses, by acquiring social skills and learning life skills.

The vital support of family was a common thread throughout all the stories of the participants. It stands to reason that children need advocates to sometimes initiate the process of acceleration, or simply to be supportive when acceleration was instigated by the school. Three of the participants needed parental support to investigate early admission, but others did not. However, in all but one case, parents still played an important background role in supporting their university student; this seemed a relatively normal posture as the adolescent moved into adulthood. It is a serious concern that sourcing information about tertiary opportunities for young, gifted students, and accessing such a pathway as early admission, in most cases depends on the skills, knowledge and persistence of the gifted students and their families. Indeed, a case can be made that gifted students need advocates.

The role that support - by family, friends and staff - played in adjusting positively to the tertiary situation was a significant issue. Robinson et al. (2002) found that family played an influential role in supporting the successful talented teenagers, and that supplying a continuum of services at university is needed to meet their needs. As mentioned, the situation in Australia is in stark contrast to the situation in the United States where many universities provide formal support programs to young students, programs which are academic, social and psychological. Noble et al. (2007) found that the surveyed early entry graduates from the University of Washington appreciated the faculty and staff support they were given. While the Australian participants were pleased to be treated as other undergraduates, they also offered suggestions on support mechanisms that the university could ensure be available for them. Yet there were few provisions, such as support, for gifted students. The general framework of formal and informal support, offered by the Australian universities, centred on the assumption that gifted students can look after themselves, just as any other undergraduate can. With very few exceptions students who do get accepted are very much left to their own devices and support systems. It may be the result of such small numbers of early admissions in Australia, whereby informal support has been assumed to be adequate. However, this may well be associated with the Australian egalitarian attitude that tall poppies do not “want” special treatment, or do not deserve special treatment. Evidence from U.S research (Maine & Maddox, 2007; Rinn, 2005; Robinson & Harsin, 2002; Rogers, 2002; Sayler, 1994) suggests that both informal and formal support is needed to help with academic, social or psychological issues.

Duty of Care was raised in many interviews by the university officers as a reason for not actively providing early admission for a greater number of students. They appear to consider the admission of younger students on campus as an onus, bringing with it potential problems of underage drinking, illicit use of the internet, and inappropriate industry placements. However, Duty of Care could be less of a concern with appropriate screening. If a thorough screening process of early admission applicants were carefully implemented, the university early admission intake would include suitable candidates. Predictors of success, which includes careful screening, for early entrants have been developed in the U.S. (Muratori, 2007; Olszewski-Kubilius, 1999; Sayler, 1994). Guidelines for early admission have also been developed in the United States to reduce the risk of placing a student inappropriately (Robinson & Harsin, 2002; Rogers, 2002; Trost, 2000). Guidelines, including screening, could be developed for Australian students to overcome the attitude of the universities to Duty of Care.

It is unclear from this study whether Duty of Care was the pretext for not providing early admission opportunities or merely indicative of a lack of awareness about gifted learners' motivation and self-directedness, or merely that it was an added responsibility. Noble, Vaughan et al. (2007) showed that the young students in U.S. who entered university early, embraced the college opportunities to mix with their intellectual peers and did not have adverse experiences because they were younger. This notion was supported by the Australian students interviewed. In adjusting socially to the university experience, the participants encountered the hurdle that, in the Australian ethos, social life is often equated with drinking. With the restriction of age for minors, alcohol related activities were supposedly off limits. However, while that ethos is prevalent at Australian

universities, the participants seemed to cope. Age related problems were raised in the readings about U.S. early entrants (Sethna et al., 2001) and argued that for some students it was preferable to be with one's intellectual peers and away from the anti-intellectual high school culture that overvalues sex, alcohol, and pop entertainment. The participants in the study by Noble (1998) accepted that there were difficulties in being young but that they learnt responsibility concerning social interaction with the older students. This paralleled the experience of the 12 Australian participants.

While it has been argued that the university experience was a positive one in general, and two participants in particular were delighted to have escaped school to have a fresh start at university, sometimes that initial adjustment to the tertiary environment was not all smooth sailing. This was consistent with the findings of Neihart (2007) who noted that not all of the U.S. research had reported positive adjustments of early entrants to university, but the negative effects were often ameliorated with intervention. Three Australian participants, beset by emotional "baggage" – a brother's reputation, anorexic issues, family problems – had these difficulties with which to contend. All three ultimately coped with these hurdles. As Patton (2002) pointed out, such negative cases seem to contradict the conclusion, the "rule" - in this case, that the stimulation of the tertiary scene was invaluable in the process of adjustment, and perhaps self-actualisation. However, the fact that the three participants did overcome their difficulties perhaps reinforces the power of the stimulation of the tertiary scene.

Interwoven with the positive university experience was the theme of intrinsic motivation for academic success. In the tertiary environment the participants were highly motivated; perhaps for the first time, there was the

optimal match (Csikszentmihalyi et al., 1997) between their skills and challenge. One focus of the UNSW screening test was to consider motivation, as this was considered a key factor indicating resilience to enable students to cope with problems. Being able to articulate long term goals may have indicated a facet of motivation that helped them through difficult times. As mentioned above, a careful screening process may be vital in identifying a student's appropriate motivation, as a predictor of success as an early admission student.

From the interviews with the university personnel, the idea of developing the talent of gifted students was not seen as an equity issue. Even though the gifted population may be small, it seemed clear that university personnel did not see gifted students as a marginalised group, having different academic needs to the university-going majority. Other equity issues, such as the indigenous student, took priority. This situation needs to be redressed so that the needs of the gifted are met in the way in which *The education of gifted children* (2001) suggested. Gross (1999), in *Inequity in equity: The paradox of gifted education in Australia,* explained how excellence and equity were complementary, not conflicting: "Equal opportunity requires that all students, regardless of their level of ability, should be encouraged and facilitated to develop their potential to the fullest"(p. 8).

Economic feasibility was raised as a significant issue by the university officials interviewed, and it may explain university decisions about student intake. The responses from the university officials implied that maximising giftedness was not a perceived priority at tertiary level, even in terms of a long term national resource. The gifted population, it was argued, was too small a group for its specific marketing to be economically viable. The economics of a university are complex and although long term harvesting of national talent would seem to be a

worthwhile pursuit, it was not a priority. The economic argument and the equity issue seem contradictory. It would seem to be a misconception that to advertise and recruit gifted students for early admission would "open the floodgates" when careful screening could be used as a filter. Thus, a natural resource is ignored and not valued in general by Australian universities. The neglect of such a national resource was one of the overriding concerns which was addressed in the U.S. Templeton publication *A Nation Deceived: How schools hold back America's brightest students* (Colangelo et al., 2004) and it most certainly applies to the Australian situation. Gross (1999) concluded:

> If we deny gifted children the right to optimal development of their potential, we are not only violating the principles of equity by denying them what Beazley (1984) called 'the courtesy and grace of an appropriate education', but we are failing to provide, for generations following, the national resource of developed intellectual talent which is essential if our country is to survive, and grow. (p. 15)

Finally there was the concern that difficulties currently exist because different Australian states have different final secondary qualifications. There are complications concerning such matters as the capacities of the universities, funding, agreement on transfers and credits. Perhaps the proposed National Curriculum may alleviate this issue to some degree in future. It can be concluded that there is a need for more education about accelerative practices, in order to underline the positive effects of acceleration, as well as the negative effects, such as boredom and underachievement, when acceleration is not used. Perhaps a national research and resource centre on gifted education, funded by the Commonwealth, as suggested by *The education of gifted children* (2001) Recommendations 17 and 18 would provide some solutions. However, the complications of state differences have perhaps precluded wholehearted support

for national coordination. Unfortunately, national coordination for gifted education remains in the realms of the ideal.

Perhaps a concern is that significant negative beliefs exist even in universities that do support early admission. One Official verbalised the myth that "Most parents feel their child is gifted" (U9). To what extent are these mirrored or exaggerated in the majority of Australian universities that do not support early admission? There are positive aspects of early admission in place in Australia. The formal program at UNSW provides an excellent example for program development, criteria for entry, application form, and interview process, including screening. Monash University and Griffith University have both framed an excellent gifted policy to cover the age factor and exceptional students. Queensland University of Technology has a thorough set of procedures to be observed by the Faculty and by the Central Student Business Services when an undergraduate is below regular Year 12 school leaving age. Murdoch University's computer system automatically creates a list of younger than usual undergraduates, and it then follows up the application with the school, the parents and /or the student. It follows from these positive examples that a nationwide model of such exemplary elements could be developed.

Recommendations

This study suggests that university options are far from consistent and accessible to gifted Australian students, their families, and to educators. A number of recommendations follow from the conclusions described above. These are summarised as follows:

1 A consistent definition of early admission be used across Australia.

2 A consistent national policy on eligibility for gaining early admission to university without completion of the final secondary certificate be developed.

3 Greater participation in early admission for educating gifted students be undertaken by Australian universities.

4 Formalised policies about early admission, and processes, be put in place.

5 Formalised case-by-case discretion and decision-making for early admission be established, based on rigorous screening processes.

6 Coordinated flexible entry and study options for gifted students be developed and advertised across Australia.

7 A consistent, national policy be developed concerning minimum age requirements for admission to university, on completion of final secondary certificate.

8 University web pages and other documents, communicate clearly the options available, and qualifications for eligibility.

9 More certainty on which university courses, available to secondary students, are awarded university credit.

10 Equity issues be reviewed to include the gifted population.

11 A model of flexible entry for the universities, based on exemplary elements from individual universities, be developed.

12 Educators and decision-makers become familiar with current research on the value of acceleration.

13 K-12 school educators should be encouraged to become aware of the asynchronous development of gifted students, and therefore alert to their disengagement from the school situation.

14 Support should be provided to enhance the young accelerated student's adjustment to the tertiary setting through individual course and affective counselling with an early admissions-specialising guidance counsellor, common study areas for younger students to gather on campus, and social structures to encourage participation in general university life. For the dual enrolment student, teacher support is needed for administrative contact with the university.

Limitations of the Study

Accuracy of information.

The main limitation of the study had to do with verification of the information collected. Not all universities responded, website information was difficult to find, and even when an official responded, the researcher was not always confident that the right person was supplying the information. Nevertheless, the universities were generally very helpful and generous with time, willing to discuss the official university policy, seemingly open in expressing opinions and arguments, and supportive of the research, but no outright admissions of lack of knowledge were given. To overcome this limitation, an effort was made to corroborate claims with university documents and follow-on interviews with additional university personnel.

Participants.

With elite interviewing, the insight and intelligence of the university officials make an invaluable contribution to the research (Marshall & Rossman, 1989). However, participants' busy schedules provided limited accessibility and time restraints. In addition, the participants may have been limited in their responses by the "interviewer effect" (Frey & Oishi, 1995) by giving a politically correct response that they "should" give, when advancing the university's attitude. In the current study, the telephone interviews were relatively informal and the participants seemed willing to respond; they did not seem to be wary or overly cautious. One participant clarified, at one point, that he was giving his own opinion, rather than the stated view of his university. One other participant reminded the researcher of the confidentiality of the interview by saying that his comments were intended for a thesis, and not as headlines in *The Sydney Morning Herald.*

One of the main limitations of the student interviews (Phase 3) was the selection of participants. There were a limited number of participants interviewed, from four different universities, but all from the one state. Greater variety of participants from different universities, Australia wide, might have broadened the findings. However, it should also be noted that this is a unique and very small population of students, making access difficult.

Phone Interviewing Skills.

The telephone interviews were semi-structured, involving a series of questions. Some questions were overlooked during the spontaneity of the conversation and a "No response" had to be recorded. Some answers were not explored fully or clarified. Nevertheless, the researcher felt confident that the

participants were genuine in their willingness to discuss the issues, and that their contribution was sufficiently substantial on which to base a case study. By providing transcripts to each interviewee after the telephone session and allowing for changes or clarifications to be made, it is hoped that this limitation on possible validity has been remedied.

The Questions.

Despite a pilot study, the framing of the questions could probably have been improved. Some questions invited a yes/no answer but most invited open ended answers. Some may have seemed ambiguous, although the opportunity was there for respondents to inquire about the intent of these questions, and some required a lengthy response. Some questions were repetitive: for example, there was a great deal of overlap when discussing early admission and /or acceleration. Some of the questions were very complex. However, the responses given provided rich and varying data which provided significant information on the topics under investigation despite these limitations

Discontinued Cases.

It was disappointing that two university case studies were not completed. All universities responded to the initial email, but if the university official did not respond to further emails after a month, the case was dropped, as the researcher did not want to annoy or jeopardise future research work with that university.

Reflections on the Process

The research for the thesis was much more complex than was originally anticipated, especially in Phases 1 and 2. The information gleaned concerning access to universities, and concerning attitude of the universities, was necessary to

establish the context in which accelerated students were interviewed. The interviews with the participants provided a rich source of information, and it was a pity that the time limitations for the study precluded having a wider range of cases. The process of identifying the participants relied on leads given by university colleagues, and personal acquaintance of the participants. Meeting and interviewing the participants, however, was very stimulating, for the participants offered valuable insights into their university experience. Collecting triangulation data for Phase 3 would have had positive benefits but would have extended the study far beyond its current 400 pages.

Reflections on the Findings

While early admission to university for accelerated students has been well established in the United States for 50 years, there is little evidence to show that the concept is understood, welcomed or practised in Australian universities, and there has been a dearth of research in Australia on the topic. This study uncovered a great deal of information which had not previously been investigated about early admission in Australia – access to universities, attitudes of universities, and finally a synthesis of student experience based on 12 case studies. The findings have significant implications for all key stakeholders, which include gifted students, their parents, schools, educators, universities and researchers. Practical implications include (i) the identification and dissemination of appropriate information to stakeholders (ii) the development of suitable processes for addressing the needs of early entrants and (iii) coordination of gifted education services and options.

The findings revealed how little is known in the Australian tertiary setting about gifted students and about the positive value of acceleration, and how little is

done in the tertiary sector to nurture the accelerants who are moving through the school system. The findings also supported the notion that early admission students found the university experience stimulating and adjusted very positively. This was at a time when tertiary institutions were beginning to review both the way in which they operated and their strategic directions. The study highlights the importance of student interaction, especially in reference to self-actualisation, at a time when the university environment is changing. Students are employed in outside work for more hours per week, are on campus for shorter periods, and are engaged in more online activities. It is important to consider what this may mean for future early entrants.

The student stories demonstrated that accelerated students found university study a positive, successful experience and some had gone on to further study. Two of the 12 interviewees in this study had gone overseas to undertake doctoral studies, two others had specific plans to pursue post graduate studies overseas, and one intended to work overseas. However, between 1991 and 2007, the University of NSW accepted only 8 out of 38 applications for its Early Admission Program. Australia's young, gifted population needs to be nurtured, for the sake of the individual, and for the wellbeing of Australia's future. Early admission is one way of meeting these needs and Australian universities need to become proactive.

Implications for Further Research

Several implications to advance the field of knowledge have evolved from the research, especially from the Phase 3 interviews. The following list suggests where further research may be directed:

1. To qualitatively investigate the experience of dual (school/university) enrolment students while still at high school.
2. To clarify and define what criteria are used by the dean or faculty heads to allow, or disallow, young students to enter the university early.
3. To conduct a longitudinal study, Australia wide, of the experience of early admission students.
4. To research a broader range of accelerated students from different faculties, and to explore whether there are different rates of success, and if so, why.
5. To follow up on the academic success of early admission students.
6. To examine those aspects of the university experience which are critical in the process of self-actualisation of gifted students.
7. To identify the different types of friendships in which gifted students engage at university and the outcomes of those friendships.
8. To develop a set of predictors for success in early admission, especially to assist students, parents and educators. This would be useful in developing appropriate screening tests for evaluating early admission candidates.
9. To explore how and why the K-12 school curriculum and social setting is disengaging for gifted students. This would be useful for school counsellors and educators.
10. To research how best to develop and implement national coordination of gifted education, a national policy providing more flexible university entry, and national study options for gifted students.

11. To develop an ideal model for early admission for universities, Australia wide, to adopt.
12. To compare the undergraduate experience of accelerated gifted Australian students with non-accelerated gifted students in Australia.

Gallagher (2004, 2008) suggested that all four engines of change that he identified need to be used to alter the U.S. view of acceleration: legislation, court decisions, administrative rules, and professional initiatives. Perhaps Australia needs to adopt his advice, if it is to overcome state differences and systematise talent development support for its young gifted learners. Greater access to tertiary options, a substantial change in attitude to gifted students, and a realisation that student adjustment to a stimulating environment can be positive, are needed. The comments of one Australian official are reminiscent of the sentiments on national wastage, expressed in *A nation deceived: How schools hold back America's brightest students* (2004):

> There is a need for such a national research centre for research into gifted education, in much the same way as the Australian Institute of Sport was seen as a timely initiative to address the decline in Australia's elite sporting achievements in the early 1980s. At the present time, we are in a similar place with respect to the entire spectrum of gifted education, pre-school to university level. (personal communication, August, 2008)

Reference List

Australian Bureau of Statistics. (2001). *1272.0 - Australian Standard Classification of Education (ASCED), 2001* Retrieved 21 July 2010, from http://www.abs.gov.au/AUSSTATS/abs@.nsf/Latestproducts/3D64726ECC17AD71CA256AAF001FCA3C?opendocument

Australian Catholic University. (2007a). *Extension studies.* Retrieved 18 May 2007, from http://www.acu.edu.au/acu_national/schools/arts_and_sciences/victoria/extension_studies

Australian Catholic University. (2007b). *Section 6: Education policies.* Retrieved 18th May 2007, from http://my.acu.edu.au/policies/

Australian Education Network. (2007). *List of universities in Australia.* Retrieved 12 July 2007, from http://www.australian-universities.com/list/

Australian Government. (2006). *Selected higher education statistics.* Retrieved 3 December 2006, from www.dest.gov.au/sectors/higher_education/publications_resources/profiles/students/

Australian Government. (2007). *Statistics relating to higher education.* Retrieved 12 July 2007, from http://www.dest.gov.au/sectors/higher_education/publications_resources/statistics/default.htm

Australian National University. (2007). *Advanced secondary studies program*. Retrieved 20 February 2007, 2007, from http://www.anucollege.com.au/Programs/Adv_Sec_Studies.html

Bailey, S. (1992). *Acceleration: Why each case must be examined on its merit.* Paper presented at the 4th National Conference for the Education of Gifted and Talented Children, Sydney.

Bailey, S. (1995). "Doing acceleration": Fast but not loose. *TalentEd, 13*(3), 14-19.

Bailey, S. (1997). Acceleration as an option for talented students. In B. A. Knight & S. Bailey (Eds.), *Parents As Lifelong Teachers Of The Gifted* (pp. 43 - 50). Melbourne: Hawker Brownlow.

Beazley, K. (1984). *Opening ceremony address.* Paper presented at the First Australian National Conference on the Education of Gifted and Talented Children, Melbourne.

Benbow, C. P., & Arjmand, O. (1990). Predictors of high academic achievement in mathematics and science by mathematically talented students: A longitudinal study. *Journal of Educational Psychology, 82*(3), 430-441.

Bleske-Rechek, A., Lubinski, D., & Benbow, C. P. (2004). Meeting the educational needs of special populations. *Psychological Science, 15*(4), 217-224.

Board of Studies NSW. (2000). Guidelines for accelerated progression (pp. 1-51): Board of Studies.

Board of Studies NSW. (2007). *Distinction courses.* Retrieved 23 May, 2007, from

http://www.distinction.nsw.edu.au/bwWebsite/followon.aspx?PageID=4073

Bond University. (2006). *Student for a semester*. Retrieved 15 May 2007, 2007, from http://www.bond.edu.au/events/studentforasemester/index.html

Bond University. (2009). *The Bond University handbook*. Retrieved 25 March 2009, 2009, from http://www.bond.edu.au/students/manage/handbook/index.html

Brenner, M. E. (2006). Interviewing in educational research. In J. L. Green, G. Camilli & P. B. Elmore (Eds.), *Handbook of complementary methods in education research* (pp. 357-370). Mahwah, New Jersey: Lawrence Erlbaum Associates (Routledge).

Brody, L. E., Assouline, S. G., & Stanley, J. (1990). Five years of early entrants: Predicting successful achievement in college. *Gifted Child Quarterly, 34*(4), 138-142.

Brody, L. E., & Benbow, C. P. (1987). Accelerative strategies: How effective are they for the gifted? *Gifted Child Quarterly, 3*(3), 105-110.

Brody, L. E., Muratori, M. C., & Stanley, J. C. (2004). Early entrance to college: Academic, social and emotional considerations. In N. Colangelo, S. G. Assouline & M. U. M. Gross (Eds.), *A nation deceived: How schools hold back America's brightest students* (Vol. 2, pp. 97-107): University of Iowa.

Brody, L. E., & Stanley, J. C. (1991). Young college students: Assessing factors that contribute to success. In W. T. Southern & E. D. Jones (Eds.), *The academic acceleration of gifted children* (1991 ed., pp. 102-132). New York: Teachers College Press.

Caplan, S. M., Henderson, C. E., Henderson, J., & Fleming, D. L. (2002). Socioemotional factors contributing to adjustment among early-entrance college students. *Gifted Child Quarterly, 46*(2), 124-134.

Carr, C. J. (2001). The use of telephone interview for research. *Nursing Times Research, 6*(1), 511-524.

Central Queensland University. (2007). *School-links non-award program.* Retrieved 20 May 2007, 2007, from http://www.cqu.edu.au/studinfo/admin/admissions/admissionsnona.htm

Charles Darwin University. (2006). *Higher education program for secondary students.* Retrieved 20 May 2007, from http://eagle.ntu.edu.au/ntu/apps/coursere.nsf/P_Course_Select/33B1AC8C69FBF67A69256DE60005FC88?OpenDocument

Charles Sturt University. (2005). *Associate student program.* Retrieved 20 February 2007, from http://www.csu.edu.au/division/deanstud/associatestudent/bsummer.htm

Charles Sturt University. (2007). *PREP (Principal's report entry program).* Retrieved 22 October, 2007, from http://www.csu.edu.au/division/studserv/equity/PREP.htm

Charlton, J. C., Marolf, D. M., & Stanley, J. C. (2002). Follow-up insights on rapid educational acceleration. *Roeper Review, 24*(3), 145 - 152.

Colangelo, N., Assouline, S. G., & Gross, M. U. M. (Eds.). (2004). *A nation deceived: How schools hold back America's brightest students* (Vol. 1): Univerity of Iowa.

Cornell, D. G., Callahan, C. M., Bassin, L. E., & Ramsay, S. G. (1991). Affective development in accelerated students. In W. T. Southern & E. D. Jones

(Eds.), *The academic acceleration of gifted children* (pp. 74-101). Columbia University New York and London: Teachers College Press.

Cornell, D. G., Callahan, C. M., & Loyd, B. (1991a). Research on early college entrance: A few more adjustments are needed. *Gifted Child Quarterly, 35*(2), 71-72.

Cornell, D. G., Callahan, C. M., & Loyd, B. (1991b). Socioemotional adjustment of adolescent girls enrolled in a residential acceleration program. *Gifted Child Quarterly, 35*(2), 58-65.

Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches* (Second ed.). Thousand Oaks, California: Sage Publications, Inc.

Csikszentmihalyi, M., Rathunde, K., & Whalen, S. (1997). *Talented teenagers: The roots of success and failure* (1st ed.): Cambridge University Press.

Elkind, D. (1981). *The hurried child: Growing up too fast too soon.* Newton, MA: Adison Wesley.

Elkind, D. (1988). Acceleration. *Young Children, 43*(4), 2.

Evans, D., & Gruba, P. (2002). *How to write a better thesis.* (2nd ed.): Melbourne University Press.

Figgis, J., Parker, l., Bowden, J., Money, L., & Stanley, G. (2002). *University credit for school students.* Canberra: Commonwealth Department of Education, Science and Training.

Frey, J. H., & Oishi, S. M. (1995). *How to conduct interviews by telephone and in person.* Thousand Oaks: Sage Publications.

Gagné, F. (2003). Transforming gifts into talents: The DMGT as a developmental theory. In N. Colangelo & G. A. Davis (Eds.), *Handbook of gifted education* (3rd ed., pp. 60-74). Boston: Allyn and Bacon.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (2nd ed.). White Plains, NY: Longman.

Gallagher, J. J. (2004). Public policy and acceleration of gifted students. In N. Colangelo, S. G. Assouline & M. U. M. Gross (Eds.), *A nation deceived: How schools hold back America's brightest students* (Vol. 2, pp. 39-45): University of Iowa.

Gallagher, J. J. (2008). What do schools need to provide to provide quality education for gifted students?, *Ninth Biennial Wallace National Research Symposium on Talent Development, University of Iowa* University of Iowa

Ghosh, R. (2009). *Different types of friendships.* Retrieved 2 November, 2009, from http://ldhs78.wordpress.com/2008/04/27/7-types-of-friendship/

Gillham, B. (2000). *The Research Interview*. London and New York: Continuum.

Griffith University. (2006). *GUESTS program.* Retrieved 3 March, 2007, from http://www.griffith.edu.au/ua/aa/sta/admission/guests/content_guests.html

Gross, M. U. M. (1989). The pursuit of excellence or the search for intimacy? The forced-choice dilemma of gifted children. *Roeper Review, 11*(4), 189-194.

Gross, M. U. M. (1992). The use of radical acceleration in cases of extreme intellectual precocity. *Gifted Child Quarterly, 36*(2), 91-99.

Gross, M. U. M. (1993). *Exceptionally gifted children*. London: Routledge.

Gross, M. U. M. (1994a). The highly gifted: Their nature and needs. In J. B. Hansen & S. M. Hoover (Eds.), *Talent development* (pp. 257-280). Dubuque, Iowa: Kendall/Hunt Publishing Company.

Gross, M. U. M. (1994b). Radical acceleration: Responding to academic and social needs of extremely gifted adolescents. *The Journal of Secondary Gifted Education, 5*(4), 27-34.

Gross, M. U. M. (1997). How ability grouping turns big fish into little fish - or does it? Optical illusions and optimal environments. *The Australasian Journal of Gifted Education, 6*(2), 18-30.

Gross, M. U. M. (1999). Inequity in equity: The paradox of gifted education in Australia. *Australian Journal of Education, 43*(1), 87.

Gross, M. U. M. (2000). Issues in the cognitive development of exceptionally and profoundly gifted individuals. In A. K. Heller, F. J. Monks, R. J. Sternberg & R. Subotnik (Eds.), *International Handbook of Giftedness and Talent* (Second ed., pp. 179-192). Amsterdam-Boston: Pergamon.

Gross, M. U. M. (2004a). *Exceptionally gifted children* (2nd ed.). London and New York: Routledge Falmer.

Gross, M. U. M. (2004b). Radical acceleration. In N. Colangelo, S. G. Assouline & M. U. M. Gross (Eds.), *A nation deceived: How schools hold back America's brightest students* (Vol. 2, pp. 87-96): University of Iowa.

Gross, M. U. M. (2006). Exceptionally gifted children: Long-term outcomes of academic acceleration and nonacceleration. *Journal for the Education of the Gifted*(July), 404-429.

Gross, M. U. M., & van Vliet, H. E. (2005). Radical acceleration and early entry to college: A review of the research. *Gifted Child Quarterly, 49*(21), 154-170.

Hébert, T. P., & McBee, M. T. (2007). The impact of an undergraduate honors program on gifted university students. *Gifted Child Quarterly, 51*(2), 136-151.

Hertberg-Davis, H., & Callahan, C. M. (2008). A narrow escape: Gifted students' perceptions of Advanced Placement and International Baccalaureate Programs. *Gifted Child Quarterly, 52*(3), 199-216.

Hofstede, G. (2009). *Cultural Dimensions.* Retrieved 26 February, 2010, from http://www.geert-hofstede.com/

Holahan, W., & Brounstein, P. J. (1986). *The acceleration into college and emotional adjustment of the academically gifted adolescent: A synthesis and critique of recent literature.* Paper presented at the Convention of the American College Personnel Association, New Orleans, L.A.

Ingersoll, K. S., & Cornell, D. G. (1995). Social adjustment of female early college entrants in a residential program. *Journal for the Education of the Gifted, 19*(1), 45-62.

Janos, P. M., Robinson, N., & Lunneborg, C. E. (1989). Markedly early entrance to college: A multi-year comparative study of academic performance and psychological adjustment. *Journal of Higher Education, 60*(5), 495-518.

Janos, P. M., Sanfilippo, S. M., & Robinson, N. (1986). "Underachievement" among markedly accelerated college students. *Journal of Youth and Adolescence, 15*(4), 303-313.

Keating, D. P., & Stanley, J. C. (1972). *From eighth grade to selective college in one jump: Case studies in radical acceleration.* Baltimore, MD.: Johns Hopkins University.

La Trobe University. (2007). *Handbook - General Information.* Retrieved 27 March, 2008, from http:www.latrobe.edu.au/handbook/2008/general/admissions-and-enrolment-process.htm

Lubinski, D. (2004). Long-term effects of educational acceleration. In N. Colangelo, S. G. Assouline & M. U. M. Gross (Eds.), *A nation deceived: How schools hold back America's brightest students* (Vol. 2, pp. 23-38): University of Iowa.

Lubinski, D., & Benbow, C. P. (1994). The study of mathematically precocious youth:The first three decades of a planned 50-year study of intellectual talent. In R. Subotnik & K. D. Arnold (Eds.), *Beyond Terman:Contemporary longitudinal studies in giftedness and talent* (pp. 255-281). Norwood, NJ: Ablex Publishing.

Lubinski, D., Webb, R. M., Morelock, M. J., & Benbow, C. P. (2001). Top 1 in 10,000: A ten-year follow-up of the profoundly gifted. *Journal of Applied Psychology, 86*(4), 718-729.

Lupkowski, A. E., Whitmore, M., & Ramsay, A. (1992). The impact of early entrance to college on self-esteem: A preliminary study. *Gifted Child Quarterly, 36*(2), 87-90.

Macquarie University. (2007). *Macquarie University school partners program.* Retrieved 9 March 2007, from http://www.spx.nsw.edu.au/academic/macquarie_university_partners_program.htm

Maine, T., & Maddox, R. S. (2007). An early entrance program. In K. Kay, D. Robson & J. Fort Brennan (Eds.), *High IQ kids collected insights,*

information, and personal stories from the experts. (pp. 197-210). Minneapolis, MN: Free Spirit.

Marshall, C., & Rossman, G. B. (1989). *Designing qualitative research.* Newbury Park: Sage Publications.

Mathis, M., & Lecci, L. (1999). Hardiness and college adjustment: Identifying students in need of services. *Journal of College Student Development, 40*(3), 305-309.

Matters, P. (2008). Gifted education: Debunking the myths. *Professional Educator, 7*(2), 6-7.

Merrotsy, P. (2003). Acceleration: Two case studies of access to tertiary courses while still at school. *TalentEd, 21*(2), 10-24.

Merrotsy, P. (2006). Radical acceleration in one subject: Two case studies. *TalentEd, 24*(1&2), 22-32.

Monash University. (2007a). *Enhancement studies program.* Retrieved 26 March, 2007, from http://www.monash.edu.au/study/enhancement/

Monash University. (2007b). *Scholarships.* Retrieved 3 June 2009, 2009, from http://www.adm.monash.edu.au/scholarships/categories.html

Mooney, S. P., Sherman, M. F., & Lo Presto, C. T. (1991). Academic locus of control, self-esteem, and perceived distance from home as predictors of college adjustment. *Journal of Counseling and Development, 69*, 445-448.

Muratori, M. (2003). *A multiple case study examining the adjustment of ten early entrants.* Unpublished PhD dissertation, University of Iowa, Iowa.

Muratori, M. (2007). *Early entrance to college*. Waco, TX: Prufrock Press.

Muratori, M., Colangelo, N., & Assouline, S. (2003). Early-entrance students: Impressions of their first semester of college. *Gifted Child Quarterly, 47*(3), 219 -238.

Muratori, M., Stanley, J., Ng, J., Gross, M. U. M., Tao, T., & Tao, B. (2006). Insights from SMPY's greatest former child prodigies: Drs Terence ("Terry") Tao and Lenhard ("Lenny") Ng reflect on their talent development. *Gifted Child Quarterly, 50*(4), 307-324.

Murdoch University. (2007). *Advanced placement program.* Retrieved 6 March, 2007, from http://www.murdochcollege.wa.edu.au/default.aspx?MenuID=92

Neihart, M. (2007). The socioaffective impact of acceleration and ability grouping: Recommendations for best practice. *The Gifted Child Quarterly, 51*(4), 330-341.

Noble, K. D., Arndt, T., Nicholson, T., Sletten, T., & Zamora, A. (1998). Different strokes: Perceptions of social and emotional development among early college entrants. *Journal of Secondary Gifted Education, 10*(2), 77-84.

Noble, K. D., Childers, S. A., & Vaughan, R. C. (2008). A place to be celebrated and understood::The impact of early university entrance from parents' points of view *Gifted Child Quarterly, 52*(1), 256-268.

Noble, K. D., & Drummond, J. E. (1992). But what about the prom? Students' perceptions of early college entrance, *Gifted Child Quarterly* (Vol. 36, pp. 106-111).

Noble, K. D., Robinson, N., & Gunderson, S. (1993). All rivers lead to the sea: A follow-up study of gifted young adults. *Roeper Review, 15*(3), 124-130.

Noble, K. D., & Smyth, R. K. (1995). Keeping their talents alive: Young women's assessment of radical, post-secondary acceleration. *Roeper Review, 18*(1), 49-55.

Noble, K. D., Vaughan, R. C., Chan, C., Childers, S., Chow, B., Federow, A., et al. (2007). Love and work: The legacy of early university entrance. *Gifted Child Quarterly, 51*(2), 152-166.

O'Leary, Z. (2004). *The essential guide to doing research.* London: SAGE Publications.

Olszewski-Kubilius, P. (1995). A summary of research regarding early entrance to college. *Roeper Review, 18*(2), 121-125.

Olszewski-Kubilius, P. (1998). Early entrance to college: Students' stories. *The Journal of Secondary Gifted Education, X*(1), 226-247.

Olszewski-Kubilius, P. (1999). Thinking through early entrance to college (pp. 1-10): Northwestern University's Centre for Talent Development.

Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Thousand Oaks: Sage Publications.

Peterson, J. S. (2000). Preparing for college - Beyond the getting-in part. *Gifted Child Today, 23*(2), 36-41.

Pressey, S. L. (1967). "Fordling" accelerates ten years after. *Journal of Counseling Psychology, 14*(1), 73-80.

Queensland Studies Authority. (2007). *Queensland certificate of education.* Retrieved 2 July, 2007, from http://www.qsa.qld.edu.au/learning_priorities/qce/docs/QCE-PoliciesandProcedures.pdf

Queensland University of Technology. (2007). *START QUT*. Retrieved 11September, 2006, from http://www.studentservices.qut.edu.au/apply/special/start.jsp?view=print

Ramsay, E., Tranter, D., Sumner, R., & Barrett, S. (1996). *Outcomes of a university's flexible admissions policies* (No. 0 644 473290). Canberra: Department of Employment, Education, Training and Youth Affairs, Commonwealth of Australia.

Richardson, T. M., & Benbow, C. P. (1990). Long-term effects of acceleration on the social-emotional adjustment of mathematically precocious youths. *Journal of Educational Psychology 82*(3), 464-470.

Rinn, A. N. (2008). College programming. In J. A. Plucker & C. M. Callahan (Eds.), *Critical issues and practices in gifted education* (pp. 97-106). Waco, Texas: Prufrock Press Inc.

Robinson, H. (1983). A case for radical acceleration: Programs of the Johns Hopkins University and the University of Washington. In C. P. Benbow & J. Stanley (Eds.), *Academic precocity: Aspects of its development* (pp. 139-159). Baltimore: The Johns Hopkins University Press.

Robinson, N. (2004). Effects of academic acceleration on the social-emotional status of gifted students. In N. Colangelo, S. G. Assouline & M. U. M. Gross (Eds.), *A nation deceived: How schools hold back America's brighest students* (Vol. 2, pp. 59-67): University of Iowa.

Robinson, N., & Harsin, C. (2002). *Considering the options: A guidebook for investigating early college entrance.* Nevada: Davidson Institute for Talent Development.

Robinson, N., & Janos, P. M. (1986). Psychological adjustment in a college-level program of marked academic acceleration. *Journal of Youth and Adolescence, 15*, 51-60.

Robinson, N., Reis, S. M., Neihart, M., & Moon, S. M. (2002). Social and emotional issues facing gifted and talented students: What have we learned and what should we do now? In M. Neihart, S. M. Reis, N. Robinson & S. M. Moon (Eds.), *The social and emotional development of gifted children* (pp. 267). Waco, Texas: Prufrock Press, Inc.

Rogers, K. B. (1991). *A best-evidence synthesis of research on types of acceleration programs for gifted students.* Unpublished Doctoral Dissertation, University of Minnesota.

Rogers, K. B. (1992). *A best-evidence synthesis of the research on acceleration options for gifted learners.* Paper presented at the Talent Development: Proceedings from The 1991 Henry B. and Jocelyn Wallace National Research Symposium on Talent Development, Iowa City.

Rogers, K. B. (2002). *Re-forming gifted education* (1st ed.). Scotsdale, AZ 85261: Great Potential Press, Inc.

Rogers, K. B., & Kimpston, R. D. (1992). Acceleration: What we do vs. what we know. *Educational Leadership, 50*(2), 58-61.

Rosenman, L. (1996). *96/12 The broadening of university education: An analysis of entry restructuring and curriculum change options*. Canberra: Higher Education Division, Department of Employment, Education, Training and Youth Affairs, Commonwealth of Australia.

Sayler, M. F. (1990). *Early college entrants at Purdue University: A study of their academic and social characteristics.* Unpublished PhD dissertation, Purdue University, Indiana.

Sayler, M. F. (1994). Early college entrance: A viable option. In J. B. Hansen & S. M. Hoover (Eds.), *Talent development: Theories and practice* (pp. 67-79). Dubuque: Kendall/Hunt.

Sayler, M. F. (2008). Talent is not enough: A short introduction to the model of giftedness and thriving, *Ninth Biennial Wallace National Research Symposium on Talent Development.* University of Iowa.

Sayler, M. F., & Lupkowski, A. E. (1992). Early entrance to college: Weighing the options. *Gifted Child Today, 15*(2), 24-29.

Schumacker, R. E., Sayler, M. F., & Bembry, K. L. (1995). Identifying at-risk gifted students in an early college entrance program. *Roeper Review, 18*(2), 126-129.

Seidman, I. (1998). *Interviewing as qualitative research: A guide for researchers in education and the social sciences* (Second ed.). New York: Teachers College Press.

Senate Employment Workplace Relations Small Business and Education References Committee. (2001). *The education of gifted and talented children.* Canberra: Parliament of Australia.

Sethna, B. N., Wickstrom, C. D., Boothe, D., & Stanley, J. C. (2001). The advanced academy of Georgia: Four years as a residential early-college-entrance program. *Journal of Secondary Gifted Education, 13*(1), 11-21.

Shannon, B. (1997). Acceleration - with hindsight. *Gifted, February*, 12 -13.

Silverman, D. (2005). *Doing qualitative research: A practical handbook* (Second ed.). London, Thousand Oaks, New Delhi: Sage Publications.

Silverman, L. K. (1993). *Counseling the gifted and talented.*Unpublished manuscript, Denver, Colorado 80222.

Southern Cross University. (2007). *STAR fast track.* Retrieved 21 May, 2007, from http://www.scu.edu.au/students/prospective/index.php/9/

Southern Cross University. (2008). *Handbook*

Rule 2: Coursework Awards: General Provisions Retrieved 27 March, 2008, from http://www.scu.edu.au/docs/handbook/index.php/20/

Southern, W. T., & Jones, E. D. (1991). Academic acceleration: Background and issues. In J. H. Borland (Ed.), *The academic acceleration of gifted children* (pp. 242). New York and London: Teachers College Press Columbia University.

Southern, W. T., Jones, E. D., & Fiscus, E. D. (1989). Practitioner objections to the academic acceleration of gifted children. *Gifted Child Quarterly, 33*(1), 29-35.

State of Queensland (DEA). (2006). *Queensland academies.* Retrieved 23 May, 2007, from http://www.qldacademies.eq.edu.au/

Swiatek, M. A. (1993). A decade of longitudinal research on academic acceleration through the study of mathematically precocious youth. *Roeper Review, 15*(3), 120-124.

Swiatek, M. A., & Benbow, C. P. (1991). Ten-year longitudinal follow-up of ability-matched accelerated and unaccelerated gifted students. *Journal of Educational Psychology September 1991, 83*(4), 528-538.

University of Melbourne. (2005). *Extension program.* Retrieved 8 November 2006, from http://www.services.unimelb.edu.au/umep/futurestudents/whatis/

University of New England. (2007a). *Admission - undergraduate admission rule*. Retrieved 2 April 2008, from http://www.une.edu.au/policies/pdf/admissionrule.pdf

University of New England. (2007b). *Alternative admissions pathways.* Retrieved 12 July 2007, from http://www.une.edu.au/for/future-students/undergraduates/apply/sras-brochure.pdf

University of New England. (2007c). *Alternative admissions pathways.* Retrieved 21 May, 2007, from http://www.une.edu.au/for/future-students/undergraduates/entry-requirements.php#alternate

University of New South Wales. (2004). *Future students - undergraduates.* Retrieved 29 March 2006, from http://www.unsw.edu.au/future.Students/undergrad/sad/early/entry.html

University of New South Wales. (2007). *Early admission for exceptionally talented students scheme.* Retrieved 21 May, 2007, from http://www.unsw.edu.au/futureStudents/undergrad/sad/earlyentry.html

University of Queensland. (2007). *Enhanced studies program.* Retrieved 21 May, 2007, from http://www.uq.edu.au/guidance/index.html

University of South Australia. (2006). *University extension program.* Retrieved 21 August 2006, from http://www.uep.unisa.edu.au/further_info.htm

University of Southern Queensland. (2007). *Head start.* Retrieved 21 May, 2007, from http://www.usq.edu.au/futurestudents/yr12schoolleaver/default.htm

University of Sydney. (2007). *Sydney summer school.* Retrieved 22 May, 2007, from http://www.usyd.edu.au/fstudent/undergrad/study/mkt/hsc_courses.shtml

University of Sydney. (2009). *Talented student program.* Retrieved 21 October, 2009, from http://www.science.usyd.edu.au/fstudent/undergrad/tsp/index.shtml

University of Tasmania. (2006a). *High achiever program.* Retrieved 22 May 2007, from http://www.prospective.utas.edu.au/hap/

University of Tasmania. (2006b). *Prelude.* Retrieved 22 May, 2007, from http://www.utas.edu.au/music/prelude.html

University of Tasmania. (2007). *Overture.* Retrieved 22 May, 2007, from http://www.utas.edu.au/music/overture.html

University of the Sunshine Coast. (2007). *Headstart.* Retrieved 22 May, 2007, from http://www.usc.edu.au/Community/Schools/SchoolStudents/Headstart/

University of Western Australia. (2007a). *Access UWA.* Retrieved 25 June 2007, from http://www.extension.uwa.edu.au/access/index.shtml

University of Western Australia. (2007b). *Learning links.* Retrieved 22 May, 2007, from http://www.studentservices.uwa.edu.au/ss/learning_links

University of Western Australia. (2007c). *Statistics office: Other universities' statistics facilities.* . Retrieved 28 March, 2007, from http://www.stats.uwa.edu.au/StatsOffice/OtherUni

University of Western Australia, & Belmont City College. (2005). *Memorandum of understanding between the University of Western Australia and the Belmont City College.* Retrieved 22 May, 2007, from

http://www.studentservices.uwa.edu.au/ss/learning_links/belmont?f=153994

University of Western Sydney. (2008). Schools action plan 2008, *Building better relationships with schools: Action plan 2008* (pp. 1-8).

University of Wollongong. (2006). *Early entry.* Retrieved 8 March 2006, from http://www.uow.edu.au/prospective/early_entry.html

Van Tassel-Baska, J. (1992). Educational decision making on acceleration and grouping. *Gifted Child Quarterly, 36*(2), 68-72.

VanTassel-Baska, J. (1994). *Comprehensive curriculum for gifted learners* (2nd ed.). Boston, London: Allyn and Bacon.

Vialle, W., Ashton, T., Carlon, G., & Rankin, F. (2001). Acceleration: A coat of many colours. *Roeper Review, 24*(1), 14-19.

Victoria University. (2007). *Extension studies.* Retrieved 23 May, 2007, from http://www.vu.edu.au/Admissions/Centre_for_Commencing_Students/VU_Partnership_Schools_Programs/Extension_Studies/index.aspx

Victoria University. (2008). *Portfolio partnership program.* Retrieved 8 April, 2008, from http://www.vu.edu.au/Future_Students/VCE_Students/Portfolio_partnership_program/index.aspx

Victorian Tertiary Admissions Centre. (2009). *Special entry access scheme (SEAS).* Retrieved 27 July, 2009, from http://www.vtac.edu.au/pdf/publications/seas.pdf

Wai, J., Lubinski, D., & Benbow, C. P. (2005). Creativity and occupational accomplishments among intellectually precocious youths: An age 13 to

age 33 longitudinal study. *Journal of Educational Psychology, 97*(3), 484-492.

Walker, R. (1985). *Doing research: A handbook for teachers.* London: Metheun.

Wengraf, T. (2001). *Qualitative research interviewing*. London: Sage Publications.

Western Australian Department of Education and Training. (2005). *WACE endorsed programs.* Retrieved 23 May 2007, from http://newwace.curriculum.wa.edu.au/pages/teachers_cep_uni.asp

Western Australian Department of Education and Training. (2007). *Early childhood education: Comparative age - Australia.* Retrieved 4 June, 2007, from http://www.det.wa.edu.au/education/ece/australia.html

Whalen, S. (1998). Flow and the engagement of talent: implications for secondary schooling. *National Association of Secondary School Principals, 82*(595), 22-37.

Yin, R. K. (1984). *Case study research: Design and methods* (Vol. 5). Beverly Hills: Sage Publications.

Yin, R. K. (1993). *Application of case study research.* Newbury Park, CA: Sage Publications.

Yin, R. K. (2009). *Case study research: Design and methods*. Thousand Oaks, California: Sage Inc.

Appendix A

Ethics Approval and Extension for Phase 1 & 2

3.2(a) Approval

Arts, Humanities & Law Human Research Ethics Advisory Panel

Date:	18 October 2006
Academic/Supervisor:	Dr Paul Ayres
School:	Education
Title of Project:	Early Admission: Predictors of Success and Issues of Social and Emotional Adjustment
Reference Number:	06 2 149
Investigator:	Mrs Marie Young

The Arts, Humanities & Law Human Research Ethics Advisory Panel has recommended to your Head of School/Unit/Centre and the Human Research Ethics Committee that this project, being of minimal ethical impact, may proceed. This approval is valid for 12 months from this date.

.....
Professor Richard Hugman
Convenor,
Arts, Humanities & Law Human Research Ethics Advisory Panel

.....
Head
School of Education

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Human Research Ethics Committee:
Human Research Ethics Advisory Panel Workshop Series

3.2(a) Approval

THE UNIVERSITY OF NEW SOUTH WALES

Arts, Humanities & Law Human Research Ethics Advisory Panel

Date:	30/10/2007
Academic/Supervisor:	Dr Paul Ayres
School:	Education
Title of Project:	Early Admission: Predictors of Success and Issues of Social and Emotional Adjustment
Reference Number:	**06 2 149 (extension)**
Investigator:	Mrs Marie Young

The Arts, Humanities & Law Human Research Ethics Advisory Panel has recommended to your Head of School/Unit/Centre and the Human Research Ethics Committee that this project, being of minimal ethical impact, may proceed. This approval is valid for 12 months from this date.

.....
Associate Professor Leong K. Chan
Convenor,
Arts, Humanities & Law Human Research Ethics Advisory Panel

.....
Dr John McCormick
Head
School of Education

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Human Research Ethics Committee:
Human Research Ethics Advisory Panel Workshop Series

Appendix B

Four Interview Schedules for Personnel at UNSW for Phase 1

Interview Schedule 1.

1. What prompted you to instigate EA in UNSW?
2. Why do you think UNSW chose not to give follow-up support to the EA students, like, say, the Uni of Washington program?
3. Other unis seem to use a case-by-case process. Why do you think other unis have not adopted a formal policy?
4. Why are they reluctant to formalise their options?
5. There are others educators, like you, concerned about gifted. Why have they not been prompted to instigate the process of EA at other unis?
6. If there is no formal EA policy, what prompts other unis to accept young, gifted students on a case-by-case basis?
7. Do you think there is usually someone at a uni, familiar with gifted, who urges the Dean to accept the case-by-case student?
8. What loophole would the Dean use?
9. Would you have any idea if they would have a screening process? A selection process?
10. What guidelines might they use? Hit and miss? Advice from someone in gifted?
11. Would you know if there is then any follow-up on the student's progress?
12. Why would a uni be reluctant to advertise dual enrolment programs?
13. Why would a uni be reluctant to advertise that they accept gifted students?

14. Do you think that national coordination of Australian unis is needed in this area? [EA and DE]
15. Why do you think national coordination has not been achieved yet, even though the Senate Committee recommended it in 2001?
16. Do you think that it will be up to the "Australian Vice-Chancellors' Committee, in consultation with school education authorities, to develop a policy providing more flexible university entry and study options for gifted students"? [Recommendation 11, 2001]. Will this ever happen?
17. Do you think that the idea of a national centre might the way to effect change?
18. Do you envisage that Australia will ever follow the US pattern for gifted in tertiary study? For example UNSW have not adopted formal programs for supporting the early entrant such as are established at Washington Uni.
19. Do you have any suggestions for leads for me to follow up at other unis?
20. How do you suggest I go about contacting other unis?

Interview Schedule 2.

About the University of NSW:

1. What is your role in the Early Admission Program here at UNSW?
1. How you think the Early Admission Program is going?
2. How do you judge that it is working well?
3. Do you think it will ever play a larger role in attracting gifted students?
4. Is the program advertised? If so, how is advertised?
5. Could you tell me something about the process of screening the candidates?
6. Who is the person/s driving or sustaining the program?

7. Why do you think UNSW chose not to give formal, follow-up support to the EA students, like say, the University of Washington?
8. Does anyone keep an eye on the progress of the Early Admission students? On their results?
9. Have any other universities sought advice from UNSW about setting up such a program?

About other universities:

10. For Early Admission, UNSW has a formal policy. Other unis seem to use a case-by-case process. Why do you think other unis have not adopted a formal policy?
11. Why do you think they would be reluctant to formalise their options?
12. At the other universities, there are educators, like Jessica Milner Davis, concerned about gifted. Why do you think they have not been able or prompted to instigate the process of EA?
13. If there is no formal EA policy, what prompts other unis to accept young, gifted students on a case-by-case basis?
14. At what level –faculty/ school? – do you suppose the decision to accept a case-by case EA would be made?
15. Do you think there would be usually someone at a uni, familiar with gifted, who urges the Dean or Academic Registrar to accept the case-by-case student?
16. What loophole would be used?
17. Why would a university be reluctant to advertise dual enrolment programs?
18. Why would a university be reluctant to advertise that they accept gifted students?

Nationally…

19. Do you think that national coordination of the universities is desirable in providing tertiary opportunities for the gifted? [EA and DE]
20. Do you envisage tertiary opportunities for young, gifted students will be fostered in Australia?

21. Why do you think national coordination has not been achieved yet, even though the Senate Committee recommended it in 2001?
22. Do you think that it will be up to the "Australian Vice-Chancellors' Committee, in consultation with school education authorities, to develop a policy providing more flexible university entry and study options for gifted students"? [Recommendation 11, 2001]. Will this ever happen?
23. Do you think that the idea of a national centre might the way to effect change?

Further investigation:

24. Do you have any suggestions for me on how to go about contacting other universities?

Interview Schedule 3.

1. When was your Early Admission Program established?
2. How many students have been enrolled in your program since 2000?
3. Is there a minimal age limit for admission?
4. What is the process by which students can be enrolled?
5. What is the process of selection of each young student?
6. What guidelines do you offer parents and prospective students?
7. What academic support systems are in place to assist the early entrant?
8. If there is a support system, for how long are they in place?
9. What social or emotional support systems are in place to assist the early entrant?
10. To what extent are the students supported or monitored in their extra curricular activities?
11. Has there been a predominance of any one faculty of choice by the student?
12. Has there been a predominance of male or female students?

13. Do you have any statistics on the number of students enrolled since 2000?
14. Is university teaching staff made aware that these students are young and gifted?
15. If so, is the university staff given any advice on the profile of gifted students?
16. Has there ever been any study done to compare the welfare of early admission students to, say, normal entry students?
17. Have you had any students drop out of your program? Has there been any follow-up of those students?
18. Do you have a published policy on early admission? If not, do you have a case-by-case procedure? How does this work?
19. Do you advertise your program?
20. Do you actively recruit for early admission students?
21. What was the rationale for developing and offering the program?
22. What factors do you believe contribute to the success of the students?
23. Are there any problems of social and emotional adjustment for these students?
24. How could your program be improved?

Interview Schedule 4.

1. How was the Early Admission Program started at UNSW?
2. How is student maturity measured?
3. Are the students supported?
4. Is there a screening process?
5. Who is on the screening panel?
6. Are any changes needed?
7. Why do other universities not have an EA program?

Appendix C

Interview Schedule for University Personnel

Tertiary Admission for Accelerated Students in Australia.

1. Early admission:

   1a The UNSW has a formal Early Admission Program. It accepts very gifted students who are about 15 years old who have not completed the final secondary qualification. Under what conditions has your university ever considered having such an early admission program? Why or why not?

   1b. Provide examples of how your university has accepted young, gifted students who

   (i) have not completed the relevant final secondary qualifications ?

   (ii) have completed final secondary qualifications but are younger than the expected age of entry to university?

2. Case-by-case admission:

   2a. I have discovered that there are about 13 universities in Australia who accept young, gifted students on a case-by-case basis. I understand your university might adopt, or has adopted, this approach. Does your university have a formal provision/policy for admission of young, gifted students? Why, or why not? Under what circumstances would you establish such a policy or a provision?

   2b. If there is no formal policy, under what category might young, gifted students be admitted?

   2c. If there is no formal policy, what would prompt the university to accept young, gifted students on a case-by-case basis?

   2d. When your university does accept such students, would there be a screening process?

2e. Could you tell me something about your process of screening the candidates?

2f. At what level – faculty or school – and under what circumstances would the decision be made to accept a case-by-case gifted student? Are there some faculties where this type of decision is more likely to occur?

2g. Would there usually be someone at the university, familiar with gifted, who would advise the Dean or Academic Registrar about accepting the case-by-case student?

3. Support:

3a. The University of Washington has a specific program –academic, social, and psychological – to support early entrants. Would, or does, your university consider giving formal, follow-up support to young, gifted students? Why or why not?

3b. If there is no formal support, would there be informal monitoring of the progress of young, gifted students? Under what circumstances would this occur? What would that informal monitoring be like?

4. Advertising and Recruitment:

4a. Does your university actively seek to attract young, gifted students?

4b. If so, in what ways do you attract them?

4c. For what reasons would your university be reluctant to advertise that they accept gifted students?

4d. For what reasons would your university be reluctant to advertise a dual enrolment program?

5. Nationally:

5a. The Senate Committee proposed that the "Australian Vice-Chancellors' Committee, in consultation with school education authorities, should develop a policy providing more flexible university entry and study options for gifted students"? [Recommendation 11, 2001]. Could you suggest reasons why national coordination has not yet been achieved?

5b. How might the idea of a national centre for research into gifted education effect such change?

Appendix D

Email Letter of Request to University Personnel for a Phone Interview

Dear Professor X,

I am a PhD student at UNSW and I am exploring how Australian universities cater for young, gifted students, especially with early admission. My supervisors are Dr X [email: xxxx] and Dr X [email: xxxx]. My research question is as follows:
What is the university decision-making process which allows young, gifted students to gain early admission to university on a case-by-case basis?

Last year I talked to Dr X, President of Academic Board, UNSW, about his role in the Early Admission Program at UNSW. He suggested that I contact other universities. If you could spare me some time, I would like to ask you about policy and the possibility of early admission on a case-by-case basis, which I understand can happen at the University of X.

I realise you are very busy; I could phone, or continue by email. I have prepared and attached some questions for you. Please let me know if you are willing to communicate with me, in whatever way best suits you, or perhaps you could suggest another relevant person whom I could contact.

Sincerely,
Marie Young
PhD student
UNSW
z2135066@student.unsw.edu.au

Appendix E

Sections of Documents from University Policies

Bond University.

The Bond University Handbook (Bond University, 2009).

Division 2 – Admission

(c) Criteria for Admission

(5) Undergraduate Special Entry Provision

(a) Under some circumstances candidates who do not fall into the category of

"mature age" or who have not recently completed high school may be assessed on

the criteria detailed above.

(b) Applicants will be assessed on an individual basis taking into account any

special or extenuating circumstances.

http://www.bond.edu.au/prod_ext/groups/public/@pub-sa-gen/documents/genericwebdocument/bd3_008268.pdf

La Trobe University.

La Trobe University (La Trobe University, 2007).

Undergraduate admission requirements

Admission to courses in the University is competitive, with selection based on a combination of academic merit and a selection committee's assessment of an applicant's ability to complete a course. Applicants must meet both the University's basic admission requirements and any additional requirements of Faculties for the course to which they seek admission.

Applicants for award courses at La Trobe University must normally be at least 16 years of age by 31 December in the preceding year to be eligible for admission. Applicants who do not meet this requirement should make a case for admission, which will be considered by the appropriate faculty dean on an individual basis.

In the main, applicants apply through VTAC for undergraduate courses and postgraduate education courses. Applicants for selected courses at Albury-Wodonga and Mildura campuses may apply through the New South Wales University Admissions Centre (UAC). Direct applications may be made to the University for mid-year entry, postgraduate courses and after VTAC and UAC closing dates.

International students should also refer to information in the 'International students' chapter in this Handbook.

Normal requirements for admission

The University's minimum requirements for admission are met by any student who has:

- 1 satisfactorily completed the Victorian Curriculum and Assessment Authority Victorian Certificate of Education (VCE) and Units 3 and 4 English (any). Any of the four VCE English subjects – English, Literature, English Language or English as a Second Language – these units must be completed in sequence and in the same calendar year; or

- 2 gained qualifications equivalent to (1) above recognised as such by the Victorian Tertiary Admissions Centre (VTAC). This covers interstate, International Baccalaureate and overseas qualifications and qualifications obtained under previous conditions, including compensation or concessional arrangements; or
- 3 gained a Victorian Curriculum and Assessment Authority Statement of Equivalent Qualification to the VCE; or
- 4 fulfilled the requirements of one of the University's alternative entry schemes.

In exceptional cases, the dean of a faculty may admit a Year 12 applicant who has not satisfied normal University entrance requirements. In such cases, the applicant must have satisfied course subject prerequisites and have achieved a level of performance which, as part of a complete certificate, would clearly merit selection into the course.

While normal requirements for admission are as listed above, most courses require a study score of at least 20 in Units 3 & 4 of English (any). All students are expected to have an adequate command of the English language in order to pursue their chosen course.

Any person offered a place at La Trobe University in 2008 may be required to sit an English language test. An applicant found to be below the necessary standard may be required to undertake a remedial English language course conducted by the University concurrently with his or her undergraduate course or may have his or her provisional offer withdrawn.

Applicants whose principal language of instruction was other than English must provide evidence of their proficiency in English. This can be done by achieving a satisfactory result in VCE English (any) or in an International English Language Testing System (IELTS) or another test acceptable to the University. For further

information telephone the International Programs Office on (03) 9479 1199 .

VTAC and UAC applicants with IELTS or other test results should supply them directly to their relevant admission centre with their application. Other applicants should provide their results directly to the course selection officer(s). Applications may not be considered until results have been provided.

Additional requirements for admission to the courses offered by a given faculty are listed in that faculty's section in this *Handbook*.

Complete details regarding requirements for admission, including course prerequisites and application procedures are available in the *VTAC Guide 2008 – A Guide to University and TAFE Courses* and in the *VICTER 2008 – Victorian Tertiary Entrance Requirements.*

Special entry access schemes

The University offers several special entry schemes, details of which are provided below. All schemes require application through VTAC's Special Entry Access Scheme (SEAS), and may require applicants to submit supplementary information directly to the University. The supplementary information required may include:

- completion of a personal particulars form
- an autobiographical essay
- mathematics test (relevant to the course applied for)
- an aptitude test, e.g., Special Tertiary Admissions Test (STAT)
- an interview.

Information regarding the eligibility criteria and application process for La Trobe University's equity and access schemes are provided in the institutional

information contained in the Special Entry Schemes (SEAS) booklet available from VTAC www.vtac.edu.au.

Murdoch University.

Admission Requirements for Murdoch University Murdoch University Academic Council 200 (Provided by personal communication 24 October, 2007).

Applicants must note that possession of the qualifications detailed below means only that they are eligible for selection; it does not guarantee that a place will be offered.
There are two routes of entry into Murdoch University, defined as being for School Leavers and Mature Aged Entrants.

1. School Leavers - Applicants who did not reach the age of 19 years on or before 1 March of the year prior to that for which application for entry is made

1.1 An applicant who has not reached the age of 19 years on or before 1 March of the year prior to that for which application for entry is made will be considered for entry if they have:

(a) completed the final two years of secondary education (Years 11 and 12), as defined by the Curriculum Council of Western Australia; or its equivalent as approved by the Committee on University Entrance;

(b) demonstrated English language competence through achieving a combined scaled score of 50 or more in TEE English, TEE English Literature, English, or Literature courses; or the required mark as determined each year by the universities in English as a Second Language, or English as an Additional Language/Dialect, for those who are eligible to take these subjects, or achieved an equivalent level of English language competence as approved by the Committee on University Entrance; and

(c) obtained a sufficiently high Tertiary Entrance Rank (TER) to gain an offer of a place in a course, or its equivalent as approved by the Committee on University Entrance.

1.2 Applications will be also be considered from any applicant who has completed an equivalent final year of secondary school either interstate or overseas. Applicants with qualifications from interstate or overseas will also be required to provide satisfactory evidence of their competence in English.

1.3 Applicants who have not reached the age of 19 years on or before 1 March of the year prior to that for which application for entry is made but who have met **1.1 (a)** and **(b)** (or its interstate or overseas equivalent as approved by the Committee on University Entrance) and successfully completed studies at a tertiary institution may be considered for entrance as mature aged applicants under **2**.

2. Mature Aged - Applicants who have reached the age of 19 years on or before 1 March of the year prior to that for which application for entry is made

2.1 An applicant who has reached the age of at least 19 years on or before 1 March of the year prior to that for which application for admission is made is exempt from the requirements of completing the final two years of secondary education and may meet entry requirements through a number of different pathways.

These include:

(a) satisfactory performance in the "mature aged" TER;

(b) satisfactory performance at the tertiary level at another institution;

(c) completion of a qualification at Certificate IV level or above (as assessed under the Australian Qualifications Framework);

(d) satisfactory performance in the STAT;

(e) work experience; or

(f) other criteria defined as acceptable by the Committee on University Entrance.

2.2 In addition to the preferred methods of admission outlined in 2.1 above, applicants who have reached the age of at least 19 years on or before 1 March of the year prior to that for which application for admission is made may apply on the basis of a detailed personal submission and résumé of their occupational, educational and personal experience that may indicate their capacity for tertiary study. Very few applicants gain admission by this method alone.

Full details on all application routes can be obtained from the Prospective Students' and Admissions Centre on 1300 MURDOCH or admissions@murdoch.edu.au or for International Applicants from Murdoch International on (61 3) 9627 4809 or via our website http://www.murdoch.internationalstudent.info/

Queensland University of Technology.

Queensland University of Technology (Provided by personal communication 22 October 2007).

For the students who are below regular Year 12 school leaving age , the following process must be followed to ensure that due consideration is given to the student and their capacity to undertake nominated studies at university.

Faculty:

* *review the student course preference*
* *consider any risk or compliance matter which would prevent the student from undertaking the course to completion, restrict the options the student would have in the course, or restrict the student's progression to normal graduate outcomes eg employment, professional registration, practice certificate etc*
* *engage with the student/student guardian ensuring they understand the course and the environment in which they will study and are aware of any identified restrictions on their options within the course and on*

completion.

** Confirm if required that the above steps have been undertaken and there are no impediments to the student receiving an offer in the course preference*

Central Student Business Services:

** Identify students likely to be under 18 at the time of course commencement and notify faculties during the admission period (not before mid October for Semester 1 QTAC entry)*

** Include a review step prior to offer to ensure*

** there has been appropriate consideration of students under 18 and, if required*

** seek confirmation from faculty that there has been appropriate consideration of a student course preference and there is no impediment to the student receiving an offer in the course.*

Appendix F

Summary of Comments from Universities in Phase 2

Table F. 1

Question	Comment
Early admission	
Q 1a Has your university ever considered having an early admission program?	do have a program; did try two programs through university extension program not ever considered (n=3) extremely low numbers do not warrant student more likely to choose bigger uni
Q 1b i Does your university accept young, gifted students who have not completed the relevant final secondary qualifications?	rare occasions only for special cases case-by-case basis yes, for single subjects only (n=2) not aware of it ever being addressed
Q 1b ii Does your university accept young, gifted students who have completed the relevant final secondary qualifications?	practicum issues, problems with industry placement no age limits
Case-by-case admission	
Q 2a Does your university have formal provision/policy for admission of young gifted students?	special process available application to student centre framework in place mechanism available need approval from dean

Question	Comment
	equity and diversity policy
	dual enrolment program
Q 2b If there is no formal policy, under what category might they be admitted?	dean's discretion
	dean's approval
	head of school's discretion
	by audit
	case-by-case
	non-award
	alternative entry
	STAT entry
	Portfolio
Q 2c If there is no formal policy, what would prompt the university to accept young, gifted students on a case-by-case basis?	exceptional results
	evidence of appropriate maturity
Comments (n=7)	extraordinary student
	help student with passionate interest
	high school recommendation
	personal request from regional area
	parental request
	reputation
	good for student, good for university
	want to attract most able
Q 2d When your university does accept such students, would there be a screening process?	screened as usual undergraduates
	screened as under-aged students
	duty of care issue
Comments (n=10)	extensive process necessary
	appropriate student important (n=2)
Q 2e Could you tell me something about the screening process?	academic
	academic record
	school reports

Question	Comment
	standardised tests
	letters of reference
	portfolio
	school achievements
	interviews
	student interview
	parental interview
	high school staff
	other affective issues
	support
	place of residence
	other qualifications
	other experience
	compliance risks
	student letter (motivation)
	mentor
	duty of care
	maturity
	social issues
Q 2f At what level – faculty or School – would the decision be made to accept a case-by-case student?	faculty
	head of school
	director of admissions
Comments (n=10)	collaborative process
	deputy vice chancellor
	pro vice chancellor
	registrar
	dean
	course coordinator
	panel
Q 2g Would there be someone at the university, familiar with gifted, who would advise the	advised by other than gifted expert (n=5)
	no-one trained, but small, caring

Question	Comment
Dean or Academic Registrar about accepting the case-by-case student?	university school of education chair of uni selection and enrolment committee collaborative advice depends on discipline
Student support	
Q 3a Would your university consider giving formal, follow-up support to young, gifted students?	no, same as undergraduate (n=7) special college specific orientation program younger students need special support
Q 3b If there is no formal support, would there be informal monitoring of the progress of young, gifted students? Comments (n=10)	same for all undergraduates (n=3) staff awareness faculty monitoring student peer support mentor coordinator needed mixture of formal and informal
Advertising	
Q 4a Does your university actively seek to attract young, gifted students?	No (n=8) concern about social maturity deliberately developing programs usual scholarships

Question	Comment
Q 4b If so, how does it attract them?	reputation, word of mouth
	special programs
	advertise regionally
	advertise in teacher journals
	local schools
	career advisors' newsletter
	accelerated degrees
	dual enrolment program
	website
	advanced leadership degree
	early entry
Q 4c For what reasons would a university be reluctant to advertise that they accept gifted students?	logistical nightmare
	floodgates
	screening labour intensive
Comments (n=7)	duty of care obligations
	trust school systems
	bias against gifted
	stigma of elite
	gifted and talented is an industry
	issues of equity
Q 4d For what reasons would a university be reluctant to advertise its dual enrolment program?	do advertise program
	non-award enrolment
	dual enrolment expensive
Comments (n=4)	short-sightedness
National coordination	
Q 5a Could you suggest reasons why national coordination has not been achieved yet?	do not know
	difficult to develop policy
	depends on capacity of university
Comments (n=10)	entry requirements uneven

Question	Comment
	lot of work for small group
	equity issues
	state legislation difficult
	funding difficulties
	content issues
	agreement on transfers, credits difficult
	not important
	gifted only small part of larger picture
	focus on other issues
	question of priorities
Q 5b How might the idea of a National Centre effect change?	good idea
Comments (n=7)	expect to have impact
	good place to start
	raise the platform for research
	develop consistent policy
	apt structure to develop national talent
	G&T is a small section of education (n=2)
	equity more important (n=2)

Note: If more than one university made the same point then keywords were tallied indicating the frequency of the response.

Appendix G

List of Universities which May Accept Case-by-Case Admission

Australian National University
Bond University
Flinders University
La Trobe University
Monash University
Murdoch University
Queensland University of Technology
Southern Cross University
University of New South Wales
University of New England
University of Notre Dame Australia
University of Western Sydney
University of Wollongong
Victoria University

Appendix H

Ethics Approval for Phase 3

3.2(a) Approval

THE UNIVERSITY OF NEW SOUTH WALES

Arts, Humanities & Law Human Research Ethics Advisory Panel

Date:	15/09/2008
Academic/Supervisor:	Dr Paul Ayres, Dr Karen Rogers
School:	Education
Title of Project:	Early admission: Predictors of success and issues of social and emotional adjustment.
Reference Number:	**08 2 105**
Investigator:	Ms Marie Young

The Arts, Humanities & Law Human Research Ethics Advisory Panel has recommended to your Head of School/Unit/Centre and the Human Research Ethics Committee that this project, being of minimal ethical impact, may proceed. This approval is valid for 12 months from this date.

.....
Associate Professor Leong K. Chan
Convenor,
Arts, Humanities & Law Human Research Ethics Advisory Panel

.....
Professor Chris Davison
Head
School of Education

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Human Research Ethics Committee:
Human Research Ethics Advisory Panel Workshop Series

Appendix I

Email Letters to Contacts and Prospective Participants for Phase 3

Email Letter to Contacts

Dear Prospective Contact,

As you may know, I am a PhD student at the University of NSW. I am working on my doctoral thesis which explores early admission to university. I now have ethics approval to interview students who have been admitted to university at an age under 17 years. These students have often been accelerated in some way during their schooling. Sometimes the student has completed the final school qualifications; sometimes s/he has not completed secondary schooling.

I am hoping that you may be able to put me in touch with students who have experienced early admission to university. I would like to communicate with the students by email and I would like to interview the students, either in person or by phone. The students may be currently enrolled at university or may have graduated.

The students would be ensured privacy, confidentiality and anonymity. Audiotapes will be destroyed and transcripts stored securely. The student will be given a participation information statement and consent form to complete and sign.

I will appreciate your help in making contact, if you know of any such students. You could give the student my email to facilitate communication.

Yours sincerely,

Marie Young

z2135066@student.unsw.edu.au

Ethics Approval Number: 082105

Supervisors: Dr Paul Ayres: p.ayres@unsw.edu.au

Dr Karen Rogers: KBROGERS@stthomas.edu.

Email Letter to Prospective Participant.

Dear *Prospective Interviewee,*

I am a PhD student at the University of NSW. I am working on my doctoral thesis which explores early admission to university. I have ethics approval to interview students who have been admitted to university at an age younger than 17 years. Such students have often been accelerated in some way during their schooling.

I want to communicate with students who have experienced early admission to university. You may be currently enrolled at university or may have graduated. I would like to contact you by email, and interview you, either in person or by phone.

You would be ensured privacy, confidentiality and anonymity. Audiotapes will be destroyed and transcripts stored securely. You will be given a participation information statement and consent form to complete and sign.

I do hope you are willing to contribute to my research, and I look forward to hearing from you.

Sincerely,

Marie Young

z2135066@student.unsw.edu.au

Ethics Approval Number: 082105

Supervisors: Dr Paul Ayres: p.ayres@unsw.edu.au

Dr Karen Rogers: KBROGERS@stthomas.edu.

Appendix J

Phase 3 Interview Schedule for Students

Past Experiences with Acceleration

a. What kinds of acceleration (give examples) did you experience in school before you went to university?
b. How willing were your schools to do this for you?
c. How hard did your parents have to push for the acceleration to happen?
d. What was your route to entering earlier than the usual age? Dual enrolment? Matriculation without completing your secondary qualifications?
e. How were you able to find your social niche while growing up?
f. Who or what were the catalysts that moved you forward before you went to university? Mentor? Sibling? Family? Peer? Teacher?

Making the Early Admission Decision

a. How did you find out about early admission possibilities?
b. What motivated you to try for it?
c. What concerns did you have about making such a decision?
d. Any regrets about leaving high school early?
e. Who was most supportive in the decision making process about where to go, to actually do it, and the courses to enrol in?

Process of Early Admission

a. How old were you exactly when you started university? And how old are you now?
b. What kind of information were you asked to supply in order to be accepted early?
c. Was your process fairly routine in terms of university policy or were there difficulties you encountered and had to overcome? Explain.
d. What degree(s) are you taking/did you take?

University Adjustment

a. How did you cope with the academic challenges of university work? How long did the adjustment take? What kinds of setbacks did you encounter?
b. What skills did you already have that made your adjustment to University a bit easier? What skills did you need to develop?
c. What have you enjoyed most about your university studies? Not so much?
d. Were there any support systems at University to help you make the adjustments? Fellow students? Teachers? School counsellors? staff?
e. Were there any factors or experiences at university that made you feel conspicuous because of your age or ability? (Drinking? Dating?) Any factors that helped make your adjustment a positive thing? (e.g., Living at home? Acknowledgement by staff that you would prefer to be treated like everyone else? Special program set up for you? etc.)
f. Were there any issues that really impacted you during your first year or two at University? (Friendships? Dating? Driving? Drugs? Extracurricular activities?) Which were easy to deal with and which were more difficult?

Your Future

a. What goals have you set yourself to accomplish and what plans do you have for the future studies and career? How likely do you think these are to be accomplished?

Reflections on Your Early Admissions Experiences

b. Would you make the same decision about early admission again? Why or why not?
c. If you feel you have been successful, what personal and environmental or external factors have contributed to this success? Which have detracted from your success?
d. What support at the university was or would have been the most useful to you?
e. What advice would you offer other students considering early admission?
f. What advice would you offer universities providing early admission to advanced students?
g. What would you say are the advantages and disadvantages you have encountered as a result of your early admission experiences?
h. Most important outcome or benefit of early admission to you?
Any words of wisdom to gifted students in general?