CHAPTER ONE
INTRODUCTION

The introduction chapter covers three areas: the outline of the study, the aims of the study, and to conclude it outlines the terms used in the study.

THE RESEARCH STUDY

During First Semester 2007, fifteen bright middle school students agreed to be a part of a study on gifted underachievement. Each of the students had either underachieved in the past or was currently underachieving. The children would look back on events in their life in relation to their underachievement, discuss their feelings at the time of their underachievement, and share their reflection on their underachievement.

A study of the literature reveals there are many and varied factors that may cause gifted children to underachieve. Some factors are school related, some are home or family related, but not one factor by itself would be expected to lead to the underachievement by any of the participants, and not one factor would solely be expected to contribute to the gifted underachievement of all the participants.

The study is conducted over several months during informal meetings including interview sessions and informal in-depth discussions. The participants' perception of their gifted underachievement is the study's focus. Advice is given to teachers on how to motivate children and how not to negatively affect children's self-esteem. Many of the children come to better understand themselves because of this experience.

The following chapters provide the details of *Contributing Factors in the Underachievement of Gifted Middle School Students*. The literature review provides many views on academic underachievement. After the review, the methodology provides

the process and conduct of the study. Following this, the case studies are detailed, and to conclude, the findings, discussions and recommendations are reported.

The middle school students of the present study want to positively affect future and current teacher perspectives regarding gifted education.

AIMS OF THE STUDY

Too many gifted children underachieve. The writer has observed a need for increased teacher awareness about gifted education since her own primary school education. Not enough is changing for gifted children and depending on the media and government policies of the minute, it sometimes does not change for the better. Some years, gifted education is seen to be a priority, and others- most others, it is not. It is time for a change. The writer has sat through undergraduate lectures and listened to educational experts speak about the gifted and academic success as if they cannot be separated. This study, through asking the students themselves, aims to clarify the situation and discover from the *real* experts what causes them to underachieve.

It aims:

- to retell the stories of 15 underachieving gifted middle school students;
- to consider the factors that contributed to their gifted underachievement;
- to listen to the students' perspectives of why they underachieve/d;
- to compare these with currently recognised factors of gifted underachievement;
- to receive future recommendations for gifted education from the students;
- to provide future recommendations for educators of the gifted;
- to assist in the education of gifted students.

DEFINITIONS OF TERMS USED IN THIS STUDY

The following section defines commonly used terms within this study. They are *gifted and talented, gifted underachiever, appropriate schooling, classroom ecology, middle school, pedagogy, competence, intelligence testing, teacher traits, and differentiation.* The definitions detail the current understanding of the term and the context in which they are used within the study.

GIFTED AND TALENTED

Theories abound regarding the definition of gifted students. Gagné's (2003) Differentiated Model of Giftedness and Talent will be used as the conceptual framework for this study. Gagné's model describes the gifted child as one who has exceptional potential in one or more areas of academia, including creative, social, leadership and physical domains (id.; 2000, p. 15; Department of Education & Training, 2004, p. 11). The Board of Studies (2000, p. 7) explains these children typically display one or more of the following characteristics: problem solving adroitness, heightened sensitivity, lively curiosity, exceptional recall ability and the ability to think in abstract terms (Gagné, 2003; Reis et al. 1995, p. 26). Tannenbaum's (1983, pp. 1-3) definition outlines the same characteristics and in addition, states that gifted children's thinking processes are different to their age-peers and therefore the gifted are often creative problem solvers (Little, 2002, p. 52). Gifted children achieve their developmental milestones earlier than other children (Gross, 2000, p. 4). They are curious, grasp concepts and find learning in general much easier than their age-peers (Gagné, 2003; Clark, 1997, pp. 26-29; Colangelo & Davis, 1997, pp. 33; Davis & Rimm, 2004, p. 33; Tannenbaum, 1983, p. 3; Berger, 1991, ¶ 3). If the gifted child's talents are observable or measurable, then the child would be deemed to be talented.

Gagne's (2003) model of gifted and talented development defines talented children as those whose skills are distinctly above average in one or more areas of human performance. The child would be ranked in the top ten percent of ability among their age-peers in the advanced domain of aptitude (id.). These children are the gifted who are able to put their gifts into practice or those whose gifts are observable. For gifts to

transform into talents a transition must take place, including teaching for quality learning, subsequent exposure and then deliberate practice of a learned task (id.). This exposure is not enough on its own, as catalysts including motivation and personality are required for success, combined with the context of environmental and intrapersonal catalysts (id.). Each gifted child is unique and therefore different situations facilitate as catalysts for academic success and prevent gifted underachievement for that specific child.

If a child's talent is observable in a domain of giftedness then they are usually not underachieving in that domain, however, each child varies in their level of ability and gifted domains so a talented child or a high-achiever can still be underachieving although their talent is observable. This is because their actual potential surpasses the ability level they are displaying, thus they are effectively underachieving (Reis & McCoach, 2000, p. 157; Merrotsy, 2008).

This may be partly due to the blurred parameters determining giftedness, making it confusing for the untrained educator to decide what actually constitutes giftedness or the need for testing. The actual percentage varies several percent depending on the theorist. Also what actually constitutes or determines the giftedness can vary depending on the theorist, which also makes it difficult to decide when intervention is required (Bélanger & Gagné, 2006, p. 133).

Many gifted children are not identified as such because they are not given the teacher attention afforded to children who struggle academically and are not viewed as in-need of attention or assistance by teachers without a background in gifted education (Teno, 2000, p. 43). In addition, research finds a high percentage of school dropouts are gifted children (Tolan, 1996, ¶ 6; Delisle & Berger, 1990). The education system has let these children down by not supporting them academically, emotionally and often socially.

Based on this information it is imperative that the methods of identification used to recognise our gifted is able to acknowledge both achieving gifted children and the underachieving gifted.

Identification

Gagné (1999, p. 18) believes that the system should be precise in the way it identifies student ability yet be accommodating to both the student and assessor. The identification process should be able to recognise gifted underachievement and should not rely solely on the child's chronological age or expected grade ability level when assessing because every child is unique, perceiving and reacting differently to the one testing situation. (Reis & McCoach, 2000, p. 155). Whatever model of identification is used it should incorporate a variety of elements as many factors need to be considered. For example, it is recommended it be inclusive because social and cultural factors can negatively affect the results for students from minority groups (Gagné, 1999, p. 18; Nettlebeck & Wilson, 2005). Additionally, identification should allow for different domains of intelligence because there are many different preferred learning styles and therefore many ways of achieving the one goal (id.; Department of Education & Training, 2004, p. 1; Ariyaratne et al., 2006). There are many characteristics indicative of gifted children. The following are traits commonly identified and associated with gifted children and can assist the parent and teacher in the preliminary stages of identification.

Rich Memory

Often gifted and talented children display an exceptional ability for detailed recall. Also evident is their ability to recall things from very early childhood years (Gagné, 2003). This ability sometimes results in frustrations for the child when they attempt to discuss matters or things that noone else remembers. The gifted are superior in other areas involving recall, metamemory and speed. They recall more details and remember these details faster than children of average intelligence. The metamemory of talented children is also different from those of average ability, the talented monitor their memory with superior ability and organise their thoughts better than their age-peers of average performance (Carr, 1987, p. 42).

Abstract Thinking

Often the ability to think abstractly sets the gifted child apart from their peers. Their conceptual understanding is advanced (Board of Studies, 2000, p. 7). The heightened

ability to predict is an abstract thinking skill that may signal potential talent. This may be evident when a gifted child is the one who foresees imminent danger for themselves and for others. The ability to understand the consequences of one's actions is also categorised within this area.

Intense Needs

Exceptionally gifted children have needs that are more intense than their moderately gifted peers (Winner, 1996, pp. 1-13). To identify these children individual programming is required (Smutny, 2004, p. 1). This sometimes leads to radical acceleration; skipping two or more grade years in one or more subject areas. Radical acceleration gives the student the opportunity to determine and apply a suitable rate of self-learning. This process should incorporate catering to the student's interests within the programme as an essential component. Within this differentiation, the focus should be on complexity rather than on volume (Western Australian Education Department, 2001, p.1). These highly gifted children need a support network to assist with problems they may face with socialisation in their new grade (Daniel & Cox, 1989, p. 3).

GIFTED UNDERACHIEVEMENT

Within this study, the term 'underachievement', unless otherwise indicated, refers to the underachievement of students who are gifted. Underachievement is "a discrepancy between the child's school performance and some index of his or her actual ability, such as intelligence, achievement or creativity scores or observational data" (Davis & Rimm, 2004, p. 306; Gross, 2000, p. 7; Rimm, 1997, ¶ 5). To be recognised as an underachiever, the lower than expected achievement level needs to be recognisable over a long period of time (Peterson & Colangelo, 1996, p. 400; Reis & McCoach, 2000, p. 155-156). The domain of giftedness that is a concern may not be a result of a learning disability, however students who have learning difficulties should not be dismissed as possibly underachieving in one or more domains as it is possible to have dual exceptionalities and be gifted with a learning difficulty (Bélanger & Gagné, 2006, p. 136; Reis & McCoach, 2000, p.156). These children will have one or more domains in which they are able to perform at a higher level than they are, yet are underperforming (Reis &

McCoach, 2000, p. 156). The poor results may not be due to short-term illness or temporary changes in circumstances such as absences from school due to family vacation (op. cit., pp. 155-156; Peterson & Colangelo, 1996, p. 400). All testing procedures should include authentic assessment to increase validity and reliability (Moon et al., 2002a, ¶ 5).

Certain behaviours can be indicators or symptoms of gifted underachievement including: procrastination; rebellion; and aggression toward peers, teachers and family (Davis & Rimm, 2004, p. 33). It is common for gifted underachievers not to complete homework or set tasks due to frustrations and boredom (Rimm, 1997, ¶ 6; Smutny, 2004, p. 1; Delisle & Berger, 1990, p. 5; Gross, 2000, p. 7; Colangelo et al., 2004, p. 16). This can make the underachiever appear contradictory to the expected gifted excelling student (Gross, 2000, p. 7). Often they underachieve to "win friends and influence people" (Gross, 1989, p. 193; Colangelo et al., 2004, p. 29). This is undertaken by either withdrawing from happenings in the classroom or becoming an aggressive attention seeker (Davis & Rimm, 2004, p. 33). Underachievers have negative attitudes to most subject areas (Butler-Por, 1993; McCoach & Siegle, 2003, p. 146; Delisle & Berger, 1990, p. 5), yet may hold an intense interest in a particular area (Davis & Rimm, 2004, p. 281; Gross, 1999, pp. 87-93). The aforementioned indicators are not always enough to indicate all children who fall into this category as underachievers usually have a very high I.Q. and therefore may be adept at masking their true potential. Another way to identify factors in gifted underachievement is the longitudinal study.

The longitudinal study has a place in the identification of gifted and talented children. In Chaffey's longitudinal study children sometimes termed "invisible" have otherwise not been recognised as underachieving (Chaffey et al., 2003, p. 43). It is a record of achievement that provides relevant data for the screening of underachievement as the child is not only compared to their class cohort but also their own record of attainment over time (Rimm et al., 1989, p. 62). If a child's results shows decline over several years then it can be deemed that underachievement is occurring. The longitudinal study can sometimes identify areas in which the child is underachieving that a standardised test

cannot, due to low ceilings of particular tests. A child could have a higher cognitive ability than the standardised intelligence test caters to and therefore any true indication of giftedness would not result from the testing. The following scenario further explains this dilemma. A child could score higher than a test allows for, reaching the ceiling in "Year A", which would not be recognisable using a standardised testing procedure. Then if the child, tested during the next year, again returns the same percentage result, they would be seen to be achieving at the same level. In fact, the child could be underachieving and the recordable results appearing the same due to the ceiling effect (Rimm et al., 1989, p. 62).

Reis and McCoach (2000, 156) support the theory that asking a child about their gifted underachievement is a pertinent way to clarify some of the factors causing the child to underachieve. Asking a child why they don't do their best can sometimes quantify a situation of underachievement. This brings about changes that may not otherwise be initiated. The lived experience makes a positive contribution to the understanding of whatever may be the phenomenon. Underneath the complexity, underachievement is sometimes a conscious decision and no-one knows better as to why it has occurred than the child who has chosen to underachieve (Reis et al., 1995; Whitmore, 1986, p. 72).

Recognisable factors

A variety of recognisable factors are cause for and are attributed to underachievement (Rimm, 1997, ¶ 5-7; Davis and Rimm, 2004, p. 33; Gross, 1989, pp. 190-193; Dowdall & Colangelo, 1982, p. 179; Diaz, 1998, p. 105; Reis and McCoach, 2000, pp. 153:154; Delisle and Berger, 1990, p. 2). These factors are either extrinsic, environmental factors that involve external influences such as school; or intrinsic, internal factors. Self-concept, and other personal issues (Diaz, 1998, p. 105; Clark, 1997, pp. 491-492; Bandura, 1993, pp. 135-136; Bandura et al., 2001, p. 190), family dynamics (Baker, Bridger & Evans, 1998, p. 5; Rimm & Lowe, 1988, p. 354; Steinberg & Lamborn, 1994, p. 755; Bandura, 1993, pp. 138,144; Bandura, 2001, p. 189; Rimm, 1997, ¶ 12; Al-Sahel, 2005), peer pressure (Rimm, 1997, ¶ 13; Peterson & Colangelo, 1996, p. 399), competition or lack of within the classroom (Rimm, 1997, ¶ 12; VanTassel-Baska, 1989, Kanevsky & Keighley, 2003, p. 21), teacher influences including inappropriate

instruction and other interactions, and disrespect for the educational setting including teachers (Rimm, 1997, ¶ 14; Reis & McCoach, 2000, p. 165; Bandura, 1993, pp. 135-136; Bandura, 2001, p. 192), are all factors that contribute to the underachievement of gifted students (Dowdall & Colangelo, 1982, p. 179; Delisle & Berger, 1990, p. 6).

Self-Concept

A positive self-concept is advantageous for educative success and personal fulfilment (Gross, 2000, p. 8; Lyon, 1993; Marsh et al., 1995, pp. 289-293; Dai, Moon & Feldhusen, 1998, pp. 55-57; Bandura, 1993, pp. 135-136; Bandura, 2001, p. 188; Boekaerts, 1993, p. 151; Van Boxel & Monks, 1992, pp. 181-182). Confident children are involved in and persist with more activities than underachievers (Boekaerts, 1993, p. 164; Gross, 2000, p. 8; Bandura, 1993, p. 118; Bandura, 2001, p. 188). This difference is due to the low ability self-perception of the underachiever (Reis & McCoach, 2000, p. 158; Dai, Moon & Feldhusen, 1998; Bandura, 1993, p. 118; Bandura, 2001, p. 189; Gross, 2000, p. 8).

Low self-concept is the most recognisable factor in gifted underachievement (Diaz, 1998, p. 107; Delisle & Berger, 1990, p. 3) and has been so since acknowledged in Whitmore's seminal 1980 study. Delisle and Berger (1990, p. 3) and Davis and Rimm (2004, p. 317) describe underachievers as children who place limits on their abilities because they envision they are incapable of what others expect of them. Some perfectionists fall within this category. They are the types of perfectionists who place limits and internal pressures on themselves, not accepting any work they produce as good enough (Rimm, 1997, ¶ 13; Winner, 1996). These children suffer from an irregular form of self-concept as they perceive their ability or output to be sub-standard (Bandura, 1993, p. 118; Bandura, 2001, p. 189; Delisle & Berger, 1990, p. 3).

Emotional Support Heightened emotional sensitivity is a trait of the gifted, therefore emotional support is essential for the education of the gifted child so that they may understand themselves (Tucker, 1997, p. 72; Reis et al., 1995, p. 26; Smutny, 2004, p. 3). They need also understand the value of learning and teachers need to uphold this principle to support the child (Gross, 1999, pp. 87-93; Bandura, 1993, p. 120; Adams-

Byers, Squiller, Whitsell & Moon, 2004, p. 18). This reinforces the recommendation by the New South Wales Education Department (Department of Education & Training, 2004, p. 8) that all teachers should receive support and professional development in the educational needs of the gifted child.

A student who feels emotionally strong perceives themselves as more able than their peers who are not supported emotionally (Bandura, 2001, p. 188; 1993, p. 118; Gross, 2000, p. 8). Marsh (1993, p. 60) also supports the need for maintaining a positive self-concept, finding that academic achievement, perseverance, and aspirations are all linked to the ability to achieve and maintain a strong sense of self-worth. Dowson et al. (2007, p. 6), Delisle and Berger (1990, p. 3) and Bandura (1993, p. 120; Bandura, 2001, p. 188) tie lack of emotional support with gifted underachievement when they state that access to appropriate schooling, suiting a child's intellectual capacity and learning style and one that encompasses appropriate teaching methods, decreases the risk of gifted underachievement.

APPROPRIATE SCHOOLING

To educate each child to their fullest potential, in an environment conducive to their needs, is a teacher's responsibility (Daniel & Cox, 1989, p. 3; Kanevsky & Keighley, 2003, pp. 25-27; Dowson et al., 2007, p. 6; Gross, 2000, p. 8). To do this, teachers need to be educationally equipped (Heath, 1997, p. 7). This is supported by Gross, who explains that, for a child to sustain a healthy self-concept, caring interaction and appropriate materials and activities are required (Gross, 1989, p. 191). Research shows that teachers with professional knowledge and experience in education of gifted students are more likely to identify a gifted child and provide for their learning needs than a teacher who has not undertaken such professional development (Teno, 2000, p. 45).

Appropriate schooling involves using various strategies. These include differentiation and the opportunity for the child to express their gifts and talents (Department of Education & Training, 2004, p. 14; Gross, 2000, p. 2; Gross, 2006, p. 421-422; Merrotsy, 2006, p. 32; Teno, 2000, p. 45; VanTassel-Baska et al., 1988; VanTassel-Baska, 1989;

Daniel & Cox, 1989, p. 2; Bernal, 2000, p. 173; Moon, Kelly & Feldhusen, 1997, p. 16). Appropriate, individualised education for children should be the conventional standard and not deemed to be additional assistance granted to, or bestowed upon a particular child or children (Merrotsy, 2006, p. 32; Montgomery, 2001, p. 270; Braggett, 1992, p. 12; Kulik & Kulik, 1992, p. 76; Teno, 2000, pp. 45-46; Gross, 2006, p 421).

Teachers recognise learning happens easiest when emotions are engaged. Yet gifted children are often left disenchanted, waiting for others to catch up before moving on to new material. When a child is constantly bored they lose respect for the teacher. They have time to daydream more and will participate less (Reis et al., 1995, p. 31; Daniel & Cox, 1989, p. 4; Kanevsky & Keighley, 2003, pp. 20-21). This engineers the feeling of increased alienation. Gross (1999, p. 89; 2000, p. 5) states that the gifted have intellectual disabilities within the regular classroom when their specific needs are not being addressed, yet rarely are they attended to with the same vigour as the needs of other children. This disability occurs when the gifted are forced to sit through lessons that are well below their ability level and listen to information they already know and understand.

Teachers should speak with the gifted children in their class to ensure their needs are being met. Schultz (2002, p. 205) supports increased dialogue between gifted educator and underachiever. He believes this interaction will increase common ground between the two and therefore heighten understanding of the particular needs of that student in relation to their underachievement.

Professional development for gifted educators and further research based on the participants' perspective will enhance opportunities to understand this phenomenon and increase the occurrence of appropriate education for the gifted underachiever (id.). Yet there is currently little incentive for a teacher who lacks interest in gifted education to undertake such courses. Most teachers are not reimbursed for their educational expenses, which are undertaken during vacations or after school hours and receive no salary increase or promotion (Merrotsy, 2003, p. 10). Adding to the problem of under educated staff is the absence of current requirements for Australian universities to provide subjects

regarding gifted education to their students, with UNSW, UNE and The University of Wollongong the only universities currently providing compulsory undergraduate education to pre-service teachers in New South Wales. Without government guidelines to define course structure, the quality of both undergraduate and postgraduate gifted education courses varies among all Australian institutions (Commonwealth of Australia, 2001, p. 163; NSW Ministerial Advisory Council on the Quality of Teaching, 1999; Australian Association for the Education of the Gifted and Talented, 1999).

CLASSROOM ECOLOGY

Classroom ecology is a term used to describe the holistic environment of a classroom. It encompasses the human interactions that take place within the classroom from an ecological perspective (Doyle, 1977, p. 51). This includes the use of the resources and furniture within the room and how the people within the room interact with each other. It also includes the physical structure of the classroom, the physical appearance of its chattels within the classroom and the classroom's history (id.).

MIDDLE SCHOOL

The middle school concept originated in the early 1900s. Also known as intermediate school or junior high school, it usually serves the educational grades in Australia of 5 to 8. Middle schools provide an intermediate bridge between primary and high school and in Australia this comes with "middle school practices" that are particular to the school structure (Beane, 1993, p. 25). The middle school structure offers specialist teachers so students are able to experience deep learning through authentic teaching and assessment (Dowson et al., 2007, p. 11). Middle school offers the adolescent opportunities to analyse their world in an educational environment that encourages questioning and intuition (op. cit., pp. 17-18). This allows children to feel secure with a sense of belonging while having the freedom to discover their sense of self, both socially and academically (op. cit., p. 9).

Pedagogy

The pedagogy upon which middle schools are formed revolves around the characteristics of adolescents and incorporates the physical and mental needs of these students (op. cit., p. 18; Beane, 1993, p. 26). Australian middle schools encourage the individual to become independent and organised at an early age while developing their identity in a safe educational environment. Within middle schools, students are assigned a homeroom where a teacher is entrusted with the children's pastoral care, often in addition to several core subjects.

Competence

Competence is another element that effective middle schools focus their framework upon (Dowson et al., 2007, p. 17). Middle school offers a diverse range of subjects, thus allowing the gifted child to investigate their preferred areas of intelligence. This is an important part of learning for the gifted child to enable their talents to emerge or continue to develop to their fullest potential (op. cit., p. 15; Bailey, 2002, p. 9; Bernal, 2000, p. 162; Tomlinson, 1995, p. 14).

INTELLIGENCE TESTING

Intelligence is the ability of one to interact purposefully with the environment and to think rationally (Wechsler, 1994, p. 1). The WISC-IV is currently a widely used measure of intelligence with intelligence testing the main identification tool used by educators and psychologists in the recognition of giftedness. Although not perfect by any means, the I.Q. test provides the most accurate feedback currently used to validate expected levels of giftedness and guide decisions within educational contexts. However, for the testing process to be considered effective, it should access several domains of intelligence and be culturally relevant (Nettlebeck & Wilson, 2005).

Cultural relevance is a recognised problem with intelligence testing, as black, Australian Indigenous and Hispanic students score lower than white students when standard I.Q. tests are used (Oakland & Rossen, 2005, p. 59). Intelligence tests are available that have measures found to be more culturally specific, such as the Raven's Standard Progressive

Matrices, the intelligence test recommended for use when testing Australian Aboriginal students. However Chaffey (2003) does not recommend intelligence testing for assessing the I.Q. of students who are deemed to be "invisible underachievers". To alleviate the problem of assessing academic potential in "invisible underachievers" Chaffey designed the "Coolabah Dynamic assessment" - a procedure unlike Westernised intelligence testing, rated as more culturally effective for Australian Aboriginal students and also relative to the underachiever, regardless of race and culture. Within the testing procedure there are approaches designed to increase self-efficacy and overcome test-anxiety that is suffered by many underachievers (Chessman, 2006, p. 4).

Another recognised disadvantage of the standard intelligence test is that it does not measure a child's will to learn and their preferred learning style. As previously discussed there are many ways to learn and a formal intelligence test does not suit every learner, yet every child is judged through a specific learning style when standardised achievement tests are used (Oakland & Rossen, 2005, p. 60). Still the I.Q. test remains the most commonly used and effective tool to rate intelligence used in conjunction with referrals and other assessments.

TEACHER TRAITS

The *effective* classroom teacher or educator is someone able to produce or be capable of producing an intended result, serving to effect a purpose, and someone who functions efficiently (Moore, 1997, p. 421). The *exceptional* teacher surpasses what is common, usual or expected for the teaching profession and is someone who deviates widely from the norm of mental ability. They are unusual, remarkable and superior in ability (op. cit., p. 457). An *exemplary* teacher is a commendable model worthy of imitation (op. cit., p. 459). To be an *enthusiastic* educator one should have and show great excitement and interest in the profession and their students (Hor, 2006, p. 211). Enthusiastic teachers are people of ardent zeal (Moore, 1997, p. 439). Capable of change and adaptable, *flexible* teachers are versatile and able to adjust readily to different situations. They are always willing to make concessions (op. cit., p. 504).

DIFFERENTIATION

Differentiation is varying the method of delivery to cater to student diversity by altering the pace, density, complexity and depth of the curriculum to suit individual, group and whole class needs (VanTassel-Baska, 1989, p. 339; Gross, 1999, p. 91; Tomlinson, 1995, pp. 3-4; Willis & Mann, 2000, ¶ 6; Good, 2006, p. 10). This assists gifted children who process complex information, make connections, and learn, faster than their age-peers by balancing substance with required level of cognitive needs (Department of Education & Training, 2004, p. 11; Berger, 1991, ¶ 3; Daniel & Cox, 1989, p. 2; Gross, 1989, p. 191; Tomlinson, 1995, p. 11). There are a variety of ways this can be achieved including parallel programming.

Parallel programming is a form of differentiation in which more able students meet different goals to their age-peers, usually while in a mainstream classroom. This is achieved through adding complexity to a required higher order thinking skill. Specific content is differentiated without altering outcomes and it is a qualitative adjustment (Good, 2006, p. 9; Willis & Mann, 2000, ¶ 16-20).

Tailoring school work in this way promotes greater comprehension for the student by offering enrichment sought through areas of interest (Bailey, 2002, p. 9; Bernal, 2000, p. 162; Tomlinson, 1995, p. 14). Offering children various, flexible levels of learning that allow continuity and direction is a way to make learning valid (Hamza & Nash, 1996, p. 17). When children work on tasks they deem to be valid, such as making a difference to their local community, researching something within their interest areas, or real-life problem- solving, their learning is enriched because it is authentic (VanTassel-Baska, 1989, p. 330; Moon et al., 2002a, ¶ 5; Hamza & Nash, 1996, p. 17). It is relative to real-life problem solving (VanTassel-Baska, 1989, p. 330; Bernal, 2000, p. 173; Moon et al., 2002b, ¶ 5). Lessons should accommodate the ability the gifted have to almost disassociate themselves from the outside world while working on a task, optimising the effectiveness of the learning (Western Australia Education Department, 2001, p. 2; VanTassel-Baska, 1989, p. 339). This process in turn increases understanding between

student and teacher by presenting instructional information the teacher can use to make the student's learning real and valid (Moon et al., 2002b, ¶ 5; Gross, 1999, p. 93). Differentiating the curriculum should enable each child to be challenged to his or her fullest potential and decrease the chances of gifted underachievement (VanTassel-Baska, 1989, p. 339; Gross, 1999, p. 90; Gross, 2006, p. 421; Department of Education & Training, 2004, p. 11; Davis & Rimm, 2004, pp. 103-106). All children have the right to specialist education aimed at encouraging their originality and one that is uniquely based on "each individual's characteristics and circumstances" (Bailey, 2002, p. 9; Merrotsy, 2003, p. 10). Many children's learning capacities are not suited to the traditional classroom for varied reasons (Davis & Rimm, 2004, pp. 103-106). Classrooms need to be stimulating for all students (Bailey, 2002, p. 9; Merrotsy, 2003, p. 10). The classroom climate should enhance and fulfil the student's educational needs through supplementary or differentiated curriculum when required (op. cit., p.10), offering broad-based concepts through themes (Western Australia Education Department, 2001, p. 2; Bernal, 2000, p. 174; Moon et al., 2002b, ¶ 5). This description aligns with Delisle and Berger's (1990, p. 2) description of an appropriate education in which individual learning styles are catered to through curricular flexibility.

The previous section explains underachievement, the current methods of identification of gifted underachievers, how underachievement relates to middle schools, and current theories on differentiation of the curriculum to assist and prevent gifted underachievement. The gifted underachiever is in need of informed attention to assist their education as children who underachieve will not necessarily continue to do so throughout their lives. Parents and teachers are able to impact the learning experience of the student by addressing the factors that cause the child to underachieve, therefore influencing their learning in positive ways.

CHAPTER TWO
A REVIEW OF THE LITERATURE

INTRODUCTION

Gifted underachievement has been at the forefront of education for the last thirty years yet concerned educators continue to ask questions of why bright children perform below their potential. Tolan (1996, ¶ 30) *s*uccinctly acknowledged the current plight of these students: "Unless we make a commitment to saving these children, we will continue to lose them and whatever unique benefit their existence might provide for the human species of which they are an essential part." Without teacher commitment the gifted will not be able to reach their best in many situations including social, personal, academic and emotional. Yet the great majority of educators continue to put the brightest last. Reis and McCoach (2000, p. 165) supported this statement and reported the need for future research to unravel the complex causes of and to provide interventions to decrease the occurrence of the same.

The literature focus of this study, *The Underachievement of Gifted Middle school Students,* follows this recommendation, with three main areas forming the foci of this research. These are, the gifted underachievement of the middle school student in the school setting including: the interactions occurring within this setting, teacher and peer interactions and classroom ecology. The second area focuses on gifted underachievement factors not solely attributable to the school setting including family dynamics and self-esteem. The final area considers phenomenological research with relation to factors that the students have identified as having contributed to their gifted underachievement. To clarify the utilization of terms used in this study they are described at the onset.

GIFTED UNDERACHIEVEMENT
THE RESEARCH STUDIES

Research regarding gifted underachievement is a relatively new area with the vast majority of studies carried out along qualitative lines of enquiry (Reis & McCoach, 2000, p. 156; Schultz, 2002, p. 194). Until 1980 when Whitmore's study brought light to the specific needs of gifted underachievers, Kimball's 1953 study was the only research on underachievement with a base in qualitative study (Whitmore, 1980; Kimball, 1953). The following section discusses more recent and current findings on gifted underachievement including areas of research broken down into *Australian Research* and *Underachievement in Middle school,* it then looks at studies that analyse why students underachieve. The specific focus of middle school is considered with particular areas focusing on *self-esteem, underserved gifted populations*, and *teacher interaction.*

UNDERSERVED GIFTED POPULATIONS

Gifted students are underserved as a whole population (Smutny, 2004, ¶ 1) with approximately half of identified gifted students in the top ten percent of intellectual ability not performing to their intellectual capabilities (Reis & McCoach, 2000, p. 154). Within this population, underachievers are underserved to a greater degree (Smutny, 2004, ¶ 1). As previously discussed, this epidemic can be attributed to many factors including poor self-esteem, lack of perseverance, fear of competition, and an absence of goal-oriented behaviour (Rimm, 1997, p. 2; Carr, Borkowski & Maxwell, 1991, p. 108). Within the realm of underachievement, there are certain groups which are at an even greater risk of not reaching their academic potential. The geographically isolated, the poor and those who are culturally disadvantaged and different, are those most disadvantaged (Smutny, 2004, ¶ 1; Merrotsy, 2003, p. 9). Smutny's (2001) research on underserved gifted populations found these children need an individual programme that addresses their specific needs and one which ensures their gifts are promoted and they are encouraged to achieve academically.

Australian research into underachieving gifted children found that there are several underserved gifted populations including students with divergent aptitudes and highly gifted students who do not function well in the regular school environment (AAEGT, 1996). Chaffey (2003, p. 43) found that Aboriginal students are culturally disadvantaged and that individual programming is required for these students to enable them to realise their potential. This includes feeling supported in their schooling by their Aboriginal community. This can be enabled by having an Aboriginal elder involved in, and present at the school on various occasions. It is necessary to have Indigenous involvement as it is common for the Australian school system to not effectively educate Aboriginal students. There is a long history of incompatible Australian Education from the perspective of Indigenous people. The Australian school system has not been a positive experience for Aboriginal students in general as from the early1900s until 1967 Aboriginal students were only permitted to attend school if no white students or their parents objected to their enrolment (Macintyre, 1999, p. 229).

UNDERACHIEVEMENT IN MIDDLE SCHOOLS

Many studies recognise the connection between lack of academic achievement and boredom (Reis et al., 1995, pp. 30-31; Rimm, 1997, ¶ 12; Rizza, 2002, p. 152; Keighley, 1996). Motivation for the gifted child is often intrinsic as is boredom and it is also strongly linked to self-concept and heightened sensitivity as the following studies exemplify. To be a motivated learner, the gifted child needs to be supported by their teachers and to recognise that a network of assistance exists (Daniel & Cox, 1989, p. 2 Mills, 2003, pp. 273; Reis et al., 1995, p. 30; Colangelo et.al., 2004, p. 49). A healthy level of self esteem generates motivation in areas of individual interest and assists the student in wanting to learn (Daniel & Cox, 1989, p. 2; Lyon, 1993; Bandura, 1993, pp. 135-136; Bandura, 2001, p. 189).

BOREDOM

Reis et al.'s (1995, p. 31) qualitative study focused on the boredom of middle school students and found a correlation between bored students and gifted underachievement. Their four-year longitudinal study highlighted a discrepancy between the level of

instructional curriculum and the ability level of the students. The work given to the students was too simplistic and did not have the students working in their zone of proximal development (van Geert, 1998, p. 637), and therefore, the students in Reis et al.'s study were not offered an appropriate learning environment. Due to the level of the learning material offered to these students, they became bored and as a result some students were unable to muster motivation toward skills they had mastered in earlier years and hence underperformed in the classroom.

A (1996) Canadian study by Keighley (as cited in Schultz, 2002, p. 196) also studied the boredom of students whilst in school. The focus was on the educational environment or classroom ecology and the influence it had on the achievement of the students, rather than on the students themselves and their ability to mould themselves to fit the classroom. The study removed the locus of control from the student and placed it on the teacher through the implementation of positive educational environmental factors. A teacher, who creates mastery experiences in a variety of ways including assisting individually when required and providing individually challenging material to all students, will have children with a higher self-concept than a teacher who does not persist in obtaining levels of mastery with their students (Bandura, 1993, p. 120; Colangelo et al., 2004, p. 49). To undertake this effectively the educator should be aware of the children's self-regulatory mechanisms and provide positive educational environmental factors suited to their concept of ability (Bandura, 1993, p. 120; Smith, 2006, p. 69).

Rizza (2002) compared teacher and student perceptions across 91 middle and elementary schools in regard to classroom activities. The study found no relationship between teacher and student perception regarding the differentiation of the curriculum to meet individual needs (op. cit., p. 150). A correlation was reported between student satisfaction and the placement of these children. Students in magnet schools and pull-out programmes report greater fulfilment than the students in regular mainstream schooling (op. cit., p. 152). These findings show that gifted students are happiest when schooled alongside other gifted students. The results of this study also relate to identification and the need for specialist teachers in the early years of schooling. To alleviate the current

amount of gifted underachievement in middle school, it is imperative specialist teachers employ early identification methods for the recognition of the gifted during the primary years of schooling.

STUDIES THAT LINK MIDDLE SCHOOL UNDERACHIEVEMENT TO EXTERNAL FACTORS

Fewer studies link gifted underachievement to external factors than to internal factors. Research by Butler-Por (1987, pp. 15-24) and Laffoon et al. (1989) both attribute underachievement to extrinsic influences.

Butler-Por reported students do not reach their potential because of lack of educational challenges, social interactions that do not meet their complex needs, and home and parental variables (1987, p. 15). Laffoon et al. (1989) reported that a variety of external forces are attributable to gifted underachievement.

PEER INFLUENCE

Numerous studies link both negative and positive behaviours of gifted underachievers to peer interaction (Weiner, 1992; Brown, 1982; Bireley & Genshaft, 1991; Bandura, 1993, pp. 138,144; Bandura, 2001, p. 188; Reis et al., 1995, p. 36). Weiner's 1992 study reported that students recognise the link between their peers and their academic achievement levels. They link positive peer influence with academic achievement and non-academic peer influence as a guiding factor in their gifted underachievement.

The forced choice dilemma of gifted youth affects minority, social and cultural groups and is sometimes the determining factor in whether the child achieves academically. Their dilemma is to either follow their peers and not strive for academic success but have their approval, or strive academically yet suffer social isolation because of their chosen academic path (Gross, 1989, p. 190; Chaffey et al., 2003, p. 43; Fryer, 2006, ¶ 2). Australian Aboriginal children have traditionally been presented with this dilemma to

either appear "white" and academic, and risk the respect of their peers or hide their giftedness and conform by rejecting school related successes (Chaffey et al., 2003, p. 43).

Bireley and Genshaft (1991) studied gifted junior high students and found that the previously accepted label of "gifted" is commonly discarded. They reported that children and adolescents value their acceptance within a peer group so underachieve for acceptance (Peterson & Colangelo, 1996, p. 399).

STUDIES THAT LINK UNDERACHIEVMENT TO INTERNAL FACTORS

As previously established, the majority of reasons why children underachieve pertain to internal factors. Researchers found that the following internal factors contribute to underachievement: competition, family dynamics, multiple extra-curricular activities, lack of self-regulatory learning strategies and poor self-concept.

COMPETITIVENESS

Stress can be a major factor in stopping a child from reaching their potential and this feeling of pressure can become apparent in a number of ways (Davis & Rimm, 2004, pp. 326-327; Rimm, 1997, ¶ 12). Children who fear competition and failure may find the stress of a classroom enough pressure to cause them to underachieve (Rimm, 1997, ¶ 12). These children sometimes say they are "bored" yet are attempting to mask their own feelings of academic inadequacy within the classroom (id.). Bandura (1993, p. 120) stated that our cognitive ability determines how we construe our own ability. Children either view intelligence as an acquirable skill or an inherent capability (id.). Children who deem intelligence to be acquirable will maintain performance during competition and learn from mistakes, viewing mistakes as a means to an end and that the errors assist to build on previously learned skills (id.). On the other hand, children who view intelligence to be inherent will not persist on tasks they find to be difficult and rather learn mastery through attempting tasks they find non-threatening and ones with which they will find instant success (op. cit., p. 121).

Competition can also reveal itself through the underachiever's parents or caregivers (Rimm, 1997, ¶ 13). Caregivers who apply excessive pressures to a child to achieve a particular level of academic attainment or to do better than their siblings because they are seen as smarter than them are unwittingly competing with the child (op. cit., ¶ 13-14). Sometimes this competition proves to be too much for the child as the caregivers' expectations are beyond what the child is capable of and they subsequently begin to underachieve (op. cit., ¶ 13). Teachers can also apply this type of pressure with similar negative results (id.) when they assume a child is capable of specific tasks and where there may be gaps in the learning as is common with gifted children.

FAMILY DYNAMICS

Most studies relating to family dynamics established a connection between underachievement of the gifted and dysfunctional family home life (Reis et al., 1995, pp. 32-33; Rimm & Lowe, 1988, p. 354; Bandura, 1993, p. 120; Bandura, 2001, p. 189; Baker, Bridger & Evans, 1998, p. 5; Butler-Por, 1987, pp. 16-18; Freeman, 2007, ¶ 23). A University of Connecticut study on parents of low-achieving students found dysfunction to be prevalent in the homes of these youth (Reis et al., 1995, pp. 32-33). Rimm and Lowe (1988, pp. 354-355) also found low-achievers in dysfunctional homes and relate this to a lack of parental academic encouragement.

Butler-Por (1987, pp. 16-18) attributed five major reasons for the decline in emotional stability of gifted children living in a dysfunctional home environment, leading to the underachievement of the child. They are lack of emotional support, lack of care or concern for the child, too much pressure placed on success of the child, difference between the parents and the child in ethical stance or values, and the stress of living in a volatile emotional environment. In contrast, in a study by Green, Fine and Patterson (1988) of around the same time, no correlation was found between gifted underachieving youth and a dysfunctional home life. The children's underachievement was attributable to the same factors as children who underachieve and live in a functional home environment (Green, 1988, p. 271).

Freeman (2007, ¶ 23) found that children who live in a poor home environment or with imbalanced family relationships have impeded metacognitive processes (Bandura, 1993, pp. 138,144). She concluded that the poor living circumstances are inadequate for learning as they detract from their positive attitudes to learning. These children need much more teacher assistance than their gifted peers living in stable home environments (Freeman, 2007, ¶ 23).

Boekaerts (1993, p. 154) studied the link between self-esteem and achievement and finds that negative feelings about their life and situation created a "pessimistic perceptual attitude" and these emotions may focus energies on this aspect of their lives that would have otherwise been focused on education. These thoughts create a survival attitude that impedes on the student's educational success. This study links into the ongoing investigations between academic achievement and self-concept. Although all of the above-mentioned studies, apart from Green, Fine and Patterson (1988, p. 271), found attributable links between achievement and family life, self-esteem could be the underlying cause for the underachievement. Social cognitive studies show that the majority of people living in a poor family environment have a poor self-concept and the lack of self-esteem is linked with poor academic attainment (Bandura et al., 2001, p. 189; Bandura et al., 1996, pp. 1206-1207**).**

SELF-CONCEPT

Lyon (1993) investigated the self-concept of junior high school students and concluded that positive academic self-concept is linked to academic achievement. This connection is reportedly twice as strong as the correlation of locus of control to self-concept. Lyons (1993) found a positive academic self-concept to be responsible for up to one third of achievement levels.

Most studies reported a correlation between self-esteem and achievement levels (Bandura, 1993, p. 118; Carr, Borkowski & Maxwell, 1991, p. 108; Bandura et al., 2001, p. 188). Lupart and Pyryt's quantitative study was an exception as they reported no connection between the two. Their findings reported low-self esteem as common in both

the group who were achieving by conventional standards and the underachievers (Lupart & Pyryt, 1996).

Other studies found that gifted underachievers do not exhibit lower self-esteem than gifted achieving students. McCoach and Siegle's quantitative study found that often gifted underachievers are attaining less than they are capable of because they do not value their schoolwork and do not rate the academic tasks to be worthy of their attention (McCoach & Siegle, 2003, p. 151). They found self-regulation and attitudes towards teachers to be lower than achieving gifted students, however not their academic self-perceptions (McCoach & Siegle, 2003, p. 150).

OVEREXCITABILITIES

Dabrowski's Theory of Positive Disintegration explains that gifted children are often super-sensitive (Tieso, 2007, p. 232; Bouchard, 2004, p.340). These hyper-reactions are in fact, normal, and a part of the gifted child's make-up. Within Dabrowski's theory, a child's development potential can be measured by their overexcitabilities in the areas of psychomotor, intellectual, imaginational, sensual, and emotional. A 2004 study by Bouchard used a likert-scale observational checklist to identify shared personality characteristics of higher intellectual overexcitabilities. Almost half of the students identified as gifted during the study had not previously been recognised as such. This study, as does Teiso's 2007 study that showed similar results, exhibits a useful method in the identification of giftedness for children who are missed by traditional methods.

TOO MANY INTERESTS

Several recent studies attributed underachievement to students having too many interests (Clark, 1997, pp. 491-492). Simons and Van Rheenen (2000, pp. 177-178) studied athletes who have recently made the transition from high school to a university sport programme and reported that underachievement can be due to role-strain that is caused when students try to achieve at a high level in both areas of academia and extra-curricular endeavours (Stansbury, 2004, p. 4). Yet they found some athletes were able to juggle the increases of both the academic pressures and athletic demands upon their minds and

bodies, with some students actually performing better academically during their sport season (Simons & Van Rheenen, 2000, pp. 177-178; Stansbury, 2004, p. 4). Stansbury suggested that, typically, athletes who enter university on a scholarship do so with lower academic strengths than non-athletes, thus, when they begin university they sometimes struggle with the level of the work not the workload. Therefore their lower academic attainment levels are sometimes incorrectly attributed to role-strain rather than lack of ability (Stansbury, 2004, p. 4).

Davis and Rimm (2004, p. 328) found that students engage in multiple activities to redirect the focus away from schoolwork. This gives the child a different way to succeed without the pressure of academic success. The accomplishment sometimes found with extra-curricular activities can also compensate for the negative feelings and disappointment underachievers experience in their formal education (Davis & Rimm, 2004, p. 328).

It is, however, beneficial for gifted students to have some extra-curricular activities for academic success. Monaco and Goodner (1990, p. 6) reported that extra-curricular activities promote a greater depth of learning, provide hand-on learning opportunities and develop strong social bonds that are necessary for developing the whole child.

SELF-REGULATORY LEARNING STRATEGIES

Rimm (1997, ¶ 7), and Ruban and Reis (2006, p. 154) reported that gifted achievers self-regulate their learning more than underachieving gifted students. These metacognitive strategies are also used more effectively with achievers who are more able to facilitate this ability when working on tasks the student perceives to be mundane. Underachievers do not have this ability as they have not developed an understanding about hard work and perseverance (Ruban & Reis, 2006, p. 154). Rimm (1997, ¶ 7) reported underachievers are living in a fantasy world where they assume they can realise their potential without any effort or training whatsoever. She gave the example of them wanting to be professional football players without ever having trained. These children act in this way

to protect their self-esteem, which they feel can remain intact if it has not been tried and tested.

EFFECTIVE TEACHER PRACTICE

What effect could the education system have on a child's learning curve if we as educators truly embraced vertical unitised learning as an option (Geake, 2003, ¶ 16; Merrotsy, 2003, pp. 3-4; Daniel & Cox, 1989, pp. 2-4; Dart, 2006), where subjects are taught to groups formed on needs rather than age? Maintenance learning characterises much of a child's learning. To break mediocrity in the majority of gifted education, teachers need to affect decisions about curriculum, their classrooms and their students (Daniel & Cox, 1989, p. 2) and be involved in research at the ground level (Geake, 2003, ¶ 3). Educators need to be taught how to create opportunities, motivate and encourage all students (Merrotsy, 2003, p. 9; Daniel & Cox, 1989, p. 2) and to be co-responsible with their students for their education (Broussard, 2004). Teachers are salespeople, they sell learning *not* information. The skill is to create motivated buyers.

We can ask ourselves as a culture why it is the majority perception that only those performing below the norm, not outside the norm, need special attention, that the "top-enders" will always do well, or at the very least cope with school and life (Schultz 2002:195). Is it perhaps our own psyche, our own insecurities and our own need to be seen to be in control that allows us to neglect those who may have the ability to outshine us? The greatest gift a teacher can give their students is a lifelong love of learning and a feeling of self-worth. All children should receive the attention they require to perform to their highest ability, social justice requires this, yet it does not occur (Gross 1999:93). The following studies report either "needed changes in teacher practice for educating the gifted" or "effective teacher practice," and some report both.

STUDIES EXEMPLIFYING NEEDED CHANGES IN TEACHER PRACTICE

HOW CHANGE IN NEEDED

Australian researchers are aware of the need for changes in teacher practice to decrease gifted underachievement, with an increasing number of studies being published every year. The study by Purdie and Hattie (1999) was a large-scale review and meta-analysis of much of the recent research. They reviewed 52 studies that examine study skills and learning, and that report changes needed in teacher practice. All but one of the studies found that surface-level strategies applied to learning did not equate to affective outcomes with results in favour of deeper conceptual understanding and study techniques. The exception to these findings involved a study in which younger students were able to rote learn scientific terminology and formula (Purdie & Hattie, 1999, pp. 83-84) with results deemed to be due to the nature of the science curriculum, the young age of the participants and therefore their ability to process and synthesise the information using the rote technique.

Other studies within the meta-analysis found that the most effective way to retain information is to be flexible and use multiple study skills. Teachers are able to assist students to learn effectively by increasing their depth of study skills as many students use non-strategic behaviours, which hinder their learning. Purdie and Hattie termed these negative behaviours, "learning-pathologies". Learning pathologies need to be replaced by effective learning strategies and students will not naturally undertake this transition on their own, needing assistance to enable enhancement of outcome results (op. cit., p. 72). Teachers can assist this process by educating students on how to link new material with prior knowledge and explaining relationships between the two (op. cit., p. 83). Note taking is another skill that can be either detrimental to the learning process or an effective tool when used correctly. Purdie and Hattie (id.) reported high correlations between student achievement and effective note taking skills when they involve targeted main ideas manipulated to enhance understanding as opposed to re-writing notes taken during class. By teaching children to effect positive study skills, outcomes are enhanced (op.cit., p. 72).

Reis et al.'s 1995 qualitative study, discussed in the "U*nderachievement in Middle school"* section, reports boredom as a factor in gifted underachievement (pp.30-31). A change in teacher practice incorporating enthusiasm (Heath, 1997, p. 3; Hamza & Nash, 1996, p. 16) and flexibility and underpinned by professional development and support (Daniel & Cox, 1989, p. 2; Merrotsy, 2003, p. 10) is able to diminish boredom and direct energies toward effective learning (Daniel & Cox, 1989, p. 2; Mills, 2003, p. 279; Colangelo et al., 2004, p. 16; Hor, 2006, p. 201). Participants in this study acknowledged teacher involvement in their underachievement and results indicated that if during the students' high school years they encountered only teachers they deemed to be uncaring and less supportive than their primary teachers then their underachievement was exacerbated (Reis et al., 1995, p. 32). Reis et al. (1995, p. 25) reported a need for differentiation of the regular curriculum and effective implementation of changes to suit individual learning needs (Bernal, 2000, p. 174). The results of the study showed an increase in application and grades after the curriculum is individualised in this manner (Reis et al., 1995, p. 30).

This aligns with a 2002 qualitative study by Moon et al. who found that not only is there a need for a differentiated curriculum but a large percentage of teachers *never* tailor school or homework to individual needs. This middle school study compared the questionnaires of teachers and students to evaluate these different perceptions of the same situation within the learning environment. Teachers reported that learning contracts, flexible grouping and curriculum compacting are rarely used within the school system (Moon et al., 2002b, ¶ 3).

In Merrotsy's 2006 study two gifted accelerants reflected on their education and gave their opinions on what positive changes could be made to the education of gifted students (Merrotsy, 2006). Both students appreciated the opportunities brought about by acceleration and recognised the need for differentiation of the curriculum so students may learn at a level commensurate with their academic ability (op. cit., p. 32). The children also mentioned the need for specialist teachers to guide students with specifics related to their acceleration (op. cit., pp. 28, 31). Merrotsy (2006, p. 32) stated that Australian

education needs to be flexible and educators need to recognise the hardships that may be faced by accelerated students. Australian gifted education in not equitable (id.) and, as previously stated, many face the added problems of isolation of a cultural, racial and economic nature (Chaffey et al., 2003, p. 43, Gross, 1989, p. 190).

TEACHER PERCEPTIONS

Teachers' perceptions can be responsible for the lack of self-esteem and performance levels of the children within their class (Chaffey et al., 2003, p. 42). Sometimes a group of children can be incorrectly perceived to have limitations on their intellectual capacity based on race, social class, or geographical situation (op. cit., p. 43; Oakland & Rossen, 2005, p. 57). The deficit thinking paradigm, as this is termed, affects Australian Aboriginal children, as they are greatly underrepresented within the gifted population (Chaffey et al., 2003, p. 42; Merrotsy, 2003, pp. 9-10; Merrotsy, 2006(a), p. 32). Chaffey found that when offered dynamic testing not focusing on reading and writing, in a secure setting, Aboriginal children are able to reveal their actual potential not recognisable within the regular school environment (Chaffey et al., 2003, p. 43).

These findings are supported by Merrotsy (2006a) who implemented a programme designed to increase self-esteem and school performance in gifted underachieving Aboriginal children, who were mostly "invisible underachievers". The selected students displayed several of the following traits: fear of failure, trust issues, and low self-efficacy towards education. All students faced the forced choice dilemma relative to gifted Aboriginal students in which students decide whether to either strive academically and risk alienation from their peer group or underachieve and be accepted as non-academic. Teachers received education on how to implement positive changes and then lessons were delivered through the child's interest areas and preferred learning style. The programme increased self-efficacy and improved student attitude to learning in a pressure-free, comfortable environment. Absenteeism decreased and the study showed an overall academic improvement across all areas.

In a 2005 study, Al-Sahel interviewed 520 Kuwait teachers to discuss the reasons they think their students underachieve. They mainly attributed the underachievement of their students to family concerns. Underachievement was related to school only through work production- being lack of homework, daydreaming, and reading and writing difficulties (Al-Sahel, 2005). Although this study did not focus directly on gifted children and their underachievement it is pertinent to note that unmasked potential was only attributed to lack of effort on the part of the student and not attributed to teacher interaction and delivery style, or emotional and social concerns. The educators took no responsibility for the underachievement of their students (id.).

A study that is not directly related to teacher perceptions, yet one that can assist teachers in gaining further understanding about the effect that their perceptions can have on their students, is a study by Garaigordobil (2004). He studied the emotional development of 174 adolescents, investigating if a programme of psychological intervention could positively affect emotional development. The programme was designed to affect the emotions of empathy, anxiety, self-concept, image of classmates, and ability to analyse feelings. The intervention had a highly positive effect on emotional development in that it decreased anxiety and improved self-concept for the adolescents.

NOT ENOUGH DIFFERENTIATION

Another study (Archambault et al., 1993) with negative findings regarding the differentiation of the curriculum for gifted students questioned approximately 5000 third and fourth grade educators teaching in public and private schools in the USA. It found that the teachers of gifted students who participated in this study made only minor modifications to the curriculum to cater to gifted students. The study also reported that the schools that claim to provide a gifted programme were offering much the same as the schools that did not provide a specified programme (op. cit., ¶ 2). The recommendations from the study were for an increase in professional development and flexibility and for an increase in provision of opportunities for students (op. cit., ¶ 4).

Smith's 2006 study reviewed the relationship between student literacy diversity, instructional differentiation and academic engagement. Her research investigated whether there has been a paradigm shift in teacher attitudes and practice and examined whether this change is enough to fully and effectively challenge and extend gifted students within the general classroom. Smith found that a gap exists between what instructional practices teachers believe they use and the accepted level of differentiated practice for individual student needs in Australian classrooms.

A CHANGE IN ATTITUDE TOWARD ACCELERATION

Smith and Chan's (2002) study examined Catholic primary school teachers' attitudes towards special provision for gifted and talented students and found that teachers supported grouping structures for the gifted within heterogeneous classrooms with some teachers finding merit with special part-time classes where the students were grouped homogeneously. Teachers were less supportive of acceleration options for their gifted students, including early entry and grade skipping. Smith and Chan found that this may have been attributable to the lack of human and material resources in the Catholic system and that formal tertiary study in the area of gifted education may improve educational options for their gifted.

LACK OF ENCOURAGEMENT

Many studies recognised the positive effect of encouragement on retaining the gifted students' motivation to succeed (Moon et al., 2002b, ¶ 5; Bloom, 1985). However a University of Virginia study did not find student motivation to be needed for success (Wu, 2005, p. 238). Wu's study, with its emphasis on the concept of talented performance, reported teacher encouragement was the factor that caused children to achieve (op. cit., p. 231). This Confucian cultural outlook is deeply influenced by environmental factors including school instruction.

Wu's study researched the continuing "nature versus nurture" debate and explored the theory that positive support is more important than innate ability and performance can be nurtured in a child who otherwise would not show talented performance (id.). Most of

the 14 teachers interviewed stated that the innate ability to be a talented performer is not the greatest factor in the child achieving success in that area. Wu also suggested that it is not imperative that a child achieves above average or higher on a form of standardised assessment to achieve through academia. Wu's opinion is supported by the data of the 14 teachers interviewed in the study, 5 stated that typical students could achieve talented performance with diligence and encouragement. He stated that talented performance is encouragement oriented behaviour meaning the motivation to succeed has been nurtured by experts in their field with specialist education and not linked to personality and motivation (op. cit., p. 238).

There are several factors that influence the results of this study. A possible cultural bias arises as the study is undertaken in China where cultural norms rely on "reward for effort" as the main achievement system (op. cit., p. 241). It would therefore be expected that the students were educated to monitor their own learning to a large degree. Such results may not be the case in a Westernised study where factors for the cause of gifted underachievement are more evenly weighted. The findings however, add to the body of literature relating cultural specific factors to gifted underachievement.

STUDIES OUTLINING EFFECTIVE TEACHER PRACTICE

Many studies recognise that to be an effective teacher of the gifted one needs to be flexible and enthusiastic (Mills, 2003, p. 273; Hamza & Nash, 1996, pp. 16-17; Daniel & Cox, 1989, p. 2; Hor, 2006, p. 211, Merrotsy, 2006a). It is therefore noteworthy to consider the impact this teacher/student interaction has on both causing the gifted underachievement and reversing it (Emerick, 1992, p. 145). The following studies are a select few from this field of enquiry that explored not only the need for flexibility and enthusiasm but also additional aspects of effective teaching.

CHARACTERISTICS OF EFFECTIVE TEACHERS

A John Hopkins University study of effective teachers of the gifted who were drawn from both Opportunity class and mainstream educational settings (Mills, 2003, p. 276) explored the characteristics of exceptional teachers and found some unusual results. Eighty-five teachers identified by Mills (2003, p. 278) as exceptional based on observations, evaluations and performance, were invited to participate in the survey. Seventy four percent of these teachers responded to two questionnaires: a personality "Myers-Briggs type" questionnaire and a questionnaire regarding previous teaching experience and level of university education (op. cit., p. 276). Eighty-four percent of the teachers had post-graduate degrees. Yet less than one third held a degree in teaching. This is possible as the study was North American where it does not pose a problem to teach at college level without holding a teaching degree (op. cit., p. 278). The study found that exemplary teachers mostly have speciality education in their area of expertise-often classified as "teacher scholars" (id.). Unlike popular consensus, this study concluded that post-graduate study in gifted education, or in fact a degree in gifted education does not make a teacher exceptional. Mills also found exceptional teachers are of similar personality types to their students and focus more on logical analysis and objectivity than their teaching peers. Results show effective teachers of the gifted are open and flexible with achievement orientation as focus (id.; Hor, 2006, p. 201).

Another recent study that analyses effective practice of gifted educators is Graffam's (2006) University of South Florida study. It focused on two exceptional teachers and discussed the thought processes they employed when teaching these students. The teachers' classrooms were very different yet both rated the same practices as important in the learning process. The research found that the presentation is to be incorporated with greater emphasis on expected levels of thought processes and offered in a way that invites higher-order levels of thinking and a greater depth on conceptual understanding. Both teachers employed the use of individualized contracts and whole group tasks simultaneously (Graffam, 2006, pp. 123-124). This research showed similar findings to the above-mentioned study by Mills (2003) in that both support a need for a specific

personality type in an effective gifted educator (Mills, 2003, p. 278; Graffam, 2006, pp. 129-130).

Rushton, Morgan and Richard (2007) focused on the personality traits of 58 exceptional teachers, nominated as such by their supervisors. The researchers administered the Myers-Briggs Type Inventory and found that they were mostly extraverts and flexible within the MBTI rating scale allowing them to cope with several tasks at one time (2007, ¶ 48). These traits were found to assist the teachers in making the classroom a bright and interesting place to be and to promote within the classroom a lively feeling of fun and enthusiasm related to learning (Rushton, Morgan & Richard, 2007, ¶ 48; Hor, 2006, p. 206). The exceptional teachers' personality traits, consistent with only five percent of the general population allowed them to be independently minded, encouraging, and have a caring rapport with their students (Rushton, Morgan & Richard, 2007, ¶ 46; Hor, 2006, p. 206). The study discussed and found links between effective teachers and personality types that include flexibility, depth and quality (op. cit., p. 201).

In Hor's (2006) study, the researcher questioned Australian adolescent students as to what makes a teacher effective. The majority of the findings were similar to the above studies by Rushton, Morgan and Richard (2007), Mills (2003), and Graffam (2006), with addition findings relating to rules. Hor found that students evaluate the levels of rules imposed upon them in the classroom and that the participants deemed effective teachers are strict without being too controlling, laid-back at times yet they do not allow inappropriate behaviour, are fair and just, and are able to control their classes.

WHAT DO THE STUDENTS SAY? - PHENOMENOLOGICAL RESEARCH

Studies that investigated the students' points of view indicated several factors that contributed to a decline in achievement levels. The studies that review the reestablishment of achievement after a period of underachievement acknowledged and discussed elements that assisted them in this process.

INTRINSICALLY MOTIVATED STUDENTS

Emerick's 1992 study reported that gifted children who underachieve and after different periods subsequently again achieve, without formal intervention, acknowledged six factors as contributing to the resurgence (Emerick, 1992, p. 144). These factors encompass extra-curricular activities, peers, family influences, change of teacher and teacher influences, academic goals including self-reflection of personal goals, and class placement. The students rated concept of self as the most important element in the process (id.). This is reported by the majority to be so crucial in the recovery that it is not believed achievement could be reestablished without this factor.

The concept of self is linked with teacher influences as students report a specific teacher has the greatest influence on their recovery (id.). This development is reported to begin with an increase in self-esteem followed by a connection with school success and personal achievement. Students who develop personal goals are able to establish academic and personal responsibility. When these children establish personal responsibilities they are able to reflect on the process they have undergone and what has contributed to their underachievement. Within this process they take ownership of their learning (id.).

SCHOOL SATISFACTION AND SELF-ESTEEM

One study that did not find results in line with the majority is Jin and Moon's 2006 study (Jin & Moon, 2006, pp. 176-180). They used the causal-comparative method to investigate the psychological well-being and school satisfaction of gifted students under the supervision of expert teachers in a gifted high school and compare them to the well-being of high achieving students educated in a typical high school. The research was undertaken in South Korea where teachers found to be exemplary are placed in specialist schools for the gifted (op. cit., p. 171).

Jin and Moon found no discrepancy between the psychological well being of students in either of the two high schools (op. cit., pp.179-180). Therefore, the teaching staff did not affect the students' level of self-esteem (op. cit., p. 177). These results oppose the vast

majority of the research that links the students' welfare with the level of education and expertise of their educators (Emerick, 1992, p. 144; Rushton, Morgan & Richard, 2007, ¶ 50; Heath, 1997, p. 7; Daniel & Cox, 1989, p. 3, Hor, 2006, p. 206).

When the two schools are compared, however, the results show a difference between the students' satisfaction of school life. Students educated under the care of the expert teachers reported high levels of satisfaction with relationships including teachers and peers, almost half of these reported this as their highest level of satisfaction within the school (Jin & Moon, 2006, pp. 176-177). The students from the regular high school reported the lack of accommodation of curriculum differentiation and relationships as a negative factor in their school satisfaction (op. cit., p. 178). However there are aspects of the study that need to be considered. Perhaps contributing factors to the irregular results of this study pertain to two aspects regarding the selection of participants.

The first aspect of the study that may have affected the results is that all students attending the gifted high school had previously attended a variety of mainstream primary schools where they were achieving at high levels (op. cit., p. 170). This exemplifies the ability of these students to remain focused and achieving when not challenged and educated by expert teachers. Therefore, it may not be the educational environment that is responsible for the students' achievement levels but the personality types of these children. The second aspect that may have affected the results is that the participants studied from the mainstream high school are also high achieving students. Therefore, gifted underachievers who are often affected by expert teaching or the lack of it are excluded from the study as they are not recognised as "highly achieving".

With these aspects in mind, the study did not truly compare gifted high school students under expert teaching with gifted high school students without expert teaching. The study involved students who are not greatly adversely academically affected by their personality types and therefore, not underachieving. What it did do, is compare gifted *achieving* high school students who attained academic success regardless of the teacher, with gifted high school students who achieved without expert teaching.

APPROPRIATE DIFFERENTAITION OF THE CURRICULUM FOR GIFTED LEARNERS

Curriculum A specified course of study including planned subject matter and educational experience offered by an educational institution (Moore, 1997, p. 322).

Intended goals should be precisely defined. Gifted children monitor their own learning to a great extent, therefore, after the prerequisite skills are established, children should have a certain amount of freedom to research their area of interest pertaining to the task at hand (Gagné, 2003). Some examples may include varying grouping structures based on interest, ability and preferred learning style. The differentiated curriculum may support this learning structure through a use of a variety of learning environments, contents, processes and result in a variety of products or outcomes.

Homogeneous versus Heterogeneous Grouping

Many studies recognised the benefits of homogeneously grouping gifted students (Adams-Byers, Squiller, Whitsell & Moon, 2004, p. 11, Smith & Chan, 2002). It is therefore pertinent to consider the effect homogeneously grouping the gifted has on staving off student underachievement. A study by Adams-Byers, Squiller, Whitsell and Moon (2004, p. 11) using 44 students reviewed their cases and concluded that grouping the gifted with like- minded students created a more positive learning environment than gifted students grouped heterogeneously.

The students rated lesson pacing, higher comprehension levels, and having the teacher's attention equally shared within the class without the need to attend to slower learners, as advantages of being grouped homogeneously. The negative aspect of this study was the social/emotional competition and subsequent loss of top ranking within the class (Adams-Byers, Squiller, Whitsell & Moon, 2004, p. 13). It is pertinent to note that the selection of students for this study originated from a variety of gifted and talented programmes, these students coming together for a summer camp during which the data were collected.

The Relationship between Classroom Environment and Learning Style Preferences

Rayneri, Gerber and Wiley (2006) found that the students did not hold a learning style preference for teacher motivation. The gifted performers reported little connection with the classroom environment, and therefore this was not rated as a determining factor in their ability to achieve. The study reported that achieving gifted students did find motivation within their teachers although they were more internally motivated than externally (Rayneri Gerber & Wiley, 2006, p. 113).

Underachievers are found to be more often externally motivated. The importance of gifted education for the teacher is highlighted with these findings as these children report the need for educators who know how to stimulate and motivate them (Rayneri Gerber & Wiley, 2006, p. 115; Heath, 1997, p. 3). Emerick's (1992, p. 144) study that is discussed in the *Intrinsically Motivated Students* section (p.38 above) also reported that specific teachers were found to be responsible for encouraging children to return to academic achievement.

CONCLUSION

Intellectual, social and emotional needs should all be addressed within each child's education. Without balance, the child is unlikely to reach their full potential. Within the classroom gifted children need to be challenged through enrichment and extension (Gross, 1989, p. 193). This can take the form of differentiation, parallel programming, higher order thinking, metacognition, student-centred learning, real-world problem solving (Tomlinson & George, 2004, p. 9), and even removing the children from the physical walls of the classroom (Doherty, 2004, p. 1). These are the principles of quality enrichment and extension. These are the strategies educators can employ to positively influence gifted underachievement.

Case studies such as Merrotsy's Wii Gaay Project (2006, p. 32) are beginning to bring to the forefront of Australian education the needed application of the above mentioned

principles. As well as these principles, it should be recognised that the gifted face hardships that may be added to by racial, geographical, economical and cultural factors (Worrell, 2007, p. 27). As previously stated, Australian gifted education is not equitable (Merrotsy, 2006, p. 32) and educators should continue to strive for an equitable education for all. Children of today are in an era where information and new knowledge is available at a rate greater than ever before. Yet school education remains the foundation of learning. Education needs to be smarter. Students need to learn not only what to learn but how to learn (Gagné, 2003).

CHAPTER THREE
METHODOLOGY

INTRODUCTION

Chapter Three outlines the methodology selected for this study and the reasons for this choice. This chapter explains the case study approach, outlines the context of the school, and describes the participants used in this study including the criteria used for selection of these participants. The chapter continues with ethical considerations, possible foreseen difficulties, and to conclude, it explains the significance of the study, and discusses the expected results.

A QUALITATIVE RESEARCH DESIGN-CASE STUDY

A RATIONALE FOR SELECTING CASE STUDY

Yin (1994, p. 13) described case study as "a comprehensive research strategy … with the logic of design incorporating specific approaches to data collection and data analysis." Punch (2001, p. 150) espoused case study as a methodology that "aims to understand the case in depth, and in its natural setting, recognising its complexity and its context." The case study focused on "why" and "how" individuals and groups view and understand the world and construct meaning out of their experiences of gifted underachievement. Qualitative research such as case study involves multidirectional relationships where events shape each other and aims to discover or uncover hypotheses (eg. the reason why middle school children underachieve). It is suited to small focus groups and individuals as it is essentially narrative-oriented (Punch, 2001, p. 150). Based upon Smyth's (2004) understanding of a conceptual framework, the case study encompasses a set of concepts extracted from pertinent areas of enquiry and is used to support and guide the research.

The methodology of case study was chosen for this research to provide direction and definition to the study of reasons children underachieve. The focus of the research, *Contributing Factors in the Underachievement of Gifted Middle School Students,* was on the educational experiences of the individuals participating in the study. Therefore, case study was the most appropriate choice of data-gathering method.

CRITICISMS OF CASE STUDY

Case studies are often viewed as weak research and those who undertake such direction as having lost their way in the investigative process. They can be seen as lacking rigour, and negatively viewed for using less participants and obtaining less quantitative data than numerical based quantitative studies (Yin, 1994, p. 9). The "lack of rigor" tag can be attributed to the researcher who "has been sloppy and has allowed equivocal evidence or biased views to influence the direction of the findings and conclusions" (op. cit., p. 9). To address the above-mentioned negative aspect of rigor as it relates to case studies, one should include triangulation. This will be further discussed in a subsequent detailed section, however, a brief explanation is required to increase understanding of the case study as an effective research strategy. Triangulation is using multiple sources of evidence to add perspective to a situation, such as obtaining hard data from documents to enhance and support information offered through narrative (op. cit., p. 92). The other criticisms are more easily addressed. Although case studies do focus on a fewer number of participants, this is a requirement if one is to fully understand, in-depth, the participants, and approach holistically their perspective of a situation or event. Attempting to approach one's understanding of phenomena through the use of solely group quantitative data would hamper the research by avoiding the benefits that narrative and discussion can add to the discussion.

INTERPRETATION OF CASE STUDY

To interpret a case study, one should be willing to openly and holistically understand the situation and the phenomena being studied (Charles & Mertler, 2002, p. 277). The participants have something unique that the researcher wants to learn about and share. They have their story that is seen that way by them alone. The researcher is also unique:

someone who sees things differently to the next investigator. It is this, which the researcher needs to be most cautious about, taking great care in not making the narrative their story, and retaining the participant's perspective and experiences throughout the retelling of the narrative (Charles & Mertler, 2002, pp. 277-278). In this study, the participants shared their perspective of their lives as underachieving gifted students: what they feel and felt about school, their teachers and their lives, while the listener took care not to add bias to the conversation. This information was then triangulated with group data and other qualitative data to guide interpretations and provide recommendations from the study.

THE PARTICIPANTS

The participants in this study were fifteen gifted middle school students, each of whom attended *Lakeside Middle School* in an urban centre on the east coast of Australia. They each held a unique perspective of their schooling and this allowed for comparisons to be drawn and conclusions to be made about their middle school experiences.

CRITERIA FOR SELECTION

Gross (1989, p. 191) describes self-concept as the child's "view of himself through his interactions with the world around him", therefore, this coupled with the knowledge that children learn much about themselves during middle school, decided the age group of 10-15 to be selected for this study. The pilot study of an eleven- year-old gifted underachieving boy and his ease in relating information from his schooling (see Appendix 3) also supported the participant age group.

To ensure the researcher could obtain an appropriate sample group, the participants were enrolled in a single middle school that catered to gifted students and provided graded gifted classes for independent learners. The participants represented a range of differences across middle schooling including: gender; ethnicity; educational experiences; birth order; family, including size, make-up and socio-economic status- the

school provided scholarships based on either, financial hardships or academic ability, allowing low-income families to attend. Another difference is their current classroom environment: although most of the candidates were selected from the Opportunity Classes for gifted learners at *Lakeside Middle School*, it was not mandatory for selection, therefore, not all participants came from the independent learning environment - adding further diversity to the sample.

The eligibility of candidates was measured by a combination of the following:

-full scale intelligence quotient above the 90th percentile- measured by standardised testing

-scored in the top 10% of Basic Skills testing or Lanna testing (Private School Basic Skills Testing) in either Year 3 or 5 of their schooling.

- scored in the top 10% of ACER MYAT middle school testing.

-student in full-time opportunity class for gifted learners.

-teacher recommendation of an underachieving student used in combination with previous school reports showing a decline in achievement levels.

-caregiver recommendations.

INVITATION TO PARTICIPATE

Late in 2006, the principal of *Lakeside Middle School* was contacted to request participation of his students in the study. This was followed by an interview to further discuss the benefits of the research and resulted in confirmation of the school's involvement in the study. The principal was keen to obtain results of the study to further enhance the education of the school's gifted students. In April of 2007 the researcher met with the Head of Middle School to discuss possible candidates. Thereafter, they together addressed the Opportunity Class students and several students from mainstream classes, providing an overview of the study and explaining the meaning of gifted underachievement and the expected benefits to arise from this study. Questions were then fielded and then any interested students who thought they may have in the past or were thought to be presently underachieving were handed letters (see Appendices 4 & 5) inviting them and their caregivers to participate. Within the first week, 12 letters of

acceptance were returned. The following week, after a follow-up duplicate letter to the remaining 5 candidates was sent, the final 3 participants returned their letters of acceptance, along with one other who, after further review of their documentation, was not deemed to be underachieving and therefore, not included in the study. The school secretary noted the eagerness of the students to participate and return the forms, commenting that they had never previously had 100% of all forms returned!

The participants comprised eight girls and seven boys. Their ages ranged from 10 to 15 years. Some were members of the composite Year 5/6 Opportunity Class, others of the Year 7 and the Year 8 Independent Learners' Classes, and two children were selected from mainstream classes. All appeared keen to begin their interview sessions.

ESTABLISHING TRUST

The establishment of trust was not an issue as the researcher was previously known to approximately half of the participants. The established comfort zone was assisted by the interview setting and by the researcher offering each of the participants a choice of the setting. To further build rapport with the participants the researcher briefly visited the students several days prior to their interview to inform them of the day and time of the upcoming session and to ask if they had further questions. During the actual interviews, the interviewer wore casual clothes and the two sat either on or near the steps outside the classrooms if it was a nice day, or on the verandas if weather was poor or too hot. They ate lollies and spoke casually during the process. The researcher relied on her memory and voice recorder to recall events of the interview, only rarely writing to keep the interview as informal as possible.

DATA COLLECTION METHODS

The instrument used for data collection in this study was triangulated. First, the Head-of-School was interviewed and *questions* were asked, anecdotal data were *listened* to and,

from the school records, data were *read*. The participants were subsequently *questioned* to which their answers were *listened*. Finally, all written data were re-*read*.

TRIANGULATION

Triangulation is the use of multiple sources of evidence. Yin (1994, p. 79) listed six sources of evidence, beneficial for collecting information for the methodology of case study, including, "documentation, archival records, interviews, direct observations, participant-observation and physical artefacts." The use of these sources of evidence was dependent upon the study and the pertinence of the evidence in relation to the study. This research project used interviews and documents comprising of: interviews with the head of school, interviews with the participants, results from intelligence quotient tests, national testing results, and school reports. These sources were used to show themes common to all sources and to reduce bias from any particular source.

INTERVIEWS

Punch (2001, p. 222) viewed the narrative as able to "give a uniquely rich and subtle understanding of life situations." Interviews are able to take a variety of forms to obtain narrative, in which participants tell their perspective of an event as it relates to their life. Semi-structured, open-ended interviews form the basis of data collection for this study. Open-ended interviews are those in which one can discuss a phenomenon and ask the participants for facts, and one can ask the participants' advice for the future in relation to the phenomena (op. cit., p. 175; Yin, 1994, p. 84). In this study, this was undertaken by questioning participants about their underachievement, and subsequently, requesting their opinion on what could inform and assist young gifted children on how to have an education free of underachievement. Yin (1994, p. 84) espoused key informants as "often crucial to the success of a case study." Also, equally important to the success of the interview, is the researcher, who should be a good listener and be free of bias. Yin (1994, p. 57) detailed that "a good listener hears the exact words used by the interviewee, … captures the mood and affective components, and understands the context from which the interviewee is perceiving the world." Yin (1994, p. 84) further explained that well conducted interviews are those that collaborate with other sources of evidence.

Before participant interviews were able to commence, the head of school was consulted. During which time, the head was questioned as to whom he viewed as suitable for the study. In a subsequent interview, children were discussed; documents were viewed including school reports, I.Q. tests, and external testing results; and the selected participants were scheduled for interviews. The children were interviewed twice over several weeks, the first to question the participant about their gifted underachievement using the questionnaire, and the second to clarify any points arising from the first interview.

The participant interviews took place one-on-one during the usual school day. The participant and interviewer were seated casually either outside the middle school classroom on the veranda if it was raining, or on the stairs if it was fine and the weather was not too hot. Interviews were scheduled for mornings and were conducted from Monday through Thursday. This was intended to maximise student participation and enthusiasm as during the afternoons and at the end of the week, some children may have felt too tired to participant fully.

DOCUMENTS

Another method of data collection used was the examination of documentation. Documents add strength to a case study as they are an exact and stable source of evidence (op. cit., p. 80). Four sets of documents were viewed comprising of: school reports from current and previous schools; school records, comprising marks from in-class tests and assessments; results from external competitions, comprising University of New South Wales Competitions; and state-wide assessments including Basic Skills and Lanna testing: the private school equivalent of Basic Skills.

SCHOOL REPORTS

School reports are a source of objective and subjective data and are therefore doubly biased: they are written from the teacher's viewpoint, which is subjective; and the teacher writes in a language style in which they only include positive statements, where what they do not say can be just as important as what they do say. These comments and the

way the reports were written were valuable in this study to align periods of gifted underachievement with teacher comments and classroom academic achievement levels. This form of documentation can add broad coverage, as viewing these documents longitudinally adds a visual timeline and supports the participants' recollections of their gifted underachievement.

INTELLIGENCE QUOTIENT TESTING

The majority of psychological testing results used in this study were drawn from The Wechsler Intelligence Scale for Children: III and IV Editions. This test measures Australian children's capabilities against Australian norms with results categorising children within a range of performance levels for different domains of intelligences. The results used for the research were drawn from the participants' files, having been previously conducted for purposes unrelated to this study.

DATA ANALYSIS

There are many ways to analyse the constructs of social research. The combined choice of these is dependent upon the situation in which they are to be used and the purpose for which the research is to be conducted (Punch, 2001, p. 200). By allowing and encouraging the participants to discuss their stories in detail, rich content emerges. This adds depth to the study by detailing the individuals' experiences from a sociological perspective.

ANALYSIS OF THE DATA COLLECTED FROM INTERVIEWS

Interviews for this study were analysed through a process involving several strategies. Several interviews were taped, in particular, the ones in which the interviewer believed the participant was fully comfortable with the setting and the idea of being recorded. First, for these interviews, they were listened to and transcribed. Following this, they were listened to again, and areas where the participant became animated in voice and gesture were studied to enable further understanding of the participant and their

experiences. For the non-taped interviews, the researcher took notes through the interview relating to verbal and non-verbal cues and immediately afterwards, recalled the interview to reflect on voice and gesture. Following this, for all interviews, the semiotics or the meanings one gives to language, such as metaphors (op. cit., p. 230), and huge exaggerations, were studied to increase the reliability of the text's meaning. The interviews were then coded.

The transcripts were then examined for similarities and themes, assisted by the coding, as it showed areas that were common to all, or popular to many. It also exhibited areas of enquiry that only applied to a sole participant. Some of this information although not valuable for group data was used for discussion in an extended narrative.

After the data from interviews and data from documentation is combined, there are three further aspects to data analysis: grouping the data and presenting in tabulated form so similarities and differences in the data are able to be studied; selecting and presenting some interviews to be highlighted as extended narratives, affording the reader a sociological perspective of the participant and allowing the reader to experience the study in greater depth; and the last and most important aspect of the data analysis is to re-examine the whole process and outcome, checking for accuracy.

ANALYSIS OF DATA COLLECTED FOR DOCUMENTS

Social structure is considered when analysing case study data, as the meaning varies depending upon the social situation in which it is constructed. Documents add a rich dimension to the analysis of case study material in the following four ways. These themes constitute: social production, social organisation, direct analysis, and the analysis of different theoretical perspectives in relation to the analysis of the documents (op. cit., p. 231).

Social production includes: the social situation that determines the document be written, what theories are used in relation to the document being formed, and the role of the writer in relation to the document (Jupp, 1996, p. 305). For this study social production would

equate to the school system or school for the case of a school report; a principal or regional head in relation to who planned the report structure; and the theories the school used to teach, and then, used to support the reporting structure.

The social organisation of a document considers the 'who, when and why' of analysis (Punch, 2001, p. 232). This means who writes the document, why they write it, who reads the document, and when it is read. Emphasis is placed on the audience, as the audience determines what is written and how it is written. With relation to this study, a student's school report for caregivers usually omits the negative comments and focuses upon the positives, touching upon what can be worked upon or targeted by the child. Yet, an internal report may list each indiscretion that the student had been involved in and give a far more factual account of events, needing less interpretation than the comments on a student report.

Direct analysis considers these discrepancies. It uses the social organisation and social production of a document to "read between the lines" of a document and to discover the actual data contained within (id.). In relation to this study, if a report of a gifted child stated, "Although Johnny always finishes first, he needs to learn to sit quietly and wait for others to finish", it would have informed the researcher that not only did the teacher lack an understanding of gifted education, but that Johnny was educationally disadvantaged within the classroom. The comment, although addressing Johnny's need for patience, unearths layers of meaning that could be used to directly analyse the case and support Johnny's comments of being bored.

The final theme in the analysis of documentation is the different theoretical perspectives one uses to analyse documents (op. cit., p. 231). Basically speaking, this means how one will analyse the documentation, including what theories the researcher uses to analyse the documents and whether a combination of several theorists are used.

ETHICAL CONSIDERATIONS

Ethical considerations were taken into account with this study concerning school, student and participant, the full details of which can be found in Appendix 9. School considerations involved approval, confidentiality, and negative reflection upon the school; teacher considerations involved anonymity, and privacy; and participant consideration involved being well-informed, protected by duty of care, and privacy with relation to documents and interview data.

POSSIBLE FORSEEN DIFFICULTIES

Issues involving time were the main concern for the researcher, including the response time of the school. Interview times caused initial disquiet, including when the students would be permitted to be released from class to participate in the study and whether these times would coincide with the researcher's release time from work commitments. The school was fully accommodating of the researcher's needs.

The school has a history of receiving less than a quarter of forms returned for school surveys, making the collection of documentation a potential difficulty. This did not eventuate as each student was keen to participate, thus returning all forms within several weeks. The researcher was even stopped in the school grounds on several occasions by excited participants, wondering if they were able to be interviewed that day! These children were excited that someone was going to give voice to their stories, and that they may assist others to have better educational provision. The interest the researcher showed in the students may be enough to begin to overturn their gifted underachievement.

This point leads to an associated potential problem that also did not come to fruition- the unwillingness of participants to share their experiences. In fact, the participants candidly shared their experiences: both negative and positive, and in most instances seemed relieved to have someone take an interest in their lived experiences (cf. Merrotsy, 2006a).

It was also a concern that the participants would not be able to vividly recall the past, as in some instances, the gifted underachievement began during the first years of schooling. All students related their narratives with vigour and enthusiasm- many seeming to have been thinking about their gifted underachievement since the introductory meeting during which they voiced their willingness to participate.

The willingness of the teachers was seen as a possibility for difficulty as the research studies interactions within the classroom. This did not eventuate as the teachers were fully informed of the study before commencement, when all potential concerns and issues were addressed. Teachers willingly released children from classes when required and the researcher has been informed they look forward to reviewing the results at a subsequent staff meeting.

SIGNIFICANCE OF THE STUDY

The study has the potential to reveal previously unrecognised factors of underachievement in gifted adolescents. The research is significant and arose because of a current lack of Australian gifted middle school qualitative data. It builds upon previous studies of gifted underachievement by including the interaction between student and teacher and the description of this interaction by the students; therefore, it has the potential to enhance classroom practices for educators of the gifted. Kanevsky and Keighley (2003) support the change in research direction as they recognised the significant need for future research by directly asking students to "describe their boredom".

Many gifted students achieve satisfactorily or are high achievers, however, many, including the aforementioned, will not perform to their potential unless the teaching is stimulating and the educational environment is conducive to their learning needs. This study may initiate future studies on a greater scale to investigate if there is a social phenomenon causing children to underachieve. The greatest significance of the study lies with the participants' voices. Through their narrative, they added to the growing body of

Australian literature that describes gifted underachievement from the "coalface" as it is happening. Through their words, they have the potential to change the way educators think and interact with their students, both present and future.

CHAPTER FOUR
THE CASE STUDIES

The chapter contains both the analysed group data and selected cases studies. Throughout the interviews the participants appear reflective of their academic experiences and all seem pleased that their stories are given voice.

GROUP DATA

The following data are those believed to be pertinent to the participants' stories and includes results reflective, at the minimum, of 25% of participants. Therefore, the results that appear in the following table apply to more than 4 of the 15 participants interviewed. The results applying to the minority, that is less than 4 participants, are included with the full list of group data for the 15 participants and can be viewed in Appendix 8.

The group data shows the results of the interviews listed under four main sections: negative aspects of school, positives about school, why participants find school boring, and questions regarding the students' motivation. A summary of the main findings show that the gifted participants share their thoughts for retaining interest in school, with the five most common suggestions involving a change in student-teacher interaction. They identify miscommunication with teachers as an area in which students could make changes to positively affect their future, suggesting gifted children tell their teacher when they have a problem and request explanations to suit different learning styles when needed or desired. The top seven suggestions for students to maintain focus are pro-active with the students playing a part in changing their learning environment to suit their academic needs. These include, asking for change in speed, delivery and content; and becoming an active questioner. The interviewer notes that while the participants offer suggestions to other gifted learners, each speak eagerly and are decisive with their answers and comments. It seems they are reflecting on aspects of their own education, that in hindsight, they would change.

GROUP DATA

Negative Aspects of School	
Curriculum-level of work	**7**
Ineffective teachers	**6**
Wait time	**5**
Positives about School	
Teacher quality	**9**
Facilities	**4**
Peers	**4**
Why participants find school boring?	
Teaching style	**17**
Mixed ability classes	**10**
Teaching ability	**11**
Curriculum not differentiated	**8**
All participants have felt unmotivated to learn during their schooling and 11 have felt motivated not to learn, with the main reasons listed below	
Teaching style	**12**
No differentiation	**11**
Boring teacher	**10**
No relevance to my life	**7**
Lack of teacher ability	**6**

The following 5 case studies have been chosen from the interviews based on their individuality and information they bring to the study, representing a range of respondents, including age, gender and experiences. Each of the five participants, highlighted and reflected upon educational events in their past that can be used to improve the education of the gifted. These specific instances are seen to add to the current knowledge base of the gifted and talented in Australia. The participants' ages range from 10 to 14 years. Some of the participants included in the case studies are presently underachieving and the remainder have underachieved in the past, all add valuable insight to the study.

Toward the beginning of the narrative, in a section headed *Academic Results,* and scattered throughout in italics, where appropriate, are comments obtained from academic

testing and school reports. This information is included to add substance to the narrative by aligning teacher comments and class results with participant comments. The remaining group data that were relevant to the study, but not considered necessary to include with the narrative, may be viewed in the Appendices: Section 8.

Each case study participant begins the interview process by completing a pro-forma questionnaire aimed to add insight into the students' personalities and to assist in increasing the comfort level of the students before commencing the interview proper. The participants are asked general questions including, their likes and dislikes, and what makes them happy and sad. The answers to these questionnaires are detailed at the commencement of each Case Study interview.

CASE STUDY 1

APRIL

PROFORMA QUESTIONS

Is *sporty, adventurous, a good friend and imaginative*

Is good at *her two favourite sports, as well as reading and maths*

Loves *her two favourite sports, swimming, and hanging on tightly to a doughnut behind a boat*

Dislikes *bullying*

Feels *nothing unusual for anything*

Worries about *getting stuck in an elevator*

If April could have anything she would want *magical powers because then she could get everything she wants*

By April, September 2007

ACADEMIC TESTING AND EXTERNAL EXAM RESULTS

WISC III

2000-149, 2004-134, 2007-117

April's results in external State Wide academic testing for Mathematics, English and Science, range from participations to High Distinctions with 100% accuracy.

DESCRIPTION

At the time of the first interview April is a lively, ten year old girl. She is kind hearted, with many friends of both sexes. April has a wiry physique and is an active participant in many outdoor activities. She appears practical and mature for her age. Her down to earth and non-judgemental approach to the interview process assists in the discussion.

SCHOOLING HISTORY

April has attended, firstly, a community pre-school then a private pre-school catering to school-ready children. She was recommended to begin school as an early entry but this did not eventuate. To begin her formal schooling, April was enrolled in a private school, subsequently transferring to the junior school campus of her current school. April is currently a student in an Opportunity Class within the middle school.

THE INTERVIEWS

Initial discussion

April is an "easy-read:" someone who wears her emotions on her sleeve, her every thought transparent and vivid. She is excited to be involved in the study and to be given a voice, continually jumping from one school recollection to the next. The conversation, constantly speckled with bursts of excitement, flows smoothly and April speaks clearly and concisely.

Recollections of schooling experiences

April could read, write and do maths before she attended school. She recalls "hating" kindergarten.

It was so boring, the work was too easy. I wasn't usually naughty but sometimes when Mum tried to get me to school I would scream. I remember this one day stripping off my clothes on the way in the car and telling her [mother] that she couldn't take me to school naked. It was like preschool, but at least there I could play outside [at preschool] and one of the teachers played chess with me.

The following results were obtained from April's report cards and relate to the subsequent quote regarding Yr 1 and 2 of her schooling:

	Exceeding stage outcomes	***Achieving Stage Outcomes***
Yr 1	*25*	*6*
Yr 2	*6*	*27*

When I was in Year One I had this teacher who made me do so much work. He was so funny and helped me get better with my writing. We had groups for reading so all of Year 1, 2 and 3 would be in with other children at the same level. It was lots of fun- he was a crazy teacher. He let me do Year 3 maths but the next year was boring with maths because I had to do Year 2 maths. The teacher said it was because I was in Year 2 so I had to do Year 2 maths.

April spoke of her initial excitement at finding out her school had a chess team and subsequent sadness at not being permitted to play chess for the school until 8 years of age. It was at this time that she decided to give up playing chess. When she was eventually old enough, she boldly stated that she didn't play chess and wasn't interested. It appears that April had decided to protect her feelings by adjusting herself and becoming a "non-chess player" so as not to feel she was missing out.

April recalled happy times during her schooling and related positive memories from each of her years. She regularly adjusted her behaviour to meet the expectations of her teachers. April remembered one teacher not liking several things, including questions

from the children, children not knowing what they were doing, or children not understanding the task. So during that year the children would ask each other in secret if they didn't understand something.

Over the junior school years, April's measurable intelligence quotient scores decreased according to WISC intelligence quotient testing. She began to underachieve during Year 2, her reports showing a slide in all subject areas. April did not feel challenged and was making silly mistakes with work she had covered the previous year.

April discussed her happiness during times of differentiation.
"My school is good as is it not too boring and if I get a good teacher they give me different work to the rest of the class". The next year when April was a student in a Year 3 class she again received a challenging and differentiated curriculum and her marks returned to above-stage level. April is an unusual case as her I.Q. tests show a remarkable decline in her ability, yet she works very well in the opportunity class setting, sometimes achieving High Distinctions in external testing, yet, at other times testing at the bottom of the class. It is not clear what causes this variance of results, however, April is quite clear that if she is not motivated she does not perform as well on academic tasks and makes silly mistakes.

Academic attitude

Throughout the interview April equates her happiness in the classroom to a sole major factor, being academic rigour including a differentiated curriculum. April spoke of like-minded friends, and their humour and the group work they have undertaken together. She enjoys learning during multiple intelligence tasks integrated across key learning areas and on open-ended tasks in which she can delve into a subject area and learn all about it and its place within the world. Apart from Kindergarten, April has always been happy to attend school.

What demotivates April

> *I don't like working with bullies. When someone is being unreasonable I can't function, I just want to leave. Normally I do [leave], but during group work it just demotivates me. When the work is really, really boring like baby maths, I get demotivated and make silly mistakes like 8 + 2 and I might say it's 11. I feel sick when I have to do that.*

April discussed relevance and how she needs work to be related to her life for learning to be meaningful. She explained that if she felt the information being presented to her during a lesson would not assist her in her life and she could not understand the purpose of the knowledge then she is always unable to bring herself to learn the information no matter how hard she concentrates.

April's advice to other gifted students on how to stay motivated

> *You need to tell your teachers when you have a problem and don't always try to solve it yourself. When I was four I was going to go to kindergarten early but it was a school my siblings were not at because we didn't have enough money [to send everyone there]. So I decided to be really babyish so they [the school] wouldn't want me. When I went in to the interview I spoke like a baby and climbed over the lounge. When they tested me I told them I could only count to fourteen and that I couldn't write my brother's name. I drew my brother and left off his arms so they thought I wasn't good enough. I later found out that they thought the rest of my drawing was exceptional and it confused them. I told them I couldn't write the alphabet. It was so funny, as soon as I got into the car I laughed so much I started to cry. I was trying to solve the problem myself but I should have just told someone my problem.*

CASE STUDY 2
HUGE

PROFORMA QUESTIONS

Is *a boy, very masculine, full of modesty, and talented*

Is good at *maths, sport, and knitting jumpers*

Loves *long walks in the park on a summer's evening, the smell of new matches when they are struck, and the feeling you get when you throw a CD on the ground (because you know no-one will be able to use it ever again.)*

Dislikes *people with large growths on their feet.*

Feels *happiness, joy, sadness, anger and the whole range of emotions everyone feels.*

Worries about *having large growths on his feet, death, and being buried alive.*

If Huge could have anything he would want *nothing really except one of those far superior milkshakes you can get at some of those little corner shops.*

By Huge, September 2007

ACADEMIC TESTING RESULTS AND REPORT COMMENTS

WISC III

Superior Range. Huge was tested during Year 2 when he was 7 years of age when his teacher suggested that Huge may need greater educational challenge.

REPORT COMMENTS

Most of Huge's report comments are scattered throughout the narrative.

> *Multifaceted young man…quiet and reflective…lively and loud…slightly acerbic wit…capable of working with great diligence…distracts others and himself by chatting about topics which are not related to the task at hand …capable and very likable student and with concentrated effort…*

DESCRIPTION

Huge is a full spirited, quirky 14 year-old with a quick wit and a ready smile. A slight boy, he selects his pseudonym with hysterical laughter, after asking if the choice is entirely his. His whole bearing throughout the self description announces his mischievous penchant to shock and his attempt to mask his deep thinking with his ever-ready humour and self amusement.

SCHOOLING HISTORY

After moving from another school system that did not fulfil his educational needs into *Lakeside Junior School*, Huge has spent the last 7 years at *Lakeside*, having been continually placed in Opportunity Class settings in both the junior and middle school campuses. He is subject accelerated by one year.

THE INTERVIEWS

Initial discussion

At the commencement of the first interview, Huge sits quietly, avoiding eye contact and seeming a little embarrassed to be called upon to speak about his abilities. After some

general conversation where Huge relates with the researcher through humour (see self-description- previous page) he feels comfortable enough to speak about his educational experiences.

Recollections of schooling experiences

The interviewer starts the conversation by asking Huge to tell her about his school life. While relating his history, Huge focuses on how he amuses himself when bored. In pre-school, when bored, he recalls showing his friends how to pull back the bars of child proof fencing to escape. He then ran up and down the footpath adjoining the highway, just so he could *"have a laugh"*. The same year he recalls a more disturbing scenario. Having an older sibling in kindergarten, Huge's mother attended a weekly parent helper morning, assisting with writing, to which she took three year old Huge. When students were unable to spell a word they raised their hand, asking the adults for assistance. Huge recalls there were several students who would ask him for his assistance and he would use their pencil to write the words on their page. *"I really wanted to stay in kindy all week. The children thought my jokes were really funny and I think I would have really enjoyed myself."* Huge understands that, generally speaking, these children were his academic equals and if not for the customary practice of the traditional entry age, he would have been included with this cohort to satisfy his educational needs.

When Huge finally did commence kindergarten at 5.0 years of age, he remembers being really naughty, but liking his teacher as, at times, she gave him difficult work and *"cracked jokes"* which no-one else understood. There is no better illustration of how Huge understands the gap that year between himself and his peers than his recollection of one of his "show and tell" presentations. All other children chose subjects like their new toy or current pet, yet Huge chose to talk about the nervous system and the tongue. The following reflection exhibits the teacher's acknowledgement of his abilities through her reaction, yet poses the question of why nothing was done to ensure Huge received a challenging curriculum.

I remember (girl's name) bringing in her Barbie doll, just like every other girl did, and she was asked the same old questions – "Where do you keep it?" and "When did you get it?" I couldn't listen to it anymore. How could they be so stupid, sitting there every day, listening to the same stuff and asking the same questions? I couldn't handle it so I got up and started doing cartwheels around the room.

At home, I was reading my book about the tongue and what each part of it does, like the sweet and sour etc. and being really interested. I also found out about the nervous system and how you can sit next to someone and bump them and then next time [you bump them], the message only goes to the top of your spinal column and doesn't bother going all the way, because your brain already knows and you've ignored it. I told my family about this and that I would talk about it for news. I was warned [by my parents] that they [my classmates] may not be as enthusiastic as I was about this stuff.

When I talked, [during my show-and-tell] they didn't listen, except for my teacher, who sat there with her mouth open. She really did! Afterwards she told me it was really interesting and she hadn't known all that I had said.

On recalling his time in Year One, Huge feels despondent about the entire year, in particular, that his educational expectations were not met. The relationship with his teacher was in contrast to the previous year when Huge felt understood. In Year One he clowned around more and was a disruptive student.

Year One Report comment: Huge is a happy, friendly little boy. He sometimes finds it difficult to remain on task as he is easily distracted. Huge generally takes pride in his work but at times greater effort is needed. ... Particularly enjoys reading. (All areas reported at achieving at above-stage level).

The next year (Year One) I was allowed to read novels while the others did their work and when I didn't have anything to read, I jumped on the tables and ran around on them and sometimes threw paper at the same time. I did a huge project on seals for homework and the teacher stuck it on the front of her desk and left it there all year but I don't remember doing anything else, except going to Year 5 to get my readers.

He recalls several casual teachers thinking he hadn't started his work and being displeased with him, not realising he had not only started it but had completed it.

"I always wanted a really long name as it would have taken me longer to write it. Sometimes the casual teachers would ask us to write our names on the sheets and then put down our pencils. They'd tell us to be quick then "go off at me" because they thought I hadn't started." Huge took ownership of the teachers' lack of understanding of himself and his abilities and viewed it as a problem he needed to solve. The solution of having a longer name allowed him to make an effort and be "quick", but not finishing his work too early, blending in better with his peers and, therefore, not getting into so much trouble.

When my mum took me to another school and I visited the O.C. class I did an activity with a group. They were already half way through the task when I began, yet I finished first, but it was O.K. because it was so interesting. The teacher could tell I was O.K. to be in there [was academically able] so she spoke quickly and explained some stuff she knew I wouldn't already know. We were sketching a map of Antarctica and I included Elephant Island. She [the teacher] commented that it was good I had done so [included Elephant Island] as it had great significance because it was there, that Shackleton and his men lay under a boat for many months on their way to seek help from South Georgia. She only took 30 seconds to tell me all of this. I hadn't wanted to go to the O.C. visit, but after that I didn't want to leave.

Huge was hopeful about the challenge he would find in the Opportunity Class for gifted learners. He found he didn't stand out as much academically as before and the teacher's expectations were far greater than he had previously encountered.

> *When I started in the O.C., the teacher thought I was too quiet. The work was still really easy and I still finished first but I sometimes pretended I wasn't finished as I didn't want to show off. When my parents discovered I was still not working hard they spoke to my teacher about me skipping a grade. After the meeting I found out that the teacher tested the class and I was in the bottom half of it, then he tested us [the class] at the year above and I was above average [for the class], so then he tested us all at 2 years above and most failed but I got almost 90%. I was accelerated [in a particular subject] and it's still not difficult and I top the year but it's not so boring.*

Academic attitude

The interviewer notes that throughout the interview, Huge equates his happiness in the classroom to two major factors: his relationships with teachers, and academic rigour.

For the accelerated subject

Report comments: In the subject Huge is accelerated he obtained only average results before acceleration.

> (report card results show achieving at stage level in all areas).
> *... while he may find [subject] a little daunting at times ...*

After acceleration the following comments were made on report cards:

> *Huge is a quiet and diligent student who uses his time wisely ... to complete his work in an efficient and orderly manner. He is to be commended for his attitude and results ...* . (Huge's report marks show several areas of working at the stage above, most at high stage level and two at stage level. These results show a target area for future learning, with the two results in the stage appropriate level. Therefore, although Huge is still not challenged in all topic areas for the

accelerated subject, there are two areas in which Huge can reach a level of higher order thinking and this is enough to retain his interest in the subject.)

Is an intelligent student who applied himself with diligence and consistency in all aspects … keen participant in class discussions and scored excellent results … .

When he speaks about the subject in which he is accelerated, his body language changes, becoming more open and animated.

My teacher knows how to teach and understands when I quickly grasp a concept, allowing me to go ahead while he explains it to the rest of the class. I don't have to wait for them. He [the teacher] once told me he knew I could do more and he knew I wasn't making an effort. He told me my grades weren't good enough to be in the top class but he knew I was smart enough so he'd asked for me to be put in there. That's when I started to make an effort … .I felt really happy that he knew me.

For other subjects

Report comments: Huge often needs to be encouraged to maintain focus … . (Level of achievement for this report marked at High stage level of understanding).

Able student who does not always put his heart and soul into his work. When he does he is capable of excellent work….failed to submit assignment….very quick verbal wit…quite capable of excellent rather than average results. (Results for this report range from achieving at next stage level to achieving at stage level.)

can be a little noisy and distracted during lessons (working at high stage level).

he does allow himself to be distracted by those around him (working at high stage level).

Huge is an extremely capable (subject) student who does not always rise to the standard of which he is capable. … Will sometimes give a humorous response over the deep or sophisticated thought … quick, wit, lively manner and incisive contributions … . I encourage Huge to combine his large amount of ability with the desire to let it show.

Throughout the interview process, Huge complains about the difficulties of being in mixed ability classes. He finds that during these classes there is more structured teacher directed learning where students copy large passages from the board and listen to monotone voices. He also finds difficulty with his peers continually asking "stupid questions" and finds that mixed ability classes hamper his desire to ask questions. Huge also explained that teachers don't understand his depth of questioning, commenting,

When the teacher doesn't get me and they say, "No Huge" and they think I don't know or I am dumb and they keep going along on a different path. I get really annoyed and lose respect for the teachers. They don't know how to listen to me, so, I don't think they are worth listening to … .
I never do homework because I always have time to do it in class. It would be good to learn more but it shouldn't be up to me to ask for it. It's like bragging, going up and saying, "I'm so good, can you give me harder work." The teachers should know what we are capable of and we shouldn't be the ones to decide to skip grades or not. I don't care really: I will make an effort in Year 12.

What demotivates Huge

What I really hate is when you decide to ask a question in class and they [the teacher] answer you on a really basic level, telling you information you've known for years. Sometimes I feel like smacking my head against the desk but most of the time I just wonder why I bothered and tune out and start thinking of funny scenarios to amuse myself.

Huge's advice to other gifted students on how to stay motivated.

You have think about yourself in the centre, be a little egocentric, with everyone around you as a tool that may be useful in your life or may not be a tool you would choose to use. These tools – the ones you wouldn't use – well, they are still around you, getting under your feet but you have to step around or over them and if you can't, just get used to them being there and remember the job you have to do.

CASE STUDY 3

FRANK

PROFORMA QUESTIONS

Is *sporty, horrible to his mother, active, and a front-foot thinker*

Is good at *sport, being there for others, yelling at his mother, frustrating his mother, spatial tasks and imaginative thinking*

Loves *sport, chocolate, friends, and time away from his mother.*

Dislikes *his mother, homework, injustice, people who always need to be right (like his mother), and not being listened to.*

Feels *anger towards his mother.*

Worries about *getting somewhere in life, and his mother*

If Frank could have anything he would want *a waterfront property with a boat.*

By Frank, September 2007.

EXTERNAL TESTING RESULTS AND REPORT COMMENTS

Frank's results range from Participations to High Distinctions in UNSW competitions. Frank's report comments are included within the narrative text.

DESCRIPTION

Frank is 13 year old perfectionist with a slim build and a brilliant, but hesitant smile. Tall for his age, he is a gifted athlete. He is one of the most mature, yet one of the youngest class members, always aware of others' needs, and ready to assist whenever possible. Frank prefers to blend, underplaying his academic successes and not forthcoming when discussion turns to his talents. His comments in his self-description exhibit his sardonic sense of humour that is often only shown through a wry smile. He is a sensitive, willing participant in the interview process, offering well thought-out responses.

SCHOOLING HISTORY

Frank spent his entire primary years in the one school setting, transferring to his current school in Year 7. For the last two years, he has been placed in an Opportunity Class.

THE INTERVIEWS

Initial discussion

At the commencement of the first interview, it is immediately apparent that Frank is a contemplative child, continually displaying high levels of concern for justice and relevance within the learning environment. Frank exhibits teenage concerns as can be drawn from the comments he makes about his mother during the personal reflection. He has a lot he wants to say, yet it is apparent from the onset of the interview that he is going to make the researcher "dig" for it. When relating his ability levels in certain subjects, Frank grossly understates his achievements. Due to this, the interviewer constantly needs to clarify most answers and comments throughout the initial discussion and several throughout the remainder of the interviews. Frank often says he is "O.K." at something, when in fact he is top of the class and receiving High Distinctions in that subject. Frank's body language is duly noted when this occurs, his eyes widen and he becomes still while speaking.

Recollections of schooling experiences

The interview begins with a conversation about school experiences in which Frank relays events according to what is foremost in his mind. These recollections are ones with which he feels most ill-at-ease, unlike the vast majority of participants, who retell events chronologically. They will be written chronologically, however, the order they are relayed to the researcher will be noted within the detailed text as first memory, second memory etc, to retain the sense of importance Frank places upon them.

During the interview, Frank recalls events that display traits of perfectionism, including asking questions to confirm order for a task he already understood. This was to increase his comfort level with the task as he often submitted work very different to the rest of the class and had been previously told he was doing too much. The following is one of those times and is Frank's second memory to be recalled.

> *We were colouring-in this body and were told the colours to use for different parts of the body, but the teacher said, "then colour the … ." So I thought I'd check if she wanted us to colour it in the specific order she had told us. So I checked with her, because I always wanted to do the right thing but she yelled at me. Really yelled at me. I waited until she finished and then put my head down to start work but I started to cry and I couldn't stop. You know when you are really embarrassed and try to stop something and you make it worse? Well it was one of those times. I had never got into trouble before so I decided I would never ask another question and until Year 6, I never did. True story.*

Frank explains the tactics he used to avoid questioning for the rest of the year, including avoiding eye contact and sitting at the back of the class. Frank does not speak of his relationship with his Year 1 teacher.

This is in contrast to the following year in Grade 2 in which Frank recalls his teacher being "nice". Although he not only recalls an event that impacted negatively upon his schooling during that year, but his most vivid memory comes from Year 2.

We were given this homework sheet about ants and the teacher said we could do a project if we wanted. I was so excited because I hadn't ever been allowed to do a project before. We had two weeks, she [the teacher] said it had to be in on time. I spent every afternoon and night working on it, but the first two days were ruling the tiny lines I made [on the cardboard sheet]. I couldn't get them straight and I was really upset so one of my parents drew them for me. I finished it [the project] on the last evening after my parents let me stay up until 11:00 p.m. I was this little possessed thing. I usually went to bed at 7:30. Anyway, the next day a few of the children hadn't brought their homework in and she let them bring it in 2 weeks late and still gave someone 20 out of 20! The worst thing of all was that she didn't even give me a mark. My parents had let the teacher know they had ruled the lines for me and she told whoever it was [his mother or father] that they shouldn't have. I don't know why she didn't mark the project, I think she thought I didn't do it by myself. I never really felt bothered to do much work after that because I worked so hard on that.

Frank's marks continued to slide in all subjects during the remainder of Year 2 apart from his favourite subject.

During the interview, Frank's body language varies, dependent upon what year is being recalled. A look of sadness sweeps over his face when he recalls the memories that Frank feels affected his capacity to learn. This body language enables the researcher to determine that the Year 2 teacher's actions negatively affected Frank's learning, by not being equitable and recognising Frank's achievements with a result or acknowledgement as she did for all other students. It is clear, through discussion with Frank that the problem did not concern wanting recognition for superior performance as he preferred to blend with his classmates where possible. The problem lay with not being fair and just as is a concern of many gifted children (Rayneri, 2006, p. 115).

The academic slide continued through to Year 5 when he received an average mark of 50% in an external test.

"Year 5 was so boring, we were treated like we were in kindy. I didn't learn anything all."

For the first half of Year 6, Frank's marks returned to the top 5% in the state. His teacher was trained in gifted and talented education and within the class Frank was educated in a "pod of gifted students". The students were grouped together and were given a differentiated curriculum.

> *It was pretty good, I went to high school for Maths and Science once a week and I was supposed to go for English but I didn't want to because I'm not a great speller and she [his teacher] didn't make me go. She was so good, but she left halfway through the year.*

After moving to his current school at the beginning of Year 7 Frank found the volume of work much greater than he had in previous years. His favourite teacher at this school is one who Frank feels understands his students.

> *At the parent teacher interview he [a teacher] told me to answer more questions [during class] and that I would get lost in senior school if I didn't because some teachers wouldn't see my ability. He is such a good teacher, you learn things with him.*

He speaks of his lack of tolerance for teachers who cannot teach well.

> *I can't stand it when we are learning a topic and going really slowly, too slowly for a 1 Class [an advanced class]. Then when it is the second last week of term all of a sudden they are rushing through the whole second half of the topic's content because they didn't get enough done. Can't they organise themselves better?*

Academic attitude

Frank equates his happiness in the classroom to a combination of justice, teacher ability and student/teacher interaction. This is exemplified with his Year 2 recollection of having a *"nice teacher"*. Although Frank assumes this teacher did not recognise his ability when undertaking the homework project about ants, she did not speak poorly or

interact in a negative way with Frank. Therefore, from Frank's perspective, she remains a nice teacher, although the teacher's ability to recognise Frank's gifts and hence, to educate him effectively, detracted from his happiness in the classroom. When Frank speaks of his attitude to learning with regard to the teacher interacting with the student, he speaks of conversations not only regarding himself but also of conversations involving his peers. Several times throughout the interview Frank mentions interactions between a teacher and another student to confirm his diagnosis of either a poor or effective teacher. Frank's evaluation of a good teacher also encompasses teaching relevant material.

> *"She would explain why we needed to know it [the content] and I remember her once saying, "This will serve no purpose to you in you adult life but I have to teach it to you." So we just did it and it wasn't too bad."*

What demotivates Frank.

Two things cause Frank to lose motivation: being a lack of justice, and ineffective teaching.

> *I can't stand it when teachers say one thing and do another. They think we're idiots and that because it was last week [when the teacher gave instructions or said something] we don't remember what they said. I also get peeved when they treat us like we don't have a clue and tell us all of this basic garbage and by the time they get to the good stuff, if there is any, you've lost interest. In the O.C. some kids are really vocal and will try and get them [the teachers] on track, by asking questions about some decent stuff. It frustrates me when someone asks a question and the teacher answers it like we're still in junior school. It's like, what? Don't you know what I mean? Like, if they don't know, why don't they just say they don't know? Oh yeah, and if they are a "monotone" like one of my teachers, you can look around the room [during a lesson he is teaching] and no-one is listening. I tell you, the guy has no idea. It is such a crack up.*

Frank's advice to other gifted students on how to stay motivated.

Always ask questions if you want to and go ahead if there's time. That teacher I was telling you about, the monotone. Well, in (the subject he teaches) I go ahead in my text book and learn myself because I just can't listen to him.

CASE STUDY 4

NICK

PROFORMA QUESTIONS

Is *sporty, a good friend, easily annoyed, likes solving problems, tough, strong, friendly*

Is good at

Loves *sport, family, sick jokes, good friends, and justice.*

Dislikes *being bored, working when not interested in the task, and people being incorrectly judged*

Feels *empathy for the poor and the homeless*

Worries about

If Nick could have anything he would want

By Nick, September 2007.

EXTERNAL COMPETITIONS AND REPORT COMMENTS

Nick explains that he achieved a second place in an external primary school (K-6) competition when in Year 2 in a subject in which he is gifted. Yet in the same subject at school, he is required to work at the appropriate stage level for his age. Therefore, he does not particularly enjoy the subject matter and does not intend to study this as an elective. Nick achieves levels for this subject within stage level and several topic areas within this subject at a working toward stage level, which means that Nick is not achieving to an acceptable standard for this subject. Comments for the subject received on report card include the following: … *although he has found some tasks a little challenging … .*

School Report Comments

> *extremely well-respected by staff and peers … generally attentive … when not making humorous comments …*
>
> *potential … grasps concepts quickly … however once a concept is grasped Nick easily loses focus …*

DESCRIPTION

Nick is a 12 year old, broad-shouldered, bronzed Aussie of above average height. His blond hair frames an inquisitive face and a shy smile. His caring nature, almost immediately evident, permeates almost every interaction and is reflected in his extreme popularity amongst peers. Although an exceptional and gifted athlete, his ability is not spoken of nor considered by him to be exceptional. When attempts are made to embrace this topic as an ice-breaker, he quickly changes the topic, making light of his successes. Nick's learning difficulties in the languages sometimes cause hesitation through long-learnt habit and, when replying to a question, his deep thought processes and analysis of a situation can be somewhat masked unless the effort is made to delve into his response with further questioning. He enjoys books with layered and twisted plots but is easily bored when the storyline slows. He reflects on life and his position in the world and he exhibits a deep sense of responsibility toward the Earth.

SCHOOLING HISTORY

Nick was moved to the junior school section of his current school after his parents found dissatisfaction with his schooling. He has been at Lakeside Middle School for several years, the first year of which he was a member of a kinaesthetic based learning environment, receiving daily intervention for his learning needs. Over the last several years, Nick has been schooled in a regular class, but without students recognised as talented English students. These students are those placed in the Opportunity Class setting.

THE INTERVIEWS

Initial Discussion

During the initial discussion, Nick's lack of self-esteem is evident and he shows discomfort related to being included in the study. He needs to be reassured that he is considered suitable for the study and although he is not the top of his class in many areas, he indeed adds positively to the research. When discussing his personal reflection, Nick gives deep insight into his compassion. He views his compassion as usual or normal but recognises he is a leader in the area of interpersonal relationships. As he answers the question about worry, in the self-reflection, he gives a quizzical look as if to ask, "Wouldn't everyone worry about the homeless?" The researcher feels that she does not entirely get past Nick's self-esteem issues and that he holds back some answers because he feels they may be incorrect. More direct questions are asked of Nick than of the other participants as Nick does not engage in the conversation as much. His answers are shorter, usually of one or two sentences, and when his body language suggests he has more to share and he is reassured and encouraged to do so, he is not always forthcoming. When he speaks, the narrative is speckled with bursts of laughter as he recalls fun times with friends. These memories are mostly associated with children who have a mature sense of humour like he.

Recollections of schooling experiences

Nick's school memories are mostly pleasant, although, he remembers being frustrated and always expected to learn in the same way as his peers, not suiting his learning style.

The teachers during Kindergarten, Year One and Two always expected us to learn the same way all the time. I don't really like to sit at my desk and write information from the board. Well, I don't mind that part, but I just don't learn well that way. In Year 3 we could choose different ways of learning and then we would show each other what we had done. That was good.

He also relates his boredom with ineffective teaching.

If they'd [the teachers] just let us talk while we're in class it would be so much better. We would still get our work done if we could discuss the work sometimes. And when the teacher is teaching us something we should be allowed to comment on it or interact in some way. That would make it so much better, but they never let us.

Nick recognises the opportunities that his school provides and is grateful for them, even seeming to draw motivation for learning from the school environment. Yet in contrast to these positives, he recalls several instances that make him lose motivation for learning. Two of these memories are being misunderstood by a teacher, and one of these is a similar situation to those described by all participants- to do with teacher questioning skills and the understanding of what was being asked.

My biggest trouble at school is not laughing. I always think of funny things and sometimes neither the topic nor timing is appropriate. I have heaps of questions and when the teacher doesn't have a clue what I am asking and rambles on about something else, I laugh. Usually I can do it quietly, but I always feel like I am in a Monty Python film and it makes me cry [with laughter]. With particular teachers, who don't really understand [children], I get particularly nervous when asking questions because I wonder what they will say [to me].

The other incident that Nick recalls is rather disturbing. He had finished his work in a subject in which one could sit on the floor with a small group to receive additional tuition if having difficulties. Nick had worked independently during that lesson and had finished

early, so was walking around the class having a chat when he should have been seated. Nick recalls the teacher saying that he should have been on the floor with *"the stupid people"*. He thinks that the teacher treated him as if he was of below average intelligence because he could not write well and was a poor speller. When asked what he felt about this teacher he replied, *"I don't care."* Nick distanced himself from this teacher because she did not understand him, nor recognise his abilities. Strangely though, he does not speak negatively about her, only her actions, never labelling her, and only deeming her actions inappropriate.

He has found that during Year 7 when the class structure has changed and he has been taught by many new teachers, they expect more of him and so he has given more. His results have improved compared to the previous year, something he credits to the effective teachers he encounters (Hor, 2006, p. 201). Nick notices that he is offered a choice of how to learn, so he not only is able to digest the material, but excel in several subjects.

Academic attitude

Nick equates happiness in the classroom to self. Throughout the interview he mentioned several scenarios in which he created a positive educational environment out of a negative one. With this in mind, it is apparent that his previously noted lack of self-esteem is not related to all aspects of his life, only those that involve a combination of his language difficulties and negative teacher expectations. Therefore, he understands his language difficulty sometimes hampers his ability to perform within the classroom and he is able to work around this, it is when the teachers view his difficulty as more than it is that his self-esteem is negatively affected. Also negatively affecting his academic attitude is his gifted underachievement, which involves lower teacher expectations and ineffective teaching styles.

What demotivates Nick.

> *I have this one teacher who is nice to me but is really mean to some other students. I don't like learning in her class because she acts poorly. She knows her*

stuff but she isn't a good teacher. When teachers don't understand me I find it hard to stay motivated. I am not motivated when they write on the board and we have to copy it.

Nick's advice to other gifted students on how to stay motivated.

It's not very good advice because it involves doing the wrong thing but it's what I do. Amuse yourself, always amuse yourself if the teacher is boring.

CASE STUDY 5

BLOSSOM

PROFORMA QUESTIONS

Is *sporty and a smart girl*

Is good at *netball, Nippers and English*

Loves *family and school*

Dislikes *Mac Donald's™ and Brussels sprouts*

Feels *mostly happy, but has a bit of a short temper*

Worries about *robbers*

If Blossom could have anything she would want *a surfboard*

By Blossom, September 2007.

EXTERNAL ACADEMIC ACHIEVEMENT

UNSW testing

Blossom has received mostly Distinctions and High Distinctions in all UNSW competitions.

Other external testing

Blossom received a score in the top one percent of participants for a region-wide mathematics competition.

School reports

Reports showed no comments worthy of inclusion within the narrative. Blossom achieved within the stage level and high stage level for all subjects.

DESCRIPTION

Blossom is a lively 12 year old girl with a fondness for the unusual. She is an eager spokesperson, readily engaging in discussion on any issue. Opinionated and gregarious, she sometimes finds she is misinterpreted. Her sporty frame and co-ordination give rise to her advanced athletic ability. Blossom's kind heart is obvious once you engage in conversation for a short time. She has a welcoming face and uses open body language to accentuate her points during conversation that is often punctuated with an infectious giggle.

SCHOOLING HISTORY

Blossom has been a member of Opportunity classes within both the junior school and middle school campuses of her current school for the last four years.

THE INTERVIEWS

Initial discussion

Before the commencement of the first interview, the researcher and Blossom had already had a discussion about the participant's lunch and where she sat during the warm weather.

The conversation flowed freely and there were no problems understanding her meaning as Blossom stated was often the case when she engaged in conversation with her teachers.

Recollections of schooling experiences

Blossom's recollections were "short and sweet". She got straight to the point and only discussed recollections she felt affected her schooling experience and were worth noting. She did not speak of specific relationships with other students and the relationships with teachers she did discuss revolved around them making her learning enjoyable.

Blossom's earliest recollection was from Year One where she remembers it being *"very boring and singing way too much".* The mathematics she did undertake during that year was content she had previously covered. *"So boring. Now I don't know a lot of maths and I don't want to."*

> *All I seemed to do in Year 2 was craft stuff. I don't remember learning anything. No, there was no learning. The teacher called me "stupid" and said I would never be able to do anything. That's not very nice is it! There are a couple of teachers I really like who I have now. The female one gets through to you, maybe because I like to read to understand and that's what she sometimes does. Another teacher: a male, well he is funny and he listens. He makes learning enjoyable. He LISTENS! The rest of the time I am bored. If we could choose the subjects instead of only maths, maths, maths and English, English and choose what we learn, then it would be better. We should have more subjects to choose from.*

Academic attitude

Blossom equates happiness in the classroom to being given a *"fair go".* In other words, if someone makes an effort for Blossom or will listen to Blossom when she has something to say, then Blossom will strive academically in their classroom.

"I usually feel like I can't say anything. But I want to because I want a say in something. I like it when a teacher knows how to listen."

What demotivates Blossom

Blossom needs to enjoy what she does or she won't be interested in the work.

> *If it's maths, consider me uninterested and when I'm annoyed it's too late. If I am misunderstood it frustrates me and this happens a lot! When someone can't understand what I am trying to say when I feel I am saying it pretty clearly it makes me not want to talk with them or listen to them. I remember … the teacher saying,*
>
> *"No, no Blossom, that's not right!" and kept going on about whatever, and I was right but she wouldn't listen to me. She just shut me down!*

Blossom's advice to other gifted students on how to stay motivated

> *Act like you know something - Don't pretend to have no idea just to fit in.*
>
> *You should ask a question if you need to.*
>
> *If you don't like something, tell a teacher.*

CHAPTER FIVE
FINDINGS, DISCUSSION AND RECOMMENDATIONS

INTRODUCTION

In this final chapter the discussion of the main findings of the present study will be provided with the educational implications. The limitations of the study and recommendations for future research are also discussed.

The aim of the present study was to provide further insight into why gifted children underachieve. It aimed to consider the factors that contributed to their gifted underachievement and their middle school perspectives of why they underachieved or continue to underachieve.

During a school term, fifteen middle schoolers told their stories about life as gifted underachievers. The study covers each individual's experiences from kindergarten through to their current year, with some students progressing through their schooling solely at Lakeside Middle School and others having attended several schools. The participants discuss their academic disappointments and successes, interactions within the classroom, and how they see themselves fitting socially and emotionally within all of the above (Gagné, 2003; Reis et al., 1995, p. 26; Davis & Rimm, 2004, p. 33). Their experiences are openly shared and their recommendations for teachers are given so that educators can use this knowledge when interacting with gifted students.

THE PARTICIPANTS - A DESCRIPTION

The 15 participants are middle school students who have been in the past or are currently gifted underachievers. All participant students are within the ages of 10-15 years, comprising 7 boys and 8 girls. They come from a variety of birth orders, with several

being only children, while all live in the surrounding suburbs of Lakeside Middle School. Several are accelerated students and most have attended more than one primary school. One participant has a language difficulty and two have a physical disability. The participants come from a range of social and cultural backgrounds, as did children in both Al-Sahel's (2005) and Bandura's (2001, p. 189) studies. One student participant comes from a blended family and one speaks a language other than English in their home.

Each of the participants exhibits multiple characteristics typical of gifted children (Gagné 2000, p. 15). Most of the participants are confident and ready speakers, with the remainder lacking self-confidence and avoiding eye contact. All show an enthusiasm for sharing their life experiences although several are reluctant to extol their own virtues. Most are sporty, excelling in their field (id.; Department of Education & Training, 2004, p. 11). Seven are accomplished musicians, having extra-curricular commitments in the creative arts (id.). Most participants share an overt sense of humour, with several children using this humour inappropriately in the classroom. All participants have at least one close friend at school. Each participant reads for pleasure, the literature drawn from a diverse and rich range of interest areas. Teachers describe each child as responsible and well-adjusted. All are global thinkers and all but two children are currently schooled in an opportunity class setting. Five participants undertake leadership roles in either their school-life or extra-curricular activities. No participant feels they are being challenged to their academic potential.

DISCUSSION OF THE MAIN FINDINGS

RECOGNITION OF TALENT

All of the participants currently schooled in an opportunity class setting were recommended for placement by the school in consultation with the child's caregivers (McCoach, 2000, p. 155; Department of Education & Training, 2004, p. 1). In all cases the participants were not sufficiently challenged in their previous schooling experiences, as was the case in several studies by Rimm, Smutny, and Gross (Rimm, 1997, ¶ 6;

Smutny, 2004, p. 1; Gross, 2000, p. 7). All participants are able to function within the classroom without distraction from other students, however, several participants are often the cause of classroom disturbances when they are bored or unmotivated (Davis & Rimm, 2004, p. 33). These findings are similar with Davis and Rimm's (id.) who found that extra curricular activities can provide success for students who find their academic curriculum unchallenging.

In relation to their learning, only one participant referred to their physical environment during the interview process, this contrasted with the rest of the participant base who focused on teacher/student interaction. These results from the present study are dissimilar to those found by Chaffey who found that a student's physical surrounds affect their learning. He removed his case study students from the walls of the classroom and found that the change, in combination with other factors, assisted in improving academic outcomes (Chaffey et al., 2003, p. 42).

In the present study all five of the case studies reported periods of achievement in the classroom that correlates with positive student/teacher interactions. These findings are in line with a study by Mills (2003, p. 278), who found that teachers who are of similar personality types to their students and are open and flexible with achievement orientation as focus have more positive interactions with their students. Mills also found that these teachers are more prone to logical analysis and objectivity than their peers and as is the case with the current study, are able to understand their students better.

The students from the current study were also able to identify the negative aspects of their formal education, unlike those recollections mentioned above. These times were when the case study students were underachieving. During these recollections the students were able to relate negative outcomes that occurred when the participant was unchallenged. These results are akin to those found in several studies by Reis et al. (1995, pp. 30-31), Rimm (1997, ¶ 12), and Rizza (2002, p. 152) in which they found that students who are bored or unmotivated due to the lack of higher order thinking tasks are more likely to underachieve and are less able to self-monitor their learning strategies.

With both the above-mentioned studies and the present study the discrepancy between the instructional level of the curriculum and the ability level of the students causes the students to be unchallenged and lack the will to learn.

The following selection of comments is a range from the present case studies that relate to both the recognition of talent and the lack of same. These comments highlight the influence that psychological interactions have on classroom successes for the gifted (Hadjioannou, 2007, ¶ 103). Students rely on the support of a healthy psychological, social and educational environment that both, encourages children to explore their gifts, and also provides comfort to enhance self-esteem (Tieso, 2007, p. 232). One participant (Ch. 4, p. 59) recalls having a "crazy teacher" who is remembered for both the interactions they shared and for allowing her to achieve at an above-stage level within a differentiated curriculum. "If I get a good teacher, they give me different work to the rest of the class." It appears that when her talent was recognised by her teachers she was challenged and achieving and also able to appreciate the opportunities brought about by the differentiated curriculum as is the case with the other participants who returned similar outcomes. These results are in line with results found by Merrotsy whose case study participants were able to reflect on and appreciate the difference a differentiated curriculum made to their academic achievement levels (Merrotsy, 2006, p. 32).

One case study boy in the present study recalls often being in trouble with teachers, yet his fondest memories come from a strict teacher who "understood" him, gave him difficult work and "cracked jokes" that no-one else understood (Ch. 4, p. 64). This memory shows that the child is appreciative of the recognition of his talent by his former teacher. Another's gifted underachievement occurred when teachers did not recognise his talent (Ch. 4, p. 73-74). The case study participant's documentation supports that it was not until he received a differentiated curriculum and a gifted and talented specialist for a teacher that he was able to achieve to his ability level. Adams-Byers et al.'s findings from a diverse range of 44 students who came together for a summer camp support the comments from the present study. Both groups report that being grouped with like-minded students gave them opportunities for faster paced lessons, less wait time

and higher comprehension levels and resulted in a much lesser chance of gifted underachievement (2004, p. 11).

Sometimes the negative effects of a student's educational environment lead the child to underachieve so much that they may not perform well on standardised assessments and their gifts are for the most part, not observable. This form of gifted underachievement is termed "invisible", and is an area that affects one of the participants (Ch. 4, p. 59; Chaffey et al., 2003, p. 43). Her results show moments of high achievement, yet she mostly works at an average level within the opportunity class, usually blending with her mid-range peers.

As indicated in the literature review, a student's perceived limitations can affect their self-esteem and subsequently their performance (Chaffey et al., 2003, p. 43). Chaffey's study supports the deficit thinking paradigm and exhibits that, as with the Case Study 1 child, April, who is mentioned above, a child's gifts are not always recognisable within a regular school setting and require a secure setting with dynamic testing to reveal actual potential.

The issues that occur with unchallenged and unmotivated students demonstrate the importance of teacher diligence in both the recognition of student ability and the processes used in identifying ability (Mills, 2003, p. 273). Both the present study and studies from the literature review including Mills who interviewed 85 noteworthy teachers of the gifted (id.) and Rayneri et al. (2006, p. 113) support this finding. Rayneri et al.'s research studied the importance of placing gifted children in schooling structures that are commensurate with their needs and as did all participants in the current study, found it should be recognised and addressed. To undertake this, educators need to be aware of options available to teachers and implement changes when required. All participants indicated that teaching style has, or is currently, negatively affecting their learning with Case Study 2, Huge (Ch. 4 p. 65), and Case Study 1, April (Ch. 4, p. 59), recognising it informally as young as pre-school and in the beginning of their formal education during the Kindergarten year. Teachers should recognise when students

require differentiation of the curriculum, whether that be by condensing core material or by acceleration (Rayneri et al., 2006, p. 113). Teachers, who are unwilling to explore their students' needs and educational options, hamper their students' academic successes. This problem becomes more prevalent during the middle school years when the gifted child's self-esteem is more likely to suffer and not only negatively affect their outlook on the world and themselves, but also their ability to learn (Tieso, 2007, p. 237).

Teacher Education

Both the literature review and the present study seem to suggest that talent will be recognised to a greater extent than it is currently if teachers are trained in the strategies required to do so, although Mills' study found that being a "teacher scholar" does not make a teacher exceptional (Mills, 2003, p. 273). Many factors contribute to the recommended professional development being possible on both a school and an individual level. On a school level it involves a commitment to gifted education and may also involve a financial outlay for teacher in-service or education. After an educator undertakes professional development in gifted education the next step is to put their knowledge into practice. This involves a concerted effort from the educators involved and for correct identification of the gifted it includes awareness of conditions that lead to classroom disruptions and using strategies to prevent possible disruptions occurring. A following step is to notice when and why classroom disturbances occur and investigating if boredom due to lack or academic rigour is a factor in the disruption as was suggested with findings from both the present study and Rayneri et al.'s (2006, p. 113). Therefore, although general principles are recognised in the identification of the talents of the gifted, it should be remembered that each child is an individual with a different educational history that impacts on their current level of achievement in either a positive or negative manner.

The quantitative results from the current study showing more than a third of participants recognise the need for greater teacher ability and all recognising a need in some teachers for a different teaching style, support teacher gifted education. Preliminary or even additional education would assist teachers to understand that students may underachieve

and may even be invisible underachievers, and that teachers should not only remain alert for signs of talent in underperforming students, but be adept in building relationships with their students, and willingly to take advantage of all educational options and support processes available to them (id.). Smith and Chan's 2002 study found that the teachers they surveyed are not educated satisfactorily in gifted education, needing an increased awareness of the knowledge, personality and social characteristics of gifted students. The research found that this lack of knowledge of social interactions of the gifted could negatively affect the way acceleration is perceived and approached within the school, hindering student potential and opportunity.

The results from Smith's 2006 study, that in part surveyed teacher perception to gifted education, supports teachers' continued exploration of the educational options for their gifted students, inclusive of differentiated resources and support processes. Further studies by Rayneri et al. (2006, p. 113), Merrotsy (2003, p. 113), and Mills (2003, p. 279) are also in line with Smith's results and the recommendations from the current study that suggest this exploration should be shared with a wide variety of personnel to ensure they are making the best joint decisions for the education of gifted students (Rayneri et al., 2006, p. 113; Merrotsy, 2003, p. 10; Mills, 2003, p. 279). Within these options, teachers should make every effort to reduce down time and boredom for all students by employing various strategies dependent on their students' individual needs and teachers' capacities to address these needs with appropriate support mechanisms (Merrotsy, 2003, p. 10; Mills, 2003, p. 279).

STUDENT/TEACHER INTERACTIONS

The findings of the present study suggest that middle school students value positive student/teacher interactions. Of the 15 student participants, 9 rated teacher quality, incorporating positive student/teacher interactions as the most positive aspect of their school. These findings support studies from the literature review including Mills (2003), Rushton, Morgan and Richard (2007), and Graffam (2006) who find that there are specific characteristics attributable to effective gifted educators. It is however pertinent to note that participants from the present study focused less on the characteristics of their

teachers and more on how well they understood their students. This understanding when incorporated with positive student/teacher interactions seemed to somewhat stave off student underachievement or reinstate a thirst for learning with the participants. The following paragraphs exhibit several instances when this occurred.

Case Study 2, Huge, valued positive student/teacher interactions to such an extent that while recalling memories of a year devoid of extension and challenge he recalled positive interactions with his teacher that included sharing a joke and the encouraging way she related to him (Ch. 4, p. 64). During this year, he provided himself with challenge such as educating himself on the nervous system and bringing the information to news. Another positive interaction recalled by the same child that involved an understanding of him was that of a paced delivery catering to Huge's advanced speed of conceptual understanding when he visited an opportunity class during his 4th year of schooling (Ch. 4, p. 66). He mentioned a list of facts that the teacher had shared during the visit and at 8 years of age had also noticed enough to later comment on the teacher taking only 30 seconds to deliver these facts. This student/teacher interaction contributed positively to Huge's educational experience and was at a time when Huge began to achieve to his potential.

The 4 other case study students also recalled positive student/teacher interactions that contributed to their educational happiness. April, Case Study 1, had positive interactions with a teacher she terms "crazy", someone with whom she had fun and by whom she felt understood (Ch. 4, p. 59). During this time April was able to achieve to well above stage level, it seems, partly due to the positive student/teacher interactions combined with the rigorous curriculum. This is supported by report card results and recollections from a subsequent year when April was a student in an Opportunity Class, receiving a rigorous curriculum, but placed with a teacher April feels did not interact positively with her class. April's results for that year were not as high as in years when she recalled positive student/teacher interactions and her memories for that year were not as vivid. Therefore it can be surmised that positive student/teacher interactions assisted in this student achieving academic success.

The other 3 case study students' memories were also related to respect from the teacher, with one participant, Case Study 5, Blossom saying, "…he's funny and he listens. And the rest of the time [during other teacher's lessons] I'm bored". During these lessons, with the teacher of whom Blossom speaks highly, this student was able to remain focused and on-task, with results from that subject at higher levels than other key learning areas in which the participant did not interact as positively with the teacher. This supports the need for a positive educational environment incorporating dynamic teachers willing to build relationships with their students. All of the above-mentioned student/teacher interactions revolve around teachers understanding and knowing their students and building positive relationships with them. The fact that students were able to recall these memories from several years earlier is a testament to the impact they had on the students' educational experiences.

The 15 participants from the present study recall negative student/teacher interactions that they found demotivating as does the majority of studies, including those undertaken by Reis et al. (1995, pp. 30-31) and Rizza (2002, p. 152). Case study 3, Frank, recalls the negative comment made to him by his Year 1 teacher after which he declared to have minimum student/teacher interaction whenever possible and for the next five years (Ch. 4, p. 72). The change that caused this student to regain the will to question during his Year 6 was that he became a member of a "gifted pod" with a teacher educated in gifted and talented education within a regular class. This teacher understood the child's educational needs and interacted with him in a way that assisted him to learn. These findings are aligned with the previously mentioned study by Adams-Byers et al. (2004, p. 11) who found that homogeneously grouping strategies create more positive learning environments.

Another participant, Case Study 2, Huge, recalled his teacher speaking to him negatively, to which he felt responsible to address the problem by changing his behaviour to mould to the teacher's expectations, although he was only five years of age at the time. This recollection involved his fast "name writing" being met with a raised voice as the casual teacher did not recognise his heightened ability; the child's youthful solution was to have

a longer name. Reis et al.'s study also found that like Huge, students changed their behaviour to suit the learning expectations of their educational environment and if unsupportive then the student's underachievement was exacerbated (1995, p. 32).

TEACHER PROFESSIONAL LEARNING IN GIFTED EDUCATION

The issue mentioned above supports the notion that teachers of the gifted need to be considered for classroom placement based on professional development related to the needs of the class, and also teacher and class dynamics (Merrotsy, 2003, p. 10; Mills, 2003, p. 279; Smith, 2006). The majority of the students in the current study appear to be aware of their abilities, yet, they are middle school students and at an age when their ability can be easily challenged (Bandura, 2001, p. 188) and during a challenging time in the development of their personal identity (Ashman & Merrotsy, 2009). During these years of pre and early adolescence, a teacher's influence is strong. It is therefore paramount that educators are careful in their interactions with students, being positive wherever possible. Words are powerful and, as the case studies suggest, can have a dramatic effect on a child's self-esteem and education.

Data from the case studies suggest that teachers of gifted students need to be considered for class placement based on knowledge of gifted and talented education and their teaching style. The group data outline several areas that could be partially attributed to under-educated teachers including ineffective teachers, teaching ability, curriculum not differentiated, boring teacher, no relevance to their life, and wait time. These findings are consistent with results obtained in most studies to date (Purdie & Hattie, 1999; Reis et al., 1995; Hamza & Nash, 1996; Daniel & Cox, 1989; Merrotsy, 2003: Heath, 1997; Mills, 2003; Colangelo et al., 2004; Moon et al., 2002). When questioned on the negative aspects of their school, the students in the present study focused on three main areas all relative to lack of teacher education. The most prevalent was curriculum- level of work with half of the participants finding frustrations with this. The second area was ineffective teaching with six of the twelve discussing issues of this kind. The final area was wait time with a third voicing a problem with waiting for slower learners in the

classroom environment, a problem that could be reduced with effective teacher professional development in differentiation of the curriculum for gifted learners.

During the present study, when questioned as to why students find school boring, similar results appeared as above with two additional concerns of mixed ability classes, and teaching style emerging from the discussion. The mixed ability classroom was discussed by 10 of the 15 middle schoolers as detrimental to their academic motivation and achievement, a figure that may be considerably reduced by trained educators willing to differentiate the curriculum to reinstate and retain motivation for learning. Ineffective teaching style leading to boredom, mentioned by all at least once during the discussion was the most commonly raised point throughout the entire interviews. This supports research from the literature review from Merrotsy (2003, p. 10), Mills (2003, p. 279), and Smith (2006) who states educators who have gifted children in their class should be flexible and dynamic in addition to having a thorough understanding of their students' needs. The two students studied during Merrotsy's research (2003, p. 10) were accelerated and recognise that the guidance and opportunities given to them by their educators was possible because of the specialist education these teachers received.

Findings from Mills' study also recognise the need for teacher scholars, but in addition as is the case with the current study, it found that just because a teacher is educated in gifted education does not mean they are able to effectively challenge and motivate the gifted to learn. This was the case with Case Study 1, April, who was a member in an Opportunity Class with an ineffective trained gifted educator as her teacher and a year when her records show she was underachieving (Ch. 4, p. 60). April recalls this teacher did not understand her students and did not relate well with her class. The student body needed to adjust their learning style and interactions with each other to suit the teacher, as is not the case with effective gifted educators who adjust their teaching style to suit their students' needs. This is in contrast with another year when April was schooled in a different opportunity class with a different teacher scholar who understood his students and was able to adjust his teaching style, enabling greater academic achievement.

To decrease gifted underachievement gifted and talented professional development should be primarily undertaken by all educators; however, this is not enough on its own as can be seen by the comments of the participant case studies in both the current and Mills' (2003) study. Additionally the professional development should be followed by the implementation of the knowledge gained through in-service and overseen by a co-ordinator to ensure continuity and effectiveness. In this way, the children's on-going needs are being monitored and effectively met. This will assist gifted students to receive a more challenging and rewarding education.

VOICE OF THE STUDENT PARTICIPANTS

During the interviews each participant was asked to recall instances during school at which they felt misunderstood. All but one mentioned interactions with a teacher during which the participant's question was misunderstood and the depth of the question was underestimated (App. 8, pp. 150-154). During the conversation the teacher moved on with the lesson without confirming if they had answered the question to the student's satisfaction. As a result participants felt unmotivated and upset. Results from Rimm's study on self-regulated learning strategies of gifted students (1997) support these findings, showing that gifted achievers regulate their learning much better than gifted underachievers and that underachievers are less able to persevere in areas in which they do not find happiness. This is what happened with the middle school students in the present study who did not enjoy the teacher misunderstanding their questions and as they were underachievers at the time, lacked the motivation and the metacognitive strategies to continue with their learning for the task at hand.

Bandura (2001, p. 192) found similar results in his study, stating that a student cannot achieve to their academic potential without a strong self-esteem. These results are akin to those found in the present study that finds students who were underachieving have lower self-regulatory learning strategies and are less able to cope without teacher support and approval. This was the case with Case Study 5, Blossom, who reported that she did not participate in a teacher's lessons because he did not know her well enough and therefore did not deserve her attention (Ch. 4, p. 87).

As outlined above, the participants willingly ask questions of their teachers until they are misunderstood by them (App. 8 pp. 152-153). This supports the notion that teachers need to be made aware of the impact their interactions have on their students (App. 8, pp. 150-154; Rimm, 1997, ¶ 14; Bandura, 2001, p. 192). It follows that teachers have a professional responsibility to become more aware of how the spoken word can negatively affect a student's self-esteem through gifted and talented in-service (App. 8, pp. 150-154; Rimm, 1997, ¶ 14; Reis & McCoach, 2000, p. 165; Bandura, 2001, p. 192). This includes a great effort on the part of the teacher to understand their students and their learning, emotional, and social needs. It is with this effort that teachers are truly able to listen to their students and understand how student/teacher interaction can affect a child's learning. The case studies from the current study report that when a teacher is involved in discussion or questioning with a student, the student would like the teacher to confirm that their understanding of the dialogue is aligned with the student's understanding and that they have answered the student satisfactorily. Teachers should encourage students to verbalise when they are either dissatisfied with an answer or they think they are misunderstood. For this to be effectively implemented in gifted education it takes a flexible teacher, therefore a teacher's personality should be considered in student class placement, as is supported in the literature (Merrotsy, 2003, p. 10; Mills, 2003, p. 279).

LEARNING ENVIRONMENTS

When the participants refer to the learning environment they mention the positive difference an opportunity class setting has on their education (Ch. 4, pp. 66-67, 75, 86). This was the case with Case Study 2, Huge, who visited an Opportunity Class during Year 3. He was given several new facts in quick succession that enabled him to work in his zone of proximal development (van Geert, 1998, p. 637). The several tasks he undertook during this visit were based on the multiple intelligences and catered to a variety of learning needs (Posner, 2003). Huge commented that he didn't want to leave the school after the visit and that he looked forward to the challenge the homogeneous learning environment may bring.

In the present study, Case Study 3, Frank (Ch. 4, p. 75) recalled a positive schooling year in which, after several years of gifted underachievement, he was schooled within a pod of gifted learners in a regular class. Reis et al. (1995) report similar successes with gifted children who were able to achieve in the mixed-ability classroom. In both Reis et al.'s (1995) study and the present study, the mixed ability classes mentioned above offered a suitable pace and density for its learners by both grouping them together and providing a differentiated curriculum to suit their needs (Ch. 4, p. 75; Reis et al., 1995, p. 30). This situation is unusual for a mixed ability class, where gifted children are usually offered the standard curriculum and the same learning pace as their classmates (Archambault et al., 1993; Smith, 2006).

All case studies referred to the mixed ability class environment and each spoke of the negative aspects of working with less able students. The negative aspects covered during discussion include: the level of questioning; lower teacher expectations; increased boredom, leading to difficulties staying focused and gifted underachievement for some; structured teacher-directed learning environment; lack of teacher understanding of giftedness; and busy work. Adams-Byers et al. (2004, p. 11) found results that support the current study's findings, specifically noting that participants perceive mixed ability classes hamper their learning by having more waiting time, and also by not providing a stimulating and challenging learning environment. Reis et al. (1995) found a correlation between the academic level of the learning environment offered in the mixed-ability class and underachievement when they undertook a four year longitudinal study on underachieving middle school students noting that boredom can be attributable to the same. The current study finds records of achievement consistent with underachievement pertaining to the following students. These are aligned with the times the following recollections occurred. Case Study 2, Huge, reports the coping strategies of adjusting his behaviour, and lowering his observable ability to suit the mixed-ability learning environment (Ch. 4, p. 66). A sole case study student apportions personal blame for the negative aspects of the mixed-ability learning environment (Ch. 4, p. 73), with all others viewing the problem on a greater scale and one attributable to the school or education system.

The present study, along with the vast majority of studies focusing on grouping the gifted supports that schools group children with like-ability students to enhance their learning (Rayneri et al., 2006, p. 113; Merrotsy, 2003, p. 10; Heath, 1997, p. 3; Mills, 2003, p. 279). If gifted and talented classes are not an option for the school, teachers could group able students in a pod within a regular class in order to provide a more differentiated curriculum for their individual needs as was the case with both, Case Study 3 from the present study, and the middle school students studied during Reis et al.'s 1995 study.

RULES

Gifted children can be emotionally overexcitable and as a consequence, be sticklers for rules (Gagné, 2003; Gagné, 2000, p. 15; Hor, 2006, p. 207; Department of Education & Training, 2004, p. 11). This is apparent with one Case Study, Frank (Ch. 4, p. 75) in which the student was given teacher guidelines for a task that he followed, after which he then observed the teacher breaking her own rules for another student. Due to his emotional overexcitability and his heightened level of intuitiveness, this student felt cheated and as a result it negatively affected his learning (Smutny, 2004, p. 1; Winner, 1996, pp. 1-13; Hor, 2006, p. 207). This student lowered his expectations of all teachers after this interaction. This is supported by Hor's (2006) study, which found that a factor in gifted students rating teacher quality relates to how their teachers impose rules. Overly and unnecessarily strict teachers did not rate well, yet "strict but fair" educators were deemed to be effective teachers.

IRRATIONAL STUDENT RESPONSES

In studies by Tieso (2007, p. 232) and Bouchard (2004, p. 340) researchers measured students' developmental potential using Dabrowski's Theory of Positive Disintegration with results showing overexcitabilities in the areas of emotional development. These results support those from the present study in which each of the case study students reported several hyper-reactions within the classroom. Four of the middle school participants recall inappropriate teacher responses to participant reactions (Adams-Byers et al., 2004, p. 18; Bouchard, 2004, p. 340). All of the hyper-reactions recalled by participants are in the areas of emotional, intellectual, and imaginational. Such is the

case with Case Study 3, Frank, whose hyper-reaction to a situation caused him to withdraw from student/teacher interactions for several years after his teacher raised her voice unnecessarily at him after he asked a clarifying question during a class task.

These reactions to situations within the classroom may be viewed by teachers as extreme or even inappropriate, when often it is the teacher's subsequent reaction to the gifted child's behaviour that is inappropriate, due to a lack of understanding or knowledge (Tieso, 2007, p. 232; Bouchard, 2004, p. 340). The inappropriate teacher responses support the view that teachers do not always understand the gifted student's reactions to situations within the classroom, interpreting these hyper-reactions as irrational student responses.
With appropriate teacher professional development hyper-reactions would be interpreted as a possible facet of the gifted child and not an inappropriate reaction.

LIMITATIONS OF THE PRESENT STUDY

This study is limited by both lack of dynamics and time. The lack of dynamics relates to the sample: the homogeneity of the group, its geographical, social and educational context, and its size. The use of a small sample of 15 participants provides a narrow view of underachievement by gifted students. Investigation by more quantitative means may have been able to begin to share the responsibility between the student and teacher and increase understanding as to where these responsibilities lie. The geographical selection of participants is limiting, as all students are selected from *Lakeside Middle School* and all reside within close proximity to one metropolitan area. Although this study involves the students' perception of middle school, and therefore logical to use participants within the age-range of 10-15 years, the age range is limiting. To overcome this uniformity, older participants could have been included in the sample and could have reflected on their years in middle school. The lack of these dynamics reduces the ability for

comparisons to be drawn within the participant selection and affects the extent to which the findings are generalisable.

Time limits all studies, including this one. A longitudinal study could have provided a clearer view of each participant's gifted underachievement and added more structure to the narrative of their life experiences (Rimm et al., 1989, p. 62). It could also have provided an opportunity to consider the longer-term effects of gifted underachievement, and responses after participants recognise they are underachieving (Chaffey et al., 2003, p. 43). These limitations can be used to guide future research and further this study's enquiry.

RECOMMENDATIONS FOR FUTURE RESEARCH

This study provides a view of gifted underachievement with a small group of homogeneous middle schoolers. It invites research in a number of directions. Future research with a greater age range or a focus on an older group of participants who are able to reflect on their whole schooling experience would not only increase the data bank from which conclusions can be drawn but also enable comparisons between groups. These ideas could be further enhanced by using any of these suggestions in a longitudinal study.

Each participant in this study has had the benefit of at least a part of their schooling undertaken in a school that appears to value and promote gifted education. Future research could examine and compare qualitative data between participants drawn from a variety of school settings. From this, researchers can explore whether students who experience an education devoid of gifted and talented specialists are able to reflect on their schooling with the same insight as those who have experienced some form of exposure to gifted and talented education.

Researchers could also study any effects of acknowledgement or recognition that the students have of their underachievement. This would be a similar study to Jin and Moon's (2006) research that used the causal-comparative method to investigate and compare the psychological well being of students who were taught by gifted specialists against gifted students who were taught by teachers with no gifted education.

The experiences of all participants in the present study expose a fundamental need for positive relationships within the classroom as did Moon et al. in their 2002 study when they compared teacher and student questionnaires of the same situation with vastly different perceptions. In the current study each participant claimed a need for positive student/ teacher relationships within the classroom and several participants blamed their lack of commitment to schoolwork on negative student/teacher interactions. Future research could investigate the effect that positive, self-esteem-building teachers have on underachieving students, as was the case with "The Wii Gaay Project" in Western NSW where invisible underachievers are placed in a learning environment that concentrates on addressing low self-efficacy and building self-esteem, with remarkable results (Merrotsy 2006a). The questions framed and the answers they deliver to these queries have the potential to change our understanding of the gifted underachiever in the context of middle schooling.

This case study is one of few Australian papers on Australian underachieving gifted middle school students. Future research could continue with this avenue of enquiry by undertaking a similar case study in other educational and social contexts. Duplicating this study would also add further to the body of research on student/teacher interactions and their impact on gifted underachievement.

Another area for future research emerges out of the participant requests and expressed need for teachers who have undertaken professional development in gifted and talented education as did Archambault et al.'s 1993 study that questioned 5000 teachers of the gifted and found teacher in-service and increased education was needed to boost student satisfaction. Future research could examine the benefits of having gifted and talented

specialist educators and focus on the student perspective with regard to these positive outcomes as did Wu's 2005 study that found positive teacher support is more important than innate ability when it comes to achieving academic success. Teachers are facilitators of learning. The more educated and experienced teachers become in gifted education and the more common the application of the differentiated curriculum, the less education will be reported as a factor in gifted underachievement. Gifted underachievement need not be a life sentence. Educators and caregivers can reverse these behaviours with support, encouragement and understanding of the symptoms and the whole child. Gifted underachievement should be looked upon as complex and multi-dimensional. Armed with expert advice and knowledge, the educator can assist the gifted child in realising their true potential.

Each participant in the present study underachieves or has underachieved and each made reference to negative teacher comments with relation to their gifted underachievement. Future research by more quantitative means may re-examine the conclusions from this study as to whether there is a connection between the onset of gifted student underachievement and negative teacher/student interaction. This would follow on from Emerick's 1992 study that acknowledged students were able to recover from gifted underachievement after positive teacher interactions and an increase in the student's self-esteem.

Another area that is recommended for future research arises from the enthusiasm of the students to contribute to the study. Throughout the study the participants were extremely keen to participate, approaching the researcher on a number of occasions. Future research could investigate whether it is the Hawthorne Effect that causes middle school students to achieve when involved in gifted programmes, and that, as above simply taking an interest in a student's academic experiences, can positively affect their level of underachievement and assist the student in beginning to address it. This idea is supported by studies by Garaigordobil (2004) and Merrotsy (2006a) who found that programmes of psychological intervention could have a significant positive effect on student self-esteem.

To fully understand the phenomenon of gifted underachievement, more research is needed in relation to this problem including the glaring gap of research pertaining to Australian middle school students. This is partly due to the usual Australian school structure of primary and secondary school settings as opposed to the American structure of junior, middle and senior school. Nevertheless, there are ample opportunities for asking Australian middle school students about their school experiences as an ever increasing amount of Australian private schools opt for the middle school structure. If educators are to fully understand the whole child, where better to go for information than the child itself. There is a lack of current phenomenological based gifted underachieving literature, suggesting a need to further investigate this area. What better way is there to fill in the gaps of what we currently do not understand about gifted underachievement, than by asking a student what they feel motivates them to learn, what negatively affects their learning and what we, as educators, can improve upon to renew this thirst for knowledge?

CONCLUDING REMARKS

The 15 participants shared their lived experiences of gifted underachievement and gave further insight into the education of the gifted. They assisted in exploring interactions within the classroom environment, and the way they perceive themselves within these interactions, thereby adding to the research on Australian gifted underachievement in a number of ways.

This study suggests that part of the responsibility of underachievement may lie with teachers, alerting educators to the significance of their words and actions (Emerick, 1992, p. 144). This is shown with the intense recall that the participants have during this study when remembering negative interactions involving their teachers and the often subsequent decrease in each of the participants' achievement levels that follow directly thereafter. In light of the above, future investigation by more quantitative means may begin to share the responsibility between the teacher and student and increase

understanding as to where these responsibilities lie. This study may encourage teachers to take greater ownership with regard to the gifted underachievement of their students and to recognise the impact that their interactions with students have on student achievement (Rayneri et al., 2006, p. 115). This in turn may improve educational outcomes and encourage teachers and students to be better communicators with each other, thus improving specific teacher/student directed enquiry (Emerick, 1992, p. 144). The study also has the potential to enhance classroom practice for an educator of the gifted, as it does for any teacher. It also highlights the need for informed gifted educators when teaching the gifted (Rayneri et al., 2006, p. 115; Teno, 2000, p. 45; Heath, 1997, p. 7). The research can also impact positively upon student teacher education, increasing awareness of gifted underachievement and their possible role in this problem.

Governments officially recognise the need to include gifted education in the education portfolio (NSW Department of Education & Training, 2004) but it is not attended to with the same vigour as all other areas of education. The more Australian research that is undertaken the more the need for an increase in funding for the education of the gifted and talented will be exposed, with the ultimate flow-on being a greater positive impact on student experiences.

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APPENDICES

APPENDIX 1
THE AUSTRALIAN EDUCATIONAL CONTEXT

INTRODUCTION

This appendix provides information about the Australian education system as it relates to the study, so readers are able to perceive the research in its appropriate context.

HISTORY OF AUSTRALIAN GIFTED EDUCATION

From our convict beginnings of formal schooling, Australian gifted and talented education has always had an egalitarian following to squash the "tall poppies" or high academic achievers, unless this giftedness is sporting related, in which case, they are revered as heroes. Gifted and talented education is still somewhat perceived as elitist, associated with the upper class more so than the working class (Hall, 2003, p. 42).

As Reeves (1996, p. 171) details, the opportunity for the poor to attend a colonial school was limited to areas of education that would assist in their usefulness in society. This ensured the social order was kept as only the upper class could be expected to move higher up the social ladder. Even if they were capable, lower class students were not able to use their bright minds for making changes to society, they were lower class and not permitted to appear more intelligent than their upper class peers. Up until the 1900's only the elite had access to books other than The Bible, as libraries and higher education institutions charged fees that were far out of reach of the middle and lower classes (Reeves, 1996, p. 172).

Things slowly changed for the positive for gifted learners. In 1932 in Sydney, New South Wales, the first Opportunity Class for gifted learners was started, yet as WWII approached, this class structure and its benefits were forgotten for a time (Hall, 2003, p. 41). In 1983, many years later with the influence from parent groups the first gifted and

talented policy was formed, entitled, "Children with Special Talents" (Hall, 2003, p. 42), paving the way for a greater responsibility to be taken by governments and schools over the education of every student.

Senate Report

In 1988, after two and a half years of enquiry into the educational needs of Australian students, "The Senate Report" arose and subsequently, the "Senate Select Committee on the Education of Gifted and Talented Children". This report and the recommendations from the committee that arose from this report were planned to change the face of Australian Education for the gifted. However, no major changes arising from these recommendations were put into practice.

More recently, the face of Australian Gifted education continues to change in a number of ways as awareness of this need continues to increase. Associations for Gifted and Talented Children have arisen over recent years, assisting the gifted and their families and bringing awareness to the community. Governments are increasingly aware of the need to foster talent and are implementing and changing policies to improve the education of the gifted and talented, however the gifted are still not given the attention or funding they require (id.).

Hall explains,

> Strong feelings of egalitarianism are still very prevalent in the education debate…These attitudes, perhaps fuelled by our own history and convict beginnings, may go some way in explaining teacher confusion and lack of knowledge on gifted education in NSW (id.).

NSW Gifted Education Policy

The New South Wales Department of Education and Training Gifted and Talented Policy (2004) states that teachers are responsible for recognising the gifted children in their

classes and for maximising their educational experiences through appropriately levelled instruction so that their gifts may emerge into talents.

CLASS STUCTURE FOR MEETING THE NEEDS OF AUSTRALIAN GIFTED STUDENTS

Yrs 5/6 Public School Opportunity Classes

The public education system offers competitive places in opportunity classes in selected metropolitan areas. Children are teacher recommended for these positions and sit an entrance exam, ranking them for acceptance to the class.

Private Schooling Options

Most independent private schools offer Yrs 5 and 6 opportunity classes, most of which are not as competitive as the public system. Some private schools also offer composite opportunity classes to earlier grades of Yrs 3 and 4.

Public Selective High Schools

Public selective high schools provide advanced skills levels for academically gifted and highly achieving students. Students sit the Selective High Schools test in English, Mathematics and General Ability, combined with the primary school's report of their results in Maths and English. Currently in New South Wales there are 17 fully selective high schools and an additional 9 high schools with selective classes.

Selective Private High Schools

Many private schools offer scholarships to the academically gifted, however, few schools' entry criteria is purely academically based and selective. Most private schools rank their pupils for the core subjects of Mathematics, English and Science and many group their gifted for history and geography in the early high school years of 7 and 8. Middle schools offer the same subjects with most also offering ranked classes under a different framework.

NEW SOUTH WALES TEACHER PERCEPTIONS OF GIFTED EDUCATION

Sadly, the majority of Australian universities do not offer undergraduate content in gifted education as there is no requirement to do so (Commonwealth of Australia, 2001, p. 163; NSW Ministerial Advisory Council on the Quality of Teaching, 1999; Australian Association for the Education of the Gifted & Talented, 1999). Postgraduate options of study are usually available, yet, without exposure as an undergraduate, most teachers do not see the need to avail themselves of this professional development. As discussed during Chapter 2, there is currently no incentive for a teacher with little or no interest in gifted education to undertake such courses. They are not reimbursed for their educational expenses, which are undertaken during vacations or after school hours and receive no salary increase or promotion (Merrotsy, 2003, p. 10).

EXTRA-CURRICULAR PROVISIONS FOR GIFTED STUDENTS

"The New South Wales Association for Gifted and Talented Children Inc." is a non-profit organisation run by interested educators and caregivers. This organisation provides counselling for students and their families; education for teachers, including programming options; and provides gifted students with camps and activities at which they can interact with like-minded students.

FEATURES OF THE AUSTRALIAN SCHOOL SYSTEM RELEVANT TO THE CASE STUDY

Geographical Isolation

Due to the vastness of the Australian continent, the education of rural gifted students can be greatly and drastically affected by geographical isolation (op. cit., p. 9). This remoteness causes a lack of opportunity for many students to access their chosen fields of study (id.). Contributing to this is the lack of numbers in small rural schools, leading to composite classes and diminishing the opportunities of gifted students to interact with like-minded peers (id.).

Types of Australian Schools

While there are various early childhood settings that effectively meet the needs of pre-primary children and associated outcomes, compulsory education does not begin until the child reaches six years of age. The child should be in school by the time they are six so begins school at the commencement of that school year: in the last days of January or early days of February, depending on the school system and state. Some parents choose to start their child earlier and depending on the school system, can start their child at 4 years of age as long as they are five before August of that year. Private schools are usually stricter with this arrangement and some require the child to be 5 before entry. Although some states vary slightly in their commencement age and class structures, the general structure is basically the same.

New South Wales caregivers are able to choose from several schooling options, public schooling, Catholic education, independent schools that have an association with a church, fully private and independent schools, and caregivers also have the choice of correspondence schooling and home schooling. Students may legally withdraw as early as 15 years of age, although to receive a school certificate, students need to remain until the end of Year 10 before withdrawing. Students who remain until Year 12 may have chosen the option of studying for university, these students study Board endorsed courses and after finishing the year 12 Higher School Certificate, have a UAI rating with which they can compete to enter University courses.

Public schooling is always structured in two blocks of kindergarten to Year 6, fulfilling the requirements of a primary education and subsequently, Yrs 7 to 12, for the high school equivalent. They are state funded, receiving additional funding from the federal government. This system does not have compulsory school fees, although some schools request a nominal yearly fee of between $100 to $600. Teachers apply for positions in these schools through the Department of Education and Training and may be moved between schools without teacher request.

Catholic schooling is also structured in the primary- secondary structure of K-6 and 7-12, with some high schools having separate campuses for the HSC years. Teachers in the Catholic system are also employed by the system and not attached solely to a particular school. Catholic schools receive funding mainly from the federal government with additional support from the state education portfolio making up 70% of student costs with the residual made up from school fees, building levies, and parish support.

Independent schools are structured in either of two ways: in the Primary/Secondary structure of K-6 and 7-12; or Junior School- Kindergarten to Year 4, Middle School- Years 5 to 8, and Senior School- Years 9 to 12. They receive federal government funding on a needs basis, receiving between $1 570 to $5 050 per student (as at December 2007). School fees make up the shortfall in costs with families paying several thousand, to tens of thousands of dollars per year for the privilege. Teachers in the independent school system are employed by the school.

Home schooling is an option availed of by few, with around 1% of the student population choosing this style of education, although no firm data is available on this to date. The Department of Education and Training oversee the structure of this education and application is made to home school through this department. Caregivers need not hold teacher accreditation to home school.

Class Structures

The maximum class size is usually 32 students, with private schools often supporting lower numbers. Infant classes have fewer students in each system, with public schooling supporting class sizes of 20 students. Composite classes combine two or more years and are mostly organised due to numbers or ability needs such as: Years 4/5 composite supporting the independent Year 4 students and the struggling Year 5s.

Stages

New South Wales' education is structured in stages. Each stage is spread over 2 years, apart from Early Stage One, which is covered during the Kindergarten year. Years 1 and

2 combine to form Stage One, Years 3 and 4- Stage 2 and so on until Years 11 and 12, covering the HSC years of Stage 6.

Key Learning Areas

The New South Wales Department of Education primary curriculum currently has 6 compulsory Key Learning Areas, including: Mathematics, English, Science, Human Society and Its Environment, Personal Development Health and Physical Education, and Creative Arts, with Church based schools adding Religion or Christian Studies to their curriculum. The secondary curriculum has the addition of Technological and Applied Studies, and Languages needed to fulfil the requirements of the School Certificate. The Higher School Certificate years of 11 and 12 allow more freedom with English the only compulsory subject for study.

The Australian curriculum is not uniform, with several differences between states, with New South Wales' outcomes most unlike the other states. As long as Education continues to be a state funded portfolio, this difference will remain, however as diverse as they are between states, there are continual improvements and changes being made to the outcomes and curriculum structure of Australian education. With the latest improvement being Nation-wide testing that commenced during 2008. Further information on the Australian curriculum can be found at <www.boardofstudies.nsw.edu.au>.

ASSESSEMENTS

UNSW Testing

The University of New South Wales Educational Assessments Australia Specialists runs ICAS- International Competitions and Assessments for Schools that measure student ability across the state in Key Learning Areas of English, Mathematics, Science, Computer Skills, Writing, Spelling and General Achievement.

Westpac Mathematics Competitions

The Australian Mathematics Trust supports the International Competition of Mathematics skills and problem solving, rating mathematically inclined students against their peers with ratings from participation to high distinction.

WISC IV

The Wechsler Intelligence Scale for Children measures Australian children's capabilities against Australian norms with results categorising children within a range of performance levels for different domains of intelligences.

APPENDIX 2

TABLE OF CHARACTERISTICS OF GIFTEDNESS

CHARACTERISTICS

Table 1: Characteristics of giftedness

Exceptional potential in one or more areas of academia or performance including, creative, social, leadership and physical domains	• Department of Education and Training, 2004, p. 11 • Gagné, 2003; 2000, p. 15
Typically display one or more of the following characteristics: problem solving adroitness, heightened sensitivity, lively curiosity, exceptional recall ability and the ability to think in abstract terms	• Board of Studies, 2000, p. 7 • Gagné, 2003 • Reis et al., 1995, p. 26 • Tannenbaum, 1983, pp. 1-3
Emotional sensitivity	• Reis et al., 1995, p. 26 • Smutny, 2004, p. 3 • Tucker, 1997, p. 72
Intense needs	• Daniel and Cox, 1989, p. 3 • Smutny, 2004, p. 1 • Western Australian Education Department, 2001, p. 1 • Winner, 1996, pp. 1-13
Creative problem solvers	• Little, 2002, p. 52 • Tannenbaum, 1983, pp. 1-3
Earlier developmental milestones	• Gross, 2000, p. 4
Curious, grasp concepts and find learning in general much easier than their age-peers	• Berger, 1991, ¶ 3 • Clark, 1997, pp. 26-29 • Colangelo and Davis, 1997, p. 33 • Davis and Rimm, 2004, p. 33

	• Gagné, 2003 • Tannenbaum, 1983, p. 3

Table 2: Characteristics of Talent

Skills are distinctly above average in one or more areas of human performance	• Gagné, 2003
Ranked in the top ten percent of ability among their age-peers in the advanced domain of aptitude	• Gagné, 2003
Catalysts required for success	• Gagné, 2003
Metamemory	• Carr, 1987, p. 42

Table 3: Characteristics that assist in the Identification of Giftedness

Need for trained educators	• Teno, 2000, pp. 43,45
School dropouts	• Delisle and Berger, 1990 • Tolan, 1996, ¶ 6
Process	• Gagné, 1999, p. 18 • Nettlebeck and Wilson, 2005 • Reis and McCoach, 2000, p. 155
Inclusiveness	• Ariyaratne et al., 2006 • Department of Education & Training, 2004, p. 1 • Gagné, 1999, p. 18 • Gagné, 1999, p. 18 • Nettlebeck and Wilson, 2005
Minority Groups	• Gagné, 1999, p. 18 • Nettlebeck and Wilson, 2005 • Merrotsy, 2003, p. 9

Table 4: Characteristics of Underachievers

Discrepancy between the child's school performance and some index of his or her actual ability	• Davis and Rimm, 2004, p. 306 • Gross 2000, p. 7 • Peterson and Colangelo, 1996, p. 400 • Reis and McCoach, 2000, pp. 155-156 • Rimm, 1997, ¶ 5
Learning difficulties	• Reis and McCoach, 2000, p. 156 • Bélanger and Gagné, 2006, p. 136
Homework	• Colangelo et.al, 2004, p. 16 • Delisle and Berger, 1990, p. 5 • Gross, 2000, p. 7 • Rimm, 1997, ¶ 6 • Smutny, 2004, p. 1
School and Peers	• Butler- Por, 1993 • Colangelo et.al, 2004, p. 29 • Davis and Rimm, 2004, pp. 33,281 • Delisle and Berger, 1990, p. 5 • Gross, 1989, p. 193 • Gross, 1999, pp. 87-93 • McCoach & Siegle, 2003, p. 146 • Peterson and Colangelo, 1996, p. 399 • Rimm, 1997, ¶ 13
Self-concept	• Bandura, 1993, pp 135-136, 118 • Bandura, 2001, p. 188 • Bandura et al., 2001, p. 190 • Boekaerts, 1993, p. 151 • Dai, Moon and Feldhusen, 1998, pp. 55-57

	• Diaz, 1998, p. 105 • Clark, 1997, pp. 491-492 • Gross, 2000, p. 8 • Lyon, 1993 • Marsh et al.,1995, pp. 289-293 • Van Boxel and Monks, 1992, pp. 181-182
Family Dynamics	• Al-Sahel, 2005 • Baker, Bridger and Evans, 1998, p. 5 • Bandura, 1993, pp. 138,144 • Bandura, 2001, p. 189 • Rimm, 1997, ¶ 12 • Rimm and Lowe, 1988, p. 354 • Steinberg and Lamborn, 1994, p. 755
Competition	• Kanevsky and Keighley, 2003, p. 21 • Rimm, 1997, ¶ 12 • VanTassel-Baska, 1989
Relationships with teachers	• Adams-Byers, Bandura, 1993, p. 120 • Bandura, 1993, pp. 135-136 • Bandura, 2001, p. 192 • Daniel and Cox, 1989, p. 3 • Department of Education and Training, 2004, p. 8 • Dowson et al. 2007, p. 6 • Gross, 1999, pp. 87-93 • Gross, 2000, p. 8 • Heath, 1997, p. 7

	• Kanevsky and Keighley, 2003, p. 25 • Reis and McCoach, 2000, p. 165 • Rimm, 1997, ¶ 14 • Squiller Whitsell and Moon, 2004, p. 18
Perfectionism	• Bandura, 1993, p. 118 • Bandura, 2001, p. 189 • Delisle and Berger, 1990, p. 3 • Rimm, 1997, ¶ 13 • Winner, 1996
Invisible Underachiever	• Chaffey et al., 2003

Table 5: Characteristics of Appropriate Schooling for the Gifted

Differentiation	• Bernal, 2000, p. 173 • Braggett, 1992, p. 12 • Daniel and Cox ,1989, p. 2 • Department of Education and Training, 2004, p. 14 • Gross, 2000, p. 2 • Gross, 2006, pp. 421-422 • Kulik and Kulik, 1992, p. 76 • Merrotsy, 2006, p. 32 • Moon, Kelly & Feldhusen, 1997, p. 16 • Montgomery, 2001, p. 270 • Teno, 2000, pp. 45-46 • VanTassel-Baska et al., 1988 • VanTassel-Baska, 1989 •

Avoid boredom	• Daniel &Cox, 1989, p. 4 • Kanevsky and Keighley, 2003, pp. 20-21 • Reis et al., 1995, p. 31
Need for quality professional development	• Australian Association for the Education of the Gifted and Talented, 1999 • Commonwealth of Australia, 2001, p. 163 • Merrotsy, 2003, p. 10 • NSW Ministerial Advisory Council on the Quality of Teaching, 1999 • Schultz, 2002, p. 205

APPENDIX 3

PILOT STUDY AND IMPACT ON RESEARCH STUDY

PURPOSE OF THE PILOT STUDY

The pilot study was conducted when the initial intention for the research proper was to conduct a study that focused on the underachiever's educationally defining moments regarding their underachievement. The purpose of the pilot study was to identify instances that the participant felt negatively impacted upon his education and to reveal problems in the processes of obtaining this information (Yin, 1994, p. 55). It furnished opportunity to explore the research questions with the participant and allowed reflection of research techniques used to encourage the participant to do so. The pilot study allowed the researcher to analyse the suitability of the collected data in relation to the proposed study. It also confirmed the suitability of the participant-age as the subject was 11 years old.

THE SUBJECT AND THE CONTEXT

Leaf, an eleven year-old gifted boy (chronological age 11.0), chose this pseudonym because he always wanted the ability to float around the world and see everything. He was a Year 6 student, who had, in recent months, moved to a specialist school for the gifted, after spending his former schooling years at *Take Your Time School* in the same metropolitan setting.

Selection of subject

The subject and his family are personal friends of the researcher therefore there was privileged access to the child and trust was already established. This familiarity opened the way to gather rich data, however the researcher was careful to ensure the participant was keen to tell his story and did not feel obliged to do so due to the family connections. It was also ensured the child knew he could withdraw at any time and without penalty. After considering the researcher's knowledge of the participants schooling history and his need for a stimulating education, he was deemed a suitable

candidate for the pilot study. *Leaf* had been troubled by his schooling environment since preschool, always needing stimulating content to remain interested and well-behaved. Young for his class cohort, he was top of the class and always first to finish the set work. *Leaf* was often left waiting for the rest of the class to catch-up.

Effect of the subject on the pilot study

Leaf's selection as the pilot study participant, and his suitability, confirmed the selection of the participant-age of 10-15 years for the research proper. His ability to relate to past educational experiences was optimal as his lived experiences were recent. Also, his maturity was at a level that allowed him to ably express these details, adding colour and depth to his narrative when he felt passionate about giving voice to particular incidents (Punch, 2001, pp. 174-175).

Impact on choice of participants for the research

It was an unexpected bonus to have *Leaf* reflecting on and comparing all of his educational experiences, including pre-school teaching strategies (that had him in fits of laughter), his previous school and the experiences within, and his current school including the same. As *Leaf* had experienced both stimulating and non-stimulating learning environments, it assisted the interview process. He had experienced and was aware of underachievement and some of the causes for this lack of achievement. This awareness and the benefits this would bring to the study, caused the researcher to source participants from a school that caters to gifted students. The school chosen, as previously discussed, has a student body that includes many students who have transferred to the school from other schools, after finding dissatisfaction with gifted education in their previous schools.

DATA COLLECTION METHODS: IMPACT ON THE RESEARCH STUDY

The pilot study showed good cause to change the research questions and focus from particular instances to a more whole, lived experience. It also, gave valuable

interviewing experience and highlighted other weaknesses and strengths in the processes involved in the study.

Interview

As discussed in, *Impact on choice of participants for the research*, the interview process worked well with both the participant and the research topic. Conversation flowed well and the questionnaire assisted in adding direction when required.

Establishment of Trust

As previously mentioned, there was an established high level of trust between the participant and researcher due to a family friendship. This caused the researcher to enter the study proper without experience in establishing trust. Therefore, extra and careful consideration was given to the establishment of trust in preparation for commencement of the study proper. The researcher took notice of the casualness of the seating arrangements and of her attire to duplicate these aspects during the latter participant interviews, as they worked well during the pilot study and increased the level of comfort for the participant.

Interview strategies

The subject - Leaf's interview was conducted at the researcher's home during a family barbeque. The pair utilized the office in the home where Leaf had played many computer games over the years. His parents were in close proximity, however this was of no interest to Leaf. He had many stories to tell, that it seemed, he had been saving for the day when he could share them with a willing ear. The interviewer had to be careful not to assume the position of "encouraging" his stories to continue to flow in the same direction, that is, not to make Leaf feel eager to please the researcher by the telling of negative tales about "bad" teachers, about which he was happy to impart. Several times, the researcher had to control the urge to raise an eyebrow or stifle an "Oh dear!" in response to a statement Leaf had made. Her silent admonishment of this urge to respond and the need to be impartial would be remembered for the study proper.

The questions - The questions were an integral part of the interview process. They were clearly structured and encouraged further dialogue into the area of enquiry. Once, a question needed to be explained, and this caused no further issues.

Other data collection methods

Products and Documents - I.Q. scores were viewed and discussed with the parents. UNSW external testing results were viewed and noted, as were school reports. The appointment of *Leaf* into a competitively placed Opportunity Class was also noted. These samples and documents provided information about his underachievement and were in-line with his recollection of his life experiences with regard to the same.

IN SUMMARY

The pilot study gave much to the planning of the study proper. This included showing the need to alter the research questions to investigate the causation of gifted underachievement, with the hypothesis that a variety of factors may cause this dilemma. This change in direction is due to *Leaf* viewing some problems as intrinsic, while others may view them as extrinsic. That is, *Leaf* assumed he was the entire cause of his gifted underachievement and he did not think that any other aspect of his life was cause for his lack of achievement. There was also the need to add a question to the interview in relation to control, because, several times, *Leaf* saw the solution to a problem as something he could achieve, yet, other children would see the problem as something over which they have little control. These changes, in addition to the valuable experience gained during the pilot study, formed an invaluable basis for the formal research.

APPENDIX 4

PLAIN LANGUAGE INFORMATION LETTER AND PARTICIPANT CONSENT FORM

THE UNIVERSITY OF NEW ENGLAND

Dr Peter Merrotsy

School of Education
The University of New England NSW 2351
Telephone: (02) 6773 3832
Email: pmerrots@une.edu.au

5th May,2007.

Dear Participant,

Underachieving Gifted Students Research

Children who participate in Ms. Walters' study will be asked to be involved in two discussions about school experiences. These sessions will be tape recorded.

What you tell Ms. Walters about your school experiences will remain completely confidential. She will not speak to teachers about your answers and no names will be used in any report of the study.

Mrs. Walters will look at your school records and other results held at school to identify that you are a suitable participant for the study.

Participation in this study is voluntary, and you may withdraw at any time. There will be no penalty or prejudice should you decide to withdraw from the study.

Should you choose to take part in this study, I thank you and appreciate your involvement. Please keep the copy of this information sheet, complete the consent below and return this letter to the middle school in the enclosed envelope for collection by Ms. Walters.

If you would like to know more information about this study, or if you have any queries, please contact Nicole on (02) 49754008 or 0438 354 008.

Yours faithfully,

Dr. Peter Merrotsy

I agree to participate in Ms. Walters' study involving gifted Middle School students. I understand it will require two sessions totalling approximately 20-30 minutes out of class and I will be tape recorded.

Name_____ Signed_____ / /07.

APPENDIX 5

LETTER TO GUARDIAN AND GUARDIAN PERMISSION FORM

UNE
THE UNIVERSITY
OF NEW ENGLAND

Dr Peter Merrotsy

School of Education
The University of New England NSW 2351
Telephone: (02) 6773 3832
Email: pmerrots@une.edu.au

Dear Parent/ Guardian,

5th May,2007.

Underachieving Gifted Students Research

Ms. Nicole Walters is undertaking her Honours Masters Degree in the School of Education at the University of New England. As part of this course, Ms. Walters is completing research investigating the factors that lead gifted children to underachieve. I am supervising Ms. Walters in this project.

Your principal and head of school have given permission for Nicole to undertake this study at your school. I am seeking your permission to allow your child to participate in this study.

Identification of the most suitable participants for the study is determined through accessing school records and other results held at school. Children who participate in this study will be asked to be involved in two interview sessions. During the first session of approximately 10-20 minutes, your child will be invited to discuss their school experiences with relation to underachievement. The second session is an informal interview to further discuss answers given during the first session. These sessions will be tape recorded.

Children's responses will remain completely confidential and no names will be used in any report of the study. The results of this study will be presented in group data so there will be no identification of individuals.

Participation in this study is voluntary, and you or your child may withdraw at any time. There will be no penalty or prejudice should you decide to withdraw your child from the study, or should your child decide not to participate.

The study has the potential to reveal previously unrecognised factors of underachievement in gifted middle school students. The findings may be published in recognised education journals, disseminated at conferences and used in the education of undergraduate students.

Should you choose for your child to take part in this study, I thank you and appreciate your involvement. Please keep the copy of this information sheet, complete the consent below and return this letter to the middle school in the enclosed envelope for collection by Ms. Walters.

If you would like to know more information about this study, or if you have any queries, please contact Nicole on (02) 49754008 or 0438 354 008.

If you have any complaints concerning the manner in which this research project is conducted, they may be given to the associate- Ms. Walters on 0438354008, the researcher- Dr. Merrotsy (02) 67733832, or if an independent person is preferred, to the University's Human Research Ethics Officer, Research & International Division, The University of New England, Armidale NSW 2351(ph 6773 2583).

Yours faithfully,

Dr. Peter Merrotsy

I give permission for my child _____ to participate in Ms. Walters' study involving gifted Middle School students. I understand it will require two sessions totalling approximately 20-30 minutes out of class and my child will be tape recorded.

Name_____ Signed_____ / /07.

APPENDIX 6

LETTER TO PRINCIPAL AND PRINCIPAL PERMISSION SLIP

5th May, 2007.

The Principal
Lakeside Middle School

Dear Sir,

Ms. Nicole Walters is undertaking her Honours Masters Degree in the School of Education at the University of New England. As part of this course, Ms. Walters is completing research investigating the factors that lead gifted children to underachieve, for which I am her advisor. I am requesting your permission for Ms. Walters to conduct this study at your school.

The study involves selecting 25 suitable children from school records and teacher recommendations and having them attend an interview to discuss their school experience with relation to their underachievement. These results are then analysed and used to form the basis of interview questions for a subsequent semi-formal interview session. Copies of the information letter and consent form for parents, and the semi-structured questionnaire are attached to this letter.

Participation in this study will not unduly interrupt the children's school day. Parents may refuse to allow their child to participate without consequence. The school's privacy will be protected in several ways. A pseudonym will be used to report results and all identifiable details will be stored in a locked box and destroyed after five years. Children's responses will be kept completely confidential and no names will be used in any report of the study. When the study is completed, Ms. Walters will give you a dissemination report which will outline the main findings of the study.

If you have any complaints concerning the manner in which this research project is conducted, they may be given to the associate- Ms. Walters on 0438354008, the researcher- Dr. Merrotsy (02) 67733832, or if an independent person is preferred, to the University's Human Research Ethics Officer, Research & International Division, The University of New England, Armidale NSW 2351(ph 6773 2583).

If you are willing to give permission for the study to proceed, please complete the consent form below and send to Ms. Walters. If you would like more information about the study please contact Ms. Walters on 49754008 or 0438354008.

Yours faithfully,

Dr. Peter Merrotsy

I give permission for Lakeside Middle School to participate in Ms. Walters' study

Name_____Signed_____/ /07.

APPENDIX 7

CONFIDENTIAL STUDENT QUESTIONNAIRE

Confidential Student Questionnaire for Research Study 1.

Date:_____

Name:_____

How do you like to learn?

_____

_____

_____

_____

_____

_____

_____

_____

Are there opportunities for you to have a say in the way you learn?

_____

_____

What are the good things about your school?

_____

_____

_____

_____

_____

_____

_____

What aspects would you like to change? **2.**

_____

_____

_____

_____

_____

_____

Do you find school boring?_____

Why?_____

_____

_____

_____

_____

_____

_____

What do you think could have be done differently to prevent you becoming bored?_____

_____

_____

_____

Have you ever felt misunderstood at school? _____

Would you tell me about one of these times?

_____

_____

_____

_____

3.

Have you ever felt unmotivated to learn?_____

If so, have you ever felt motivated not to learn?_____

What do you think happened to make you feel like that?_____

_____

_____

_____

_____

_____

_____

_____

_____

Do you have any ideas about how to help gifted children from losing interest in school?_____

_____

_____

_____

_____

_____

End of Questionnaire

APPENDIX 8
GROUP INTERVIEW DATA

PREFERRED LEARNING STYLES

Verbal	5
Visual	4
Written	4
Groups	4
Kinaesthetic	3
Not chalk & talk	2
No waiting time	2
Games	2
Friendly environment	1

LEARNING STYLE CHOICES

Yes	6
No	3
Sometimes	5
In the Past	1

POSITIVES ABOUT SCHOOL

Teacher quality	9
Facilities	4
Peers	4
Learning quantity	3
Subject choice	3
Discipline	2
Opportunities	2

Teacher expectations	2
Differentiated curriculum	2
School structure	2
Excursions	1
Choice of learning style	1
Community feeling	1
Canteen	1

NEGATIVE ASPECTS OF SCHOOL YOU WOULD LIKE TO CHANGE

Curriculum	7
Improve teacher quality	6
Less time wasting	5
Choice of learning style	4
Facilities	3
Peers' maturity	2
Rules	2
Homework	2
Relevance	1
None	1
Uniform	1

DO YOU FIND SCHOOL BORING?

Yes	6
No	0
Sometimes	6
In the past	3

WHY DO YOU FIND SCHOOL BORING?

Teaching style	17

Mixed ability classes	10
Teaching ability	11
Curriculum not differentiated	8
Non relevant	6
Waiting	4

SUGGESTIONS FOR WHAT COULD HAVE HELPED

Graded classes	10
Differentiated curriculum	7
Information relevant	6
Teaching style	6
Teacher ability (individualised attention)	5
Students greater choice of learning style	3
Involve the students in discussion	3
Let talk & work	1

HAVE YOU EVER FELT MISUNDERSTOOD AT SCHOOL?

Yes	14
No	1

WHEN?

Teacher misunderstood a question and didn't clarify that the question was answered satisfactorily.	11
Bullying	2
Negative teacher reaction (shutdown)	2
Asked peer a question & got into trouble	1
Teacher yelling	1

HAVE YOU EVER FELT UNMOTIVATED TO LEARN?

Yes	15
No	0

IF SO, HAVE YOU EVER FELT MOTIVATED NOT TO LEARN?

Yes	11
No	4

WHAT DO YOU THINK HAPPENED TO MAKE YOU THINK LIKE THAT?

Teaching style	12
No differentiation	11
Boring teacher	10
No relevance to my life	7
Lack of teacher ability	6
Low teacher interest (attitude) in student	3
Teacher over-reaction	1

ANY IDEAS ON HOW TO HELP GIFTED STUDENTS TO REMAIN INTERESTED IN SCHOOL?

Tell teacher when you have a problem	6
Ask for explanation in different learning style	5
Ask questions	3
Ask for differentiation	2
Request class discussion	2
Differentiate yourself	2
Self change delivery style to suit own MI (visualise teacher instruction to decrease boredom)	2
Tell parents when you have a problem	2

Don’t let teacher incompetence ruin your focus	2
Don’t always try to solve problems yourself	1
Act like you know something when you do	1
Make teacher concentrate on you (not just naughty or good book work)	1
Amuse yourself if the teacher is boring	1

APPENDIX 9
FURTHER ETHICAL CONSIDERATIONS

Special ethical considerations involve the areas of school, teachers and participants. School ethical considerations involve three main areas including, approval, anonymity and negative reflection upon the school. They are addressed in the following ways. Approval to proceed with the study was gained from the school principal and head of middle school. The middle school campus remains anonymous by being described as an urbanised east coast middle school with the pseudonym *Lakeside Middle School.* To ensure there is no negative reflection upon the school or the participant's previous schools, the researcher does not differentiate between schools in the report, nor is any other school named, so as not to negatively reflect upon any school.

Teachers are protected in the study in several ways, including privacy and anonymity. To ensure their privacy was protected, it was explained to teachers at the commencement of the study that their names would not be mentioned and that the study's results would be forwarded to them to assist in better catering for gifted students. A great proportion of students who attend *Lakeside Middle School* do so as their second school after finding dissatisfaction with previous schooling and a lack of gifted education, therefore, participants are requested not to differentiate in name between teachers and schools when describing experiences so as not to negatively reflect upon a particular place or person. This is outlined at the commencement of the interview process.

Student participants are well informed of the study before commencement and are protected during it. The researcher outlined the study to the student body before calling for volunteers. Participants are informed that if they choose to participate it is entirely voluntary and they are able to withdraw from the study at any time should they desire. Consent forms are obtained from the participants and their caregivers prior to commencement and on these forms it is plainly noted where to contact the researcher for further information and to discuss problems arising from the study. Student records were not removed from the middle school office and any notes made from the records were

shredded. Each child chose a pseudonym for themselves to safeguard their identity. Times for interviews were catered to the school day to ensure core curriculum subjects were not missed. These usually took place during tutorial time or electives and on the verandas or on the stairs around the classrooms always in full view of others. The school psychologist has been informed of the study and notes that their services may be required in relation to discussions about the participant's previous schooling arising during this study, although this is not expected.

The school is advised that a report will be sent to them on completion of the study giving an overview of the results of participants surveyed. The transcripts from this study are packaged and securely stored at the University of New England.

APPENDIX 10
ADDITIONAL CASE STUDY DATA

APRIL

WISC III

2000 149

2004 134

2007 117

April's results in external testing range from Participation to High Distinction with 100% accuracy.

School Reports

In Year one when April was receiving unofficial single subject acceleration she obtained the following notations on her report card.

Her achievement has accelerated this semester … she is reaching advanced levels.

All areas for this subject were noted as exceeding stage outcomes, with April achieving at stage level for 6 sub-topics.

Report card results	Exceeding stage outcomes	Achieving Stage Outcomes
Yr 1	25	6
Yr 2	6	27

The following year, Yr 2 when April was not permitted to proceed with her acceleration, and had to undertake the same level of work as her class peers, the above results were obtained from her report card.

All apart from 6 areas in the subject of previous acceleration were noted as achieving stage outcomes at stage level.

HUGE

WISCIII

Superior

External Testing

Ranging from Credits to High Distinctions with most being distinctions.

> *Multifaceted young man … quiet and reflective … lively and loud … slightly acerbic wit … capable of working with great diligence … distracts others and himself by chatting about topics which are not related to the task at hand … capable and very likable student and with concentrated effort … .*

Year One Report comment: *Huge is a happy, friendly little boy. He sometimes finds it difficult to remain on task as he is easily distracted. Huge generally takes pride in his work but at times greater effort is needed. … Particularly enjoys reading.* (All areas reported at achieving at above-stage level).

In the subject Huge is accelerated in he obtained only average results before acceleration.

> (report card results show achieving at stage level in all areas).
> *... while he may find (subject) a little daunting at times ...*

After acceleration the following comments were made on report cards:

> *Huge is a quiet and diligent student who uses his time wisely … to complete his work in an efficient and orderly manner. He is to be commended for his attitude and results …* (Huge's report marks show several areas of working at the stage

above, most at high stage level and two at stage level, giving Huge areas in which to obtain higher level thinking and learning)
Is an intelligent student who applied himself with diligence and consistency in all aspects … keen participant in class discussions and scored excellent results … .

Report comments for subjects other than the accelerated subject:
Huge often needs to be encouraged to maintain focus … (Level of achievement for this report marked at High stage level of understanding).

… able student who does not always put his heart and soul into his work. When he does he is capable of excellent work … failed to submit assignment … very quick verbal wit … quite capable of excellent rather than average results. (Result for this report range from achieving at next stage level to achieving at stage level)

can be a little noisy and distracted during lessons (working at high stage level)

he does allow himself to be distracted by those around him (working at high stage level)
Huge is an extremely capable (subject) student who does not always rise to the standard of which he is capable … will sometimes give a humorous response over the deep or sophisticated thought … quick, wit, lively manner and incisive contributions … I encourage Huge to combine his large amount of ability with the desire to let it show.

NICK

External Competitions

Nick achieved a second place in an external primary school (K-6) competition when in Year 2. Yet in the same subject at school when required to work at the stage level for his

age, he obtains appropriate stage level results and a working toward stage level results for that subject. The following comment is from the above-mentioned report:

... although he has found some tasks a little challenging ...

School reports

extremely well-respected by staff and peers ... generally attentive ... when not making humorous comments ...

potential ... grasps concepts quickly ... however once a concept is grasped Nick easily loses focus ...

FRANK

Frank's results range from participations to high distinctions in UNSW testing.

Year 5 report comment

During Year 5, Frank underachieved in all areas. The following comment is an excerpt from the end-of-year report.

Frank lacks confidence in reading which can be attributed to his shyness. (Results show a decline from high stage to at stage level in all areas.)

BLOSSOM

UNSW testing

Blossom received distinctions in all UNSW testing apart from the last year when she received a High Distinction in one subject.

Other external testing

Blossom received a score in the top percent of participants for a region-wide competition.

ACER MYAT academic ability testing for middle schoolers

Achieved results in the top ten percent.

School reports

Reports showed no comments worthy of inclusion within the narrative. Blossom achieved within the stage level and high stage level for all subjects.

APPENDIX 11
ETHICS APPROVAL LETTER

UNE
The University of
NEW ENGLAND

RESEARCH SERVICES

Armidale NSW 2351 Australia
Telephone (02) 6773 2070, Fax (02) 6773 3543

HUMAN RESEARCH ETHICS COMMITTEE

MEMORANDUM TO: Dr P Merrotsy/Ms N Walters
School of Education

This is to advise you that the Human Research Ethics Committee has approved the following:

PROJECT TITLE: Contributing factors in the underachievement of gifted middle school students.

COMMENCEMENT DATE: 02/04/2007

COMMITTEE APPROVAL No.: HE07/047

APPROVAL VALID TO: 02/04/2008

COMMENTS: Nil. Conditions met in full.

The Human Research Ethics Committee may grant approval for up to a maximum of three years.
For approval periods greater than 12 months, researchers are required to submit an application for renewal at each twelve-month period. All researchers are required to submit a Final Report at the completion of their project. The Progress/Final Report Form is available at the following web address: http://www.une.edu.au/research-services/ethics/hrec_pages/final.report.doc

The *NHMRC National Statement on Ethical Conduct in Research Involving Humans* requires that researchers must report immediately to the Human Research Ethics Committee anything that might affect ethical acceptance of the protocol. This includes adverse reactions of participants, proposed changes in the protocol, and any other unforeseen events that might affect the continued ethical acceptability of the project.

In issuing this approval number, it is required that all data and consent forms are stored in a secure location for a minimum period of five years. These documents may be required for compliance audit processes during that time. If the location at which data and documentation are retained is changed within that five year period, the Research Ethics Officer should be advised of the new location.

Jo-Ann Sozou
Secretary

10/04/2007