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The learning experiences and preferred teaching strategies of children who have been identified as Gifted with ADHD

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Abstract

This qualitative study investigated the educational and social experiences of six children who had been identified as Gifted with Attention Deficit Hyperactivity Disorder (ADHD). The children were aged from six to ten years old. Semi-structured interviews were conducted with the children and their parents and a staff member of the George Parkyn Centre (now The Gifted Education Centre) to explore their educational and social experiences in order to identify their preferred strategies that were also expected to be the most effective educational strategies.

It is important to identify effective educational strategies for Gifted children with ADHD. This is because there are children in New Zealand (as this study has found) who have been identified as Gifted with ADHD but according to the literature review conducted for this study there does not appear to be a significant amount of literature from New Zealand or international writers that informs educators about how to assist these children to learn.

Instead, the literature appeared to focus on misdiagnosis of Giftedness as ADHD, however, these children may benefit from having assistance with their learning as some literature suggested they are not being identified and could be underachievers. It seems that the use of effective educational strategies may be the only way these children could reach their academic potential. Therefore, this study sought to move on from the misdiagnosis debate evident in the Gifted/ADHD literature to identify some effective educational strategies.

This study also investigated the social experiences of Gifted children with ADHD. This is because the literature maintained Gifted children with ADHD could have difficulties with social interactions. Talking to the children about their social interactions could indicate whether the literature's implications are correct and if they are it should allow further understanding regarding how we could assist the Gifted child with ADHD to have more positive social interactions that could also positively impact on learning as social interactions occur within the classroom.

The key findings of this study indicated that some Gifted children with had specific learning preferences that could stimulate them to learn (e.g., when their interests were recognised, information was presented visually, tasks had a meaningful purpose and movement and use of computers was allowed). Ineffective educational strategies were also addressed although not in detail as for the most part they seemed to be the opposite of effective educational strategies. The findings also indicated Gifted children with ADHD could benefit when they find their 'true peer' as this seemed to result in the children within this study wanting to work with others.

Although specific suggestions were recommended (e.g., the use Renzulli's 1977 Enrichment Triad Model) the findings emphasised the depth of information that could be gained by simply talking to children and their parents about their learning. A wider implication may be this Gifted group of children may benefit from the use of specific educational strategies that personalise their learning.

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Table of Contents

1 Chapter 1: Introduction 1
1.1 My interest 4
1.2 Underlying perspective evident in the literature 5
2 Chapter 2: Gifted 9
2.1 Introduction 9
2.2 The New Zealand definition of the Gifted and talented 9
2.3 A brief history of some of New Zealand's educational policies for the Gifted and talented 9
2.4 What are some social and emotional issues that relate to the Gifted and talented? 12
2.5 What are some educational strategies that have been suggested for the Gifted and talented? 14
2.5.1 Differentiation 15
2.5.2 The Enrichment Triad Model 15
2.5.3 Gifted and talented models of enrichment: The Schoolwide Enrichment Model (1985) 16
2.6 Chapter summary 18
3 Chapter 3: ADHD 20
3.1 Introduction 20
3.2 The New Zealand definition of the term disability 20
3.3 From exclusion to inclusion, a brief history of educational policy development for children with disabilities 21
3.4 The New Zealand definition of ADHD 22
3.5 What are the social and emotional issues related to ADHD? 24
3.6 What are some educational strategies that have been suggested for those who have ADHD? 25
3.6.1 Introduction 25
3.6.2 Educational strategies 26
3.6.3 Stimulation 28
3.7 Chapter summary 31
4 Chapter 4: Gifted and ADHD 33
4.1 Introduction 33
4.2 The history of Giftedness with ADHD 33
4.3 The current focus in the Gifted/ADHD literature 34
4.4 Identification issues 36
4.4.1 Introduction 36
4.4.2 The similarity between Gifted and ADHD characteristics 36
4.4.3 Masking 37
4.4.4 Intelligence Quotient tests (IQ tests) 38
4.4.5 The environment 39
4.4.6 Teachers' lack of knowledge 40
4.5 How could the Gifted with ADHD link to Gifted literature? 41
4.5.1 Creativity 41
4.5.2 The Gifted who like to move 43
4.5.3 The Gifted who are not easy to teach 44
4.5.4 Underachievement and selective consumerism 44

4.6 What are the social and emotional characteristics related to the Gifted with ADHD? 47
4.6.1 Introduction 47
4.6.2 Social and emotional characteristic of the Gifted with ADHD 47
4.6.3 Friendships 49
4.6.4 Gates's social, emotional, behavioural and cognitive phenotyping of a student with ADHD and academic giftedness 51
4.7 What are some educational strategies that have been suggested for the Gifted with ADHD? 53
4.7.1 Introduction 53
4.8 New Zealand Gifted/ADHD literature 54
4.9 The combined verses separatist approach 54
4.10 The table 57
4.11 Literature that explored Gifted/ADHD educational strategies 58
4.11.1 Introduction 58
4.11.2 Konza, inclusion for children with dual exceptionalities 58
4.11.3 Zentall, Moon, Hall & Grskovic's learning and motivational characteristics of boys with AD/HD and/or Giftedness 59
4.11.4 Gates's social, emotional, behavioural and cognitive phenotyping of a student with ADHD and academic giftedness. 60
4.12 Chapter summary 62
5 Chapter 5: Rationale and focusing questions 64
5.1 Rationale 64
5.2 Focusing questions 67
6 Chapter 6: Methodology 68
6.1 Introduction 68
6.2 The researcher's position 68
6.3 Finding participants 69
6.4 Participant selection 70
6.5 The appropriate research method 74
6.6 Interviews as a research method 76
6.6.1 Semi-structured interviews 77
6.7 The interview setting 78
6.8 Data collection 79
6.8.1 Putting the children at ease 80
6.8.2 The questions 82
6.8.3 The procedure 82
6.8.4 Interviews, truth and credibility 84
6.9 Interviews and power 85
6.9.1 Ethical issues 86
6.9.2 Cross culture interviewing 87
6.10 Reliability and internal validity 87
6.11 Triangulation 88
6.12 Generalisability or external validity 91
6.13 Data analysis 92
6.14 Limitations 93
6.15 Chapter summary 94
7 Chapter 7: The children's stories results and discussion 96

7.1 Introduction 96
7.2 Results: The children's stories 97
7.3 Discussion: The Stories 112
7.3.1 Introduction 112
7.3.2 Discussion 113
8 Chapter 8: Educational strategies results and discussion 118
8.1 Introduction 118
8.2 Difficulties that could affect the children's learning 118
8.2.1 Memory 118
8.2.2 Dislike of academic material being repeated 123
8.2.3 Working memory (short term memory) difficulties regarding verbal instructions 124
8.2.4 Writing and reading difficulties 125
8.3 Results: What appeared to assist and motivate the children in this study to learn? 127
8.3.1 Computers 127
8.3.2 Movement 129
8.3.3 Visual information 131
8.3.4 Purpose of tasks 132
8.3.5 Stimulation due to interest 134
8.4 Results: Ineffective educational strategies 135
8.5 Discussion: Effective educational strategies 137
8.6 Chapter summary 146
9 Chapter 9: Social experiences results and discussion 149
9.1 Introduction 149
9.2 Results: Social difficulties with other children 149
9.3 Results: Friendships with children of differing ages 151
9.4 Discussion: Social difficulties with peers and friendships established with children of differing ages 154
9.5 Results: Preference for working alone or in groups 156
9.6 Discussion: Preference for working alone or in groups 159
9.7 Chapter summary 162
10 Chapter 10: Conclusions, implications and future research 163
10.1 Introduction 163
10.2 Key findings and implications of the project 163
10.3 Conclusions 165
10.4 Limitations and strengths 167
10.5 Directions for future research 168
11 REFERENCES 170
12 APPENDICES 185

List of Tables

Table 1: Effective Educational Strategy Similarities for Gifted children with ADHD…….56
Table 2: Participant Data……73
Table 3: Effective and Ineffective strategies……... 136

1 Chapter 1: Introduction

Helen Keller, Stephen Hawking, Ludwig van Beethoven, Stevie Wonder (Blacher & Reis, 2002), Albert Einstein, Thomas Edison, Leonardo DaVinci, Whoopi Goldberg and Robin Williams all share some similarities (Fetzer, 2000). Not only are they well known due to what could be considered their Gifts but because they also had or have disabilities. Most would know that Helen Keller was deaf, blind and mute but taught herself how to read and write, and that Stevie Wonder is blind (Blacher & Reis, 2002), Robin William's disability does not seem as apparent. Fetzer (2000) suggested that Robin Williams known for his amazing acting Gifts also has Attention Deficit Hyperactivity Disorder (ADHD). This thesis is about the Gifted with ADHD.

From the start it is important to acknowledge that there is considerable debate surrounding the Gifted/ADHD topic, particularly in relation to misdiagnosis of Giftedness as ADHD. Many writers (e.g., Bruzzano-Ricci, 2003; Cline & Schwartz, 1999; Hartnett, Nelson & Rinn, 2004; Kaufmann, Kalbfleisch & Castellanos, 2000; Lawler, 2000) indicated Gifted children could be misdiagnosed as having ADHD. Nevertheless, several researchers have suggested that some Gifted children are not misdiagnosed with ADHD as they are both Gifted with ADHD (e.g., Baum & Olenchak, 2002; Flint, 2001; Kaufmann et al., 2000; Leroux & Levitt-Perlman, 2000; Lovecky, 2004; Mika, 2006; Turk & Campbell, 2002). Silverman (1993; 2003) indicated there may even be *under*-identification. Furthermore, some writers (Kaufmann, Kalbfleisch & Castellanos, 2000; Mika, 2006) argued there was no evidence to support the claim that Gifted children were misdiagnosed with ADHD and maintained that further exploration of the Gifted with ADHD should occur based on the assumption that the combination is real "…as we have found ***no empirical data*** in the medical, educational or psychological literature to substantiate the extent of this [misdiagnosis of Giftedness as ADHD] concern" (p. xiii, emphasis in the original). Mika (2006) indicated further diagnosis of Gifted children with ADHD should occur as children would benefit from appropriate educational accommodations.

This brings to question whether appropriate accommodations (e.g., educational strategies) should be made for Gifted children with ADHD in New Zealand. The Ministry of Education indicated "gifted and talented learners are found in every group within society" (Ministry of Education, 2002, p.3).[1] However, the MOE (2000) also suggested the Gifted/ADHD issue was an overseas concern. Furthermore, the two articles (Brown, 2006; Bruzzano-Ricci, 2003) this literature found that were published in New Zealand implied it was unlikely that a child could be both Gifted with ADHD. For example, Brown (2006) implied although a child could be Gifted with ADHD the child was more likely to be a bored Gifted child.

At present the debate seems to simply be an argument without strategies (e.g., Mika, 2006). This is an issue because there appeared to be very limited literature which addressed how to educate the children who have been identified as being both Gifted with ADHD. Many writers (e.g., Baum & Olenchak, 2002; Leroux & Levitt Perlman, 2000; Zentall, Moon, Hall Grskovic, 2001) suggested that further research was necessary. The research could be necessary as some writers (Brown, 2006; Neihart, 2003; Reis & McCoach, 2000) maintained that Gifted children with ADHD could be an underachievers.

Gifted children with ADHD could be underachievers and viewed as lazy (Flint, 2001) by teachers, but even if teachers attempted to address the Gifted/ADHD literature its complicated nature would be difficult for a working educator in a 'normal' school (who would probably teach these children) to read due to numerous conflicting perspectives (e.g., whether misdiagnosis is occurring). Furthermore, a common strategy evident in Gifted/ADHD literature was the suggestion to focus on strengths and remediate disabilities (e.g., Kaufmann & Castellanos, 2000; Leroux & Levitt-Perlman, 2000; Neihart, 2003). There seems to be a limitation regarding how a teacher could focus on strengths (e.g., the literature does not seem to explain how strengths could be focused on let alone how they could be identified). Thus, most Gifted/ADHD literature does not truly assist an educator with practical educational strategies.

[1] From here on the Ministry of Education documents will be referenced as MOE unless part of the body of the text e.g., the Ministry of Education (2000) stated.

The suggestion to focus on strengths was also evident in GLD (Gifted and Learning Disabled) literature (e.g., Weinfeld, Barnes-Robinson, Jeweler, & Shevitz, 2006). Davis and Rimm (2004) described how those who were GLD had amazing Gifts and weaknesses that were associated with their disabilities. Winebrenner (2003) suggested an alternative term for the GLD was twice exceptional. However, there is debate surrounding who the twice exceptional are. Some stated that it was all people who had both Gifts and disabilities (e.g., Bourne, 2004; Bruzzano-Ricci, 2003; King, 2005; Reis & Ruban, 2004; Silverman, 1998; Sturgess, 2004). In contrast, other writers indicated the twice exceptional were only those who were Gifted and had social, emotional disturbances or behavioural disabilities (e.g., Emotional Behavioural Disorder, EBD, or ADHD) (Benge & Montgomery, 1996; Kaufmann et al., 2000; Morrison & Omdal, 2000). Although the Gifted with ADHD could be considered GLD the GLD or twice exceptional literature may not be generalisable to the Gifted with ADHD because it is questionable how appropriate the general GLD and twice exceptional literature is for those with specific disabilities (e.g., the Gifted with ADHD).

In contrast, this thesis drew predominantly on psychological perspectives to explore the experiences of the children in this research. Key writers included, Russell Barkley, Carol Dweck and Deirdre Lovecky. Albert Bandura was also evident in relation to self-efficacy (Bandura, 1995), as previously suggested, there appeared to be a scarcity of research on educational strategies for the Gifted with ADHD.

This study aimed to identify effective educational provision to assist Gifted children with ADHD to meet their academic capabilities. In order to identify effective educational strategies semi-structured interviews were undertaken. The semi-structured interviews were based around three key questions that were derived from three themes, these included, ineffective learning strategies, effective learning strategies and social experiences. The semi-structured interview method was chosen because it allowed me to find out about issues which could assist to 'fill the gaps' in the current literature but the participants were also able to discuss issues that

concerned them. The participants included six children, their parents and a staff member of the George Parkyn Centre (as indicated in the abstract of this thesis, now The Gifted Education Centre). The George Parkyn Centre is a One Day School where children who have been identified as Gifted (by the centre) attend a one day a week. The George Parkyn Centre assisted with finding a relatively large sample, when compared to other research (e.g., Gates, 2005; Konza, 1998) on the Gifted with ADHD, for this study. Until now Zentall et al. (2001) study appeared to have the most child participants who were Gifted with ADHD, with three children who were Gifted with ADHD (but nine participants overall).

Effective educational strategies could lead to more children being identified as being both Gifted with ADHD and it could equally lead to children being recognised as simply Gifted. This is because prior to the use of effective educational strategies children who exhibit ADHD like behaviours may not have had appropriate education (Webb & Latimer, 1997) and if given appropriate education their true abilities may be exhibited. Therefore, I am not trying to support the labelling of ADHD as some writers (e.g., Baum & Olenchak, 2002; Lovecky, 2004; Mendaglio, 2005) suggested labelling can be negative. In contrast, this study aims to make educators aware of the academic potential within children who exhibit ADHD like behaviours (whether formally diagnosed or not) and who may have also been identified as Gifted.

It should be noted that the term Gifted was capitalized within this thesis as symbolic recognition that Giftedness is equally as significant as ADHD which has to be capitalised.

1.1 My interest

It was after reading and viewing documentaries when completing a paper on the Gifted and Talented that I became interested and aware of children who were diagnosed as Gifted with ADHD. However, it was not until I began teaching about the Gifted and Talented and listening to student's stories of themselves and/or their children's educational experiences that I became aware of how some parents had to

become advocates for their children because they did not believe their children were meeting their potential in the 'normal' classroom. Although these children may not have been officially diagnosed as Gifted most of their parents referred to their children as high achievers. In addition, some of these children had been diagnosed with ADHD or were exhibiting disruptive behaviours.

This suggested high achievement (Giftedness) and disruptive behaviour (such as ADHD) could be more closely linked than I had previously thought. Although, the MOE (2000) maintained that the combination of being both Gifted with ADHD was an overseas issue, the conversations I had with parents indicated that Giftedness combined with ADHD may be an issue for some children in New Zealand. This was later supported by the fact that I was able to find six children in the Waikato-Auckland area with the diagnosis of both Giftedness and ADHD.

1.2 Underlying perspective evident in the literature

As previously mentioned in the introduction to this chapter, it is psychology's focus on the mind and behaviour (VandenBos, 2007) that appeared to be the underlying link between the most relevant literature for Gifted children with ADHD. Although, out of these writers Russell Barkley, Deirdre Lovecky and Carol Dweck it is only Deirdre Lovecky who specifically writes on the Gifted with ADHD. This implies that the literature that is specifically on the Gifted with ADHD is possibly no more helpful than that for the 'average' child.

One of the writers who wrote about the 'average' child with ADHD was Barkley (2003) (a prominent ADHD writer) who suggested ADHD theories are shifting their focus from a disorder of inattention, hyperactivity and impulsiveness to poor inhibition and executive function (self regulation) deficiencies. "The term 'executive function' refers here to those self-directed actions of the individual that are being used to self regulate" (Barkley, 1997, p. 56). This relates to psychology as it appeared to link to the brain's ability to self regulate behaviour. Self regulation (or

executive functions) are evident in Barkley's (1997) Hybrid Model of Executive Functions (see Appendix A).

At the top of Barkley's (1997) Hybrid Model of Executive Functions is behavioural disinhibition (the lack of ability to inhibit behaviour), that then led to four key executive functions, these included, poor working memory (non-verbal), delayed internalization of speech (limited verbal working memory), immature self regulation of affect/motivation and arousal and impaired reconstitution. Each of these four key executive functions relates to many difficulties. For example, poor working memory[2] (non-verbal) has ten associated specific difficulties. However, this thesis will further explain only those difficulties which relate to findings for the Gifted with ADHD involved in this research (although there are further references to Barkley such as within 3.4).

Deirdre Lovecky (2004) also addressed executive function deficits (e.g., motivation difficulties relating to goal setting). In Lovecky's (2004) book *Different Minds: Gifted children with AD/HD, Asperger Syndrome, and other learning deficits*), she also appeared to write from a psychological perspective that related to her work as a clinical psychologist at the *Gifted Resource Center of New England*.[3] Her book on children who are Gifted with ADHD will be referred to throughout this thesis.

Although Lovecky (2004) wrote specifically on the Gifted with ADHD Carol Dweck wrote about the 'average' child. In the 1980s Carol Dweck researched students' implicit beliefs of intelligence (Indiana University, 2007, para. 6). Dweck (1986) developed a model (see Appendix A) that shows the relationship between goals that children used to motivate themselves when undertaking cognitive tasks and their reaction to their achievement or lack of success. Dweck (1986) referred to how her

[2] Lefrancois (2000) stated that working memory is "a type of memory wherein material is available for recall for only a matter of seconds" (p. 169). While, Ashcraft (2006) indicated long term memory was where information was held for longer than seconds and related to where information could be permanently stored.

[3] Although, Lovecky (2004) did refer to a piece of research (Lovecky, 1994, cited in Lovecky, 2004) she had carried out that involved 70 participants. However, although this 1994 article is on the Gifted with ADHD it does not clearly illustrate what her research led her to find but rather discusses other literature.

1986 research was based on a 'social-cognitive framework.' There is a clear link evident to Bandura's *socio-cognitive theory.* In fact the two have written together (e.g., Bandura & Dweck, 1985, cited in Dweck, 1986).

In relation to this thesis what seems to be relevant from Bandura's work is his cognitive view of motivation. Bandura (1995) suggested positive 'perceived self efficacy' motivates people to carry out tasks. This is because 'perceived self efficacy' is personal insight relating to what a person thinks they can achieve (Bandura, 1995). Bandura (1995) suggests perceived self efficacy is why those with high 'perceived self efficacy' undertake challenging tasks while those with low 'perceived self efficacy' attempt to avoid them and have low commitment to goals (Bandura, 1995).

Dweck (1986) described those who were *performance goal oriented* as wanting others to have positive judgements of their competence (see Appendix A for further details). Although Smiley and Dweck (1994) indicated there could be variances between those who are *performance goal oriented* depending on whether they had low or high confidence.[4]

In a later publication Grant and Dweck (2003) separated performance goals into further categories. Some of these included, *performance approach goal* and *performance avoidance goal oriented.* Those who were *performance approach goal* orientated focused on being academically successful and those who were *performance avoidance goal oriented* aimed to avoid failure (Elliot, 1999; Elliot & Church, 1997; Elliot & Harackiewicz, 1996; Middleton & Midgely, 1997; Pintrich, 2000a, cited in Grant & Dweck, 2003). "In general, …it is the avoidance form of performance goals that predict lower intrinsic motivation and performance, with approach goals often relating positively to performance" (Grant & Dweck, 2003, p. 542).

[4] For example, those who were *performance goal oriented* and had high confidence could challenge themselves if they felt comfortable, however, those who were *performance goal oriented* with low confidence would probably often avoid learning new information to avoid feeling inadequate.

However it was Smiley and Dweck's (1994) *learning goal orientation* that could assist children to produce work at a higher level as this goal orientation means the person aims to acquire new skills and therefore chooses challenging tasks (Smiley & Dweck, 1994). Thus, *learning goal orientated* people are constantly challenging themselves.

This section on underlying perspectives has addressed educational concerns for 'average' children that relate to some Gifted children with ADHD. In the literature review that follows the focus in on literature specifically written on the Gifted, those with ADHD and the Gifted with ADHD. Chapter 2 addresses Gifted literature and Chapter 3 looks at ADHD. Gifted and ADHD are the focus in Chapter 4. Chapter 5 presents the rationale of this study and Chapter 6 the methodology. Chapter 7, 8 and 9 relate results and discussions of findings, Chapter 10 considers the implications of the study and the conclusions.

2 Chapter 2: Gifted

2.1 Introduction

This chapter will briefly outline some key Gifted literature that relates to this thesis. This literature relates to the New Zealand definition of the Gifted and talented and a brief history of New Zealand's educational policies for the Gifted and talented. Then two key questions relating to this thesis are addressed, what are some social and emotional issues that relate to the Gifted and Talented? and what are some educational strategies that have been suggested for the Gifted and Talented?

2.2 The New Zealand definition of the Gifted and talented

The current New Zealand definition of Gifted and Talented students is that "gifted and talented learners are those with exceptional abilities relative to most other people. These individuals have certain learning characteristics that give them the potential to achieve outstanding performance" (MOE, 2002, p. 2)

The New Zealand definition appears to be general (e.g., it refers to exceptional abilities relative to most other people) which can have both positive and negative implications. However, it is the positive implications which seem to dominate. For example, because the New Zealand definition is general it means schools can modify and adapt the definition so it fits more closely with their school ethos (Moltzen, 2004a). It seems the definition is like the MOE handbook *Gifted and talented students: Meeting their needs in New Zealand schools* (MOE, 2000) in that it is a guide rather than directive (Moltzen, 2004a). This directive appeared to have been developed after much change in Gifted educational policy.

2.3 A brief history of some of New Zealand's educational policies for the Gifted and talented

Reflecting on the history of Gifted education Moltzen (2004a) referred to how there had been many small changes up until the dramatic changes in 1989 that occurred

when the fourth Labour Government was in power (Moltzen, 2004a). It was at this time that the Picot Taskforce and Tomorrow's Schools (Lange, 1988, cited in Moltzen, 2004a) reform occurred. This meant schools had more autonomy and were each individually expected to provide for able children (Moltzen, 2004a). Another significant aspect of this reform was that it involved the community in consultation and hence allowed parents to express their views relating to how their school was catering for the Gifted and Talented (Moltzen, 2004a). This meant schools became a place where parents could have a voice.

The further changes that occurred between 1996 and 2002 could have been initiated by the "…establishment in 1997 of a Ministry of Education Advisory Group on Gifted Education" (Moltzen, 2004a, p. 15). The advisory group used the word *Gifted* as prior to this the Gifted had been referred to as *Students* (or) *Children with special abilities* (Moltzen, 2004a). The terminology was changed to the Gifted but it seemed it was difficult to convince the Ministry that there should be a national policy for Gifted children's education (Moltzen, 2004a).

Nevertheless, the establishment of the advisory group also appeared to lead to the publication of *Gifted and talented students: Meeting their needs in New Zealand schools,* (MOE, 2000), a guide for teachers on how to provide for the Gifted and Talented (Moltzen, 2004a). There was also a Gifted and Talented Community placed on TKI (Te Kete Ipurangi, an online resource for teachers) so specific strategies could be suggested from the guide (Moltzen, 2004a). The publication of the Ministry of Education (2000) book meant professional development was necessary. To begin with this was for 12 months, but due to popularity it was decided that advisors for the Gifted were necessary (Moltzen, 2004a).

In 2001 a Working Party in Gifted Education was established to answer three key questions surrounding issues such as the principles that should support educational provision for the Gifted and talented (Moltzen, 2004a). The three questions resulted in five key tasks such as investigating local and international literature on students' outcomes to find the 'best practice' (Moltzen, 2004a).

> The working party called for submissions from interested individuals and groups, consulted with an advisory group established by the Minister of Education to guide the working party, and on 30 November 2001 submitted their report to the Minister of Education. (Moltzen, 2004a, p. 18)

The report was entitled *Report of the Working Party on Gifted Education* and this led to the Ministry of Education booklet *Initiatives for Gifted and Talented Learners* (2000). "The booklet spells out the Government's gifted education policy (p. 2) and includes implementation of the majority of the working party's recommendations…" (Moltzen, 2004a, p. 19). Some of these suggestions included, funding, professional development, more Gifted advisors, a booklet for parents, pre-service training, and the development of a National Administration Guideline (NAGs) (Moltzen, 2004a).

The National Administration Guidelines (NAGs) recognised the Gifted and talented in 2005 (MOE, 2007a). There are six NAGs, one of which (NAG 1-III) was modified with a footnote to include Gifted and talented learners (which took effect in Term one of 2005) (MOE, 2007a). This amendment related to using good quality assessment to identify students and groups of students including those who were not achieving, who are at risk of not achieving or who have special needs (MOE, 2007a). The footnote, regarding the Gifted and talented, was added to this last group (those which special needs) (MOE, 2007a).

The NAG 1-III footnote was highly significant as it was the first time in New Zealand it was mandate policy for the Gifted and talented to be recognised, and acknowledged in 'normal' schools (MOE, 2007a). This was because the National Administration Guidelines (NAGs) are "…statements of desirable principles of conduct or administration for specified personnel or bodies" (MOE, 2007a, para. 1). It also meant the Education Review Office (ERO)[5] could now look into how schools were recognizing their Gifted and talented students as teachers were responsible for utilising effective educational strategies for the Gifted. This thesis will assist teachers

[5] Any further references to The Education Review Office will be referenced as ERO.

as it identifies effective educational strategies for a group of Gifted children, the Gifted with ADHD.

2.4 What are some social and emotional issues that relate to the Gifted and talented?

It is not within the scope of this thesis to address the vast amount of literature that relates to both the Gifted and their social and emotional abilities or issues. Thus, 2.4 will very briefly address what is specifically relevant to this thesis, that is, some of the literature that addressed the issue of whether the Gifted have social and emotional issues.

The Ministry of Education (2002) initiatives indicated that Gifted children's social and emotional issues should be addressed. This could be because, many Gifted writers suggested Gifted children have social and emotional difficulties (Johnson, 2000; Lovecky, 1994a; MOE, 2000). In contrast, some writers argued that the Gifted were not more likely to have social difficulties and that their Giftedness could act as a protective factor (e.g., Neihart, 1991).

Lovecky (2004), the Ministry of Education (2000) and Winner (1996) argued that when intelligence increased so too did social and emotional issues. These writers implied that the exceptionally Gifted were more likely to have social and emotional problems. However, Garland and Zigler (1999) conducted a study with 191 children aged 13 to 15 years that found "…the most highly gifted of the group tended to exhibit fewer problems than the moderately gifted" (p. 41).

Gross (2002) argued the exceptionally Gifted were not more likely to have social and emotional difficulties. Although she did acknowledge Gifted children could have social and emotional issues (e.g., peer rejection) she suggested they arose "…*not* out of their exceptional intellectual abilities, but as a result of society's response to them" (p. 25, emphasis in the original).

The perspective that exceptionally Gifted children have social and emotional difficulties could be based on old research such as that conducted by Hollingworth (1942, cited in Garland & Zigler, 1999). Hollingworth "…proposed the concept of 'optimum intelligence,' and suggested that a certain range of intelligence is optimal for a child's personal happiness and adjustment to society…[however]…beyond this range there is a risk of psychosocial isolation" (1942, cited in Garland & Zigler, 1999, para. 3).

Gifted children's difficulties with social and emotional issues could relate to Dabrowksi's overexcitabilities as the overexcitabilities are clearly linked to the Gifted. Flint (2001) maintained most Gifted children have overexcitabilities. Lind (2000) stated "a small amount of definitive research and a great deal of naturalistic observation by professionals, have led to the belief that intensity, sensitivity, and overexcitability are primary characteristics of the highly gifted" (p. 45). Mendaglio and Tillier (2006) stated those who have higher abilities (e.g., those who were Gifted in an area such as music) and a strong drive to be individualistic often exhibit strong overexcitabilites.

The five overexcitabilities included (psychomotor, sensual, intellectual, imaginational and emotional). There is an obvious link between emotional overexcitability and emotional and social issues (e.g., extreme feelings). Although, Mendaglio and Tillier (2006) indicated other overexcitabilities could relate to emotions. For example, the impulsivity of movement that is characteristic of psychomotor overexcitability could result from emotional tension (Mendaglio & Tillier, 2006).[6]

Lysy and Piechowski (1983 cited in Silverman, 1994) suggested those who had stronger overexcitabilites were more likely to become ethical adults and reach the higher of the five levels within Dabrowski's Theory of Positive Disintegration (1964, 1967, 1972, cited in Silverman, 1994). White (2004) indicated very few people related to these higher levels, possibly because the higher levels require an individual to move beyond their biological 'urges' and "some of the cohesiveness with which

[6] The overexcitabilities will be discussed in further detail in 4.5.2 within the Gifted/ADHD chapter. Although this is not to imply all children who exhibit Dabrowski's overexcitabilities have ADHD.

his or her psyche maintains its sense of meaning and purpose in life, and for a time allow the disintegration of the old structure" (p. 29) resulting in a new personality being developed at a higher level.

Thus, because it is often only few who reach the higher levels within Dabrowski's Theory of Positive Disintegration (1964, 1967, 1972, cited in Silverman, 1994) and those who reach these levels are probably Gifted and it is the Gifted who relate to overexcitabilities it could mean a Gifted child is socially and emotionally different to other children. This links to Moltzen (2004b) who maintained that Gifted children have a heightened sensitivity and emotional intensity.

Guevremont's (1990, cited in Lovecky, 2004) indicated social difficulties could result in difficulties interacting with others (e.g., Gifted children may play with younger children as they can boss them around). Winner (1996) suggested if Gifted children may have social difficulties as they feel different and can only associate with 'like minded' peers. Thus this thesis is going to investigate the social experiences of Gifted children with ADHD to see whether they too had social difficulties, and as Winner (1996) indicated, they could benefit from finding a 'like minded' peer.

2.5 What are some educational strategies that have been suggested for the Gifted and talented?

There are many Gifted and Talented educational strategies (e.g., extension, early entry, Individualised Education Plans). The focus of this section was to address some Gifted education strategies that could be carried out in the 'normal' classroom as Moltzen (2005a) indicated the 'normal' classroom is where Gifted children spend most of their time and the NAG 1-III footnote (MOE, 2007a) requires Gifted children to be acknowledged in New Zealand schools. Thus, strategies that are carried out in the inclusive classroom are significant. The inclusive strategies addressed in this section include, differentiation and enrichment.

2.5.1 Differentiation

Riley, Bevan-Brown, Bicknell, Carroll-Lind and Kearney (2004) conducted research that was commissioned by the Ministry of Education in 2003 which included a review of Gifted literature, a survey of around half of New Zealand's schools (which involved investigating policy, identification and provision for Gifted and talented students) and ten case studies of New Zealand schools. Riley et al. (2004) suggested New Zealand teachers preferred a combination of enrichment and acceleration. Townsend (2004) described the two terms, he described accelerated learning as being related to learning instruction that aligns with readiness while enrichment supplied breadth and depth to normal instruction for the individual. The Ministry of Education (2000) suggested enrichment and acceleration related to differentiation, they stated:

> Differentiation for Gifted and talented students means movement both horizontally and vertically from the usual curriculum. It is about expanding horizons and shattering glass ceilings. In Gifted education, this is referred to as enrichment or acceleration. (MOE, 2000, p. 37)

2.5.2 The Enrichment Triad Model

The Enrichment Triad Model (ETM) is addressed here as it appears to be favoured by New Zealand teachers as an appropriate model for enriching the classroom environment for the Gifted who are within the regular classroom (MOE, 2000). The ETM's development began in 1977 (Renzulli & Reis, 1985). Renzulli's (1977) ETM curriculum model consists of three types of enrichment which involve a flow of movement between them. These three components are type I, II and III. Renzulli (1977) described how type I tasks should relate to a children's interests and learning styles. The tasks should also involve little structure so learners can explore different activities which could be developed into type III (addressed in a following paragraph).

Type II relates to group training activities. This type relates to the children learning processes of operation that assist them to address content. Some of these processes could include, problem solving, inquiry training or divergent thinking and other high level thought processes. Renzulli (1994) indicated these skills should be taught to children within the regular classroom and those within enrichment clusters.

Rawlinson (2005) stated "type III investigations aim to empower the learner because the child has a major role in planning and designing his/her personal research" (p. 64). Type III is entitled individual and small group investigations of real problems. This is when the learner "…becomes an actual **investigator** of a **real** problem or topic by using appropriate **methods of inquiry"** (Renzulli, 1977, p. 29, emphasis in the original). The Ministry of Education (2000) described how Type III involved the Gifted and Talented learner becoming a producer rather than a consumer of knowledge. Renzulli (1994) suggested that it was the interaction between the three types (e.g., I, II, III) that is significant because if the three types are pursued independently the 'dynamic properties' cannot be achieved. (See Appendix A for a visual representation of the ETM model). Renzulli (1999) indicated the 'dynamic properties' related to what can occur when people find a topic of study they are particularly interested in. These 'dynamic properties' are evident in the Schoolwide Enrichment Model (SEM).

2.5.3 Gifted and talented models of enrichment: The Schoolwide Enrichment Model (1985)

This section briefly addresses Renzulli and Reis's Schoolwide Enrichment Model, SEM (1985). This chapter does not have the scope to address SEM in detail; however a brief overview of some key components relating to this thesis (e.g., the Total Talent Portfolio is provided). To view the whole SEM model see Appendix A.

Riley (2004a) referred to how the SEM was developed from research instigated from the ETM (see 2.5.2) and the Revolving Door Identification Model (RDIM). The RDIM was developed in 1981 by Renzulli, Smith, and Reis (1981, cited in Renzulli, 1999). Renzulli (1999) suggested the RDIM was developed to explain his beliefs

such as the three ring model of Giftedness (that indicated Gifted children should have above average ability, task commitment and creativity). The RDIM relates to creating a talent pool of above average ability students and providing these students with enrichment experiences relating to the ETM (Renzulli, 1999). Renzulli (1999) indicated the response children have to Type I and II could indicate whether they should 'revolve' into Type III, more intensive enrichment within the SEM.

The SEM is:

> Designed to provide an organisational plan for talent development, with maximum utilisation of both regular classroom teachers and enrichment specialists who deliver a differentiated core curriculum, a myriad of enrichment learning and teaching opportunities and a continuum of special services, particularly aimed at gifted and talented students. (Riley, 2004a, p. 317)

These Gifted and talented student's education could be addressed within three school structures, these included, the *regular classroom, enrichment clusters or a continuum of special services* (Renzulli, 1994). Renzulli (1994) referred to three main changes that could occur in the *regular classroom* in order to incorporate enrichment. As indicated in 2.5 this chapter focuses on inclusive educational strategies for the Gifted.

One modification that could occur within the regular/inclusive classroom included differentiation of levels of challenge (e.g., content intensification). This referred to removing already mastered content and replacing it with more in-depth learning that should relate to student interest (Riley, 2004a). The reference to more depth seems to relate to the MOE (2000) definition of differentiation that included enrichment that involves depth. The last inclusive suggestion is to utilize The ETM to enrich teaching and learning (which was previously described) (Renzulli, 1994). As well as inclusive enrichment methods Renzulli (1994) also referred to schoolwide *enrichment clusters* that were designed for children who were 'non graded' to come together to pursue a shared interest.

Renzulli (1994) also referred to The Total Talent Portfolio (TTP). The The Total Talent Portfolio could be carried out in the normal classroom. The TTP involved a teacher finding out about Gifted children's abilities, interests and style preferences (including, instructional, learning environmental, thinking and expression) (Renzulli, 1994). Riley (2004a) indicated that the TTP was highly individualized guide to appropriate education (e.g., enrichment clusters or differentiated regular curriculum). Renzulli and Reis (n.d.) described how the TTP was particularly useful for children who had "…limited English proficiency, economically limited circumstances, attendance at poor-quality schools, or because they just learn in a different way from the majority" (p 7). For further detail see Appendix A.

2.6 Chapter summary

After a lot of educational change in New Zealand (e.g., NAG 1-III) the Gifted and talented situation in New Zealand seems quite positive. We have a definition that is quite general that allows schools to modify and adapt it to fit their school's ethos. This effectively means different schools can cater to the Gifted in different ways.

Riley et al. (2004) conducted research regarding teachers' education in Gifted and talented education and found teachers in New Zealand preferred a combination of acceleration and enrichment (which the Ministry of Education indicated links to differentiation). This chapter could have addressed various kinds of enrichment models but chose to address the ETM as it seems to be favoured by New Zealand teachers. The SEM was also referred to as particular components could be carried out in the inclusive classroom. Nevertheless, what could be preferred by the teachers may not always be what is most effective for the children.

Although Riley et al. (2004) identified New Zealand teacher's preferred educational strategies for the Gifted and other writers (e.g., Moltzen, 2004b) maintained the Gifted have social and emotional difficulties, this study will investigate whether Gifted children with ADHD have social difficulties that are associated with the Gifted

and identify what effective educational strategies Gifted children with ADHD prefer and thus find effective.

3 Chapter 3: ADHD

3.1 Introduction

This chapter will address the areas of ADHD which relates to this thesis. These include the New Zealand definition of the term disability (as those with ADHD could be considered to have a disability), a brief history of educational policy development for children with disabilities (including those with the New Zealand Definition of ADHD) and lastly two key questions that relate to this thesis. These include, what are the social and emotional issues related to ADHD? and what are some educational strategies that have been suggested for those who have ADHD?

3.2 The New Zealand definition of the term disability

In chapter one I noted that Gifted children with ADHD could be considered a specific group within those classified as Gifted with Learning Disabilities (GLD). However, the Ministry of Health (2001a)[7] definition of disability is an important reminder that the focus has moved from seeing deficits within the learner to recognising structural and organisational barriers within schools and learning communities (O'Brien & Ryba, 2005). The Ministry of Health (2001a) stated:

> Disability is not something individuals have. What individuals have are impairments. They may be physical, sensory, neurological, psychiatric, intellectual or other impairments. Disability is the process which happens when one group of people create barriers by designing a world only for their way of living, taking no account of the impairments other people have. (p. 1)

Nevertheless, as Neilson suggested "as we move into the 21st century the definition [of disability] continues to be contentious…" (Neilson, 2005, p. 18).

[7] From here on the Ministry of Health documents will be referenced as MOH unless part of the body of the text e.g., the Ministry of Health (2001a) stated.

3.3 From exclusion to inclusion, a brief history of educational policy development for children with disabilities

Prior to 1989 children with moderate to profound disability were discouraged from receiving stated funded education. However, The New Zealand Education Act (1989) was amended to allow all children who were disabled the right to be taught in mainstream classrooms with free education for five to nineteen year olds (Education Act, Section 8, cited in O'Brien & Ryba, 2005).[8] This meant teachers had to educate children with a wide range of special education requirements.

The Special Education 2000 policy[9] is possibly the next most significant policy change in New Zealand that related to those with ADHD. This is because the Ministry of Education (2003) book entitled *Attention Deficit Disorder/Attention Deficit Hyperactivity Disorder: A resource for teachers* referred to three initiatives from the Special Education 2000 policy. These initiatives included Behaviour Education Support Teams (BEST) (a team that works with students who have severe behavioural challenges), Special Education Grant (SEG) (a grant provided to schools for children with moderate educational difficulties) and Resource Teachers: Learning and Behaviour (RTLB). O'Brien and Ryba (2005) described how RTLBs are "…specially trained teachers who support and work within school settings to meet the needs of students with moderate learning and/or behavioural difficulties" (p. 30), such as those with ADHD.

Mentis, Quinn and Ryba (2005) suggested the Special Education 2000 policy recognizes that all students have the right to learn in the mainstream however, inclusion requires modification to mainstream educational practice and social practice because for a school environment to be inclusive it requires shared values and beliefs

[8] This was believed to have occurred due to the United States of America Education for All Handicapped Children Act (1975, cited in O'Brien & Ryba, 2005, p. 24).
[9] The "*Special Education 2000* policy is one that is characterised by interlocking parts aimed to meet the needs of a diverse range of students" (Mitchell, 2000, as cited in O'Brien & Ryba, 2005, p. 27) within three varying levels of learning difficulties, including, combined moderate, high or very high (O'Brien & Ryba, 2005).

regarding equity and access for all (e.g., collaboration between the team of people who may assist children where appropriate). This collaboration could be required when developing Individual Education Plans (IEPs). The Ministry of Education (2007b) stated that an IEP has various meanings (e.g., that it is a cyclic process of planning, providing and evaluating).

Overall, teachers have the responsibility to find appropriate educational strategies for children with disabilities and this thesis will assist teachers by identifying some effective educational strategies for Gifted children with ADHD.

3.4 The New Zealand definition of ADHD

The New Zealand guidelines for the assessment and treatment of Attention-Deficit/Hyperactivity Disorder (MOH, 2001b) suggested the *DSM-IV-TR* (APA, 2000 cited in MOH, 2001b) criteria for ADHD must be met in order for a diagnosis of ADHD to occur. Part of the requirement for the *Diagnostic and statistical manual of mental disorders-text revision* (American Psychiatric Association, 2000) [10] to diagnose a subcategory (either inattention or hyperactivity) is that six out of nine criteria need to be met. One example of inattention is "often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities" (p. 92). An example of hyperactivity is "often fidgets with hands or feet or squirms in seat" (p. 92). A requirement for diagnosing the combined ADHD sub-type is if both inattentive and hyperactive criteria are met.

In order to be diagnosed as having ADHD other criteria has to be met. This included, that the characteristics were present before the age of seven, impairment from the symptoms were present in two or more settings (e.g., home and school) and there must be clear evidence of clinically significant impairment in their academic, social or occupational functioning. If these criteria are not met (e.g., the behaviour onset occurred after the age of seven) a person can be diagnosed as Attention-

[10] From here on the *Diagnostic and statistical manual of mental disorders-text revision* (American Psychiatric Association, 2000) will be referenced as *DSM-IV-TR* (APA, 2000) according to APA guidelines.

Deficit/Hyperactivity Disorder Not Otherwise Specified (see Appendix A for further details).

There are distinct differences between the predominant inattentive and hyperactive/impulsive subtypes. However, a significant amount of literature appeared to use the terms ADHD and ADD (often related to those who are predominantly inattentive) loosely and did not define subtypes of ADHD. This is significant as it can confuse the reader about which literature relates to the subtype of ADHD they are investigating. Although writing that occurred in or before 1994 could be excused for using the term ADD when referring to children who exhibit what are now recognised as ADHD tendencies as it was only in 1994 that further research led the *DSM-IV* (APA, 1994) to distinguish between the predominant subtypes of ADHD, inattention and hyperactive/impulsive.

Regardless of this apparent lack of clarity between the terms ADD and ADHD, many writers (e.g., Armstrong, 1999; Carbone, 2001; Fielding, 2005; Puri, 2005) and researchers (e.g., Carlson, Booth, Shin & Canu, 2002; DuPaul & Weyandt, 2006; Nowacek & Mamlin, 2007) appeared to agree with *DSM-IV-TR* (APA, 2000) definition and have referred to the three main characteristics of ADHD being inattention, hyperactivity or a combination of these symptoms.

However, some writers (e.g., Adler, Barkley, Wilens, Ginsberg, 2006; Barkley, 1997; Douglas, 2005) are now investigating whether these are the primary characteristics of ADHD. As previously indicated in 1.2 Barkley (2003) has argued that the primary characteristics of ADHD are actually 'poor inhibition and deficient executive functioning (self regulation)'. Barkley (1997) indicated executive function difficulties could relate to social and emotional problems (e.g., difficulty interacting in a group).

3.5 What are the social and emotional issues related to ADHD?

Many writers (e.g., Carlson & Maedgen, 2000; Carpenter, 2002; Farrell, 2006; Finzi-Dottan, Manor & Tyano, 2006; Gnezda, 2005; Landau & Mangione, 2004; MOH, 2001b) referred to the emotional social and interpersonal difficulties many children with ADHD face. Most writers (e.g., Jensen, 2005; Leroux & Levitt-Perlman, 2000; Zentall, 2006) argued that children with ADHD often had difficulty with anger and frustration which meant they did not have positive social interactions. The Ministry of Education (2003) also implied this as it referred to assisting children who have ADHD with developing skills for recognizing and coping with anger and learning how to relate to others.

Scime and Norvilitis's (2006) study found children with ADHD were more likely to report becoming frustrated with the task and although they tended to spend the same amount of time (as the control children who did not have ADHD) completing an activity they were more likely to quit the activity before completion. This implied the children with ADHD had spent the same amount of time as the control group but unlike the control group had not completed the task and chose to quit. This could indicate that the children with ADHD in Scime and Norvilitis's (2006) study may have benefited if they had support to continue with the task as Webb, Amend, Webb, Goerss, Beljan, and Olenchak (2005) suggested children with ADHD have difficulty going back to a task once they have stopped.

In addition to issues with frustration, some writers (Flint, 2001; Leroux & Levitt-Perlman, 2000; Paasche, Gorrill & Strom, 2004) indicated that children with ADHD can have low self esteem and suffer from depression. Kratochvil, Wilens and Upadhyaya's (2006) also maintained that the children with ADHD in their study felt 'down at times.' However, it could be argued that this is the case for most people.

Another negative implication related to ADHD was suggested by Heiman (2005) who found their participants with ADHD did not express more feelings of loneliness or report problems in social relationships. However, Heiman (2005) stated the children

with ADHD could have perceived themselves as having more friends than was true, which could relate a lack of social understanding.

Carlson and Maedgen (2000) warned that we should be careful not to make generalizations about all children with ADHD. This is because Carlson and Maedgen (2000) found different subtypes of ADHD were related to different social difficulties. This is significant because, as previously suggested, it has been indicated that most children with ADHD have anger and frustration issues and often have low self esteem. However, this could be an overgeneralization as different subtypes of ADHD (e.g., predominantly inattentive) may only relate to some of these negative emotional characteristics (e.g., anger). Although, Carlson and Maedgen (2000) did find the participants in their study who had combined type ADHD exhibited more aggressive behaviour. It is possible that this behaviour could be addressed using appropriate educational strategies (e.g., teaching them to go and work on a task alone until their anger had subsided).

3.6 What are some educational strategies that have been suggested for those who have ADHD?

3.6.1 Introduction

This literature review supported Armstrong (1999), DuPaul and White (2006) and DuPaul and Weyandt's (2006) claim that there is very little recent research on educational strategies as ADHD literature seemed to focus on medication preventing the misbehaviour or on medication and behavioural interventions (DuPaul & White, 2006). In addition, some literature (e.g., DuPaul and Eckert, 1997) referred mostly to older research (e.g., from 1975 and 1983), although they did refer to some more recent research of their own (DuPaul & Eckert, 1997, cited in DuPaul & Eckert, 1997).

Nevertheless most literature appeared to refer to strategies such as assisting children with ADHD to avoid distraction. One method that could prevent distraction was

moving the child's desk to the front of the class, so the child can focus his/her attention (Cook, 2005; Farrell, 2006; Fielding, 2005; United States Department of Education, 2006). Another method was to get the child with ADHD to face the wall (e.g., Carbone, 2001; Farrell, 2006), so he/she was not distracted by other children. In addition, Carbone (2001) suggested children should not sit near windows but in row formation and that items such as 'flashy' bulletin boards should be removed. Preventing distractions were also evident in the MOE (2003) guidelines, where it referred to removing objects that seem to distract.

Assisting children with ADHD to avoid distractions seems to relate to the historical view of Strauss's syndrome which maintained children who had minimal brain damage (which was what ADHD was formally known as) had to be in rooms where walls were plain, windows were covered and the child's work materials had the pictures cut out and were placed on white paper (Farnham-Diggory, 1978). Although, some classroom teachers appear to derive some current classroom practices from this perspective (e.g., no hanging mobiles) this seems somewhat extreme for today's classrooms. In contrast, 3.6.2 is going to address behavioural interventions and an antecedent-based strategy which was evident in many pieces of literature.

It should be noted that Dr George DuPaul is a Professor at Lehigh University Pennsylvania, America (Lehigh University, College of Education, 2008) and is a prominent writer regarding ADHD and thus is referred to at many times throughout the following section.

3.6.2 Educational strategies

DuPaul and White (2006) suggested along with medication, a combination of antecedent and consequent events were the most effective educational strategies for children with ADHD. According to DuPaul and White's (2006) definitions of consequent events and antecedent based strategies token economy[11] could relate to

[11] Flick (1998) maintained token economy was a behavioural system where specific behavioural goals are set and if met the child receives tokens that, once a defined amount has been reached, result in rewards. Although Flick (1998) indicated punishment resulted in loosing tokens.

both. This is because token economy includes both antecedent-based strategies as it involves rewards (where children earn tokens for good behaviour or work) and consequent events as it involves response cost (where points or rewards are taken away).

DuPaul and Eckert (1997) suggested that other than medication token economy was the most studied 'treatment' for ADHD, although they then only referred to one recent study (DuPaul & Eckert, 1997). Nevertheless, researchers (e.g., Carlson, Mann & Alexander, 2000; Farrell, 2006; McGoey & DuPaul, 2000) and writers (e.g., Carbone, 2001; Farrell, 2006; Murphy, 1997) indicated the *token economy* strategy was successful in reducing disruptive behaviour.

Although earning tokens may be a behavioural strategy rather than an educational one Carlson, et al. (2000) study, of 40 children with ADHD and 40 controls, found response cost was highly effective in relation to improving accuracy of work (rather than quantity) when completing an arithmetic task. They also suggested that the children with ADHD in their study chose to do more mathematics tasks in the second half of a task (the second half being significant as they indicated it meant it was not due to novelty) (Carlson, et al., 2000). Although Carlson et al. (2000) maintained it was in the reward condition (e.g., no response cost) where the children were motivated to complete the task again. Thus this indicated that response cost appeared to lead the children with ADHD in Carlson et al. (2000) study to complete work more accurately but it was rewards that seemed to motivate them to complete the same tasks again (e.g., repeat). It is questionable what type of repetition requires rewards to motivate these children. This is because although a child may not have to complete the exact task (e.g., a mathematics task) again but repetition may still occur in the classroom (e.g., a child may have to complete a mathematics session, possibly at the same time each day). If a child with ADHD viewed repeating the same topic as repetition, Carlson et al. (2000) findings suggested they may need a reward (e.g., from token economy) for self motivation.

However, Cook (2005) maintained token economy's response cost could be harmful to children with ADHD. Cook (2005) indicated that a child's ADHD could mean they have been constantly demoralized and response cost could cause a very negative reaction (Cook, 2005). So initially Cook (2005) suggested response cost should not be implemented. Although, the child with ADHD could have a negative reaction due to many reasons not associated with demoralization (e.g., they may simply may not like loosing a reward). It is possible that token economy (including response cost) is simply not appropriate for their individual learning style. It will be interesting to see whether the children in this study find rewards appropriate for their individual learning style.

Other educational strategies may be more appropriate for some ADHD children. Many other writers (e.g., Cook, 2005; Fielding, 2005; United States Department of Education, 2006) and researchers (e.g., DuPaul & Weyandt, 2006; Nowacek & Mamlin, 2007; Zentall et al., 2001) referred to educating children with ADHD about strategies of self management (e.g., planning their own assignments). This was evident in Zentall et. al's (2001) findings that indicated it was more effective for children to break down their own assignments with the teacher providing checkpoints along the way. If a child with ADHD is able to self manage their own learning they may not have to rely on educational strategies such as token economy.

3.6.3 Stimulation

This section will address some of the ADHD literature that suggested children with ADHD may focus better when stimulated. This implied stimulation may be an effective educational strategy for those with ADHD. Thus, this section will address Zentall's (2006) optimal stimulation theory (underarousal theory) and Brown's (2007) reference to motivation through interest and hyperfocus. Although it should also be noted that the Ministry of Health (2001b) maintained central nervous system stimulants (e.g., methylphenidate or dexamphetamine) 'raise the activity' or stimulate parts of the brain. Ministry of Health (2001b) also stated that combined treatment (e.g., medication and behavioural treatment) is better than simply behavioural

treatment. However, this thesis is not focusing on medication and thus will not address stimulation from medication in any more detail.

Zentall's (2006) optimal stimulation theory (underarousal theory) was originally meant as a "…general explanation of the activities of all organisms" (p. 50) but in 1975 it was applied to children who had ADHD (Zentall, 1975, as cited in Zentall, 2006). Zentall (2006) referred to how many children with ADHD often exhibit attention problems such as a short attention span and selective focus, although, when stimulated appropriately these behaviours should decrease. He stated:

> …individuals with ADHD will need additional stimulation earlier than others. Students with ADHD have been described as the 'canaries' in the mines. Canaries were set into cages in mines and used as a signal (e.g., by dying) to warn miners that insufficient oxygen was present. (Zentall, 2006, p. 51)

If children who have ADHD are canaries and are more perceptive to lack of stimulation than other children it is possible they will attempt to self stimulate earlier than others (that could often relate to inappropriate behaviour). This is why it is important to "teach students to appropriately self-generate stimulation" (e.g., changing topics of thought) (Zentall, 2006, p. 52) although, Zentall (2006) also recommended that tasks could be made more stimulating by using such strategies as increasing novelty in rote tasks. Although, Zentall (2006) also warned not to over stimulate a child with ADHD (e.g., by giving them a lot of stimulation at once), he suggested they could see this as a feast as they have been previously starved (Zentall, 2006). Further explanation does not appear to be given.

Although Zentall (2006) recommended that children with ADHD should not be under or over stimulated. Brown (2007) stated:

> all [those with ADD] seem to have a few specific activities in which they can focus well and for long periods of time. Yet they have difficulty focusing on many other tasks that they recognize are important and that they want to do well, such as completing an essay or preparing for a major exam. (p. 26) [12]

[12] It should be noted that although Brown (2007) referred to children with ADD he stated in his article that he had used the term ADD and ADHD interchangeably.

Brown's (2007) example of this was a student who was a hockey goalie who could not focus in class but he had the ability to focus for long periods of time watching the hockey puck throughout a game. Thus, Brown (2007) has suggested that many people who have ADD/ADHD have an interest area they can focus on over a period of time which appears to relate to hyperfocus.

Some writers (Baum & Owen, 2004; Lovecky, 2004) indicated hyperfocus related to ADHD. Baum and Owen (2004) referred to hyperfocus as "…excessive engagement in tasks that are interesting and have intrinsic value" (p. 62). Brown (2000b cited in Lovecky, 2004) agreed as he stated that a keen interest could make a person with ADHD hyperfocus. Conversely, a dislike of the task could result in a negative response (Brown, 2000b cited in Lovecky, 2004) such as a child focusing on being stuck (Lovecky, 2004; Webb et. al., 2005).

Although Flint (2001) implied he viewed hyperfocus as a positive trait Baum and Owen (2004) suggested hyperfocus can be wrongly confused with flow (Csikszentmihalyi, 1990, cited in Baum & Owen, 2004). Baum and Owen (2004) suggested that hyperfocus was only the ability to maintain attention in an area of interest (Baum & Owen, 2004). In contrast flow related to the ability to maintain attention in areas of interest but also in the ordinary (Baum & Owen, 2004). Csikszentmihalyi (1996) referred to flow as a state when a person finds a task challenging enough to lose all sense of time and feel at one with the world and is often associated with creativity.

It may be possible for Gifted children with ADHD to show their strengths when they hyperfocus in an area of interest as hyperfocus implies that children with ADHD can show persistence when the task relates to their interest and they are stimulated. It is possible that this also relates to an intrinsic motivation to continue with a task due to enjoyment. Flint (2001) stated "hyper-reactivity in the minds of people with ADHD is amazing to behold. The ideas come and come, changing from one topic to another with an awesome rapidity and proliferation" (Flint, 2001, p. 65).

3.7 Chapter summary

The New Zealand ADHD criteria is taken from the *DSM-IV-TR* (2000) which maintained there were three sub-types, inattentive, hyperactive/impulsive and combined. Furthermore, the American Psychiatric Association (2000) and the Ministry of Health (2001b) implied there were three main characteristics of ADHD, including, inattention, hyperactivity and impulsivity. However, Barkley (1997) argued the main characteristics of ADHD could be 'poor inhibition and deficient executive functioning (self regulation).'

Children with ADHD and executive functioning difficulties should now be taught in mainstream classrooms as those with disabilities are no longer repressed by political structures. Nevertheless, children with ADHD may be segregated (e.g., separated from other children in the classroom in order to avoid being distracted). Furthermore, children with ADHD could have negative social and emotional characteristics (e.g., anger) that indicated they could segregate themselves from children of the same age. It is possible that children with ADHD are angry or frustrated for a reason (e.g., because it takes them longer to complete tasks, or they have difficulty with social interactions). However, as Carlson and Maedgen (2000) suggested, it could be an overgeneralization to describe all children with ADHD as often being angry as this does not recognize the varying sub-types variations, let alone individuality.

As well as addressing social and emotional issues teachers should utilize effective educational strategies for children with ADHD. This literature review recognized some commonly held views regarding the education of children with ADHD. These included how they can be distracted and that this can be prevented through such educational strategies as placing them at the front of the class (which seemed to be derived from Strauss' syndrome). Another common educational strategy for children with ADHD appeared to be token economy, where children earn rewards and their consequences for bad behaviour is to loose them (response cost). Although some suggested this educational strategy may not be effective for all children (Cook, 2005).

What does seem a more appropriate educational strategy is to assist children with ADHD to become self managed (e.g., plan how to carry out their own assignments) and self stimulated (e.g., to change topics of thought) rather than to negatively self stimulate by using inappropriate behaviour.

4 Chapter 4: Gifted and ADHD

4.1 Introduction

As indicated in the chapter one introduction, this chapter will address the main focus of this thesis which is Gifted children with ADHD. Giftedness combined with ADHD appears to be a new topic in the literature and the main issue addressed appears to be misdiagnosis. This misdiagnosis can occur for many reasons, the main ones including the similarity between Giftedness and ADHD characteristics, masking, Intelligent Quotient Tests (IQ tests), the environment and teachers' lack of knowledge. Each of these will be explained in further detail in this chapter.

As well as explaining some reasons why misdiagnosis can occur, some Gifted literature will be described as it appeared to have links to ADHD. The main links seemed to be, creativity, the Gifted who like to move, the Gifted who are not easy to teach and selective consumerism and underachievement.

This chapter briefly explores these issues to provide background to the topic, but the main focus of this thesis is to move beyond debate about misdiagnosis and to investigate the Gifted/ADHD literature on social and emotional experiences and effective educational strategies.

4.2 The history of Giftedness with ADHD

It was important in 3.3 to address past educational policies that relate to children with disabilities in order to understand how we came to have the current inclusive educational system. It is also significant to address the history of Giftedness and ADHD, as there are no New Zealand educational policies specifically for these children and thus literature on the Gifted with ADHD (rather than policies) could assist our understanding of where we have been in order to better understand where we are now.

The Gifted/ADHD literature appeared to begin around the late 1980s as the oldest publication this literature review found was Deirdre Lovecky's (1989) *Huh…? Attentional Problems in Gifted Children*. Lovecky's (1989) article suggested that the Gifted/ADHD literature has developed for nearly twenty years. Gates (2005) and Mendaglio (2005) further emphasised how the Gifted/ADHD topic is fairly recent as its current focus (suggesting many Gifted children are not Gifted with ADHD and are misdiagnosed as having ADHD) seems to relate closely to the initial stages of the GLD situation when people were questioning the combination of Gifts and disabilities.

The combination of Gifts and disabilities (GLD) was debated in the late 1970s and early 1980s. Gates (2005) indicated it was in 1975 that public were made aware of the twice exceptional issue by The Council for Exceptional Children (CEC) and the Association for the Gifted (TAG). Thus, it was around forty years ago when the GLD debate occurred while Gates (2005) and Mendaglio (2005) implied the Gifted/ADHD debate is still occurring (e.g., evident in Nelson, Rinn & Hartnett, 2006).

4.3 The current focus in the Gifted/ADHD literature

Upon initially skimming the literature on the Gifted with ADHD one could be forgiven for assuming that the constant references to misdiagnosis of Giftedness as ADHD (e.g. Bruzzano-Ricci, 2003; Cline & Schwartz, 1999; Kaufmann et al., 2000) indicate that many writers and researchers do not believe that it can co-exist. Particularly with statements such as "many authors and experts believe Gifted children are wrongly diagnosed with ADD or ADHD" (Nelson et al., 2006, p. 243) and "as a former special education teacher, I fear that the ADD/Gifted label is unjust, unfair, and over-done" (Delisle, 1995, p. 42).[13] Delisle (1995) appeared to suggest the label is unfair because children can use it as an excuse for not meeting their potential. Moreover, Delisle (1995) was concerned with the impact of the false

[13] Delisle's (1995) reference to ADD literature is referred to here because it appeared to relate to the loose use of the term ADD and ADHD as referred to in 3.4 of this thesis. This was evident when Delisle (1995) referred to a child with ADD needing to be calmed down, which is more likely to be a symptom of hyperactivity than inattention as defined by the *DSM-IV-TR* (APA, 2000).

labelling of Giftedness as ADD as it often means the 'real' problem, such as an inappropriate curriculum, is not addressed.

However, in contrast to Delisle's (1995) implication that many Gifted children are misdiagnosed as having ADD there is a case for considering that children can be both Gifted with ADHD. As previously mentioned in the introduction of chapter one many writers (e.g., Baum & Olenchak, 2002; Flint, 2001; Kaufmann et al., 2000; Leroux & Levitt-Perlman, 2000; Lovecky, 2004; Mika, 2006; Turk & Campbell, 2002) indicated they believed Giftedness and ADHD co-existed. Mendaglio (2005) stated "there is no reason why gifted children cannot also experience certain conditions or disorders that may afflict their non-gifted peers" (p. 58). In contrast Webb (2000) stated "some gifted children surely do suffer from ADHD, and thus have a dual diagnosis of gifted and ADHD; but in my opinion, most are not" (p. 5). However, in a later publication Webb et al. (2005) stated "Gifted children can-and do-suffer from ADD/ADHD" (p. 37). It is unclear why this change of opinion occurred as both publications do not seem to be based on research, although it is possible that when working as psychologist, in the five years between publications, he changed his opinion.[14]

Researchers including Gates (2005) Konza (1998) and Zentall et al. (2001) also indicated they believed in the coexistence of Giftedness with ADHD as they conducted research with participants who they suggested were Gifted with ADHD. Their research will be further explored in 4.11.2 (Konza, 1998) 4.11.3 (Zentall et al., 2001) and 4.11.4 (Gates, 2005) of this thesis. As Kaufmann and Castellanos (2000) suggested, if there was more empirical data it would encourage and facilitate methods of identification and appropriate curriculum suggestions (Kaufmann & Castellanos, 2000), which is what this study is investigating.

[14] Webb (2000) and Webb et al. (2005) publications did not seem to be based on research

4.4 Identification issues

4.4.1 Introduction

Identification issues that Gifted children with ADHD face are relevant to this thesis because along with misdiagnosis, identification issues are the focus in the current Gifted/ADHD literature as it seems it is the identification difficulties that lead to misdiagnosis. In addition, explaining the Gifted/ADHD identification issues emphasises the problems involved in diagnosing a Gifted child with ADHD.

Accurate identification of Gifted children with ADHD is important because the consequences of not identifying these children could mean they do not meet their academic potential. Guenther (1995) indicated once a child is negatively labelled it is unlikely the child will be seen as Gifted. This claim was supported by GLD literature that suggested negatively labelled children do not get their names put forward for programs due to educators focusing on their behaviour (Davis & Rimm, 1993; Reis & McCoach, 2002; Reis, Neu & McGuire, 1997).

There are many identification issues that relate to most Gifted children with ADHD. The main identification issues included the similarity between Gifted and ADHD characteristics, masking, Intelligent Quotient tests, the environment and teachers' lack of knowledge.

4.4.2 The similarity between Gifted and ADHD characteristics

Mika (2006) argued the characteristics of the Gifted and those with ADHD were quite distinct as those with ADHD have difficulties that the Gifted do not (e.g., self-regulation). Barkley (1997) also referred to how he believed self regulation was a main component of ADHD (see 1.2 of this thesis).

However, as indicated in 3.4 of this thesis the *DSM-IV-TR* (APA, 2000) diagnostic criteria suggested those with ADHD (predominantly hyperactive/impulsive) could exhibit characteristics such as fidgeting, which both Gifted children and those with ADHD could display. Characteristics such as these seemed to lead many writers

(e.g., Brown, 2006; Bruzzano-Ricci, 2003; Turk & Campbell, 2002;[15] Webb et al., 2005) to suggest there were similarities between the characteristics of the Gifted and those with ADHD.

There were numerous tables which compared the similarities between Gifted and ADHD characteristics (e.g., Brown, 2006; Bruzzano-Ricci, 2003; Webb et al., 2005). Some of the similarities between the Gifted and those with ADHD included that they often do not seem to listen when spoken to, are easily distracted by erroneous stimulation and have difficulty organising tasks and activities (Webb et al., 2005). It is possible because the characteristics of the Gifted and those with ADHD are so similar they could lead to masking.

4.4.3 Masking

Some Gifted/ADHD writers referred to the issue of compensation to the extent of masking (e.g., Kaufmann & Castellanos, 2000; Leroux & Levitt-Perlman, 2000; Montgomery, 2003; Nadeau, 2004; Neihart, 2003; Webb et al., 2005). These writers described how a Gifted child could use their Giftedness to compensate for their ADHD. Masking could lead to inappropriate educational expectations as a teacher could view a child as being more able than they actually were. Although, when learning becomes more difficult their deficits may become apparent (Lovecky, 1999; Turk & Campbell, 2002), this is also referred to in GLD literature (e.g., Davis & Rimm, 1993; Reis, 2004; Reis & Ruban, 2004). Conversely, some writers (e.g., Leroux & Levitt-Perlman, 2000; Neihart, 2003) suggested that the reverse was also true; a child's ADHD could be recognised but not their Giftedness. Thus, to prevent masking, appropriate identification measures should be investigated.

[15] It should be noted that in future reference to Turk and Campbell (2002) I have referred to Doug (Turk & Campbell, 2002) this is because although not explicitly stated it seems Doug Campbell, the young man who is Gifted with ADHD, is a co-author and Mr Turk, the other author was one of Doug's teachers. In addition I have referred to Doug's statements as being made by Doug because some statements relate to his references to experience of which Turk, for the most part, had no part.

4.4.4 Intelligence Quotient tests (IQ tests)

One identification method that could be utilised to overcome masking issues is the Intelligent Quotient tests (IQ tests). The commonly utilised *DSM-IV-TR* (APA, 2000) referred to how "…individuals with Attention-Deficit/Hyperactivity Disorder may show intellectual development in the above-average or Gifted range" (p. 88). However, a person who has a learning disability may not be able to show their potential in an IQ test if their disability relates to its requirement. For example, a child who cannot maintain attention may find it difficult to do so for a test. Even if the child with ADHD was able to maintain attention for the test, Neihart (2003) referred to how impulsivity can depress IQ test scores.

IQ tests scores could also be depressed because Gifted/ADHD children can produce 'scatter' in IQ tests (Silverman, 1998). The Ministry of Education (2003) also referred to this concept when they stated that for many Gifted children with learning difficulties IQ results can appear average as they can do exceptionally well in some of the subtests and poorly in other subtests with results from the subtests then added and averaged. Thus, the Gifted/ADHD child can appear average, with their strengths and weaknesses ignored. However, Webb (2000) argued that in some intelligence tests (e.g., Wechsler Intelligence tests) scatter increases if the child is highly intelligent (e.g., greater than 130). This means if a Gifted child with ADHD has scatter on their IQ test it could caused by their diverse subtests or their high intelligence in particular areas. Regardless of the cause, the scatter between the subtests would still be averaged.

With difficulties such as scatter on subtests it is not surprising that Flint (2001) stated "…many educators believe diagnostic tests uncover only the children who have extremely superlative talents or gifts" (p. 65). However, for a participant in a study by Gates (2005) the IQ test was vital. This is because it was the IQ test rather than his behaviour which led to his Giftedness being identified. It makes the argument for an IQ test still seem somewhat relevant as although an IQ test could reinforce a teacher's negative view regarding a child's lack of ability it could show that a child is Gifted, perhaps as Flint (2001) suggested even highly Gifted, so the IQ test could lead

to more effective education. In addition, those making the Gifted identification would have access to data in order to see scatter, and this scatter information could be shared with those that educate the Gifted with ADHD (e.g., with the 'normal' classroom teacher).

Although some writers (e.g., Flint, 2001; Gates, 2005; Lovecky, 2004; Webb et al., 2005) noted that there are alternatives to Gifted children with ADHD sitting IQ tests to be identified as Gifted. Gates (2005) and Lovecky (2004) suggested that a teacher should gain information from various settings (including home and school) regarding children's strengths and weaknesses. Webb et al. (2005) indicated it was very important to talk to the parents of Gifted children with ADHD as they can provide rich details regarding their child's behaviour and medical history. This study involves talking to parents to gather rich information.

Once this information has been gathered it is important that their progress is compared to their previous achievements rather than age norms (Lovecky, 2004). This seems more in keeping with the New Zealand approach, as many schools use multi-modal identification and it is recommended in *Gifted and talented students: Meeting their needs in the New Zealand classroom* (MOE, 2000). However, if the multi modal approach has not been used and the teacher is not recognising the Gifted child with ADHD as Gifted a high IQ test score (overall or in parts of the test, due to scatter) could indicate they could benefit from modifications to the current curriculum and environment.

4.4.5 The environment

Gifted/ADHD literature maintained inappropriate learning environments where Gifted children with ADHD have become bored could lead to ADHD and ADHD like behaviours being exhibited (Baum & Owen, 2004; Lind, 1996; Lovecky, 2004; Nelson et al., 2006; Reis & McCoach, 2002; Turk & Campbell, 2002; Webb & Latimer, 1993; Webb, 2001; Willard-Holt, 1999). Thus bored Gifted children could be that they are diagnosed with ADHD. Maxwell (1989, cited in Cramond, 1994) suggested this misdiagnosis could be catastrophic due to inappropriate medication or

ADHD educational strategies being applied to Gifted children (e.g., a highly structured learning environment), thus, emphasising the importance of appropriate identification. The *DSM-IV-TR* (APA, 2000) also indicated the environment could be a possible cause of inattention. "Inattention in the classroom may also occur when children with high intelligence are placed in academically unstimulating environments" (APA, 2000, p. 91).[16]

Doug (Turk & Campbell, 2002) referred to how he was often bored at school. In addition, Doug referred to how he often distracted other children because he was easily distracted, although Doug suggested rather than distracting others he would often day-dream. However, Doug stated "I found it ironic that teachers reprimand daydreamers, which forces a student who was content distracting himself or herself to begin distracting others" (Turk & Campbell, 2002, p. 50). Doug's daydreaming seemed to link to Zentall's (2006) suggestion that children with ADHD can self stimulate (as addressed in 3.6.3). However, Doug was prevented from doing this. It is possible that Doug's teacher, who prevented him from daydreaming, may have lacked knowledge of those with ADHD. Although one teacher (Mr Turk) used the Socratic method "…so as long as I could perform on cue with some kind of coherence, I was allowed to let my mind wander" (Turk & Campbell, 2002, p. 52).

4.4.6 Teachers' lack of knowledge

If Gifted children with ADHD do become bored they could be seen as "… under-achieving or lazy long before they are ever labelled ADHD" (Flint, 2001, p. 65). This implied Gifted children with ADHD could stop trying to learn if they are unstimulated. If they stop completing work it is also unlikely they will be recognised as Gifted (Hartnett, et al., 2004; Lovecky, 2004; Webb, 2000).

Not recognising Giftedness implies that some teachers' lack of knowledge can lead them to misdiagnose Gifted children. As Doug (Turk & Campbell, 2002) stated "I

[16] This was also referred to by Lovecky (2004).

recall as I moved through the grades, things either got better or worse entirely because of a particular teacher" (p. 50).

Many GLD writers referred to teachers' lack of knowledge of Giftedness being problematic due to the difficulty that can be involved in identification of the two exceptionalities (e.g., Gift and the disability) (e.g., Baum & Olenchak, 2002; Higgins & Nielsen, 2005; Reis et al., 1997; Sturgess, 2004).

Rather than purely a teacher issue, lack of knowledge by other professionals may contribute to identification issues. For example, Brown (2006), Webb and Latimer (1997) suggested that it is the people who diagnose and treat ADHD (e.g., paediatricians and psychologists) that could be causing the issues as most do not appear to have knowledge on the Gifted.

4.5 How could the Gifted with ADHD link to Gifted literature?

It is important to this thesis to address how the Gifted with ADHD could link to Gifted literature because the literature in this section further explains why many writers (e.g., Brown, 2006; Bruzzano-Ricci, 2003; Hartnett et al., 2000) believe ADHD is often misdiagnosed as Giftedness. The focus on misdiagnosis and identification issues is significant to this thesis because it underlines how most of the Gifted/ADHD literature focuses on the misdiagnosis issue rather than identifying effective educational strategies for Gifted children with ADHD. There are three main areas which appear to link the child who is both Gifted and has ADHD to the Gifted literature. These include creativity, the Gifted who like to move and underachievement.

4.5.1 Creativity

There appear to be two main views relating to creativity and ADHD. One view appears to be that because ADHD and creative characteristics are so similar (Cramond, 1994; Flint, 2001; McCluskey & McCluskey, 2003) creativity can be misdiagnosed as ADHD (Cramond, 1994; 1995). The other view is that those with

ADHD can naturally have creative ability (Flint, 2001; Lovecky, 1994b; McCluskey & McCluskey, 2003; Shaw & Brown, 1991; Zentall et al., 2001) as creativity could be the 'other-side' of ADHD (e.g., a positive way to view ADHD) (Montgomery, 2003). Although, Guenther (1995), Healey and Rucklidge (2005) suggested that not all children with ADHD are creative. Because the issue surrounding whether children with ADHD are creative seems unresolved the following paragraphs will address ADHD and creative characteristics and their similarities.

Characteristics associated with creativity included that creative children were, less conformist and socially accepted (Fraser, 2004) unpredictable and easily upset (Robinson, Shore & Enerson, 2007). Davis and Rimm (1998, cited in Fraser, 2004) also maintained some more negative traits were associated with the creative child, such as, they could be stubborn, uncooperative, dislike domination, question rules, cynical, sloppy, forgetful and can view courtesies as unimportant.

Healey and Rucklidge (2005) suggested the creative characteristics related to those with ADHD. For example, both those who are creative and those with ADHD can have an anxious and depressed temperament. Cramond (1994) indicated there were further similarities between the creative and those with ADHD that included their lack of concentration, advanced imagination, interests, risk taking, sociability, self talk, impulsivity, independence, organization and emotionality and energy. These similar characteristics could lead to misdiagnosis.

Cramond (1994) noted "the ramifications of diagnosing a bright, creative child with ADHD may be dire" (p. 206) because, as previously mentioned, it could lead to inappropriate medication, a negative effect on self esteem, removing responsibility for actions and inappropriate educational recommendations. Maxwell (1989, cited in Cramond, 1994) suggested these inappropriate educational recommendations could include, limiting distractions or making the tasks more structured. One could assume the ramifications of diagnosing ADHD as creativity would not be as problematic (Cramond, 1994).

4.5.2 The Gifted who like to move

As established in 2.4 Dabrowski's overexcitabilities relate to the Gifted. Furthermore, many writers have also referred to how there are similarities between Dabrowski's overexcitabilities[17] and ADHD (Baum & Olenchak, 2002; Bruzzano-Ricci, 2003; Flint, 2001; Hartnett, et al., 2004; Lind, 2000; MOE, 2000) particularly in relation to psychomotor overexcitability. Although, Flint (2001) argued while Gifted children with psychomotor overexcitability love moving those with ADHD can not stop. Nevertheless, White (2004) suggested there was not clear research to support the link between ADHD and psychomotor overexcitability.

However, Tucker and Hafenstein's (1997) description of a Gifted girl Katrina clearly showed the similarity between psychomotor overexcitability and the movement described in the *DSM-IV-TR* (APA, 2000) ADHD hyperactivity criteria, such as, often on the go and often runs around and leaves their seat when they are expected to stay seated (APA, 2000). Tucker and Hafenstein's (1997) stated:

> Next, she went back to the table to paint. For another few minutes, then she changed tables to draw. She would choose one marker from the marker box, run over to the table to draw with it, and then run back to the marker box to put it away and get another marker. (p. 72)

McCluskey and McCluskey (2003) indicated their daughter shared similar characteristics to Katrina as she too wanted or needed to move. McCluskey and McCluskey's (2003) daughter (who was diagnosed with ADHD and they believed also has Gifted tendencies) had a teacher who allowed her to move and dance her understanding of biology.

> One flexible high school biology teacher [who] allowed her to take some of her tests orally-to talk, act out, move and dance-and it helped (you haven't seen any thing until you've seen the Photosynthesis Shuffle and The Dance of the Reproductive System!). (p. 38)

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[17] Dabrowski (1972, cited in White, 2004) suggested that most people that reach high potential (which could be considered Giftedness) possess some overexcitabilities. The overexcitabilities included psychomotor, sensual, intellectual, imaginational, and emotional (Dabrowski, 1972).

4.5.3 The Gifted who are not easy to teach

A child wanting to move when learning does not seem highly unreasonable. However, it could make some established classroom practices difficult (e.g., when learning on the mat). What some teachers may benefit from acknowledging is that some Gifted children do not 'fit' within the 'normal' classroom expectations (e.g., they may want to move). It is possible once Gifted children stop trying to follow 'normal' classroom expectations and are not compliant may no longer be viewed as Gifted. Alternatively, Baum and Olenchak (2002)[18] indicated Gifted children could be 'cured' of their Giftedness in exchange for compliant behaviour. It is possible that attempts to cure Giftedness could be occurring because some believe the Gifted should be easy to teach. As Hunter (2006) suggested, it seems it is often only those Gifted who exhibit positive characteristics (e.g., co-operation) that are valued.

In contrast, some writers (e.g., Chorlton, 1997; MOE, 2000; Webb, 2000) implied that the Gifted child may be difficult to live with or teach. Gowan (cited in Turk & Campbell, 2002) referred to how it is often the able child that is the 'biggest nuisance.' Conversely what can appear to be compliant behaviour (e.g., listening) may not be (e.g., they could be daydreaming).

4.5.4 Underachievement and selective consumerism

Brown (2006), Neihart (2003), Reis and McCoach (2000) suggested that children who are Gifted with ADHD could become underachievers who often struggle with and can drop out of school. Betts and Neihart (1988) maintained there were numerous Gifted underachievers, as they referred to six profiles (the successful, challenging, underground, dropouts, double labeled and autonomous learner). It seems it is only relevant to describe the double labeled Gifted underachiever as like the Gifted children with ADHD, these children "...are gifted but also have a physical or sensory disability or a learning difficulty" (Betts & Neihart, 1988, cited in MOE,

[18] Baum and Olenchak (2002) conducted a single case study with a participant Blaine. This articles' research is also referred to in a later publication (a chapter within a book) by Baum and Owen (2004).

2000, p. 21). Although unlike the children in this study who have been identified as Gifted by the George Parkyn Centre, the double labeled Gifted may go unrecognized because the focus is on their disability (Betts & Neihart, 1988, cited in MOE, 2000).

Rimm (1995, cited in Moltzen, 2004c) referred to twelve categories of underachievers. One of which, the hyperactive underachiever, seemed to closely relate to most Gifted children with ADHD. This is because Gifted children with ADHD (predominantly hyperactive/impulsive) and those who are underachievers could "…show glimpses of exceptional ability but overall their performance is inconsistent" (Rimm, 1995, cited in Moltzen, 2004c, p. 376).

Rimm (1995, cited in Moltzen, 2004c) and Betts and Neihart (1988) had referred to numerous profiles of underachievers, while Delisle and Galbraith's (2002) indicated there was a difference between underachievers and selective consumers. A table of some of the descriptors for underachievers included that they "…do not understand causes or cures…are dependant and reactive…tend to withdraw…[and] respect or fear authority figures" (Delisle & Galbraith, 2002, p. 177). Although, Delisle and Galbraith (2002) do not appear to explain these statements in more detail many more characteristics are evident in their table (see Appendix A for more detail). This table was selected because if Gifted children do appear to be underachieving it may be important to also acknowledge the characteristics of selective consumers as although they (underachievers and selective consumers) do have some similarities (e.g., difficulty with friends) educational strategies would be different (Delisle & Galbraith, 2002).

In contrast to underachievers Delisle and Galbraith (2002) suggested selective consumers "…can explain both the problem and possible solutions…are independent and proactive…tend to rebel…see teachers as adversaries; can be contentious…are frequently satisfied with their accomplishments…[and] see themselves as academically able" (p. 177). Again these characteristics were not described in any more detail.

Although Delisle and Galbraith (2002) had referred to numerous differences between selective consumers and underachievers they also maintained they shared some similarities. These included, difficulties socializing with peers, preferring a 'family' classroom environment, having inappropriate behaviour and attitudes and possibly benefiting from counseling or assistance with their academic achievement (Delisle & Galbraith, 2002).

Delisle and Galbraith (2002) separated educational strategies for selective consumers and underachievers. The table is separated into supportive, intrinsic and remedial strategies, according to Whitmore's (1980, cited in Delisle & Galbraith, 2002) categorization.

Supportive strategies related to improving self worth and potential. Intrinsic strategies related to supporting the development of intrinsic motivation (e.g., focusing on achievement in relation to learning rather than extrinsic rewards). This seemed to relate closely to Smiley and Dweck's (1994) *learning goal oriented* (as addressed in 1.2) as these people are usually intrinsically motivated to learn new information or skills. In contrast it is those who are *performance goal oriented*, particularly *avoidance goal oriented* that often have low intrinsic motivation (Grant & Dweck, 2003). Clarke, Timperley and Hattie (2003) warned how there are a lot of limitations relating to extrinsic rewards (e.g., children are encouraged to work for the rewards rather than for the accomplishment of achieving).

Remedial strategies related to focusing on improving an area the child finds difficult, has failed and/or is not motivated to learn about (Whitmore, 1980 cited in Delisle & Galbraith, 2002) (for the whole table see Appendix A).

4.6 What are the social and emotional characteristics related to the Gifted with ADHD?

4.6.1 Introduction

This section is the first of two (the second being 4.7) that are particularly relevant to this thesis. Gifted children with ADHD may require assistance with their social and emotional difficulties. The first section will address various writers' references to some social and emotional characteristics of children who are Gifted and have ADHD. The section that follows this will address the literature on children who are Gifted with ADHD and their friendships. The last section will address Gates's (2005) research, as it was particularly detailed and relevant to this thesis.

4.6.2 Social and emotional characteristic of the Gifted with ADHD

When some writers referred to the social and emotional characteristics of the Gifted with ADHD they often kept the characteristics in two separate lists, one relating to those with ADHD and one to those who are Gifted (e.g., Brown, 2006; Bruzzano-Ricci, 2003). Those who did address the social and emotional characteristics of children who are Gifted with ADHD together referred to quite general terms. For example, many writers referred to the emotional and social immaturity, instability (e.g., Leroux & Levitt-Perlman, 2000; Mendaglio, 2005; Moon, 2002;) [19]or emotional sensitivity (Lovecky, 1999; Mendaglio, 2005, Moon, 2002; Neihart, 2003; Ramirez-Smith, 1997) of many Gifted children with ADHD.

Only a small amount of literature appeared to be more specific (e.g., Lovecky, 2004; Mendaglio, 2005; Moon, 2002; Moon, Zentall, Grskovic, Hall & Stormont, 2001). Even though these writers were more specific most of the characteristics referred to

were negative including, egocentrism (Mendaglio, 2005)[20] or aggressive behaviour (Moon et al., 2001). Mendaglio (2005) suggested that egocentrism combined with above average intelligence could mean a child who is able to manipulate situations. Moon (2002) argued Gifted children with ADHD can be moody and unpredictable. In addition, many writers (Baum & Owen, 2004; Flint, 2001; Lovecky, 2004; Mendaglio, 2005) suggested children who were Gifted with ADHD could often be angry and frustrated. Moon (2001) maintained this frustration was due to both the behavioural impact of the disorder and schools' inability to recognise and address the child's necessary accommodations. For example, Doug (Turk & Campbell, 2002) suggested he became frustrated because he felt many of his 'normal' classroom teachers did not assist him to learn. Doug indicated the teachers did not assist him to learn when they stopped calling on him to answer questions when he raised his hand (as he was often right but the teacher could not gauge whether other children understood the question if Doug was called on first) but rather focused on those children who did not seem to want to learn, thus, not challenging Doug (Turk & Campbell, 2002). Other writers (Leroux & Levitt-Perlman, 2000; Lovecky, 2004; Mendaglio, 2005) indicated many negative emotional difficulties (e.g., anger) appeared to be related to the negative aspects of ADHD. Despite all of these difficulties Lovecky (2004) argued that many children who are Gifted with ADHD can still appear emotionally Gifted.

Lovecky (2004) believed that the Gifted child with ADHD could be emotionally Gifted which could be why she chose to refer to some of their positive emotional attributes. These included naivety, trust, enthusiasm and humour (Lovecky, 2004). Lovecky (2004) maintained many children who are Gifted with ADHD could overcome rejection due to their sweet naivety that meant they were often easily forgiven. She also referred to how they would ask other children to join in their spontaneity. Another positive attribute was their generosity in relation to giving

[20] It should be noted that Mendaglio (2005) was not referred to in detail prior to this reference as his small chapter focuses on misdiagnosis and the social and emotional characteristics of Gifted children with ADHD, based on his personal experience counseling Gifted children and those with ADHD. Thus, I could not explore his research methods. Furthermore, Mendaglio (2005) often makes statements regarding the Gifted and those with ADHD separately such as referring to how the Gifted can have difficulties with social isolation and that when ADHD is 'added to this' and can result in alienation.

items away. However, this was attributed to impulsivity, a negative characteristic. Although Lovecky (2004) did acknowledge these traits they were placed at the end of the chapter. This is noteworthy because by placing the positive traits at the end of the chapter it still places emphasis on the negative traits.

Moon et al. (2001) suggested the lack of literature on the social and emotional characteristics of the Gifted child with ADHD was why they carried out their research. Moon et al. (2001) research involved nine children, three boys who had ADHD, three boys who were Gifted and three who were both Gifted with ADHD. "Findings suggested that participants with co-occurring giftedness and AD/HD had difficulties regulating their emotions, problems with peer relationships, and stressed families. Giftedness appeared to exacerbate the social/emotional difficulties associated with AD/HD rather than serve a protective function" (Moon et al. 2001, p. 207). Gates (2005) also found this with the child who participated in her research (see Gates's section in this chapter at 4.11.4 for more detail about her research).

4.6.3 Friendships

It was not only Moon et al. (2001) who found children with ADHD had difficulty with peer relationships, many writers indicated most Gifted children with ADHD have difficulty making and maintaining friendships (Lovecky, 2004; Moon et al., 2001; Ramirez-Smith, 1997; Turk & Campbell, 2002; Webb et al., 2005) and interacting with their peers (Moon et al., 2001; Ramirez-Smith, 1997; Turk & Campbell, 2002).

Lovecky (2004) suggested many Gifted children who have ADHD seem to have difficulties with other children because they had, poor emotional monitoring which can lead to annoying behaviours, trouble joining in with peers, lack of patience and having few interests in common with other children in which to build bonds. Lovecky (2004) and Hunter (2006) suggested social interactions are further complicated for the Gifted child with ADHD (e.g., due to working memory difficulties addressed in 1.2). Working memory (an executive function) can relate to predicting what will happen next and other people's feelings, beliefs or intentions (Lovecky, 2004).

Another reason why friendships could be an issue was because Gifted children with ADHD may often want to use advanced rules when playing. This implied they would need to play with more cognitively advanced peers. However, Gifted children are usually more emotionally mature and may find the characteristics of many Gifted children who have ADHD problematic (Moon et al., 2001; Neihart, 2003). This is because many Gifted children who have ADHD are believed to be socially immature (Leroux & Levitt-Perlman, 2000; Lovecky, 2004; Moon, 2002; Ramirez-Smith, 1997; Zentall et al., 2001). Some Gifted children with ADHD also believed to have immature coping strategies in relation to emotional reactivity that could affect their social interactions (Lovecky, 2004; Mendaglio, 2005; Moon et al., 2001). For example, a rapid shift between happy and miserable if a problem occurs (Lovecky, 2004). It is possible the further social difficulties arise as many Gifted children who have ADHD are aware of their social difficulties (e.g., Flint, 2001; Gates, 2005; Lovecky, 2004; Mendaglio, 2005). This could lead to depression or opposition to others (Flint, 2001).

Because Gifted children with ADHD could be aware of their social difficulties they could become depressed. However, it is possible that if they had a true friend they would not focus on these social difficulties as they would not be as apparent. Roedell (1989, cited in Lovecky, 2004) suggested a 'true peer' would share similar 'needs' such as deeper understandings and similar interests. This appeared to relate to Lovecky's (2004) suggestion that Gifted children's chronological peers will probably not understand what it means to be Gifted and how it feels different from the inside. Roedell (1990) who wrote on the Gifted stated:

> An appropriate learning environment should also offer a gifted young child the opportunity to discover true peers at an early age. Parents of gifted children frequently find that, while their child can get along with other children in the neighborhood, an intense friendship is likely to develop with a more developmentally equal peer met in a special class or interest-based activity. (para. 15)

Furthermore, Roedell (1990) indicated a supportive parent should make the effort to assist the child to develop a 'true friendship'. It brings to question what an educator should do to assist a child to develop friendships with 'true peers.' It does not seem unreasonable, that like a parent, they should assist Gifted children with ADHD to develop these 'true peer' friendships, although Roedell (1990) maintained Gifted children could still 'get along' with other children. In contrast, the literature previously addressed (in 4.6.3) suggested Gifted children with ADHD may not be able to do this. Therefore, it may be more significant for them to find a 'true peer' to overcome both their social difficulties and their awareness of their social difficulties.

However, there may be challenges in establishing 'true peer' friendships. For example, Moon et al. (2001) found all three Gifted/ADHD boys in their study had some friends outside of the school environment. They argued the parents were uncomfortable with these relationships as the children they befriended were often older and boisterous.

4.6.4 Gates's social, emotional, behavioural and cognitive phenotyping of a student with ADHD and academic giftedness

Gates's (2005) thesis entitled *Social, emotional, behavioural and cognitive phenotyping of a student with ADHD and academic giftedness* method was a single baseline case study. Gates (2005) described how her participant was "…under investigation in terms of his social, emotional, behavioural, and cognitive phenotypes" (p. 34).

Gates's (2005) participant was a boy (H.V) from her third grade class who had been diagnosed as Gifted with ADHD. He had ADHD-I, which means predominantly inattentive type. Gates (2005) suggested H.V's ADHD emotional issues were probably exacerbated by his Giftedness. She indicated these emotional issues included that he was negatively internalising behaviours (e.g., rather than acting out) which "…can lead to depression, feelings of low self-worth and thus the inability to succeed" (p. 71). H.V also appeared to have emotional and social difficulties in the

playground. Although it may be okay that H.V enjoyed playing alone at playtime, such as on the swings or with rocks, his lack of interaction with other children appeared to have led them to no longer attempt to interact with him (Gates, 2005). According to Gates (2005) some strategies to address H.V's emotional abilities could include counselling and interaction with a peer from his scout group who appeared to be more advanced socially than H.V. Gates's (2005) findings suggested:

> In order to meet the needs of H.V. in the classroom, his emotional needs must first be met. When these needs are met, he will be more apt to want to learn and try out his new skills. As his self-efficacy in the classroom increases, so too will his motivation to try and succeed. It is only then that classroom, curricula, and teacher interventions will work. (Gates, 2005, p. 82)

There are numerous references in this quote to 'needs.' However, other than counselling and making a friend Gates (2005) did not suggest what H.V's educational needs were.

There were many references to the social and emotional difficulties Gifted children with ADHD face and how some references suggested how these issues could be addressed (e.g., counselling). However, counselling could not be carried out in a classroom by a 'normal' classroom teacher. Although, Roedell (1990) suggested Gifted children could overcome their social difficulties and awareness of these difficulties by finding a 'true peer' (someone who has deeper understandings and similar interests). What is unknown is whether finding a 'true peer' could assist Gifted children with ADHD to overcome their social difficulties. This thesis will address this unknown by establishing whether the children in this study have social difficulties and if they do find out why they could be occurring and whether these social difficulties could be addressed by finding a 'true peer.'

4.7 What are some educational strategies that have been suggested for the Gifted with ADHD?

4.7.1 Introduction

As previously indicated in 4.1 this is the second section within this chapter that is particularly relevant to this thesis as there seems to be a dearth of Gifted/ADHD literature on effective educational strategies. This seemed to be because misdiagnosis was the focus in most pieces of literature, and there was often only a small statement at the end of an article referring to educational strategies, for example, to make the environment stimulating and provide appropriate curriculum modifications (e.g., Webb & Latimer, 1997).

Although there is a lack of literature on educational strategies for Gifted children with ADHD it could first appear there is more research than has actually been conducted, due to more than one publication being derived from the same research (Baum & Olenchak, 2002; Baum & Owen, 2004; Moon et al., 2001; Zentall et al., 2001). In addition, there was sometimes no evidence given as to whether vignettes and the proposed strategies to address the issues raised in the vignettes were based on research (Baum & Olenchak, 1998; Flint, 2001). For example, Flint (2001) stated how his "…article describes the special situations and needs of three children-Tony, Mikey, and Gina" (p. 62) but he did not state where the information on these three children was from (Flint's educational suggestions are addressed in Table 1).

Nevertheless, many writers implied an effective educational strategy for Gifted children with ADHD could be to have an exciting environment as they indicated a 'boring' environment can lead Gifted children to exhibit ADHD characteristics (e.g., Baum & Owen, 2004; Lind, 1996; Lovecky, 2004; Nelson, et al., 2006; Reis & McCoach, 2002; Webb & Latimer, 1993; Webb, 2001). This cannot be disregarded as relating to only overseas educators as the exhibition of inappropriate behaviours due to a boring environment was also evident in New Zealand publications (e.g.,

Brown, 2006; Bruzzano-Ricci, 2003) (see 4.8 for further details on the educational strategies they suggested).

Nevertheless, there were some writers who made more detailed educational suggestions for the Gifted with ADHD. This section will address some of the literature which was more specific. Section 4.9 is about the separatists (those who indicated the educational difficulties Gifted children with ADHD face could be addressed separately utilising educational strategies suggested for those with ADHD and those who were Gifted) and combined (those who indicated combining strategies suggested for the Gifted with those referred to for children with ADHD resulting in modified strategies). The most detailed section will be the Gifted/ADHD researchers as they had researched educational strategies for Gifted children with ADHD. These writers were, Deslea Konza, (1998), Sydney Zentall, Sidney Moon, Arlene Hall and Janice Grskovic (2001) and Jillian C. Gates (2005).

4.8 New Zealand Gifted/ADHD literature

The educational strategies suggested within the New Zealand publications either seemed inappropriate or did not give much detail. Bruzzano-Ricci's (2003) suggestions that Gifted children with ADHD should be placed in classrooms (either all day or pull out) with other children who are Gifted with ADHD would be problematic due to the numerous identification issues that can mean Gifted children with ADHD are not identified and even when they are identified the they seem to be few in number. Therefore, there would probably not be enough Gifted children with ADHD identified to establish a class. While Brown (2006) separated educational strategies that were appropriate for the Gifted and those with ADHD (e.g., one title was 'dealing with attention deficits' and 'preventing boredom in Gifted students').

4.9 The combined verses separatist approach

I chose to use the combined and separatist terminology in order to refer to what seemed to be two different approaches to addressing the educational difficulties associated with children who are Gifted with ADHD. The separatists were those

writers such as Brown (2006) and Turk and Campbell (2002)[21] who indicated educational strategies for Gifted children with ADHD could be Gifted educational strategies and ADHD educational strategies (e.g., to address Giftedness and ADHD separately). Alternatively, some writers suggested that because of the similarities between the Gifted and ADHD the educational recommendations for each group could be combined (Kaufmann et al., 2000; Leroux & Levitt-Perlman, 2000). [22]

However, as Neihart (2003) maintained interventions suggested for those with ADHD (e.g., simplifying tasks) may not be appropriate for Gifted children when the Gifted often enjoy complex tasks. Addressing the Gifted and ADHD educational suggestions separately also seemed somewhat inappropriate as it implied segregation of the terms was still fitting. After Neihart (2003) had reviewed Gifted/ADHD literature she suggested the most effective interventions are those that are designed for the individual. The table that follows addresses other writers and researchers perspectives regarding what are effective educational strategies for Gifted children with ADHD.

[21] Although some strategies they refer to are not separated (e.g., to address learning styles). See Table 1 for further strategies.
[22] It should be noted that it initially appears as though Leroux and Levitt-Perlman (2000) have cited previous literature on the Gifted with ADHD regarding educational interventions but when looking into their references they were actually citing literature which was about those with ADHD or Gifted or the Gifted and Learning Disabled in general.

Table 1: Effective Educational Strategy Similarities for Gifted children with ADHD

	Active involvement in tasks (e.g., experiments, projects, have an explicit purpose)	Learning preferences/ approaches (e.g., sensory such as visual) should be recognised	Preference for oral presentations due to verbal abilities	Work should be stimulating (e.g., relate to their interest)	Boundaries and limits are necessary when learning	These children should be taught compensatory skills such as the computer	They enjoy working on a computer	Learning should be individualised	Involve parents in education (e.g., what best way to address their child's education)
Lovecky (1994a)				√					
Ramirez-Smith (1997)		√		√	√	√			
Konza (1998)		√							
Lovecky (1999)								√	
Kaufmann, Kalbfleisch and Castellanos (2000)			√					√	
Leroux & Levitt Perlman (2000)					√				
Zentall, Moon, Hall & Grskovic (2001)	√		√	√		√	√		
Flint (2001)			√						√
Baum & Olenchak (2002)						√		√	
Moon (2002)								√	
Silverman (2002)		√							
Turk & Campbell (2002)	√	√						√	
Neihart (2003)	√							√	
Montgomery (2003)									
Baum & Owen (2004)				√				√	√
Lovecky (2004)	√	√							
O'Rourke (2004)				√					
Gates (2005)	√	√		√			√	√	√
Webb et. al (2005)						√			

4.10 The table

The table on the previous page summarises some of the key educational strategies that were evident in various pieces of Gifted/ADHD literature. Because there are so many Gifted/ADHD writers referred to within the table it appears as though there is a lot of literature on educational strategies for Gifted children with ADHD. However, some literature very briefly referred to educational strategies (e.g., Leroux & Levitt-Perlman, 2000). The educational strategies suggested within the table seemed quite scattered, although, purposeful tasks and individualised learning seemed to be evident predominantly in the more recent Gifted/ADHD literature.

Although there were some commonalities evident in the Gifted/ADHD literature there was also a discrepancy regarding whether Gifted children with ADHD should work in groups. According to Ramirez-Smith (1997) Gifted children with ADHD could be stimulated by using interactive teaching strategies (e.g., co-operative learning opportunities). However, others indicated Gifted children with ADHD have difficulty in group situations (Mendaglio, 2005; Zentall et al., 2001). Mendaglio (2005) referred to how Gifted children with ADHD often have their ideas disregarded in group situations. Although, as previously mentioned in 4.6.2 (footnote) Mendaglio (2005) did not seem to base this suggestion on research but rather reviews of literature. In contrast, Zentall et al. (2001) found that the three Gifted children with ADHD in their study enjoyed group work. Nevertheless, other students in the group suggested the Gifted children with ADHD did not complete as much work as the other children. Despite this, Zentall et al. (2001) maintained that Gifted children with ADHD should not be excluded from group work as it has motivational potential.

I tried to develop another table relating to key educational strategy differences; however, the educational strategies were so diverse there did not seem to be an overlap in the arguments.

4.11 Literature that explored Gifted/ADHD educational strategies

4.11.1 Introduction

There is only a very small amount of Gifted/ADHD research that has addressed educational strategies in detail. Furthermore, two of the three studies that this literature review found referred to educational strategies that were based on single case studies (Gates, 2005; Konza, 1998)[23]. Although one study was based on three Gifted/ADHD children (Zentall et al., 2000) (as previously mentioned there were nine participants overall). This meant these three studies were the most detailed Gifted/ADHD pieces of literature on effective educational strategies this literature review found. Thus, the following section separately addresses the research in order to clearly outline the educational strategies. Further attempts to summarise the small amount of educational strategies would have lost the qualitative data's detail as the literature seemed to have few similarities.

4.11.2 Konza, inclusion for children with dual exceptionalities

Konza's (1998) research involved three case studies of children who are Gifted and had a dual exceptionality. Sarah (a fourteen year old girl) had cerebral palsy and above average mathematical ability and general knowledge. Adam who had just completed his first year of school at the time of Konza's (1998) study (specific age not stated) had autistic tendencies and high ability in written language and number concepts. Lastly, Melanie is a secondary student (specific age not stated) who is believed to have ADHD and high ability in reading and mathematics and was able to easily grasp new concepts due to a great memory. However, Melanie was not formally diagnosed as Gifted and although she meet ADHD criteria, it is not clear whether she was assessed for this either. What was described in detail was that Melanie was underachieving, did not accept assistance and was hostile to adults. This study found Gossen's Restitution Model (1996, cited in Konza, 1998) was effective in getting Melanie to behave appropriately.

[23] Although, Konza (1998) referred to utilising case studies and listening to three participants' stories she did not describe her methodology in further detail.

The model developed by Dianne Gossen requires restitution where the 'wrong doer' should accept what they have done is wrong and establish a plan to fix the problem. The restitution has to take time, the victim has to be content with the result, it should be in the same area as the mistake (this is not explained) and it should make the wrongdoer stronger (Konza, 1998). She also referred to the important aspect being that the wrongdoer develops the plan themselves (Konza, 1998). Although, it took several months to convince Melanie to utilize the model once she did her behavioural difficulties decreased and her academic grades improved. There was a close communication between home and school and Melanie received regular feedback on how she was progressing. Thus, what is important about this study for this thesis is that the strategy suggested seemed to be effective for the individual.

4.11.3 Zentall, Moon, Hall & Grskovic's learning and motivational characteristics of boys with AD/HD and/or Giftedness

This research appeared to lead to two publications, the other article was entitled *Emotional and social characteristics of boys with AD/HDD and giftedness: A comparative case study* (Moon et al., 2001). Zentall et al. (2001) suggested additional educational strategies than those suggested here, these are evident in Table 1 (e.g., tasks that resulted in projects).

Zentall et al. (2001) research found "the most helpful motivational strategies reported by and for our students with exceptionalities were teachers who gave students individual attention and took a personal interest in them..." (p. 516). The three Gifted children with ADHD that were in Zentall et al. (2001) research preferred cognitive stimulation through activities which related to their interest.

Moon (2001) referred to how her previous research suggested many Gifted children with ADHD preferred learning, reading and creative dramatics that were language, cognitive or imaginatively based. While in contrast boys of average intelligence with ADHD preferred sports, building or computers which involve concrete, sensory or social stimulation. Although, Zentall et al. (2001) research found all of the children

in their study, Gifted, ADHD, and Gifted with ADHD had a preference for learning on computers. Thus, we may be teaching the first digital generation of children (Harwood & Asal, 2007). It is possible as Harwood and Asal (2007) suggested children use the computer more at home than at school as in some schools they usually are only able to use it when going to a computer room. Although Harwood and Asal were referring to American schools, the New Zealand school I was previously teaching in only had one computer in each classroom and then a computer room within the library. So it is possible some New Zealand children can still only use computers when attending a computer room.

However, there were some negative aspects that are evident in Zentall et al. (2001) selection process for their participants. These are that part of the method of identification was a formal method which involved an IQ test. They also selected the six Gifted children from contexts (from classrooms where their teachers had Gifted educational training) to control, social, emotional and ADHD tendencies (Zentall et al., 2001). It seems this was done to prevent the Gifted children with ADHD (three of the six previously referred to) from exhibiting negative behaviours due to an inappropriate environment. However, it could also have meant the Gifted children with ADHD would have low ADHD tendencies or very high Giftedness, or both. This is because (as previously mentioned) to score highly on an IQ test would be very difficult for the Gifted child with ADHD due to scatter and attention issues (see 4.4.4). Furthermore, these children would probably also be compliant as they were selected to go into a Gifted program and literature (as previously mentioned in 4.4.1) suggested that children with behavioural difficulties are very seldom selected for Gifted programs.

4.11.4 Gates's social, emotional, behavioural and cognitive phenotyping of a student with ADHD and academic giftedness.

Gates's (2005) participant H.V was Gifted with ADHD and as previously mentioned was a part of her classroom (see section 4.6.4). The findings indicated H.V. enjoyed "…playing problem based computer and electronic games" (p. 63) and he had

"…expressed an interest in science and loves to do projects and would do them all day everyday as opposed to worksheets if he could" (p. 64). He also enjoyed the Gifted program he attended and loved reading (Gates, 2005). It was at the Gifted program that his interest appeared to be 'tapped into' (Gates, 2005). When attending the withdrawal Gifted program H.V. began a unit on chemistry. During this time it was "…noted that H.V. showed periods of distinct on-task behaviour, these episodes continued for those few weeks of the unit and then declined to their previous levels" (Gates, 2005, p. 73). This also occurred during mathematics where he could produce more work than usual. This implied he also enjoyed mathematics. At other times when asked to carry out a task that he did not believe he could succeed at (e.g., he has low self efficacy) he would not try. Thus, Gates (2005) suggested it was important that H.V had academic challenge in order to experience results beyond mediocrity or failure so that he does not develop an 'inability to apply himself' (Gates, 2005). Being successfully challenged could also improve his negative emotions (Gates, 2005). Although it may be that H.V could benefit from becoming *learning goal oriented*.

Although, sometimes H.V would not try, Gates (2005) indicated his behaviour could appear off-task when he was actually on task. For example, he could glance at his spelling and appear to pay no attention but then informed his teacher that there was a word repeated on the list. It is also worth noting that Gates (2005) suggested visually presenting the information could assist children who are Gifted with ADHD to learn. This links to Doug's preference for the Socratic method Turk utilised as this allowed his mind to wander and only answer on demand (Turk & Campbell, 2002).

Modification to the normal curriculum, such as making learning visual appeared to assist H.V to learn. Gates (2005) maintained further individualisation was necessary, such as removing tasks he had already mastered. Prior to removing these tasks H.V was "withdrawing and entertaining himself with activities such as reading and apparently day dreaming" (Gates, 2005, p. 74).

Gates (2005) suggested more individualisation could occur. For example, a teacher could allow H.V to choose the format in which they present information so he could choose a way which he finds interesting and thus motivating. H.V could also be allowed to learn beyond the other children in the class, as long as he continues to work (Gates, 2005). According to Gates (2005) it may be beneficial for the child's education if a learning contract was developed. A 504 plan was mentioned which seems to be the equivalent of New Zealand's Individualised Education Plan (as previously addressed in 3.3). In New Zealand children who are in the Ongoing Renewable Resource Scheme are required to have an IEP but for others children the decision to make an IEP is optional (O'Brien & Ryba, 2005). The IEP could also involve parents which Gates (2005) suggested was important. Flint (2001) also indicated parents should be involved in developing appropriate education for the Gifted child with ADHD. Flint's (2001) suggested strategies for parents (e.g., making sure their children have appropriate curriculum and teachers).

4.12 Chapter summary

There does not appear to be a vast amount of literature on the social and emotional characteristics of Gifted children with ADHD, let alone their social and emotional experiences. In addition, the small amount of literature that is available does not appear to be based on research. So this study would add research to this void in the literature by talking to Gifted children with ADHD in order to gain understanding of their social experiences and to see whether the literature's suggestions (e.g., difficulty interacting socially with their peers) are correct. Since in New Zealand Gifted children with ADHD will most likely be in the 'normal' classroom (due to educational policies outlined in 2.3 and 3.3) it seems vital that we gain further understanding about their social experiences as this could be impacting on their learning.

This literature review only found three pieces of research that referred to educational strategies for Gifted children with ADHD (Gates, 2005; Konza, 1998; Zentall, et al., 2001), none of which appeared to be conducted in New Zealand. It is important to

conduct further research and identify effective educational strategies because Gifted children with ADHD may not be identified and they could be underachieving, which suggests they are not meeting their potential. Both Gates (2005) and Zentall et al. (2001) suggested motivation or perceived self-efficacy could be reason why some Gifted children with ADHD are not meeting their potential. This showed a clear link to the underlying perspectives evident in 1.2 where writers (Barkley, 1997; Grant & Dweck, 2003; Lovecky, 2004; Smiley & Dweck, 1994) who wrote from a psychological perspective referred to motivational difficulties children can have.

It seems children who have been identified as Gifted with ADHD should be spoken to about effective educational strategies as they could give insight into what makes learning difficult and what strategies could be further utilised to assist their learning. Further insight into educational strategies for Gifted children with ADHD is necessary as it seems Gifted children with ADHD could be challenging for the 'normal' classroom teacher. This was evident in 4.5.2 and 4.5.3 where it was suggested some Gifted children may not be easy to teach as they may find established classroom practices such as mat time difficult (e.g., as they may benefit from moving). Although Gifted/ADHD literature referred to educational strategies such as individualising learning this does not describe what a teacher could do in practice to assist a Gifted child with ADHD to learn. Thus, this thesis will investigate what a teacher could do to assist Gifted children with ADHD to learn through identifying specific educational strategies by talking to the children and their parents.

5 Chapter 5: Rationale and focusing questions

5.1 Rationale

This chapter addresses the rationale for this study. This thesis focuses on identifying effective educational strategies for Gifted children with ADHD. Literature implied that effective educational strategies should be addressed as some writers indicated that Gifted children with ADHD could be underachievers (Brown, 2006; Neihart, 2003; Reis & McCoach, 2000). Furthermore, Mendaglio (2005) stated these children could exhibit negative behaviours due to their learning environment. Some writers also argued research should address appropriate educational interventions (Baum & Olenchak, 2002; Leroux & Levitt-Perlman, 2000; Moon, 2002). Thus, effective educational strategies could prevent underachievement and assist Gifted children with and exhibit more appropriate behaviour so their Gifts are more likely to be recognised. As well as addressing effective educational strategies I chose to ask some Gifted children with ADHD about ineffective learning strategies in order to gain further understanding about strategies they found could be effective.

Appropriate educational intervention/strategies may also need to acknowledge the social difficulties literature suggested some Gifted children with ADHD face (Lovecky, 2004; Mendaglio, 2005; Moon, 2002). For example, difficulties interacting with their peers (Moon et al., 2001; Ramirez-Smith, 1997; Turk & Campbell, 2002; Webb et al., 2005). This is significant because most New Zealand classrooms require children to interact with their same aged peers when learning. For example, when seated at a table in a group or working with a classmate when completing a task. Thus, I chose to speak to Gifted children with ADHD about their social experiences to see whether they supported the claims relating to social difficulties (evident in Gifted, ADHD and Gifted/ADHD literature) and also to attempt to identify why these social difficulties, that could be affecting their learning, were occurring and as indicated in 4.6.3 whether finding a ‘true peer’ could assist them to overcome these difficulties.

I was also attempting to address social experiences, ineffective and effective educational strategies because there appeared to be a dearth of literature and research that addressed educational strategies or social experiences of Gifted children with ADHD. Although, there is some research on the educational strategies for these children (Baum & Olenchak, 2002; Baum & Owen, 2004; Gates, 2005; Konza, 1998; Leroux and Levitt-Perlman 2000; Lovecky, 2004; Moon et al., 2001; Zentall et al., 2001). As suggested in 4.7.1, some writers had not described whether they had carried out research in order to get the information for their vignettes. Other researchers clearly stated they had carried out single case study designs (Baum & Olenchak, 2002; Baum & Owen, 2004; Konza, 1998; Leroux & Levitt-Perlman 2000) or based their writing on personal experiences (e.g., Lovecky, 2004). Other articles were based on reviews of articles and books (e.g., Mika, 2006; Ramirez-Smith, 1997). Even a monograph written by key Gifted/ADHD writers was based on a summary of scientific writing (Kaufmann et al., 2000). It seemed there was only a small amount of literature on children who are Gifted with ADHD which was based on research.

Although there appeared to only be a small amount of Gifted/ADHD literature based on research, other writing on children who are Gifted with ADHD could be relevant to inform people about Gifted children with ADHD and possibly assist teachers by identifying some educational strategies to assist these children to learn. However, the main focus of this work was on misdiagnosis (see the introduction to chapter one and 4.3). Many writers suggested these misdiagnosis issues could be due to the characteristics of both Giftedness and ADHD being very similar (e.g., Baum & Olenchak & Owen, 1998; Baum & Olenchak, 2002; Flint, 2001; Kaufmann et al., 2000; Ramirez-Smith, 1997; Reis & McCoach 2002; Webb & Latimer, 1993; Weinfeld et al., 2006). In addition, some writers indicated that it could be due to a teachers' lack of knowledge regarding the Gifted (e.g., Hartnett, Nelson & Rinn, 2004; Lovecky, 2004; Webb, 2000). For example, they may not understand Gifted characteristics can be very similar to ADHD characteristics.

Zentall et al. (2001) implied further research on Gifted children with ADHD should involve talking to children about appropriate educational strategies. For example, asking them "what makes learning easy (or difficult) for you at school?" (Zentall et al., 2001, p. 516). Thus, I chose to focus on talking to children who were recognised as being both Gifted with ADHD. I conducted a pilot study, as recommended by Wisker (2001), to trial this approach. After conducting the pilot study I removed the term 'easy' from the questions. This was because the pilot study indicated that this could bring connotations of tasks that the children found were easy in relation to basic and boring for everyone (i.e. worksheets) rather than particular tasks or strategies they found effective or even challenging. Therefore, I asked them about learning experiences which they found challenging, interesting or fun.

By addressing challenging, interesting or fun learning experiences Gifted children with ADHD in this study could suggest educational experiences they had found effective. Effective and ineffective educational strategies and social experiences were the focus themes which evolved into three key questions (outlined in 5.2). These three questions were used as the basis for developing questions for semi-structured interviews that were conducted with six Gifted children with ADHD, their parents and a gatekeeper at the George Parkyn Centre who had worked with Gifted children who also had ADHD.

The six children (had been formally recognised as being both Gifted and having ADHD). These children had their ADHD recognised by either a paediatrician or psychologist and their Giftedness by the George Parkyn Centre. My research is unique as the data was collected from these children and their parents. This was unique because it seemed only two Gifted/ADHD studies that I found, involved talking to parents (Gates, 2005; Zentall et al., 2001).

Although speaking to that parents of Gifted children with ADHD makes my study unique I also chose to talk to parents as I feel they know their children the best and they could refer to numerous learning and social experiences and various educational strategies that various teachers had used (e.g., 'normal' school teacher, One Day

School teacher or an extra-curricular teacher). In addition, it was only Gates (2005) and Zentall et al. (2001) studies which appeared to involve talking to children. No studies on Gifted children with ADHD and their educational experiences appeared to have been undertaken in New Zealand.

Effective and ineffective educational strategies and social experiences presented in this New Zealand study should instigate conversation amongst those who educate Gifted children with ADHD. The primary audience was considered to be the 'normal' classroom teacher, as previously mentioned in 2.5, this is where Gifted children spend most of their time (Moltzen, 2005a). However, the findings may also be relevant to those who teach extra-curricular activities. These educators may teach the children in this study or other teachers may be able to make fuzzy generalizations to children that they teach (Bassey, 1999; Merriam, 2002).

5.2 Focusing questions

This small scale research moves beyond the current literature's focus on emotional characteristics and misdiagnosis of Giftedness as ADHD to address some educational and social experiences of six children who have been identified as being Gifted with ADHD. It also involved interviewing their parents. The main aim of this research is to identify some effective educational strategies that help the children in this study learn. The three focusing questions included:

- What are some effective educational strategies these children identify as assisting them when learning?
- What are some ineffective strategies these children identify as making their learning more difficult?
- What are some social experiences they have had when interacting with other children and how could this impact on their learning?

6 Chapter 6: Methodology

6.1 Introduction

This chapter addresses how the method for this thesis was chosen and carried out. Firstly, the researcher's position is addressed. Secondly, how participants were selected. Thirdly, the appropriate research method is explored, which resulted in the use of semi-structured interviews. This includes issues relating to the appropriate setting and to interviewing children. Concerns that should be considered relating to interviews (e.g., interviews and power) are also addressed. Finally, this chapter concludes with limitations and conclusions.

6.2 The researcher's position

This section is an attempt to address what Scheurich (1995) described as the *baggage* researchers bring both subconsciously and consciously to research. As suggested under *my interest* in chapter one this research was instigated due to an interest in the area developed mainly from talking to my students about their children as they had indicated their children could sometimes appear to exhibit ADHD behaviours when they were in unstimulating learning environments. Cohen et al. (2000) implied baggage related to the bias that researchers bring to their investigations (e.g., preconceived attitudes and ideas that could be placed onto participants). I attempted to avoid placing my attitudes onto participants' suggestions as before I conducted the interviews I listed down my underlying beliefs so when it came time to write the interview questions or interpret the data I could look at my list and make sure I did not focus on my attitudes or beliefs.

My preconceived ideas included that that:

- 'normal' classroom teachers can effectively cater for the Gifted in the inclusive classroom.

- It is not enough for Gifted children's Giftedness to be addressed one day a week (such as at One Day School).
- The difficulties Gifted children with learning difficulties face could be masked.
- Parents know their children the best.

6.3 Finding participants

I initially began to try and find participants by contacting numerous psychologists, schools, ADHD and Gifted centres. Although I found a supportive response (most believed it was a valid area of research) the psychologists I contacted referred to how they had (in the past) had patients who were both gifted with ADHD, but unfortunately they were no longer in contact.

A belief I had when beginning this thesis was that the diagnosis of ADHD was not significant but that if someone felt the child was exhibiting ADHD tendencies it may be due to an underlying factor that needed addressing. However, after viewing the numerous references to misdiagnosis in the literature (as seen in the literature review) it seemed important to obtain a diagnosis of both Giftedness and ADHD. This meant I could not follow through with the contacts I had made with schools as their dual diagnosis of Giftedness and ADHD had been made by varying teachers and thus was subjective and divergent. This is why I worked with the George Parkyn Centre as the children there had all undergone the centre's Gifted tests (which comprises of a parent questionnaire on developmental history, a teacher's questionnaire, an interview with the child, work samples and the Woodcock Johnson III test of cognitive abilities-version III). In addition, all of the children had been diagnosed with ADHD either by a psychologist or paediatrician.

It may have been possible to involve more participants (i.e. from overseas or further south in New Zealand) if I had undertaken a questionnaire response. However, Montgomery (2003) maintained Gifted children with ADHD can have writing difficulties. Thus, face to face interviews were imperative.

6.4 Participant selection

The intention of this study was to work with children who had been identified as Gifted with ADHD. This is because the focus of this study was not on identification issues, or possible misdiagnosis, but to identify effective educational strategies that could support Gifted children with ADHD to learn. A disadvantage was that choosing children who had been officially identified meant that I would be limiting my number of participants.

Furthermore, because I chose to work with children who were identified as Gifted with ADHD as Graue and Walsh (1998) suggested it was difficult to get into the field. It was not until I found a gatekeeper (Graue & Walsh, 1998) or informant (Fontana & Frey, 2005) at the George Parkyn Centre that had a passion for the Gifted/ADHD area and felt they could help that I began to find possible participants.

It seemed vital to first meet this gatekeeper in order to discuss what the aim of the research was and to put them at ease regarding the people they were electing to participate in the research. As Graue and Walsh (1998) suggested, gatekeepers are usually protective of the children they are responsible for. Thus I met the gatekeeper before the Waikato Ethics Committee had approved my Ethics document. This was because the process for access to participants needed to be arranged in order to give detail to this document. Hence, there was a period of time when communication was continued between the gatekeeper and I while the ethics document was written and later approved by the Waikato Ethics Committee.

After obtaining approval from the University of Waikato's Ethics Committee, approval then had to be obtained from the George Parkyn Centre's Board of Trustees. After this had occurred the letters of invitation to both the parents and children were sent to the George Parkyn Centre gatekeeper (see Appendix B). It was significant from the start to involve the children in the process (e.g., with separate letters) so they

could begin to develop a sense of personal investment (Carr, 2000). The gatekeeper was sent letters to give to ten families in the hope that five would respond.

All the children the gatekeeper felt met the criteria for this study (e.g., had been identified as Gifted by the George Parkyn Centre and their ADHD had been diagnosed either by a psychologist or paediatrician) were contacted. It was left up to the families to contact me so I did not know their details before they had agreed to participate. The participants made contact using the information obtained from the letters (I sent to the George Parkyn Centre) by either emailing or returning the detachable slips.

After a period of time some families had responded and at this point agreed to be participants (but as yet had not signed consent). But there were also some who had not responded. I recontacted the gatekeeper who assisted with prompting a further response. Another person at the George Parkyn Centre was involved due to the availability of the initial gatekeeper. After a period of time all of the families who had been sent the letters had responded to a gatekeeper. Those who had agreed to participate had or were still attending a George Parkyn Centre in Auckland or Hamilton. All of the families who responded were included in the study (two families chose not to participate).

This thesis involved six children, three mothers and four fathers from the Waikato, Auckland and wider Auckland area. It should be noted that one father did not participate in the interviews and thus the mother was interviewed alone. One of the gatekeepers from the George Parkyn Centre where I conducted the Auckland interviews was also interviewed. The children's ages ranged from six to ten years old (further details can be found within Table 2 that follows).

The next step was to consider an appropriate place for the first meeting with the Gifted children with ADHD and their parents. Because the researcher usually holds more power it was important for me to meet the participants in a place in which they felt comfortable. Thus, I travelled to Auckland to meet the participants from this area. It was also important to consider the gatekeeper's role in this process, as they

knew the families and were responsible for their involvement. Thus, it was necessary to also involve them in the first meeting. Due to availability, one gatekeeper was present.

The meeting was also to assist the development of a relationship with the children so they could feel more comfortable when it came time to interview them. In addition, the meeting allowed me to gain some understanding of the children's backgrounds so I could draw on this in the interviews. Garbarino and Stott (1992) suggested it was important to have some understanding of the children's community before interviewing them in order to assist with understanding their verbal messages.

It was at this first meeting that I discussed the research, answered any questions and gave the parents and children information sheets so they had some information to take away with them (see Appendix C). I also obtained signed consent in relation to them agreeing to participate (see Appendix D).

This also occurred with the Hamilton family but as they were new members of the George Parkyn Centre and preferred to be met at their home I first met them in their Hamilton home. Although, the same process (as described above) was followed in relation to the information and consent forms.

Table 2: Participant Data

Participant Data						
Child's name (pseudonyms)	**Taylor**	**Emily**	**Thomas**	**Darrell**	**Zan**	**Randy**
Parents' name (pseudonyms)	Doris and Pierre			Lynn and Mark	Angela and Ben	Jane
Age	6	9	10	8	9	10
Year	2	4	5	3	5/6 (conjoint class)	5
Gender	M	F	M	F	M	M
Ethnicity	NZ European	NZ European	NZ European	NZ European	NZ European	Chinese
1st language	English	English	English	English	English	English
Place in family	Youngest	Middle	Eldest	Eldest	Only	Eldest
Parent's occupation (Mother/Father)	Office worker, Managing Director			Architect, Engineer	Photographer, Restaurant owner	Test Analyst
Parent/Caregiver age range (Mother/Father)	30-40 40-50			40-50	30-40 40-50	30-40
Attending (at the time of the interviews)	One Day School	Not attending One Day School	One Day School	One Day School	Not attending One Day School. Attending Kip McGrath[24]	One Day School
Predominant type of ADHD	Hyperactive/ impulsive	Hyperactive/ impulsive	Hyperactive/ impulsive	Hyperactive/ impulsive	Predominant sub-type unknown	Hyperactive/ Inattentive (combined)
Co-morbidity (other identified conditions)	Oppositional Defiant Disorder (ODD), Autistic Spectrum Disorder (ASD)	Investigating Autistic Spectrum Disorder (ASD), Obsessive Compulsive Disorder, Bipolar	Autistic tendencies			
Point of Contact	George Parkyn Centre					

Information for Table 2 was obtained through the question sheets evident in Appendix E and through conversations with the children and their parents.

[24] Kip McGrath is an external education centre where parents can send their children and pay for tutoring.

6.5 The appropriate research method

Because of the small number of participants available and because the purpose of the research was to access children's educational and social experiences through talking to both the children and their parents, qualitative research seemed most appropriate. This section will address the different qualitative methods that were investigated. Action research was addressed first then observations and then narrative storying was considered for a long period of time. Finally semi-structured interviews were found to be the most appropriate method for this research.

Action research was discarded as this thesis involved researching a phenomenon which there appears to be little research on. Most of the literature that this thesis found was reviews of other pieces of writing. There seems to be only a small amount of research carried out in this area. Therefore, it was not the aim of this thesis to make changes such as in action research but to talk to children, their parents and a gatekeeper at the George Parkyn Centre to gain understanding of their views. Also to see if there are any common effective educational strategies that could assist the Gifted with ADHD to learn.

Because I was attempting to identify effective educational strategies and social experiences I investigated whether observations were an appropriate method for this study. Both Silverman (2000) and Carr (2000) suggested observations are a good way to gain knowledge about a classroom instead of asking people what they think about it. Viewing the learning environment can inform the researcher whether it is providing children with opportunities to "…acquire or practice or participate in the strategies or dispositions of interest" (Carr, 2000, p. 53).

However, as I was not aiming to find out merely about the school classroom but learning in general (e.g., extracurricular activities) observing the classroom learning environment seemed less relevant. Also, as previously mentioned in the introduction of chapter one and 4.5.4 Gifted children with ADHD could be underachievers thus, observations could be misleading.

Also, during the first meeting some of the parents suggested their children's current classroom teachers (at the time of the interviews) were not assisting their children to meet their potential. Thus, the teachers would probably not be exhibiting effective educational strategies. Therefore, observations could be of ineffective strategies. These could be useful to observe but were secondary to the aim of finding effective strategies.

Next, narrative storying was thought to be an appropriate method. This was because the thesis was instigated after I heard student's stories during university tutorials. The use of narrative storying was supported after reading research which utilised this method, such as that by Bishop (1995) who suggested "stories allow the diversities of truth to be heard, rather than just one dominant version" (Bishop, 1995, p. 78).

However, after further reading it became clear that narrative storying was not an appropriate method for this thesis. This was because two key issues, power and meaning, appeared to combine in relation to analysis and presentation of results. This meant that long narrative accounts of stories should be detailed and not be divided into categories when presented (e.g., Bishop, 1996; Riessman 1993). However, qualitative researchers should investigate the layers of their findings.

Furthermore, although it was vital to give power to participants in order to hear their true experiences, I had to consider what was the most appropriate research method for my questions. Rather than wanting to find out about participants' wider stories of experience I wanted to focus on finding answers to three questions. In contrast pure narrative stories the type of narrative storying which seemed most appropriate for this research was that which related to placing data into categories (Lieblich, Tuval-Masiach & Zilber, 1998). This suggested a thematic approach would be appropriate.

The approach chosen for this thesis was the semi-structured interview. This is because it allowed both the participants and I to talk about the issues we considered important. Thus, it appeared to relate to narrative stories in that the interviews gave

power to the participants to talk about what they wanted to. It also allowed me to direct some of the interview around issues which seemed to be lacking in the current literature, such as effective educational strategies. I wanted to address effective educational strategies not simply because there appeared to be a void in the literature, but because it did not seem to assist teachers with *how* they could educate Gifted children with ADHD.

6.6 Interviews as a research method

Before addressing semi-structured interviews it is necessary to firstly discuss interviews as a research method. Silverman (2000) referred to how talk has been recognised as the main medium through which social interaction occurs. "The latest trends in interviewing have come some distance from structured questions; we have reached the point of interview as negotiated text" (Fontana & Frey, 2005, p. 716). This notion appealed as recognising negotiation meant that participants would probably be given more power which was an aspect of the narrative storying which was attractive. This is attractive because it is important to find out what Gifted children with ADHD want to tell us about their educational experiences. Particularly as the children involved in this study could be considered 'successful' as they have had their gifts recognised while other children may not. In addition, interviews can be very time consuming but they can provide the information you want to obtain (Wisker, 2001) so I could ask Gifted children with ADHD, their parents and a gatekeeper at the George Parkyn Centre questions about their learning. This meant if an appropriate type of interview was chosen power could be shared with participants but I could also obtain particular information.

In order to obtain particular information I would need to get children to talk about their experiences. "Children know more than they know they know. They surely know more about what they know than the researcher does. The purpose of interviews is to get them to talk about what they know" (Graue & Walsh, 1998, p.112). Furthermore, as Gollup (2000) stated, although there are many ways to gain information about children the most ideal is to obtain it from children directly.

6.6.1 Semi-structured interviews

Carr (2000) indicated in structured interviews the child can merely be attempting to understand and answer according to the intent of the researcher. In contrast, Cohen et al. (2000), Garbarino and Stott (1992) and Wisker (2001), referred to how semi-structured interviews involved using set questions but with some room for divergence. Because semi-structured interviews allow for divergence (from the researcher's focus and questions) they could be more appropriate than a structured interview when attempting to find out children's perspectives as the interviewee can discuss what they wish too, and should not give the interviewee the impression the interview is focused around finding out information for the interviewer.

The semi-structured interview seems to align with what Patton (2002) described as the interview guide approach as this also involves the interviewer deciding on the wording and ordering of questions during the interview but the content can stay focused (Burns, 2000). Burns (2000) suggested this does not mean fixed wording or fixed ordering of questions. He stated "this permits greater flexibility than the close-ended type and permits a more valid response from the informant's perception of reality" (p. 424).

This thesis developed a guide similar to Creswell's (2005) interview protocol which had headings for information such as context detail (place) and date and interviewee (see Appendix F). This less fixed approach should lead to rich data. While Gollup (2000) stated:

> Rigid, structured interview schedules take control of the conversation away from the children. It is therefore important not to interrupt children if they are talking about what the interviewer may see as 'irrelevant' topics. Such an interruption signifies that the interviewer is controlling the context of the interview. I have found that a low-key, casual, conversational approach with lots of diversions into 'irrelevant' territory works well. Letting children set their own pace and agenda not only makes the conversation more natural, but it also minimises the adult-child power inequality and helps establish a good relationship between the interview participants. (p. 27)

Other writers (e.g., Dunne, Pryor & Yates, 2005) also suggested semi-structured interviews should be conducted like conversations. Conversational interviews are possibly more successful as they can put the interviewee at ease (Dunne, et al., 2005) and are less restrictive than a structured interview which could be difficult for a child to respond to as the researcher has more power (Garbarino & Stott, 1992).

It is important that this research gives children as much power in the interview as possible so they can express their thoughts and feelings about learning. Therefore, the semi-structured interview seems appropriate. "However, the comparability of the information between informants is difficult to assess and response coding difficulties will arise" (Burns, 2000, p. 424). This could be difficult as the way in which the question is asked could be different for each participant (Garbarino & Stott, 1992). I addressed this by analysing in relation to commonalities that arose relating to the three key questions and identifying any discrepancies.

6.7 The interview setting

Gollup (2000), Garbarino and Stott (1992) referred to the significance of interviewing the child somewhere they feel comfortable such as their home, school or where the researcher works, although each has negative and positive aspects. This research was undertaken at two locations. Either at a George Parkyn One Day School centre in Auckland or the children's homes. This occurred because of many reasons.

Ideally it would have been best to interview the families in their homes as this is probably where they feel most comfortable. However, for some of these families this was not appropriate (for more details see data collection 6.8). So the next best option seemed to be to interview the families at one George Parkyn Centre in Auckland where the children had visited or attended as this was a familiar environment. This meant I travelled to Auckland rather than asking the participants to travel to Hamilton.

Interviewing some of the children at the George Parkyn Centre acknowledged some writer's suggestions that children should be interviewed in a context that relates to the interview (which in this case would be a place of learning). For example, Carr (2000) referred to how she interviewed children in their early childhood education centres in order for her research to be conducted in a 'natural' setting when carrying out schoolwork. Although I negotiated with the Hamilton family where it was best to interview them and it was suggested that their home was the most appropriate.

6.8 Data collection

As previously mentioned, the participants were those parents and children who had responded to the letters passed on by a gatekeeper at the George Parykn Centre. Informed consent had been arranged at the first meeting. It was after the first meeting that the first interview (data collection) date was arranged.

The first interviews were to occur earlier than they did and possibly in their homes as some researchers recommended (e.g., Carr, 2000). However, there were many issues to be negotiated. For example, (as previously stated) Gollup (2000), Garbarino and Stott (1992) suggested interviews with children should not be conducted in the late afternoons or when children are tired. Therefore, it was not appropriate to conduct interviews after school (and the interviews could not be conducted during school time). This meant the interviews had to be conducted at the weekend. Issues then arose in relation to weekend availability due to children spending different weekends with different parents. This meant choosing which of the children's homes the interview could take place and whether this was appropriate. For example, they could have felt they had to answer questions according to their parent's beliefs (of the home they were interviewed in).

Thus, the interviews occurred at the George Parkyn Centre. This then meant a gatekeeper had to be available to open the centre at the weekends. So when taking into consideration the families' and the George Parkyn Centres gatekeeper's

availability the Auckland interviews were conducted on two separate occasions rather than over many separate visitations.

Although it was negotiated with the parents whether they wanted to be interviewed alone or together and they all wished to be interviewed together. Gollup (2000) suggested the child should be interviewed alone without others to distract them but if they want a parent present this should occur. The parents and the child themselves were asked if it was possible to interview them alone and occurred if they agreed. Conversely, Carr (2000) implied her support for the group interview. Davies (1982, cited in Carr, 2000) referred to how a group interview can re-create the classroom relationships. However, in relation to this research it seemed inappropriate as the participants had not met each other before. It also became clear after the first meeting that issues could arise around making sure every person had a turn to talk (Creswell, 2005) without taking an authoritarian position.

6.8.1 Putting the children at ease

Some children could see the interview as a novel experience and not understand what is expected of them or they may have had experience with being interviewed by professionals such as psychologists and would be more familiar with the process (Gollup, 2000), although, this may mean they view interviews as distressing. Part of the process of ADHD diagnosis could have meant the children in this research had previously been a part of interviews or were at least asked some questions by either a psychologist or paediatrician. Thus, they may be aware of the interview process but relate it to negative connotations relating to when they were labelled as having ADHD. This is why as Gollup (2000) suggested, the interviews began by asking if children knew why they were there and they also met me before the interviews (in an attempt to put them at ease and to address ethical concerns such as it is my obligation to explain why they are there and check if they still want to participate).

In addition, Garbarino and Stott (1992) and Gollup (2000) also suggested that there should be explanations in relation to the purpose of the interview and how the

interview is not a test. Carr (2000) echoed this belief when she stated that children should know there are no right answers. This can occur by the interviewer taking the role of needing help and giving the child the role of the expert in order to help elicit information (Gollup, 2000). 'Playing dumb' can be established by getting the child to converse about something which they are familiar with and have expertise in (Gollup, 2000). I did this at the start of the interviews by using information I obtained from first meeting the child (e.g., asking them to explain how they worked a microscope I knew they had been using).

Although they recognise that some researchers use 'real' conversations Fontana and Frey (2000) referred to how the researcher should avoid giving personal opinions or undertaking a 'real' conversation where they answer the interviewee's questions. However, when interviewing children Gollup (2000) referred to how there should be some reciprocal conversation where the researcher shares information about themselves. Carr (2000) noted that this is necessary for the balance of power to shift towards the learner. If the interviewer has the power the child may feel they have to answer even when there is no answer (Garbarino & Stott, 1992). They also maintained empathy and interest should be shown to the child, which would probably be difficult if not responding. Furthermore, as Gollup (2000) suggested I asked the children to address me by my first name.

I also attempted to give the children more power by conversing with the children about my learning experiences. I found this was particularly useful when I asked the children to speak about their experiences when learning as it seemed to assist them to feel more comfortable with sharing. This seemed to be effective as the children appeared to believe they had power as when they did not know the answer to a question they responded that they did not know but answered other questions with detail (e.g., the 'I don't know' did not seem to be an attempt to avoid answering the questions). In addition, I showed empathy and interest when children described their experiences by responding to these experiences and then rewording my following question to build onto what they had brought up.

6.8.2 The questions

Interviews should begin with more general questions which then move to more specific while the researcher checks for truthfulness (for example a simple question could be asking about what school they attend) (Fontana & Frey, 2000; Gollup, 2000). It has been indicated that open ended questions are the most appropriate as they allowed for a 'more elaborate response' (Garbarino & Stott, 1992; Gollup, 2000), although, Hughes (1988, cited in Gollup, 2000) suggested that some young children may find open questions difficult to answer. For this thesis the interview questions attempted to address this by giving structure by intertwining more specific questions with open ended questions (Gollup, 2000). I also asked the participants about their positive learning experiences before their negative in order to be sensitive to what could be delicate questions (Hughes, 1988, cited in Gollup, 2000) (see Appendix F).

Third person questions were also used as some children may find it easier to answer in general (Graue & Walsh, 1998). I also used hypothetical questions in an attempt to avoid the child focusing on getting the answer correct (Graue & Walsh, 1998, cited in Gollup, 2000). For example, I asked questions around recommendations they would give to people who are going to help other young people learn. I also attempted to avoid complex double questions (Erdman & Lampe, 1996, cited in Gollup, 2000). Everyday and concrete terms (i.e. fun) were also used (Gollup, 2000). As suggested by Garbarino and Stott (1992), and Patton (2002) 'why' questions were used minimally. As Patton (2002) indicated 'why?' questions presuppose that occurrences have happened for a reason.

6.8.3 The procedure

In addition, to answering questions this interview procedure also involved talking about photos and drawing. Gollup (2000) referred to how the use of other formats may prevent a child from becoming bored, which is particularly significant for the children in this study as they had ADHD (see 3.4). Garbarino and Stott (1992) and Wisker (2001) stated that photos may be a useful technique to assist with

communication. Gaining the attention of these children seemed to be a significant issue. For example, one child cart wheeled and jumped around the room kicking her 'evil twin.' Another child kept reading the titles of the books on the library shelf or posters that were on the walls of the classroom. However, if they appeared "…bored, tired or distracted…" I suggested a break (Gollup, 2000, p. 29). According to Gollup (2000) if this occurred it was important to end the interview on good terms so that the child does not feel it was terminated because they were not doing the right thing. During the first interview the youngest child (6) interviewed appeared to become restless. It was at this time I stopped the interview and told him how much he had helped me. After talking to him about what would help him to not become restless for the second interview we decided he should bring his game boy into the room where we were talking. I also brought in some blue poster paper (his favourite colour) so he could write and glue his answers onto it if he wanted. Preventing boredom was also why the children were interviewed first before their parents.

Using visual information at the end of the first interviews appeared to gain the children's attention. Three photos were used in the first interview (see Appendix G). These photos were used when asking the children how they felt about learning together (photo one) alone (photo two) or beside others (photo three). This is why the second interview was based around picture cards, as this appeared to grab their attention. The children spread these cards upside down on the floor and chose which one they wanted to answer (possibly giving them more power too). I asked the simple closed questions 'do these things help *you* learn?' or 'do they make learning harder?' then they could tell me what they wanted to about the picture.

Another component of the interviews was drawing. Gollup (2000) suggested asking children to draw was a way to make the interaction less intense so children could focus attention on the drawing if they wanted to. In the first interview I asked the children to draw a picture of someone who was good at helping them learn. Some children did not want to so I did not force them as I did not want to be authoritarian (Gollup, 2000), while the children that did complete drawings asked if they could keep them. It is noteworthy that the term teacher was consciously not used so as to

not direct the child to classroom teachers but those who help them learn (i.e. extracurricular teachers or their parents).

Some researchers suggested that interviewing prompts should be used for encouragement to avoid repeatedly asking questions and expecting a response (e.g., Creswell, 2005; Garbarino & Stott, 1992; Gollup, 2000; Wisker, 2001). Creswell (2005) maintained there were two kinds, the clarifying and the elaborating probe. An example Creswell (2005) gave of a clarifying probe appeared to focus on asking a more specific question (tell me more about…?). An elaborating probe could be to ask "What does *not much* mean?" (p. 218). Wisker (2001) suggested probes could be as simple as smiling and nodding or repeating the participant's previous statement (see Appendix F end of interview one and two for prompts that were used).

Furthermore, Fontana and Frey (2000) and Garbarino and Stott (1992) referred to the importance of taking notes of non-verbal features. This occurred throughout all of the interviews.

6.8.4 Interviews, truth and credibility

Garbarino and Stott (1992) referred to how children can sometimes make up stories and tell fantasy and that in different interviews the child can give different responses to the seemingly same question. Although, as Graue and Walsh (1998) stated, "even fabricated answers can assist the search for meaning" (p. 121). They referred to how a lie should hold an element of truth at an underlying level. For example, a child could say they do not like school cafeteria food when they actually do, giving a group-defined answer (as most children do not like cafeteria food) (Graue & Walsh, 1998).

Furthermore, a child who is asked a novel question may not think of an appropriate answer until the following day (Graue & Walsh, 1998). This is why it was beneficial for the first transcript clarification to occur at the second interview so the children could add information if they wanted to. Furthermore, this should accommodate the possibility of multiple meanings, misunderstandings or mishearing (Garbarino &

Stott, 1992). For example, if I had transcribed something they had said incorrectly or if they had wanted to clarify a statement they had made. All of the participants were given the chance to view and change their interview transcripts and some chose to change wording and remove unnecessary words to make their perspective clearer.

Giving the participants the opportunity to check their transcripts also seemed to relate to member checking (Mutch, 2005). Member checking is not only about checking the factual accuracy of the story constructed, but the meaning it has to the participant (Creswell, 2005). In this case the first interview transcript was given to the participants before the second interview which allowed the opportunity for discussion relating to the first interview if necessary. The second interview transcript was emailed to them (as the participants preferred this). The participants were also able to email or phone me if they felt it was necessary.

6.9 Interviews and power

As previously mentioned, power is a significant issue in interviews, particularly when interviewing children. This issue was accommodated for in many ways, some of these have already been addressed (e.g., by sharing my learning experiences). Power was also addressed by conducting the interviews in a place the children and their parents were familiar with. Also, by undertaking a research method that allowed for divergence from structured questions. Furthermore, I began the interview by explaining to the participants that they were there to help me and that they were the experts there to advise me about their educational and social experiences. Fourth, after this explanation they were asked simple questions (such as what school do you go to?) to ease them into the interview process. Lastly, both their first and second transcripts and my analysis were member checked (as addressed in 6.8.4).

Although, it should be noted that power is not only negotiated in relation to the researcher and participant relationship but throughout the research process (Fasoli, 2001). According to Fasoli (2001) within interactions the power can continuously tip back and forth. Researchers should be made aware of this and recognise that an

understanding of power is not merely inherent but very complex. For example, Fasoli (2001) stated when carrying out research she wanted one of the five year old participants Jake to get off the computer at the museum and focus on the art as she felt this should be the focus. On reflection Fasoli (2001) could see she did not recognise this child's interest and his right to focus on the computer.

I believe one way I recognised the children in this study's right to their interests when I acknowledged the significance of visual information. The children in this study appeared to focus better when I showed them the photos in the first interview (e.g., one of the children stopped doing cartwheels and another stopped reading the posters on the wall). This is why in the second interview the picture cards were the central focus. It is noteworthy the difference in behaviour in the second interview. They spoke more and moved less. This could be partly due to the children becoming more comfortable with me but also possibly the visual information.

6.9.1 Ethical issues

"A 'good' qualitative study is one that has been conducted in an ethical manner" (Merriam, 2002, p. 29). This seems to relate closely to the 'trustworthiness' of the research. Mutch (2005) described how "*trustworthiness* means you have clearly documented the research decisions, research design, data-gathering and data-analysis techniques and demonstrated an ethical approach" (p. 114). Although she suggested that generalisability is not necessary in qualitative research, the reader still should be able to "…trust your processes and believe your findings" (Mutch, 2005, p. 114). Mutch (2005) also suggested that credibility was necessary in research. According to Mutch this could occur through *triangulation* (see below for more detail) and *member checking* (as previously addressed in 6.8.4).

Another ethical concern was that the participant in this study remained unidentifiable. It was agreed when I obtained ethical approval from the University of Waikato's Ethics Committee and the George Parkyn Centre's Board of Trustees that participants would remain anonymous and choose pseudonyms (this was also on the participant's consent forms). This is significant because the children were to identify ineffective

as well as effective people who have helped them learn. This could mean children could be speaking of those who were teaching them at the time of the interview. Therefore, it was imperative they not be named.

6.9.2 Cross culture interviewing

Patton (2002) suggested there could be interview issues, such as language or differing values when the interviewer and interviewee are of different cultures. One of the children involved in this study was from a different cultural background (Chinese) to me. I addressed possible language issues by talking to the child and their parent. After finding out that the child's first language was English and that he had attended New Zealand schooling it seemed the language issue was of little concern.

I also attempted to address differing values. The mother spoke about how differing values may impact on her expectations of the child. For example, she said that many Chinese children are expected to complete their schoolwork whether it is enjoyable or not. There may be many other differing values that we did not discuss. However, it could be argued that all of the children I interviewed had differing cultural values, perhaps not in relation to ethnicity but perhaps culture in the sense of a group (possibly a family) shared belief. Although all of the families were asked if that had any cultural values they felt I should be aware of and they suggested there were none.

6.10 Reliability and internal validity

As Cohen et al. (2000) stated, reliability is not the aim of qualitative research, and this is its strength rather than its weakness. This is because "reliability is the extent to which a research fact or fiction can be repeated, given the same circumstances…" (Bassey, 1999, p. 75). In contrast " in qualitative methodologies reliability includes fidelity to real life, context-and situation specificity, authenticity, comprehensiveness, detail, honesty, depth of response and meaningfulness to the respondents" (Cohen et al., 2000, p. 120). In qualitative research reliability seems to relate to a researcher attempting to put forward what the participant was informing them about as

accurately as possible. This seems to relate closely to validity as in qualitative methods internal validity relates to understanding the viewpoints of the participants, beginning to understand human behaviour and presenting the findings in a holistic manner (Merriam, 2002). To address this I sent my participants their transcript and analysis to see if my transcribing was accurate.

6.11 Triangulation

Creswell (2005) stated triangulation is carried out when qualitative researchers "triangulate among different data sources to enhance the accuracy of their study" (p. 252). He then referred to triangulation occurring in relation to not only data (e.g., interviews and observations) or method of collection (e.g., archives and interviews) but also through corroborating evidence from different individuals.

This thesis corroborated evidence from different individuals, including the Gifted children with ADHD their parents and a gatekeeper from the George Parkyn Centre. The children and their parents were asked similar questions about educational and social experiences. The gatekeeper was asked similar questions to the parents as she had experience working with Gifted children with ADHD. Thus, this brings data from different sources together in relation to the same or similar experiences. Although parents and children are considered different sources, because of their close interactions many talked about shared experiences which did allow for cross checking of trustworthiness.

An alternative approach to triangulation was suggested by Bassey (1999) who modified Lincoln and Guba's (1985, cited in Bassey, 1999) work. Bassey (1999) maintained that triangulation was a component of trustworthiness. The questions Bassey (1999) suggested are below.

At the third stage: collection of raw data

1 Has there been prolonged engagement with data sources?

2 Has there been persistent observation of emerging issues?

3 Have raw data been adequately checked with their sources?

At the fourth stage: analysis of raw data

4 Has there been sufficient triangulation of raw data leading to analytical statements?

At the fifth stage: interpretation of analytical statements

5 Has the working hypothesis, or evaluation, or emerging story been systematically tested against the analytical statements?

6 Has a critical friend thoroughly tried to challenge the findings?

At the sixth and seventh stages: reporting of the research

7 Is the account of the research sufficiently detailed to give the reader confidence in the findings?

8 Does the case record provide an adequate audit trail? (p. 75)

Although Bassey (1999) believed no researcher could embrace all of his suggestions this study related to all of the questions. In relation to question one, I spent a lot of time 'immersed' in the Gifted/ADHD information in order to understand the complexity of the issues (Lincoln & Guba, 1985, cited in Bassey, 1999). This was particularly significant due to the various conflicting perspectives.

I also attempted to establish relationships with my participants, in order to immerse myself in their situations, as they were also a data source. These relationships were built with the participants by meeting them and emailing and phoning throughout the interview process. Although, I would have liked to have spent more time to enhance familiarity with the children the availability of some of the families meant this was not possible.

Question two addressed looking for 'tentative salient' features in the data to address what is most relevant to understand them. This occurred throughout the interview process. This was particularly evident after the first interview when key features

were found within each interview and then addressed in the second interviews, either to gain further detail or to check if the feature was relevant to other participants.

The third question related to checking the data with the participants (sources). Both interview transcripts were given to participants to respond with any changes, including removing, altering or adding information for clarification. Question four referred to triangulation. As previously mentioned this was evident in this study.

"…[H]ypothesis, or an evaluative statement or emerging storyline-is carefully and systematically tested against the analytical statements which have been made about the raw data" (Bassey, 1999, p. 76). 'Testing' in this case is thoughtful consideration, looking for discrepant cases that may disrupt the storyline. This can be found in my discussion as I gave thoughtful consideration in addressing various possibilities for the occurrences within the story and by addressing any discrepancies.

Question six referred to a critical friend attempted to challenge the results. In the case of this research the researcher's supervisor challenged the findings to find weaknesses. In relation to question seven Bassey (1999) suggested being succinct and not presenting either too much or too little information. This is why I have attempted to present key information for this thesis that related to the aim, to identify some effective educational strategies and present some social experiences to see whether the literature's suggestions (e.g., that they have social difficulties) is true and if so whether it could be impacting on learning.

Bassey's (1999) 'audit trail' meant that throughout the research process I could have had my records checked to see if they exemplify the 'justified conclusions' (Bassey, 1999). This thesis left a clear 'audit trail' as the conclusions made were justified as they related to a combination of suggestions made in the Gifted/ADHD literature (which is referenced in the reference section) and by the participants (data evident in the results section).

6.12 Generalisability or external validity

Merriam (2002) referred to how the issue of external validity or generalisability has stimulated a lot of discussion and debate. Firestone (1993) referred to a criticism of qualitative research being how it is hard to generalize findings to other settings. He described how generalizing is about making claims that your findings are replicable to other settings. "The strongest argument for generalizing is usually thought to be extrapolation from a sample to a population" (Firestone, 1993, p. 16). This does not seem relevant to this thesis as the participants were specifically chosen and are not representative of the population and the research is aimed at teachers, parents, or those who help children learn. As Merriam (2002) stated "a small sample is selected precisely because the researcher wishes to understand the particular in depth, not to find out what is generally true of the many" (p. 28).

Cronbach (1982, cited in Firestone, 1993) referred to how sample to population findings were more significant for those professionals such as governors rather than teachers and parents. This is because governors use large pieces of information to make policy decisions.

Firestone (1993) referred to how in qualitative studies transfer of findings can be carried out by the reader. However, "…the researcher has an obligation to provide a rich, detailed, thick description…" (Firestone, 1993, p. 18). He suggested this should assist the reader with seeing how the information read can be applicable to a setting. Merriam (2002) stated that the possibility of generalization in qualitative research seems more persuasive when we realise the in-depth information we gain from this research can be applied to other settings.

This seems to relate to fuzzy generalizations. Bassey (1999) referred to how "a fuzzy generalization carries an element of uncertainty. It reports that something has happened in one place and it may also happen elsewhere. There is a possibility but no surety" (p. 52). The reader can decide *if* what they have read can be an applied to another setting and if so *how* they can apply it (Merriam, 2002).

Bassey (1999) explained this concept further when he referred to how fuzzy generalizations may need amending. He suggested that if the study is replicated by another researcher they can amend fuzzy generalizations if they find they faced difficulties which the first researcher did not. This then allows for cumulative research as the second researcher can add onto the first researcher's findings. Thus the aim of this research is to present fuzzy generalizations from information that was derived from interviews.

6.13 Data analysis

The data were transcribed and analysed by myself soon after the interviews took place. I took the first transcripts to the second interview for participants to member check (Scheurich, 1995). The second interview was on the key issues that developed from the first interview. This included anything I felt I needed to clarify. I also asked the participants if there was anything they would like to add or remove.

Then "…there is a point in the data collection when the field does end, and then we are faced with our data and ourselves, a daunting prospect" (Pillow, 2002, p. 396). Once the data analysis begins some writers suggest total immersion is necessary in order to fully understand it (e.g., Creswell, 2005; Pillow, 2002). When it is time to present the data, Cohen et al. (2000) warned that:

> The great tension in data analysis is between maintaining a sense of holism of the interview and the tendency for analysis to atomize and fragment the data – to separate them into constituent elements, thereby losing the synergy of the whole, and in interviews the whole is greater than the sum of the parts. (p. 282)

Silverman (2000) and Moltzen (2005) also warned of the dangers when categorizing qualitative data. Silverman (2000) suggested that the data should be presented realistically and implied that differences found can be just as significant as the similarities. "…One becomes aware that any clustering of responses in this manner can over-represent trends and under-represent the individuality of people's

experiences and stories" (Moltzen, 2005b, p. 162). Thus, it may have been appropriate to address each child's educational and social experiences as individual stories. However, presenting in themes possibly allowed for educational strategies that are appropriate for more than one of the children to arise. Thus, both strategies are utilised as brief stories are evident in 7.2 while the results that follow this are presented thematically (e.g., 8.2).

When analysing I firstly began by looking for data that related to the three key questions of this thesis that related to effective strategies, ineffective strategies and social experiences. As Creswell (2005) suggested I also looked for unexpected findings. To add realism to the data short quotes from the interviews were used (Creswell, 2005).

6.14 Limitations

An issue that relates to this research is that it involved interviewing children that I did not know prior to the research. It is difficult to know the exact impact of this because even if I (and not another person they knew) had interviewed the children on a different day the findings may have been different. However, it was not possible to know these children before the interviews as they had to be both Gifted with ADHD (e.g., they could not be children who were part of a class that I had taught).

Nevertheless, I did establish relationships by meeting the children before the interviews were conducted and using a somewhat informal interview method (semi-structured) which gave them power. I shared power by conducting 'real' conversations where I shared my learning experiences. On some occasions they corrected my understanding of what they had said (during the interviews). Therefore, indicating they were somewhat comfortable with me.

Another limitation is that the findings relate specifically to the educational experiences of the children in this research. Some may argue that they cannot find value in reading others specific experiences. However, this research focused on a

specific group of children who had been identified as being Gifted with ADHD. Hence, it was never the objective of this research to have generalisable findings for all children. Although as previously mentioned fuzzy generalizations may be found in this thesis' findings (Bassey, 1999). Thus, the intended audience (those who help children learn) can read the findings presented and may be able to relate to some aspects and possibly gain further understanding in how to assist children who are Gifted with ADHD to learn and, as indicated in the introduction of chapter one, general educational strategies could assist children in general rather than simply the Gifted with ADHD. However, as Beyer (1992) suggested no piece of research is perfect and if you look closely you will be able to find the weaknesses in all of them.

6.15 Chapter summary

This chapter has described the approach taken in this study, the issues that were considered in relation to the methodology, and the decisions that were made at each step of the process. A qualitative approach was chosen to answer the research questions, and the study involved interviewing six children, their parents and a gatekeeper from the George Parkyn Centre where the children had either attended or still attended. The participants were recognised as being both Gifted (by the George Parkyn Centre) and as having ADHD by either a paediatrician or psychologist.

Semi-structured interviews were chosen for numerous reasons (e.g., this method allowed participants more power as unlike a more structured interview semi-structured interviews are not as rigid). In addition, I deliberately chose to conduct semi-structured interviews with children and their parents as I believe parents know their children best (as addressed in 6.2). Also, because it allowed me to gain further information about effective or ineffective educational strategies that various teachers (e.g., their children's teachers from previous years or their extra-curricular teachers) had carried out.

What is of importance from this chapter is the qualitative issues that were referred to were acknowledged in order to get rich findings from the participants (e.g., one issue

was power which was addressed was by making the interview like a conversation). These rich findings could then allow further understanding regarding Gifted/ADHD areas I wished to investigate (e.g., effective educational strategies, ineffective educational strategies and their social experiences). Also, by acknowledging the issues (e.g, power) evident in this chapter it should allow participants to feel comfortable to discuss Gifted/ADHD concerns that they want explored. Participants seemed to feel comfortable as some of the findings in the following chapter address what parents wanted investigated (including how they felt their children were underachieving).[25]

[25] For a simplified general overview of the chronology of this study see Appendix H.

7 Chapter 7: The children's stories results and discussion

7.1 Introduction

Chapters seven, eight and nine address the results and findings of this thesis. The findings and discussion relate to the three research questions:

- What are some effective educational strategies these children identify as assisting them when learning?
- What are some ineffective educational strategies these children identify as making their learning more difficult?
- What are some social experiences they have had when interacting with other children and how could this impact on their learning?

Each chapter follows the format of firstly addressing the results and then a discussion. Chapter seven briefly introduces the children that participated in this study through stories and underlines why it was important that effective educational strategies were identified. This included how all of the parents that participated in this study felt their Gifted children with ADHD were underachieving and not meeting their potential.

Part of chapter eight gives further detail to some difficulties that seemed to be associated with the children's learning disability ADHD that they, either the children themselves or their parents, indicated affected the children's learning. The later part of chapter eight describes the educational strategies identified from talking to the Gifted children with ADHD, their parents and the George Parkyn centre gatekeeper and thus addresses the first research question *what are some effective educational strategies these children identify as assisting them when learning?*

The second research question *what are some ineffective educational strategies these children identify as making their learning more difficult?* is also acknowledged in chapter eight (8.4). The ineffective educational strategies were referred to in a table

and were not explored in further detail as they were the opposite of effective educational strategies.

The last findings chapter, chapter nine addresses the third research question, *what are some social experiences they have had when interacting with other children and how could this impact on their learning?* The findings within chapter nine refer to *social difficulties with peers, friendships established with children of differing ages and preferences for working alone or in groups.*

Here is a small reminder of the names of the participants and their parents.

Parents	**Children**
Pierre and Doris	Taylor (aged 6)
	Emily (9)
	Thomas (10)
Mark and Lynn	Darrell (8)
Ben and Angela	Zan (9)
Jane	Randy (10)

7.2 Results: The children's stories

This section presents the results which imply why it is necessary that the children in this study have appropriate educational strategies, specifically because they do not appear to be meeting their academic capabilities due to a number of reasons. The two most significant reasons included, lack of appropriate challenge from teachers and the children not challenging themselves. The stories are presented in chronological order in relation to the age of the children.

Taylor

Taylor's story is shorter than the other children's. This is because he is six years old and has not had as much educational experience as the other children. Also, possibly because of his age, he appeared to find it more difficult to express how he felt about

his learning, even though I used extra accommodations to assist Taylor to talk (see 6.8.3).

Taylor was able to describe the tasks he liked. For example, he referred to enjoying *"chunky challenge"* where *"you've got to write down words that start with the chunk"* (transcript 1/2). Taylor indicated he liked chunky challenge because *"it's quite easy"* (transcript 1/2). Doris suggested this enjoyment of easy tasks was not just a one off case. Doris stated *"at normal school, he doesn't have to do a lot of thinking and use his brain"* possibly because *"Taylor is not recognised as gifted [at 'normal' school]"* (transcript 1/2). But Doris stated:

> *because I had been communicating with Taylor's teacher this year and said, we have had him assessed and he is gifted she [Taylor's 'normal' classroom teacher] actually put him in the animation class [an extra class available for Gifted children] too [as well as Emily]. So those teachers, even though they don't understand the gifted side of things, they recognised the need of giving them [the gifted] a little something extra, and that was good. It just doesn't happen regular enough.* (transcript 1/2)

Although it seemed Taylor "*…didn't want to go to One Day School because he didn't want to have to work hard"* (Doris's transcript 1/2). Taylor had stated *"…oh Mum, one day school is hard work, because you have to do a lot of thinking…"* (transcript 1/2). It seemed prior to attending One Day School Taylor had "*done a lot of avoidance"* (Doris's transcript 1/2). It seems he could be avoiding challenge by selecting easy tasks. Although Doris stated Taylor said *"Mummy I didn't want to stop for morning tea and lunch [at One Day School] and I thought he has got a sore tummy, but he said 'normally I just want to go to morning tea and lunch' but he said 'I didn't want to stop my work today' "* (transcript 1/2). When I asked Taylor what the task was he did not want to stop doing he said *"we had to write about what we did in the holidays"* (transcript 1/2). In contrast at school he indicated he did not like writing with his 'normal' teacher. Taylor was not sure what the difference was between writing at One Day School and 'normal' school. Nevertheless, this implied that although Taylor may have avoided more difficult tasks in his 'normal' classroom he was sometimes willing to continue with more challenging tasks when they were provided for him.

Darrell

Darrell's parents felt her 'normal' classroom teacher (at the time of the interviews) was not helping Darrell to achieve her potential. Lynn described how Darrell *"…definitely hasn't met her potential this year, whether things will change next year I don't know"* (transcript 2/2). Lynn indicated she felt Darrell's current teacher was ineffective as she related to a 'type' of teacher that is:

> *too emotional whose method of discipline doesn't work and who won't stretch Darrell. Darrell gets labelled as being worse and worse. We actually have got RTLB coming back in now, having had two years of good teachers who did stretch Darrell who didn't yell and seemed to be organized. [So at school] academically she is doing okay except in her maths. That's not going ahead as well as it should. But because her spelling is so far ahead she is doing okay. Her reading, she is still well ahead, but she has got to a point where there doesn't seem to be anything specific in place to teach her at the level she is at. She just gets a book and brings it home and that it really what it consists of at the moment. But the last two teachers, as I was saying they were different in that they were organised and that they did stretch Darrell.* (transcript 1/2)

Lynn indicated Darrell was 'stretched' by these previous teachers because they established IEPs, Lynn described how IEPs were good:

> *… because it meant we (looked over to Mark) caught up with everyone every so often, saw what was going on and could make sure that her [Darrell's] academic needs were being met. And because her academic needs were being met half of her behavioural issues disappeared. I think really she needs an IEP [again]. She was actually suppose to have had one this year according to RTLB, when they handed her, or signed her off, I think is the proper term. But the school in their wisdom decided not to do it. It was put in the too much work basket, I think.* (transcript 1/2)

Darrell may have benefited from an IEP at 'normal' school as an IEP should address how Darrell could meet her academic potential. Instead (at the time of the interviews) Darrell seemed to be placed in situations that did not challenge her learning. Lynn had not told Darrell's 'normal' classroom teacher that Darrell has ADHD as she suggested:

> *I don't think this particular teacher would handle the information well. She [the 'normal' teacher Darrell had at the time of the interviews] is very similar to the one we had the first six months…she is the type of teacher who has the very limited number of groups in everything and won't go beyond that. So if you have got the top six children in the class reading over four levels they are all lumped together and reading at the lowest, least able, and for a child like Darrell that doesn't work. She gets bored and I think she gets fractious in class because we have noticed when she gets a teacher who is different her behaviour improves both at school and at home. But you get that sort of teacher usually who is not quite as organised and is quite emotional and her current teacher's modus operandi for dealing with her is to yell louder than Darrell.* (transcript 2/2)

In contrast to a teacher who was disorganized and yells at Darrell Lynn indicated she felt that Darrell should have had a teacher *"… who is either going to put that time into stimulating her or has less children so they can put more time into her. I don't know which, probably a combination of both"* (transcript 1/2). Although the size of the class (e.g., number of children) would be out of the 'normal' teacher's control the 'normal' teacher could put more time into assessing how to address Darrell's educational capabilities through stimulation. Lynn indicated that Darrell's year one 'normal' classroom teacher recognised Darrell's Giftedness as she*"… recognised she [Darrell] needed something"* (transcript 1/2). This teacher got Darrell into the Gifted and Talented (GAT) program that ran once a week at her 'normal' school. Darrell indicated the GAT program was where she learnt *"more than any other place"* (transcript 1/2). Darrell felt this was because she (Darrell) was smart and because the teacher of the GAT (Mrs Judd) *"always teaches me the most interesting things"* (transcript 1/2), such as celebrations.

The teacher at One Day School (where she had attended for around a month when I interviewed her) also seemed to stimulate Darrell to learn as she was *"flourishing"* (Lynn's transcript 1/2) there. Lynn stated prior to attending One Day School Darrell:

> *…had stopped reading and she came back from One Day School and suddenly started reading again (pause) which is a constant thing. It is a bit of a headache we have to stop her doing reading to do other things but she is reading again, she is prepared to do extra homework and things like that. Those sort of attributes had disappeared this year (pause) so that is good. It is a pity it [One Day School] isn't five days a week, but we can't have everything.* (transcript 1/2)

Darrell may have been more appropriately stimulated and challenged at One Day School. However, Lynn described how Darrell did not appear to like challenging herself. Darrell *"… will repeat activities or the same book again. If she liked it she won't necessarily go and try something else"* (transcript 1/2), as she seems to select tasks she previously had done well. Thus, Darrell possibly had a preference for easy tasks. This was reiterated when Mark indicated that Darrell is:

> *… very competitive she wants to win and to be given recognition for being better than somebody else but she doesn't like to have to try very hard. She doesn't like the actual competition she likes the winning result.* (transcript 2/2)

Darrell may often experience a winning result in her classroom because at the time of the interviews*"…the only child who had like abilities has actually been put up a year, so she [Darrell] is again on her own, with somebody [her 'normal' classroom teacher] who doesn't recognize that she needs anything extra…"* (Lynn's transcript 1/2). This suggested that Darrell's competitiveness would probably not motivate her to extend herself as there was no one of 'like ability' in her class. Therefore, as Lynn suggested, it is likely that Darrell is not meeting her potential.

With no one in her class of 'like ability' to challenge her, this could be why Darrell was very confident in her ability. Darrell stated *"well it's [learning] just easy for me"* (transcript 1/2) because *"I was just born that way"* (transcript 1/2). When asked for more detail Darrell replied *"I have got a very good brain"* (transcript 1/2). Darrell's confidence in her ability could be considered positive as although her current teacher does not appear to be stimulating her learning, Darrell does not appear to have lowered her self-worth.

Darrell may not have lowered self worth but she seemed to be motivated by extrinsic (rather than intrinsic) rewards that were immediate. Darrell seemed to be motivated to learn when:

> *… the rewards [were] more often. They [Darrell's class] had a particular relieving teacher and the first couple of times she comes home she [Darrell] had got half a crunchie bar or something for having a good day. And it was like Darrell never [usually] gets these sort of rewards.* (transcript 2/2)

Although giving Darrell a crunchie bar may not be appropriate practice Lynn further explained that Darrell did not usually receive rewards from her 'normal' classroom teacher and Lynn felt the relief teacher's immediate rewards were effective for Darrell as the relief teacher had used rewards that involved *"breaking up something into a chunk that she [Darrell] can deal with. Okay she might not get it everyday but she has got a chance of making one day work…"* (transcript 2/2). Darrell did not seem to be motivated by her 'normal' classroom reward system (privilege) that children were placed on due to good behaviour. Lynn stated:

> *The idea was that you would get a warning or a couple and then you would be off privilege if you continued to behave badly. So the first four days of the week you would have to try and stay on the privilege chart and then on Friday they [the children and teacher] would vote people back on. But what was happening was that no-body was being allowed back on. As far as I was concerned the teacher should have been watching their behaviour. …She [Darrell] would come home Monday the week was already gone she was off privilege already [and]…no-body was being allowed back on…* (transcript 2/2)

Darrell indicated that the only thing she had learnt from privilege was that *"…when you are off privilege you don't get any fun, and when you are on privilege you get the fun"* (Darrell 2/2). It did not seem that privilege motivated Darrell to learn. Lynn stated Darrell "*…really needs to achieve or feel she has achieved, she really needs to find it within her"* (transcript 1/2), suggesting Lynn would like Darrell to become intrinsically motivated.

Darrell could benefit from being assisted to become intrinsically motivated and being asked what she thinks when boundaries are established. This is because Darrell:

> *always push[es] the boundaries, again and again, you know you expect most children to. But it is almost like the converse of the academic side. Tell her something a couple of times verses telling her something twenty times. When you want to make a rule with Darrell, whether it is because when you repeat*

> *it the next time you are not repeating the same exactly and therefore she starts getting variations on things. Yes, well a politician or a lawyer we are guessing the moment*. (Lynn's transcript 2/2)

Emily

Emily's story addresses Emily (year three) and her parent's perspectives regarding the effectiveness of her teachers. What became evident was the perspective of Emily's parents that Emily had only been challenged by two teachers but could still be further challenged.

Doris referred to a prior teacher of Emily's when she stated:

> *…in her [Emily's] second year at school her reading went through, you know just progressed so quickly, and she was insatiable for her work, she wanted worksheets to do all the time. She would do her homework in five minutes and want more work…and I actually went to the school to see if they could give her extra homework, or you know some extra worksheets because she wants them, but at the time she [Emily's 'normal' school teacher in year two] said 'no' I should just 'teach her to chill out.'* (transcript 1/2)

This implied that this teacher and Doris had a different perspective regarding what was most appropriate for Emily. In addition to Emily's desire for more work, her parents had been told she was capable of more than she was currently achieving *"…the psychologist came back and said actually she [Emily] is doing work at this age group but the testing puts her up here…"* (Doris's transcript 2/2). Pierre (Emily's father) suggested this meant Emily had been *"cruising"* (transcript 2/2). However, the teacher did not appear to believe more work was beneficial, and her parents did not appear to have discussed this with the teacher further in order to achieve something all parties were happy with.

Emily appeared to have a preference for fun and easy tasks as she also seemed to avoid more difficult tasks in Mrs James's (her teacher at the time of the interviews) class in preference for easy work that could be completed quickly. Emily stated *"…if it's easy you can get it done quicker and go and play games"* (transcript 2/2) and *"yeah so I can go and play before everyone else"* (transcript 2/2). The games were clearly something she enjoyed. Emily described how these games were "*free choice*

tasks" (transcript 2/2) that included games such as *"traffic lights [and] lots of other stuff"* (transcript 2/2) and could be chosen when a classroom task had been completed.

Emily appeared to favour tasks that could be completed quickly but she also indicated she liked Mrs James because she*"…makes you work pretty hard, like some teachers might give you boring stuff but she [Mrs James] gives you really hard work"* (transcript 1/2). Doris also had indicated she felt Mrs James challenged Emily because *"…she recognises that Emily loves work…"* (transcript 1/2). Mrs James:

> *…gave Emily the option to do a project on her own, that other kids didn't have to do. To do a power-point presentation on herself because she knew Emily was capable of it and to give something to challenge her…* (transcript 1/2)

Doris also recalled how Olive at One Day School:

> *challenges them [Emily, Thomas and Taylor] and it's, like some of the worksheets I can't even pronounce some of the words (laughs). When Emily was there [One Day School], I don't know what they were doing around it, but they basically made an oven out of a golden syrup tin and, and cooked rice in it in the sun so they kind of do these sorts of things that are practical as well as they do exploratory work on the internet and then they do some theory kind of stuff and then they do practical stuff so its kind of a lot of different ways to approaching a subject.* (transcript 1/2)

It seemed that Emily enjoyed challenging tasks when these were provided by her teachers (either at One Day School or 'normal' school), but did not actively seek new challenges in her routine classroom work, preferring to finish early and move on to free choice activities and games. Depending on the nature of the games she carried out after completing class work there may have been opportunities for challenge within them but it is possible that Emily was developing a pattern of preferring easy work that could be completed quickly, particularly as Emily suggested she did not learn from these tasks. The fact that Emily noted she disliked 'boring' work suggests that interest may be a crucial factor in the tasks she selects. Emily also noted that she enjoyed rewards, and in this case she seemed to be rewarded for finishing early.

Interestingly, although Emily said that she liked rewards, she did not think getting lollies for table points (the children earn points for their tables where they sat if they behaved appropriately) helped her to learn.

Emily did not think rewards could help her learn, but she indicated Mrs James's classroom context possibly did. Emily stated the classroom context was a "*colourful, and effective [environment] because we have an active board"* (transcript 1/2) (an interactive whiteboard that is being used in some schools and other educational institutions).

Doris indicated that an effective classroom context for Emily and her two brothers (Thomas and Taylor) included clear boundaries. Doris stated *"something I ascertained doesn't work for the children [Emily, Thomas and Taylor] was if somebody is not clear with the boundaries and rules and their expectations"* (transcript 1/2). Pierre appeared to agree when he suggested *"what you don't realise is that kids actually like having them [boundaries] because it [the boundaries] makes them feel safe"* (transcript 2/2).

Boundaries could make the classroom context more effective but Doris also seemed to feel Emily could be further challenged *" …I think Emily …to date maybe she has found work quite easy. And I don't know if to date if they [Emily, Thomas and Taylor] have found work challenging"* (transcript 1/2).

Zan

At Zan's current school his behavioural difficulties appeared to be the focus. Zan's 'normal' school teacher would often get angry regarding Zan's behaviour, even when Angela felt he was not the one behaving inappropriately. Angela stated:

> *I mean if you have got twenty five children and three of them are playing up and you repeatedly say to them sit down sit down, you are going to loose your temper and because he [Zan] is sometimes near that or in the middle of it, and I know it's kind of wacky but I think also because he is tall and has blonde hair that he kind of stands out from kids who are shorter with dark hair that just don't stand out. So if he is bobbing around over there it's Zan, Zan (Angela makes noises to indicate being growled out).* (transcript 1/2)

Although Angela also indicated that she and Zan's 'normal' teacher may have had different views about what was appropriate behaviour. This was evident when Angela implied she felt Zan was not misbehaving but often became distracted and would "*skip over there and have a look at that and skip off with it and then 'Zan stole my rubber' and he will get into trouble and you know, it just goes around, around and around* (transcript 1/2). Angela also referred to how teachers would give instructions that led to distractions such as:

> *'Okay get up, okay everybody come and sit on the mat' and then they sit on the mat for five minutes to hear the instructions and then 'okay everybody go and get your bags now come and sit on the mat.' Now 'go and get your books out' and then 'go and sit at the tables.' There is so much movement around the class, getting up, getting down that I think Zan gets a bit lost, not lost but you know there's so much going on*. (transcript 1/2)

It seems Zan is distracted when asked to move around the classroom. Although it is not clear whether it is the distraction caused by the movement or if Zan uses the distraction caused by the movement as a way to avoid tasks as Zan "…*won't follow through with tasks if something changes, if the setting changes or something gives him… the excuse to not fulfil his obligation to the first task"* (Angela's transcript 2/2). Either way (if distracted by movement or the movement is an excuse to become distracted) Zan *"… misses out the first stage and that first step then he just gets completely lost and I think it makes all of it [learning] challenging"* (Angela's transcript 1/2). Ben elaborated stating *"and it's that whole thing, I don't know if it happened to you at school, where you miss the instruction and everyone is, you know, there's noise and clatter and then you going what the hell are they doing? what are we doing?"* (transcript 1/2).

Although Zan may miss instructions at 'normal' school he did not appear to be distracted at Kip McGrath. Angela stated:

> *So he [Zan] sits in front of his computer as well as the other three girls sitting by their computers and Debra [Kip McGrath tutor] goes around to them individually and they are all on separate tasks and they are all on different*

> *levels. So it's a really ordered nice environment. He can only focus on the computer. And he does handwriting in his handwriting book as well. There are just no other distractions, you know it's not really noisy no noises.* (transcript 1/2)

Kip McGrath did not seem to have distractions and it also *"stimulated his [Zan's] learning again"* (Ben's transcript 1/2). Zan indicated this was because the tasks at Kip McGrath were *"…tricky in a fun way because they [the activities] are actually possible for me at my level"* (transcript 1/2). Thus, Kip McGrath was possibly more appropriately addressing Zan's academic level.

The boundaries at Kip McGrath may also assist Zan to learn. Angela stated:

> *…the order that Debra has at Kip McGrath it works really really well so those sort of boundaries seem to be brilliant for him. Very very clear boundaries, like this is where you sit, this is where you work, this is what we are doing, so it is explained every step of the way beforehand.* (transcript 2/2)

There are some other significant differences between the learning contexts of 'normal' school and Kip McGrath. Zan attends Kip McGrath once a week for around an hour, while school is for six hours a day. It could be argued most people would find it easier and could focus for an hour a day. In addition, at Kip McGrath *"when you complete all of the tasks you get to play on these really cool games"* (transcript 1/2). These computer games seemed like an extrinsic reward because the child is rewarded after completing their work.

Zan indicated his old teacher used extrinsic rewards "*…my old teacher Amy like yeah, like if I did something well. Like if I got enough stickers on the sticker chart thingy that I had then I would be allowed to go on computer the next morning"* (transcript 2/2). It seemed that this teacher may not have been motivating Zan simply through the use of extrinsic rewards but by addressing his interest, the use of the computer (this will be addressed in more detail in the following results section 8.3.1).

Zan seemed to behave and work better when he was extrinsically motivated either at 'normal' school or Kip McGrath. However, although motivated and challenged at Kip McGrath, Zan did not seem to appropriately challenge himself.

Angela stated:

> *…he has a tendency if he is not good at something immediately he will dismiss it and not want to try it again and that is quite frustrating as a parent when you want to teach that you need to practice to become very good at something.* (transcript 2/2)

Angela felt Zan's 'normal' school teacher did not know his academic capabilities. Angela explained how Zan is in the top group for reading because he finds that easy but she suggested Zan "*has got a great math brain but they [the teachers at 'normal' school] don't see that"* (transcript 1/2). Angela indicated this was *"probably because they don't have the experience or the understanding [of Gifted children with ADHD]"* (transcript 1/2). Thus, Angela implied the 'normal' teacher had a lack of knowledge of Gifted children with ADHD and may not use effective educational strategies so Zan could exhibit his true capabilities and have his true potential recognised.

Thomas

Thomas seemed to be confident in his abilities and suggested he did not experience many challenges in his school work. Thomas stated *"usually if you know you are the best at that you usually think that you don't need to try because you think you are better than them, so you don't need to"* (transcript 2/2).

Although Thomas was confident in his abilities, Doris was worried about the impact of Thomas not having to try very hard with his work *"…you know they are capable of it, but it's easy to just fall into the easy…"* (transcript 1/2). Also, how Thomas appeared to choose the easiest way to carry out his homework Doris stated, *"… for his [Thomas's] projects, for the last four weeks in a row he's done it on a piece of paper"* (transcript 1/2). It possibly concerned Doris because she knew someone who had faced difficulty because he:

> *Hadn't learnt those skills to apply himself, his learning was just breezing through and not having to work, he flunked his first year [at University]. Well that nearly tipped him over because he had never had failure like that before in learning…* (transcript 2/2)

Doris was concerned that when Thomas did face challenging work it could overwhelm him. This was probably why Doris was pleased with the learning provided at One Day School. *"Before Thomas started One Day School, I kind of felt he was not really challenged in class"* (Doris's transcript 1/2). Thomas agreed, *"you have got to use your brain a lot more…to answer a lot harder questions at One Day School, like breeding animals and how it's effective and ineffective"* (transcript 1/2). He seemed to enjoy the level of thinking involved in answering the questions Olive (the One Day School teacher) asked.

Like Emily, Thomas was challenged at One Day School and Doris felt he too had been challenged by Mrs James (the 'normal' teacher Emily had at the time of the interviews). Doris referred to how Mrs James challenged Thomas as he produced more work when he was in her class. Thomas was "*writing more and doing more because he was getting something and doing it and onto the next thing, and he got through and did a lot more work to the point that the teacher made a comment"* (Doris's transcript 1/2). The comment was that "*he produces a lot more work than the other kids in the class"* (Doris's transcript 1/2). Although Thomas indicated when a *"teacher is giving us too easy work I still finish it"* (transcript 1/2). Thomas suggested he finished the work Mrs James gave him because it was *"…more fun and it might [have] been easier"* (transcript 2/2). Although Doris felt Thomas had been challenged by Mrs James, Thomas's comment brings to question whether completing a lot of easy work means a Gifted child is being challenged.

Completing a lot of easy work may not challenge a child, however, it is possible that playing games does. Thomas indicated when he learnt how to play tennis his tennis coach Don helped him learn through the use of games. Participating in games may appear as though a child is not learning or being challenged thus we may benefit from reconsidering what challenge looks like to the observer. It is interesting that both Emily and Thomas seemed to enjoy games even though they were different types of games (e.g., Emily's was word based and Thomas's were kinaesthetic).

Randy

Randy is a ten year old boy of Chinese ethnicity. Jane (his mother) suggested his teacher's perspective appeared to be "*…so long as he is not the last one then he is fine"* (transcript 1/2). However, Jane referred to how if Randy is *"…doing things average then that's not right for him because his potential is much higher than that. It's not like the kid has been working really hard and that's the result"* (transcript 1/2). Jane suggested that *"…I don't think he [Randy] is meeting his potential because of his ADHD, he doesn't really concentrate for very long and he can't contain that much information and that definitely limits him"* (transcript 2/2). Thus, suggesting it is possibly Randy's attention difficulties which make it hard for him to concentrate. Although Jane later implied it was challenge that motivated Randy to learn when she stated Randy *"…really enjoys One Day School so I guess he is doing something that challenges him at his level. But at school I can't really say that"* (transcript 2/2). Jane referred to how Randy's Giftedness with ADHD is probably not common and how 'normal' teachers do not seem to understand it. Jane referred to how she believed Gifted children with ADHD:

> *don't get to their potential at all, so if teachers can recognise that and give them a little bit more attention to get more things out of them and to encourage him a bit more so they can go a bit higher.* (transcript 1/2)

Randy was possibly challenged at One Day School but he does not appear to challenge himself. Instead at times he appears to avoid tasks. Jane described how Randy had avoided completing a speech at school and *"…writing and spelling [as] he doesn't think he can make it interesting, basically he thinks he won't do it well so he doesn't want to do it"* (transcript 2/2). With the speech "*for two years now, last year was the worst one he just managed to escape, escape, escape"* (Jane's transcript 2/2). So Jane *"… talked to the teacher and she [the teacher] said 'can we do it tomorrow?'* (transcript 2/2). *"So that night we [Jane and Randy] prepared a speech and Randy prepared"* (Jane's transcript 2/2). But Randy *"went to stay at his Dad's place and his cards and everything went through the wash in his pants."* This meant *"…he escaped again and the teacher got really annoyed and said 'last chance has gone so you have to do something different' because other kids had been planning it*

for weeks but he just didn't do anything." We discussed how this was probably what Randy's aim was all along. Randy possibly avoided this task because he disliked delivering speeches for the same reason he disliked delivering plays, *"…when you do something wrong everybody laughs at you"* (transcript 2/2).

Randy may have avoided delivering the speech because he feared public humiliation, it could also have been because he liked a "…*little challenge but not too much of a challenge"* (transcript 2/2). Liking a little challenge but not too much also seemed to be evident in Randy's relationship with his younger brother Jack. Jane suggested that (at the time of the interviews) Randy was having difficulty with how his younger brother was surpassing him in academic ability. Jane suggested this was a recent change because prior to this change Randy *"was always the one who knew everything but now Jack's reading age is like Randy's"* (transcript 1/2) and when Jane gives Randy and Jack mathematics questions now "…*Randy's ones will be slightly lower and Jack's slightly harder"* (transcript 1/2). It seems Randy does not like too much of a challenge as "…*he doesn't compete with him [Jack] anymore"* (Jane's transcript 1/2). Although Jane also explained how Randy's behaviour related to his Chinese culture:

> *Tall poppy syndrome. It's been thousands of years like that in China, you don't want to be the top. Well you do want to be the top but you have got to remember that lots of people will be aiming at you and you will get lots of not just attention, but lots of other things to go with it as well. So you don't want to be the top, in the middle you are comfortable, that's fine, you know. His Dad is pretty much like that. he [Randy's father] is a very intelligent guy but he just wants to sit in the middle. He doesn't want to fight for the high position or anything.* (transcript 1/2)

Jane indicated Randy was like his Dad and did not like to compete for the top position. Jane indicated *"that's one of the reasons I wanted him to come here [One Day School] because I wanted to build him up rather than just let him withdraw"* (transcript 1/2). It is possible that being younger, Jack was not aware that he was surpassing Randy academically.

Jane was concerned about Randy withdrawing, possibly due to how he did not like too much challenge. Jane was also concerned with what she suggested was an overuse of extrinsic rewards. Jane stated:

> *Personally I think it has gone a bit too far it is a thing that now every time they do something they have to get a reward otherwise they [children] won't work at it. You know they have to see something before they put effort in which to me is not right*. (transcript 2/2)

For example, Randy's guitar teacher said:

> *'If you practice five minutes everyday up to Christmas, go and ask your parents for a reward' (exhales) and I thought yeah everything has got a reward. And I said well 'Randy this is just a task that is a challenge for you, if you can practice everyday for five minutes up to Christmas and in the end you feel that you have done it that is a big achievement for you, rather you have to get a chocolate bar or something and I said do you think you could do that?' he goes 'oh yeah, yeah I can do that.' I am just trying to not sweeten everything, everyone is just so focused on reward.* (Jane's transcript 2/2)

Jane is trying to prevent the overuse of extrinsic rewards and assist Randy with becoming intrinsically motivated, although, Jane indicated Randy was somewhat reliant on extrinsic boundaries:

> *Yeah he definitely will ask for rules and he will ask for the boundaries himself. He is very a sort of squared boy he has to know what he is allowed to do and what he isn't allowed to do. I have restricted him a little bit too much; it is a bit of a reflection. He will come and ask 'Mum am I allowed to do this?' 'Mum am I allowed to do that?' To other people he seems like a really good boy always asking for permission. But I think it is that more limited way of thinking that more Chinese square thing you know, everything is in a square box. Because I came from that background and it is just part of my normal behaviour and I just can't change it and Randy is getting a bit like that. I would like him to have more freedom; he doesn't have to check with me all the time.* (transcript 2/2)

7.3 Discussion: The Stories

7.3.1 Introduction

This section discusses the main findings from the stories in detail. It was important to present the stories first as the stories underlined the importance of identifying

effective educational strategies. Identifying effective educational strategies was necessary because although the children in this study had been identified as Gifted with ADHD their parents felt their children were not meeting their academic capabilities at 'normal' school.

The key themes that arose within the stories included that the Gifted children with ADHD in this study had very mixed experiences of learning, all the children had some experiences of learning that they enjoyed and experiences at school seemed to depend on skills and interests of individual teachers. Even though their parents had suggested their Gifted children with ADHD had experienced challenge at 'normal' school (e.g., when Darrell had an IEP), One Day School or Kip McGrath all of parents were concerned about their children underachieving in the 'normal' classroom and all of the children seemed to avoid challenging themselves. Some of the reasons that underachievement could be occurring are addressed in 7.3.2. These included, underachievement, goal orientation and selective consumerism.

7.3.2 Discussion

Flint (2001) suggested children with ADHD could incorrectly be diagnosed as underachievers *before* being diagnosed with ADHD. This contrasted the children in this study as they had been officially recognised as having ADHD and it was only their parents who maintained they were underachieving. It seems this could relate to Delisle's (1995) suggestion that the label ADHD can be used as an excuse for why children are not meeting their academic potential. Although, Lynn did not inform Darrell's classroom teacher about Darrell's ADHD because she did not want Darrell to be further restricted by what her mother saw as the teacher's limited grouping system (e.g., with material directed at the level of the lowest achiever in the group) and further boredom. Nevertheless, as many GLD writers (Davis & Rimm, 1993; Reis & McCoach, 2002; Reis, Neu & McGuire, 1997) suggested the negative behaviour of some of the children in this study was the focus (e.g., Darrell and Zan). Thus, it may not be the ADHD label that leads to the focus on the negative behaviour

but the behaviour itself. Alternatively as Jane indicated, Randy's academic capabilities may not have been recognised by his 'normal' classroom teacher because Randy did not want to exhibit his true ability and reach the top, in accordance with his Chinese culture. Jane explained, how like his father, Randy seemed to be 'aiming for the middle.' It is not as clear why Emily and Thomas's Giftedness was not recognised in their 'normal' classroom. Nevertheless, the parents indicated all of the children in this study were underachieving.

When attempting to deduce how the children in this study related to Gifted underachievers there appeared to be both obvious links and some divergences from the Gifted underachiever categories. Although it was possible that the children in this study linked to Bett's and Neihart's (1988) double labelled Gifted underachiever who are both Gifted and have a disability. However, the double labelled Gifted underachiever's Giftedness is often unrecognised due to their disability (Betts & Neihart, 1988). In contrast, the children in this study had been identified as Gifted by the George Parkyn Centre (and Darrell participated in a Gifted program within her 'normal' school). However, some of the parents in this study suggested their children's Giftedness may not have been acknowledged by their 'normal' classroom teachers and hence the children only exhibited their Giftedness in some settings. This could be why like some hyperactive underachievers (Rimm, 1995, cited in Moltzen, 2004c) the children in this study only exhibited their exceptionalities in some settings.

As noted above, although the children in this study had been formally identified as Gifted with ADHD some of the parents indicated that many of their 'normal' classroom teachers did not seem to acknowledge their children's Giftedness. For example, Doris who suggested Taylor's Giftedness was only recognized at 'normal' school because she had informed the teacher or Lynn who maintained Darrell's Giftedness was recognized by her first 'normal' teacher but not her current (at the time of the interviews) 'normal' teacher. This would imply the teachers in some settings may lack knowledge on Giftedness that could lead to Gifted children not completing work (Hartnett, et al., 2004; Lovecky, 2004; Webb, 2000). For example,

it is possible that Zan was not concerned about becoming distracted in his 'normal' classroom because his teacher did not recognise he was Gifted. Although Emily completed her work, she suggested she completed it quickly in order to get to play games, possibly avoiding challenge.

In contrast, Rimm (1995, cited in Moltzen, 2004c) indicated hyperactive underachievers do not complete all of their work. Interestingly both Emily and Thomas completed more work when in Mrs James's class. However, both also seemed to have a preference for easy tasks (e.g., Thomas and his homework and how Emily wanted to get to play games). All of the children seemed to have a preference for easy tasks, although, possibly for different reasons. It seemed Randy avoided some tasks due to a fear of humiliation, while Angela indicated Zan avoided tasks he was not immediately good at, possibly to avoid challenge.

Dweck's (1986) reference to *performance goal orientation* relates to the preference for easy tasks or avoiding challenge. All of the children in this study seemed to *be performance goal oriented* rather than *learning goal oriented*. As previously mentioned in 1.2 a person who is *learning goal oriented* often wants to acquire new skills and thus choose challenging tasks (Smiley & Dweck, 1994) while those who are *performance goal oriented* want to appear competent (Dweck, 1986).

According to Grant and Dweck (2003) it was people who were *performance avoidance goal oriented* that had lower intrinsic motivation which may relate to the children in this study as some seemed to be motivated by extrinsic rather than intrinsic motivation. Barkley (1997) indicated children with ADHD can have a "…diminished capacity to bridge the delays in reinforcement and permit the persistence of goal-directed acts" (p. 289). Although, Taylor exhibited intrinsic motivation when he suggested he did not want to go to lunch so he could continue with his work at One Day School. It is possible that if extrinsic rewards are the reward system used in the classroom and children with ADHD have difficulty persisting with goals without reinforcement that some of the children in this study could become reliant on extrinsic motivation. This was possibly evident in how

Darrell had a positive experience with more immediate rewards yet had difficulty with her 'normal' teacher's privilege reward system, that required longer delay before reinforcement and seemed to focus on behaviour rather than learning. Darrell seemed to almost feel a sense of helplessness when she was off privilege so quickly. This is a dilemma for a teacher because Darrell seemed to enjoy extrinsic rewards that were immediate but the general consensus is that there are a lot of limitations relating to extrinsic rewards (e.g., children are encouraged to work for the rewards rather than for the accomplishment of achieving) (Clarke et al., 2003).

As Delisle and Galbraith (2002) suggested, if children are *learning goal oriented* they could challenge themselves. This could relate to Zentall's (2006) suggestion regarding how children with ADHD can self stimulate. Although, rather than trying to change topics to keep stimulated the children could attempt to make a task they are given challenging, or when there are choices choose a task they know will be difficult for them.

In addition, Doug (Turk & Campbell, 2002) indicated the extent of his learning difficulties depended on who he had as a teacher. Thus, if Gifted children with ADHD are assist to be *learning goal oriented* this goal orientation will be with them no matter who their teacher is and what reward system the teacher chooses to use (e.g., a Gifted child with ADHD that is reliant on extrinsic rewards in one classroom could find it difficult when in a different classroom, if that teacher does not use extrinsic rewards). Being *learning goal oriented* could also address some of the suggestions made in the ADHD literature (see 3.6.2) regarding how these children benefit from becoming self managed.

Delisle and Galbraith (2002) had indicated there were similarities and differences between Gifted underachievers and selective consumers. A key difference that was evident in this research was the children's relationship to boundaries. Delisle and Galbraith (2002) suggested selective consumers require little structure while underachievers benefit from structure. Some of the children in this study seemed to relate to underachievers (e.g., Randy) while other related to selective consumers (e.g.,

Darrell). However, it is possible that a child could respond differently to boundaries in different situations (e.g., at school or at One Day School). Hence, it is too simplistic to suggest the children in this study are underachievers or selective consumers.

Overall what seems most significant is that the children in this study did not appear to be experiencing a lot of challenge from some of their 'normal' teachers and the children themselves did not appear to be challenging themselves. Thus, the children in this study did not appear to be exhibiting their true potential. In addition, there are challenges for the 'normal' classroom teacher (e.g., Darrell's) relating to how to motivate Gifted children with ADHD to learn. Therefore, the following section will identify some effective educational strategies that could assist 'normal' teachers teach Gifted children with ADHD and assist the Gifted children with ADHD to meet their academic potential.

8 Chapter 8: Educational strategies results and discussion

8.1 Introduction

This chapter addresses what the participants from this study indicated were effective or ineffective educational strategies. Thus addressing the first two key research questions of this study including, *what are some effective educational strategies these children identify as assisting them when learning?* and *what are some ineffective strategies these children identify as making their learning more difficult?* The section on effective educational strategies first outlines *difficulties that could affect the learning of Gifted children with ADHD in this study* and then *what appeared to assist and motivate the children in this study to learn.*

Difficulties that could affect the learning of Gifted children with ADHD included memory, repetition, writing and reading difficulties. *What appeared to assist and motivate their learning was* computers, movement, visual information, purpose of tasks and stimulation due to interest. The final results section addresses what participants suggested were ineffective educational strategies.

8.2 Difficulties that could affect the children's learning

8.2.1 Memory

According to their parents the four boys in this study appeared to have difficulty with working memory, particularly with remembering instructions. In contrast, they could remember things that interested them in great detail. However, the two girls were described as having exceptional memories at most times. The following examples are of the boys' difficulties with working memory. Doris described how at home she tells Taylor:

> *Teeth, face, socks, shoes or whatever I try and turn it around to painting a picture. 'Right Taylor it's four things remember…two of them begin with t, so it would like seeing them and to try and make it a game so he can remember it*

> *better, that sort of thing. And he [Taylor] will go up the stairs and say 'Mum what was I suppose to do again'* (laughs) *and I say 'four things Taylor' and I just repeat it four things, you know sometimes it gets all done and other times it doesn't. But if it is painted as a picture that they relate to then, that's easier for them to retain and remember.* (transcript 2/2)

Taylor seems to remember better when things are visual, or Taylor is stimulated to visualise. At the second interview Doris described how:

> *I have just had a go at doing something different with Taylor because we are having lots of problems with him staying on task and he knows (emphasis on knows) it. But this is just a new chart I have done and it has got visual prompts with the words to see if that makes a difference.* (transcript 2/2)

Doris had made a card that included both words and pictures of what Taylor had to do to get ready for school. When I asked if the card was working Doris replied *"(laughs) hard to say, I have to remind him to look at it, but yeah, he said it has been helping him. It has only been two days. On Friday he took it around with him and ticked off the things he had done"* (transcript 2/2). Although Taylor did not discuss his memory directly he did show his ability in the first interview, when he explained to me how to introduce his Mother and Father in Maori (which he had learnt that week at school), suggesting long-term memory for facts as opposed to remembering instructions.

Doris suggested Thomas, like Taylor, also had difficulty remembering instructions:

> *…with Thomas, with things he is interested in he is able to file them and remember but other things he just has a shocking memory, so I guess if he can learn to apply that [the ability to remember things he is interested in] to things he is also not interested in, then that would help him in his future with his learning. I am not quite sure how to do that.* (transcript 2/2)

Doris described an instance when Thomas's interest was captured and he seemed to remember. Thomas sees cars *"...in a magazine, he sees the picture he reads the stuff about it, so I think that combined helps him memorize. Because he can remember models, makes, years, how much they are and everything"* (transcript 2/2). Doris indicated the book's combination of visual and written information could assist Thomas to remember.

Thomas also suggested he remembered information from a book, saying *"I learnt from this book that there's this germ that lives in dirt and um one teaspoon full of its venom can kill 1.2 billion people"* (transcript 1/2). Doris stated *"he can remember that stuff because it interests him, he has always gone for those kinds of fact, based book things*" (transcript 2/2). It is possible that remembering information from books is different to remembering instructions.

Zan also seemed to have difficulty remembering verbal instructions but could remember what he had learnt from a book. Zan stated:

> *the illustrations are really fun and stuff and one of the facts I learnt was [that] sandwiches were invented because people, gambled and stuff they would be eating with a knife and fork and they would have to like put the knife and fork in one hand and chips and be eating and stuff. So they invented the sandwich so they could be eating and using the other hand and stuff.* (transcript 1/2)

Angela indicated Zan was also able to remember guitar chords. Learning guitar possibly included a visual component (e.g., seeing the chords on a music sheet or seeing the chords modeled by Doug his guitar teacher). Angela stated:

> *…long term memory is amazing, it's incredible. I think we mentioned this last time, Doug his guitar teacher said his pick up, he will get them instantly and remember them as well, his ability to retain is incredible. But if you ask him where his shoes are he will have no idea. And I will say 'go into the bathroom and wash your hands before dinner' and he will come back and I will say 'did you wash your hands?' and he will say 'oh no I brushed my teeth instead' (laughs).* (transcript 2/2)

It seems when Zan was asked to wash his hands he went to the bathroom and remembered what you do in the bathroom but forgot the specific request that could have been retained in his working memory, thus, possibly indicating a working memory difficulty.

Like Zan, Jane suggested Randy could remember some things such as *"…things years and years back and things like that"* (transcript 2/2). Although Jane indicated

Randy had difficulty with auditory processing and storing the information he had heard. Nevertheless, the auditory processing difficulty implied Randy had difficulty with his memory. Jane stated:

> *I think his memory is fine, it is more to do with, auditory processing, so he doesn't really store it properly. He hears it but he can't really sort it out like we can. So if you give him two or three things he will just pick one, whichever one got stored there and he will just do that one and will just forget. I used to think he forgets about things all the time but then I was told about the auditory processing so we have to train him so he can store a bit more so we have been doing that with the speech therapist.* (transcript 2/2)

At the first interview Jane had described how Randy went to the speech therapist that:

> *…does a lot more with him than just speech. And what she did with him was to give him just give him instructions, like three or four instructions to see if he can get them all because at the very beginning he could only get the first one or two and the third and fourth one had just gone, he just can't remember it and when he started getting it we started to change the order of things. Like say, go to that chair, sit on that chair and before you sit on that chair move that table first and after you sit on that chair do something else. Just mess them all up so he has to sort out which one to do.* (transcript 1/2)

Randy's speech therapist seemed to be addressing his working memory as Randy exhibited the primacy effect (accurate recall of the beginning items within a list, Ashcraft, 2006).

Like, Thomas, Taylor and possibly Zan, Jane described how Randy learnt better when provided with visual information:

> *…we've been to all the different specialists and gone through a few tests and stuff and apparently Randy learns better by seeing things visually so definitely seeing something will help him a lot. But talking to him and just telling him, so if you give him instructions without seeing that chair so if you say 'go and move that chair in the lounge' it will probably be very hard for him to remember that. But if he can see the chair and you say 'go and move that chair in the lounge' then he will remember that. So that speech therapist gave him instructions to always visualise what it is like.* (transcript 2/2).

Randy and Taylor seemed to remember when the information when they were told to visualise.

Doris stated *"if it is painted as a picture that they [Taylor and Thomas] relate to then, that's easier for them to retain and remember"* (transcript 2/2). Otherwise Doris felt her two boys could not remember instructions because if they involved a lot of words because *"…they don't have that short term [working] memory with the ADHD to retain all of that and then when there are distractions that come along…*" (transcript 2/2).

Although, Doris and Pierre's daughter Emily also has ADHD and Emily referred to her memory as *"good"* (transcript 2/2). Doris elaborated and stated that *"Emily she seems to kind of have an intense memory, remembers everything"* (transcript 2/2). Darrell also did not seem to have a difficulty with her memory. Darrell stated that *"I can learn my spelling words and keep them in my head*" (transcript 2/2) and how *"once I remembered my whole list!"* (transcript 2/2). Lynn said *"there have been various people who have suggested short retention various bits and pieces like that which has all been disproved. I think one of things with her being so academic she has a photographic memory"* (transcript 2/2). Lynn also relayed (without prompting) how Darrell can retain her spelling words, Darrell:

> *…will come home with her spelling written in and she now knows them all and that's it, they're there for life. Just having put them in the first time. She has got an incredibly good memory for things like that. She doesn't seem to have any memory difficulties I can think of.* (transcript 2/2)

However, Lynn and Mark indicated Darrell could often become distracted when asked to follow instructions to get ready to go out. Although Darrell *"…doesn't have a problem understanding the instruction…"* (Lynn's transcript 2/2). Mark suggested Darrell:

> *She doesn't want to be told what to do, she can think of something better to do instead. So instead of getting her shoes and socks she will disappear off into her room but she will be out a few moments later sitting there a few moments later with a book open or with a doll or something. Shoes and socks where are they, she hasn't even found them.* (transcript 2/2)

Lynn felt Darrell did not follow instructions because of two problems:

> *…one is not wanting to be told, that always causes problems. We want to be our own boss we don't want to take instructions. But anyway, the other one is not actually getting on with the job she gets distracted by something.* (transcript 2/2)

It seems Darrell also has difficulty following through with verbal instructions, possibly because she becomes distracted and the verbal instruction is displaced.

Joan (who had worked with children who were Gifted with ADHD) stated:

> *I think for some kids it [memory problems] is and some kids it's not, but certainly I do think some children with short term [working] memory do have big problems and that's where I think sometimes the rote learning as when we went to school the rote learning for spelling and things was quite good I think. Yeah I use all sorts of things to help the kids with memory like cue cards and putting the times tables up in the toilet and you know all those sorts of things, can be a big problem for ADHD kids.* (transcript 1/1)

Joan seemed to refer to methods to assist with storing material in long term memory and then retrieving it.

8.2.2 Dislike of academic material being repeated

Memory and repetition are closely linked as repetition (by the parents) only seemed necessary when the information was not stored in their working memory. It appeared that three of the boys benefited from repetition in relation to verbal instructions while most children in this study did not seem to like or benefit from academic material being repeated (e.g., that they had already learnt and was already stored in long term memory).

Most of the children in this study indicated they disliked repetition of academic material. Randy stated *"if you do one plus one like five times in a row it gets like really boring"* (transcript 2/2). Zan expressed the same sentiment when he stated *"well it is kind of annoying because like you have already learnt it and you will be*

learning it again and again" (transcript 2/2). It was also a bit concerning when Zan stated *"like, when I go home from school its just like I have been learning stuff I pretty much already know"* (transcript 1/2).

Lynn also referred to how Darrell does not like repetition *"yeah it doesn't really matter whether it is something she is learning at school or at home…she doesn't like repetition"* (transcript 2/2). Mark stated:

> *I mean I explain things to her [Darrell] and she won't ask questions, that I think she might perhaps have asked because I think she probably has got what I am trying to tell her so I don't repeat, in fact if I do repeat myself she would say,' yeah I know dummy,' or something like that…* (transcript 2/2)

Emily also suggested repetition of academic information was *"boring"* (transcript 2/2). When asked *"What makes it boring?"* (researchers' voice, Emily's transcript 2/2) she stated *"having to learn it again when you already know it"* (transcript 2/2) and when asked *"Does that happen at school?"* (researchers' voice, Emily's transcript 2/2) she stated *"yeah, that's where it always happens"* (transcript 2/2). But she couldn't think of an example. This gives further weight to the point that was made earlier that while Doris indicated Emily was academically challenged by Mrs James, in fact this was possibly just more of the same work, as Emily indicated there was unnecessary repetition of academic material in Mrs James's class.

8.2.3 Working memory (short term memory) difficulties regarding verbal instructions

Some of the children in this study indicated they benefited from *verbal instructions* being repeated. Doris referred to how she often had to repeat instructions she gave to Thomas in order to get him to do something as he got side tracked, although Doris maintained if she kept asking Thomas to carry out the instruction he would get angry. Taylor also seemed to have difficulty remembering instructions and Jane indicated *"if you are giving him[Randy] complicated instructions, he can't remember the whole lot and you are sort of repeating yourself but for him it is not repetition because he*

didn't get the other bit" (transcript 2/2). Jane implied it was not repetition to Randy due to his auditory processing difficulty (as previously addressed). Although Randy seemed to have a working memory difficulty evident in the primacy effect he exhibited under the section on memory within this chapter. It seemed as though Thomas, Taylor Randy and Zan (data provided within the memory section) had difficulty with their working memory. Repetition that helps working memory is probably different to re-learning known material.

8.2.4 Writing and reading difficulties

Both Randy and Zan had difficulty with writing. Randy also referred to how he disliked reading at 'normal' school.

Randy stated "*I don't like handwriting and writing"* (transcript 1/2). His Mother Jane suggested he had difficulty thinking of ideas. Jane stated:

> *...he [Randy] hates writing; yeah he had a hard time with writing. When he was year (pause) three yeah he just sits there and can't come up with anything for hours and he would just sit there… I talked to him a few times about it and I asked him whether he just doesn't have anything to say or you find it hard because you can't spell the words or… he said I just don't have anything to say. Well he's a bit like me, if I don't know what I am going to say I just can't write a word.* (transcript 1/2)

Although Randy maintained he disliked writing at 'normal' school due to a different reason, he stated *"I really don't like writing long stories*" (transcript 1/2). It is possible Randy disliked writing long stories because he also found reading long books boring. In addition, Jane suggested Randy *"… doesn't like reading at school, but he likes reading books at home because I just let him go to the book shop and choose the books he likes* (transcript 2/2). This indicated if Randy was interested in the book he would not become bored and loose his focus. According to Randy he did not like reading at school "*because at school you have to answer questions and everything"* (transcript 2/2).

Jane suggested Randy may require the same choice he had at home (in relation to choosing the books he read) with writing at school. Jane stated *"with writing if he was given choices he could choose the one [topic] he had a connection with, yeah I would think that would help"* (transcript 2/2).

Although, Jane referred to how Randy "*… has got a computer at home…he always wants to go on. Every time he will ask me 'Mum can I go on the internet?' Yeah he likes to do research and stuff like that"* (transcript 2/2). Randy also stated *"I do like researching on the computer"* (transcript 2/2) and that when he does not know much about a topic they are learning about at school he would like to be *"allowed to go on the computer and research it"* (transcript 1/2). This implied he enjoys reading off the computer. It is not clear why Randy enjoyed reading when on the computer, other than information tends to be short like the short books he likes, but the use of computers could be incorporated into his learning to assist him to learn and meet his potential

Computers also seemed to assist Zan to learn. Angela and Ben spoke to Zan's teachers to try and get him permission to use a computer as a compensatory strategy (a strategy to counterbalance a difficulty) for writing. Angela and Ben felt Zan should use a computer to write. This was because *"well it would be, 'we need you to write a story about a topic' and he [Zan] would sit there with his pencil and doodle and draw pictures"* (Ben's, transcript 1/2). However, Ben stated:

> *But if you put him on a keyboard he will type away. So Angela came up with the suggestion that during that time instead of him squirming around at his table and crawling around on the floor and distracting others he should be allowed to go to the library jump on that and write the story and refocus.* (transcript 1/2)

However, when Angela and Ben had attempted to talk to Zan's teacher at school about appropriate educational accommodations it was argued that it would be unfair to the other children if Zan was allowed to use a computer. Ben stated:

> *there was a suggestion that it [allowing Zan to use a computer] might be seen as privilege and you know if we do it for him we should do it for everyone.*

> *We were countering that by saying, well if it works we should take him out of that situation and make it easier for the class and him to achieve the outcome rather than worry about whether or not it is seen as being a privilege that other kids should be allowed. They don't have you know, they can sit down with a pencil.* (transcript 1/2)

Eventually, Zan was allowed the use of a computer in the classroom and at our second interview he excitedly described how *"…I'm do writing on the computer for my narrative…"* (transcript 2/2). The topic is even about computers *"yeah I am doing narrative about a boy that is like sucked into the computer…"* (transcript 2/2). It seemed Zan was very interested in computers.

Zan also seemed to like using computers at Kip McGrath. Zan stated *"…it's fun on the computer with the like learning and stuff"* (transcript 2/2). He implied it was fun to learn on the computer at Kip McGrath because they provided a more immediate feedback, similar to immediate rewards. Zan stated:

> *when you finish your tasks it comes up either great or terrific and if you get some of them right but not all of them it comes up with great and like it has a big flashy thing and then it goes down and comes back up.* (transcript 1/2).

8.3 Results: What appeared to assist and motivate the children in this study to learn?

8.3.1 Computers

It was not only Zan and Randy that seemed to enjoy learning on computers, all of the children in this study referred to how they enjoyed learning on computers.

Doris stated *"I know definitely with Emily and Taylor they love computers, anything like that, Thomas (pause)…"* (transcript 2/2) *"likes games"* (Pierre's transcript 2/2). Taylor referred to his fun experiences *"at school we have got Kidpix and we have got these other games now cause Kidpix is a drawing game and you can just draw a picture and there's some other math's games…"* (transcript 2/2). This was said

quickly with great enthusiasm. As previously mentioned (in Emily's story) Emily described how she enjoyed how her teacher used the interactive whiteboard as it meant she could see all of the information. Emily's brother Thomas (like Randy) suggested he too enjoyed researching information on the computer:

> *…at school we have to look up on the computer and get facts because we are doing brochures and animations and for the brochures. We have to get facts off the internet for our brochure, which is about planets.* (transcript 2/2)

Although the children reported enjoying using computers some of the parents had concerns about this. These concerns included the lack of resources, problems occurring if there was overuse of computers and how what is being taught is too simple.

The availability of computers was one concern, Jane explained *"they do have computers at school but not everyone can get a turn so he [Randy] doesn't normally get a turn"* (transcript 2/2). Lynn implied Darrell's school also lacked computers as a resource and how the school seemed to focus on teaching children how to use computers rather than allowing the use of computers as a tool for learning. Lynn stated:

> *they do have ICT at school in a limited fashion, they normally share computers and I think what they learn there for her is incredibly simple. By the time she [Darrell] had started school she had already learnt the basics of Word and things.* (transcript 2/2)

Lynn implied Darrell would benefit if she was able to use the computer as a learning tool rather than being taught how to use the computer.

However, Doris indicated her children could not learn on the computer for long periods of time *"for Emily, if she spends any time on a computer or play station she can get very volatile or aggressive afterwards* and *Taylor and Thomas, all three actually"* (transcript 2/2). Pierre (who was also diagnosed as having ADHD) stated *"I know myself t.v used to do that, if I sat and watched t.v for a long periods of time I would get quite edgy"* (transcript 2/2). Pierre stated:

> *I don't know whether that is the rays that come from the t.v the electro type stuff cause in front of the computer you do have that. Because that is where they used to have those static straps to stop static electric*. (transcript 2/2)

If working at the computer for a long time is problematic it is possible that Emily, Thomas and Taylor could benefit from having a break and then going back on the computer. Darrell also referred to benefiting from a break when using computers. Darrell stated *"…they [computers] are great to learn on but sometimes you might need a break though, so you will have to have some fun and games on them, it's a good idea for a rest"* (transcript 2/2). However, rather than wanting a rest because she felt angry Darrell seemed to want a break for variety (and to play games) so she could stop from practicing typing, as *"I am good at typing"* (transcript 2/2). It is possible that Doris and Pierre's children had difficulty with prolonged use of the computer as Doris suggested there was little movement when typing. As Doris indicated, sitting on a swiss ball while learning on a computer could allow for more movement.

8.3.2 Movement

Some of the parents indicated their children often moved and some had difficulty stopping. Angela stated *"when he [Zan] is excited about something he jiggles a lot"* (transcript 2/2). When Zan was interviewed he was often twisting his hands around a table leg or playing with his shoes (as we were sitting on the floor).

Mark referred to how:

> *…Darrell is always moving… she is always flipping her arms about or doing a high kick, hopefully without someone at the connecting end. But she can't sit still, I don't think it's a matter of she won't sit still I don't think she can.* (transcript 2/2)

Darrell was attempting to attack (by kicking) her imaginary evil twin when she was first interviewed. She also was doing cartwheels.

Jane described how Randy:

> *has to try really really hard and that [not being able to move] will distract him so after a few minutes, if he knows he is allowed to move around then he can be more relaxed that would help his learning as well*. (transcript 2/2)

Jane referred to how *"he's biting his fingernails because doesn't have any other way out at school when he has got nothing, he can't move, he bites his nails"* (transcript 1/2)

Doris described how once Thomas wasn't interested in doing his fire-wise homework so "*to get him clicked in and interested I ended up taking him to practice doing the escape route out of his bedroom for if there was a fire, we actually went and physically acted out what he would do…"* (transcript 1/2).

Joan stated *"yeah, it's interesting that you have got the kid on the tramp [referring to my picture on the card]. Because I had worked with kids, to learn their spelling and that and they jump on the tramp"* (transcript 1/1). Joan indicated that some Gifted children with ADHD may benefit from moving when learning because it appeared to relate to these children's learning style. (The card referred to in this paragraph is similar to the one in Appendix G). Both Joan's example and Doris's examples indicated some Gifted children with ADHD wanted to move to learn.

Although, when some of the children in this study found learning fun or stimulating they seemed to be able to stop moving even though all but one child (Zan's subtype of ADHD was unknown) in this study had been identified as hyperactive/impulsive (predominant or combined with inattention types). Three of the children in this study could stop moving when reading. Jane stated:

> *Even though at night when he is reading he doesn't seem to need that [movement] at all, he will just lie in bed and read, read and read. If I left him for half an hour, he wouldn't complain. I have to go in and physically stop him and say 'finish that chapter and that is it.'* (transcript 2/2)

Zan stated "*I read a book and sit like this, the only movement I do is this (shows page turning)*" (transcript 2/2).

Darrell referred to how she too doesn't really move when reading *"I have to move around to get into the right position so I feel comfortable"* (transcript 2/2) and how *"…sometimes when I am lying on my stomach with a book and a torch I have to move my arm to move the torch and of course turning the* page" (transcript 2/2). Darrell had also exclaimed "*books are my life! I love reading!"* (transcript 1/2).

8.3.3 Visual information

All of the children in this research referred to a preference for visual learning. Three of the four sets of parents (Jane, Doris and Angela) also maintained that visual information helped their children remember (see the section in this chapter on memory). Visual information also appeared to help the children to focus their attention. As previously mentioned the first interviews involved three photos. It was after using the photos in the first interview that I decided to use images as the main medium in the second interviews. This seemed to be effective, because it appeared to grab the children's attention and their movement lessened. For example, one child ceased running around the room kicking her 'evil twin' and doing cartwheels and sat quietly and spoke. Although, this may not be solely attributed to the visual information (e.g., the children may have become more comfortable with me) it is possible that visual information did assist with focusing attention.

Lynn also suggested visual information could assist with learning. Lynn referred to how Darrell:

> *…probably does learn better visually, so this [mathematics] book [Lynn had bought] has got lots of puzzles and good graphics. And the fact that because she still only eight she loves chapter books, she loves the breadth and depth of the story in them but she is just as happy to sit down with a picture book because she loves the graphics. It's just that sort of mismatch between what you are intellectually capable of and what is available for that age.*
> (transcript 1/2)

Doris and Pierre indicated their children's tennis coach taught their children tennis using visual representation, tapping into their interest and movement. Doris described how:

> *...it's fun, he [Don] makes it fun, for his moves for tennis he talks about pinochinose (shows hand movement to indicated swinging from the nose) as a move and then scratch your back and then ready belly button and all these things that kind of kids can visualise and relate to, and he changes all the time so he keeps their attention.* (transcript 1/2)

It seemed Don was able to use visual representations, interest and movement to keep Emily, Thomas and Taylor's attention. Angela suggested visual information and movement were components of how Zan and possibly other Gifted children with ADHD learn:

> *I think that's the origami is sort of a perfect example really of how they [Gifted children with ADHD], or Zan learns, it's visual, it's little snippets of information, it's ordered you have to do that and then that and then at the end you have your little crane or little box. It's purposeful and its fun and it's physical and its all right there so you are using your brain, you're reading, you're using your hands, and it's logical.* (transcript 2/2)

8.3.4 Purpose of tasks

The origami example described above relates to another factor the children in this study found motivating, which was tasks whose purpose was clear. Three of the parents involved in this research referred to how their children often found it difficult to carry out tasks that the children considered had no purpose.

In contrast, some of the children in this study referred to how they enjoyed tasks that resulted in a product. Joan referred to someone she had worked with when she stated *"he acknowledges he has to do the theory to get to the other side but he is much better with the practical side of things"* (transcript 1/1) and went on to say *"a lot of the gifted kids are like that as well, if they can't see a purpose they won't do it"* (transcript 1/1).

Angela referred to how Zan did not see the purpose in an art task he had to complete. Angela stated Zan *"was asked to bring a photograph to school and then they were to do a mosaic collage of that photograph…[by] ripping up bits of paper…he had the photograph and he could see it was a really pointless exercise, copying someone else's picture and chopping up bits of paper"* (transcript 1/2). Angela referred to how Zan:

> *… really fought against doing it [the mosaic collage] and all the other kids were sort of finished doing it and he had done a third of it. But then the teacher really pushed and pushed and pushed for him to finish it and it had to come home and you know I just had to agree with him that it was just completely pointless, and I said, that's not the point, the point is we have to finish the task, it's actually completing it. And he was just like 'Mum, I just can't.' It was very difficult to argue because I really didn't believe that it was important either, so I wasn't particularly helpful.* (transcript 1/2)

Angela implied Zan had difficulty with completing the mosaic collage because Zan did not see it had a purpose. Doris indicated Emily, Thomas and Taylor also did not seem to like to do *"things they find are pointless"* (transcript 1/2). This could be why Thomas and Emily implied they preferred topics that resulted in a product. Emily said she enjoyed delivering speeches and Thomas referred to enjoying doing projects for homework and enjoying making a model zoo that included, "…*different types of animals and their enclosures"* (transcript 1/2).

Also, Randy also referred to enjoying making a product. Randy described how they worked in groups at One Day School to make a rocket, *"we had to make it blast off and we had to make someone fall off and parachute down. The rocket was plastic and the human was plastic"* (transcript 2/2) and Randy said he made the rocket blast off by using *"baking soda and vinegar"* (transcript 2/2). Making a rocket seemed to involve making a product but it also seemed to interest Randy.

8.3.5 Stimulation due to interest

Overall, the children in this study seemed to be stimulated and motivated to learn when their interest was captured. Interest seemed to affect whether learning difficulties such as movement arose.

Jane suggested it was important that a teacher got Randy interested in learning:

> *otherwise if you just go in there and tell him that I am going to have a new topic for you today he will just go 'oh yeah.' Randy just pretends that he is listening. His pretending is really good. I think that is one of the reasons the teacher [at his 'normal' school] doesn't notice him. Because he just pretends he is there and no one really notices him.* (transcript 1/2)

Angela maintained it was also important to tap into Zan's interests otherwise Zan *"…will have absolutely nothing to do with it. He gets bored"* (transcript 2/2).

It is possible most of the children in this study may only be able to focus when they are truly interested. For example, Mark indicated when Darrell is not interested in a task she *"…will just walk and you are still half way through it so you either pack it all up or you finish it (laughs)"* (transcript 2/2). However, Lynn stated *"if she [Darrell] sets a project herself all hell will break loose if she has to move or be moved because it is dinner time or whatever"* (transcript 2/2).

Joan indicated at the One Day School in Auckland where she works the teachers often relate the subject they are going to teach to the children's interest. For example if the whole class was learning about transport and the child was interested in dinosaurs, as a lot of Gifted children *"…have a real passion for a particular thing"* (Joan's transcript 1/1), dinosaurs could be related to transport. Joan stated the dinosaur interest could be related to transport by asking the child to:

> *…build a cart that the dinosaur could pull or you know try and sort of marry it into whatever topic they are doing and I think that is where One Day School is quite successful and kids have some control over what they learn, or they*

> *think they do (laughs) again it is presenting it in a way to hook into their passion and somehow weave it into your topic. You know you would be amazed how many things you can weave into other things you know. Just with a bit of imaginative thinking.* (transcript 1/1)

Lynn also referred to the importance of teaching to Darrell's interests. Lynn stated:

> *I think the tapping into her [Darrell's] interest is quite a good one. When they [the children] started One Day School for the term the kids put down what they wanted to do. They actually sat down as a group and decided what topics they wanted to cover which, okay, in an ordinary class might be a little bit difficult. But whether you could, for an art session for instance sit the kids in different groups and get each group to write or brainstorm what they wanted to do for an art project. So long as it sort of channelled their interest.* (transcript 1/2)

Although Mark indicated Darrell *"likes choice I am not convinced it is a good thing for her though"* (transcript 2/2) Lynn continued stating *"yeah narrowing the choice down does seem to better doesn't it"* (transcript 2/2). Angela also indicated how you can give Zan *"… two choices, but if you give him four or more choices he is gone, he thinks he likes choice but he doesn't work best with it"* (transcript 2/2). Although as indicated under reading and writing difficulties in this chapter, Jane indicated Randy could benefit from some choice so he could find a connection.

8.4 Results: Ineffective educational strategies

Initially ineffective learning strategies were going to be addressed separately. However, after analysing the data it appeared that ineffective strategies were merely the opposite of the effective strategies. Examples of these are given in Table 3 below.

Table 3: Effective and Ineffective strategies

Effective learning strategies	**Ineffective learning strategies**
Tap into the children's interests	To not tap into the children's interests (If this does not occur it appears to have a negative effect on memory, repetition and movement)
To assist these children to challenge themselves (not always selecting easy tasks)	To not assist these children to challenge themselves when learning
Teach information using visual stimulus (could be used to assist with remembering instructions)	To not teach information visual stimulus (not used to assist with remembering instructions)
Inform the children about the purpose of the task	To not inform the children about the purpose of the task
Allow time on and use of computers	To not allow time on and use of computers
Allowing children to move	Not allowing children to move

It is these ineffective strategies which appeared to lead to boredom, distraction and underachievement.

8.5 Discussion: Effective educational strategies

This chapter has identified some of the children's effective educational strategies as well as some difficulties that could be affecting the learning of the children in this study.[26] The difficulties that could be affecting their learning included memory and repetition. Some of the children also had some difficulties when writing and reading. What seemed to assist the children in this study to learn was to give them work that was *interesting, involved visual information* (that can also assist memory), *was purposeful* (e.g., involved making a product) *allowed movement* and *time on computers.*

Interests and stimulation

Suggesting Gifted children with ADHD could benefit from becoming stimulated is not a new idea as many Gifted/ADHD (e.g., Gates, 2005; Lovecky, 1994; Ramirez-Smith, 1997; Zentall et al., 2001) and ADHD writers (Brown, 2007; Zentall, 2006) acknowledged this. However, this study has suggested *how* Gifted children with ADHD may be stimulated to learn. Although *why* it is significant that the interests of Gifted children with ADHD are acknowledged is firstly addressed.

It was important to identify the interests of the children in this study as it seemed to stimulate them to learn and prevent them from becoming distracted and not completing tasks (e.g., Zan), pretending to listen when told they were going to be investigating a new topic (e.g., Randy) or not finishing tasks they did not devise (e.g., Darrell). This implied when the children were interested it assisted them to overcome learning difficulties associated with ADHD such as becoming distracted. Furthermore, acknowledging the interests of the children in this study could assist them to hyperfocus. As addressed in 3.6.3 of this thesis Baum and Owen (2004) indicated hyperfocus related to excessive engagement in tasks that children find interesting and they believe have intrinsic value.

[26] As I suggested in 2.6 educational strategies that are preferred by teachers may not be preferred by children. Thus, I wanted to identify the educational preferences of the Gifted children with ADHD rather than their teachers.

Hyperfocusing may not only assist Gifted children with ADHD to become *learning goal oriented* (e.g., if they are intrinsically motivated it is less likely they would want extrinsic motivation) but also to exhibit their true potential (as they would be stimulated to learn and could have less distractions as they would not be bored). This was possibly evident in this study when some of the children could become focused on reading and stop moving (this is addressed in more detail in this discussion). This hyperfocus possibly relates to how Gates's (2005) participant H.V who showed on task behaviour for a number of weeks when at a Gifted program relating to his interest chemistry. Although as suggested in 3.6.3 teachers should be aware that a child with ADHD could also hyperfocus negatively (e.g., become focused on a part of a task that they cannot complete) (Lovecky, 2004; Webb et. al., 2005).

Nevertheless, a teacher would benefit from finding out about the interests of Gifted children with ADHD so they could acknowledge these when teaching. Children's interests could be found by utilizing Renzulli and Reis's (1985) Total Talent Portfolio (a component of the SEM) or Renzulli's (1977) ETM as they address children's interests. Nevertheless, this information could also be gained from talking to children and their parents about their learning preferences.

An alternative way Gifted children with ADHD in this study could be stimulated was to allow an element of self management (e.g., as previously referred to, Mark indicated Darrell does not usually become distracted when she sets a task herself or how Randy did not like to be told he was learning a new topic that day). The element of self direction seemed to relate to how many researchers (e.g., DuPaul & Weyandt, 2006; Nowacek & Mamlin, 2007; Zentall et al., 2001) on ADHD indicated children with ADHD could benefit from being self managed (this was also acknowledged in 7.3.2 which referred to how self management relates to those who are *learning goal oriented).*

However, self management may also require children to make choices relating to their learning (e.g., how to gather information on a chosen topic) that some of the parents in this study indicated their children found difficult. Nevertheless, some of

the parents indicated their children would be able to make choices if there were limited options. For example, as Lynn indicated the children could brainstorm what they wanted to learn, but perhaps with somewhat restricted choice (e.g., they have to do a piece of art that depicts birds but they can choose how they present this, such as the size of paper and type of art materials used). Furthermore, the children in this study could benefit from setting their own goals as this could allow them to be self managers and to understand purpose (purpose is further addressed later on in this discussion).

As suggested in the introduction of this discussion other interests or learning preferences the children in this study indicated could be effective in assisting them to learn included, *visual information, immediate visual feedback, tasks that appeared to have a meaningful purpose, relating tasks to children's interests, allowing movement, and the use of computers.*

Visual information

All of the children in this study seemed to have a preference for visual information. Some Gifted/ADHD writers (e.g., Gates's, 2005; Lovecky, 2004; Ramirez-Smith, 1997) indicated Gifted children with ADHD benefited when their learning preferences (that could include visual learning) were recognised. A teacher could recognise children's learning preferences in the same way they recognised what children found interesting to learn, by assisting them to complete a Total Talent Portfolio (Renzulli and Reis, 1985).[27] Alternatively, a teacher may be able to find out child's instructional style preference by merely talking to them and their parents.

Rewards

Some of the children in this study seemed to prefer extrinsic rewards and immediate feedback. The preference for immediate feedback was evident in Zan's suggestion that he enjoyed how computers at Kip McGrath flashed 'well done.' The immediate feedback evident on the computers also seemed similar to Lynn's view that Darrell behaved and carried out work for a relief teacher who gave her an immediate reward.

[27] Although Renzulli (1994) did not explicitly state visual learning was an instructional style preference (e.g., lecture style) it is possible that visual learning could be an instructional style.

If the immediate feedback is focused on, rather than the extrinsic reward, it may be possible to motivate the children in this study to learn without extrinsic rewards by using a system that gives the children immediate feedback. If the children in this study benefited from visual information and some indicated a preference for immediate feedback, an alternative reward system could incorporate this. Immediate positive visual information (e.g., by writing positive information on a whiteboard or in a book) could stimulate them to learn because it is acknowledging their specific learning preferences. These visual positive rewards differ from extrinsic reward dependency where children can begin to believe they should have a reward after completing all tasks (Clarke et al., 2003) and it is also not like a verbal reward that some of the children in this study could forget.

The children could also be involved in checking their own work where appropriate. This again would provide immediate feedback, and there could be agreed ways in which children rewarded themselves for effort towards learning goals.

Working memory difficulties relating to verbal instructions

All of the children in this study seemed to remember information that included a visual component. This could be because as Baddeley (2000) stated information can be stored in working memory within the visuospatial sketch pad that holds visual information. Lefrancois (2000) stated that working memory is "a type of memory wherein material is available for recall for only a matter of seconds" (p. 169). However, Baddeley (1986) indicated displacement theory would argue it is not the time elapsed but the number of items that mean information can be displaced (where a person begins to focus on the new information and looses the old). This displacement seemed to occur for some of the children when they were meant to follow verbal instructions but they were displaced with other stimuli. For example, when Darrell was asked to get ready she would go and open a book or play with a doll. As Darrell herself had stated "*books are my life! I love reading!*" (transcript 1/2). Zentall's (2006) suggestion that children with ADHD can self stimulate when there is only a low form of stimulation could link to this displacement. This is because it is possible when some Gifted children with ADHD are carrying out a task

that is of low stimulation they may self stimulate and displace the information that could be of low level stimulation in preference for tasks they find more stimulating, such as reading.

However, it is possible displacement of low level stimulation may not occur if the verbal instructions were recoded and related to visual information the children had chosen (and found stimulating). Harman and Rule (2006) used the peg word mnemonic device in their classroom to see whether it could assist the children to remember the Mohs scale of hardness (relating to the hardness of minerals). Although the children in this study did not seem to have difficulty remembering academic material the underlying idea evident in the peg word mnemonic device could be used to assist the children in this study to remember instructions as this mnemonic device involves a visual component. For example a child who is having difficult remembering verbal instructions (e.g., what they have to carry out when leaving the mat) could make visual pictures relating to a peg word. Such as, one is sun (the numbered peg) then the word you want to remember (sit) could be included so a child could draw an image of the sun sitting on a chair. This could mean the child could take a pen and paper to the mat so they could draw these images before they leave the mat.

Baddeley (1987, cited in Baddeley 2000) stated people who have significantly impaired working memory and can only remember one digit (e.g., when most can remember seven) are able to remember four digits when the digits are presented visually. Alternatively, because Lefrancois suggested working memory "…primarily involves rehearsal rather than more in-depth processing" (p. 169) the children in this study could benefit from rehearsing the verbal instructions themselves rather than their parents or teachers repeating the information. This relates to Lovecky's (2004) suggestion that Gifted children with ADHD could benefit from the mantra approach. "For example, sent upstairs to put on his shoes and shirt, Tom would go to his bedroom saying 'shoes and shirt' over and over until he had put them on" (p. 182).

Ashcraft (2006) indicated another method could be the method of loci, where a child could remember what they had to do as it was associated with a location. For

example, if a child had to remember to get their mathematics book out after lunch the set of loci could be the classroom door and the child could image the classroom door as having numbers oozing out of the door frame, so when they walk through the classroom door they retrieve the information (the information in this case being to get their mathematics book out).

Informing the children about the purpose of the task

It seemed that some of the children in this study liked tasks that resulted in a product (e.g., a rocket). However, it may be that the children in this study seemed to prefer tasks that concluded with a product because a task that involves making a product has an explicit purpose. This could mean an effective educational strategy for some Gifted children with ADHD would be to use Renzulli's (1977) Enrichment Triad Model. This is because it should make the learning purpose more explicit as the task should relate to a real life context such as a problem that the child could solve (Renzulli, 1977). This seemed to relate closely to product differentiation which also related to real context and problems (Riley, 2004b). The child's solution to solving the problem should then be presented to an audience, again making the purpose more explicit both because the children have to become ready to present to an audience and because the audience may comment on what the children suggests (Renzulli, 1977).

A teacher could also make a task more explicit by simply stating the purpose of learning the task. When teachers establish tasks for the children in their classroom to learn they have learning objectives and know, or should know, the reason why they are teaching the children the task. The purpose may not be as explicit to children who are not told. This could become more of an issue for children who are Gifted as their intelligence could allow them to see an apparent lack of purpose earlier than other children that could mean they do not attempt to complete the task, or only somewhat complete it (e.g., Zan and the mosaic collage). Thus, an effective educational strategy may be to tell the children the purpose of the task.

Allowing Movement

Most of the parents in this study indicated their children had difficulty learning when they were not allowed to move (e.g., how Thomas would not complete a task or

Randy would become distracted by the effort he had to apply to trying to stop moving). Jane indicated if Randy knew he was allowed to move he may stop doing such things as biting his nails as he would probably be more relaxed. McCluskey and McCluskey (2003) also indicated Gifted children with ADHD could benefit from being allowed to move (e.g., they referred to how a biology teacher let a student show their understanding relating to a test by acting, moving and dancing).

This suggests teachers should allow children to move, for example, when sitting on the mat. Allowing children to move when on the mat may require a teacher to change their perspectives regarding such things as what appears to be compliant behaviour (e.g., Randy may look as though he is paying attention when sitting still). However, it would be better for a teacher to change their perspective and assist children to find ways to move that are appropriate rather than a child appearing as though they are learning when they may not be (e.g., they may appear compliant and sit still but not actually be learning).

Flint (2001) indicated those with ADHD can't stop moving. Although, the data from this study indicated Gifted children with ADHD may be able to stop moving when learning if they were stimulated (e.g., some of the children stopped moving were reading). This somewhat contrasts the diagnosis of ADHD hyperactive/impulsive type or combined (the types associated with most of the children in this study). This is because according to the *DSM-IV-TR* (APA, 2000) children who are hyperactive/impulsive (which can also relate to the combined sub-type as combined relates to both the inattentive and hyperactive/impulsive sub-types) should often be fidgeting, squirming or moving. This indicates how significant it is that Gifted children with ADHD are stimulated to learn, as stimulation appears to be able to reduce a main characteristic of ADHD, hyperactivity. Hyperactivity, appeared to cease possibly because some of the children in this study were interested in what they were reading. The children were being stimulated by reading to the extent that they seemed to hyperfocus which relates to ADHD. Their reading related to hyperfocus because the children probably had to be engaged, interested and intrinsically motivated, in order to stop moving (Baum & Owen, 2004). It is also in accordance

with hyperfocus that children with ADHD can react negatively when they are not interested in a task. Possibly much like the reaction Thomas had when asked to carry out a fire-wise task that did not involve movement (until Thomas's mother modified the task). It is ironic that he was re-stimulated to complete the task through movement. Possibly implying that the apparent 'need' to move relates to lack of stimulation and in contrast when stimulated no movement is necessary.

However, it could be argued that children who have been diagnosed as having ADHD (but can stop moving when stimulated) are actually Gifted but are not being appropriately stimulated and are therefore exhibiting ADHD tendencies (Lind, 1996; Lovecky, 2004; Nelson et al., 2006; Reis & McCoach, 2002; Webb & Latimer, 1993; Webb, 2001). Although as previously mentioned in this discussion (under the sub-heading stimulating work) some writers (Gates, 2005; Lovecky, 1994; Ramirez-Smith, 1997; Zentall et al., 2001) also acknowledged that Gifted children with ADHD benefit from stimulation when learning. Regardless of whether these children are Gifted with ADHD, or are Gifted or have ADHD alone they all seem to benefit when tasks are stimulating.

Allowing time on and use of computers

All of the children in this study also seemed to be stimulated by using computers. Zentall et al. (2001) research also found all children in their study, Gifted, ADHD, and Gifted with ADHD had a preference for learning on computers. This is significant because it means a preference for using computers is possibly not common to just Gifted children with ADHD and using computers as a learning tool could benefit all children. Harwood and Asal (2007) suggested, children that are in schools now have been brought up in a digital age. Although Harwood and Asal (2007) is an American publication it seems children in New Zealand have also been brought up in a digital age. This could imply there could be further use of computers in some schools.

Nevertheless, some of the parents raised concerns in relation to lack of resources. This indicates it is possible that schools should address how they allocate funding for computers and also teachers should recognize that although a child may initially

benefit from being taught how to use a computer it can then be used as a learning tool.

One caution is that Doris and Pierre suggested overuse of computers could lead their children to become angry. The suggestion could relate to how many writers (e.g., Baum & Owen, 2004; Flint, 2001; Lovecky, 2004; Mendaglio, 2005; Montgomery, 2003) indicated Gifted children with ADHD are often angry and frustrated. Although it is not clear why some of the children appeared to become angry after using a computer it is possible, as Darrell indicated, that Gifted children with ADHD should use the computer for a while and then stop for some variety.

Computers and writing and reading difficulties

Despite some of the challenges raised regarding the use of a computer Zan appeared to be successfully using a computer as a compensatory strategy in his 'normal' classroom and as a learning tool at Kip McGrath. Prior to the use of the computer Zan's parents indicated when a teacher asked him to write he would sit and scribble on his paper. When Zan was allowed to use a computer as a compensatory strategy it seemed to be effective because rather than scribbling pictures he began to write. Although, Zan's teacher did initially raise an equity issue suggesting how she felt it may not be fair to other children if Zan used a computer. Nevertheless, many writers (Giangreco, Dennis, Cloninger, Edelman & Schattman, 1993; Kugelmass, 2004; Leeder & Dominello, 2005) address equity issues for children with disabilities, and it could be argued that if Zan had not been able to use a computer it may have been inequality for Zan.

It is not clear whether Zan writes when using a computer because he cannot write without one, or because his passion for computers stimulates him to write. However, his experience is consistent with Ramirez-Smith (1997) and Zentall et al. (2001) recommendations that computers should be used as a compensatory strategy for Gifted children with ADHD.

Randy's preference for using computers for research could also relate to enjoying visual information. It is possible that if Randy enjoyed reading and researching on the computer, like Darrell enjoyed the immediacy of rewards and Zan enjoyed the immediacy of feedback, Randy could enjoy the immediacy of the information that can be searched and read on a computer (e.g., when using a computer it would also be more immediate to find an answer to a question). Finding a more immediate answer to a question could assist Randy's learning because he indicated he disliked answering questions after reading a book. Randy could then have written about the information he found on the computer as it could have assisted him with what he is going to say, as Jane suggested this is what she felt he had difficulty doing. Zan appeared to benefit from using a computer as a compensatory strategy for writing, although for a different reason, Randy could also benefit from using a computer as a learning tool due to its immediacy.

8.6 Chapter summary

In conclusion, there were various effective educational strategies referred to in the previous discussion that could assist the children in this study to be stimulated to learn *relating tasks to children's interests, using visual information, making rewards visual and immediate, explaining a tasks purpose or utilising Renzulli's (1977) ETM, allowing movement, and the use of computers.*

The children in this study seemed to show *performance goal orientation*. It appeared that teachers could assist the Gifted children with ADHD in this study to be *learning goal oriented* by placing less emphasis on extrinsic rewards (as those who are *performance goal oriented* could have low intrinsic motivation) and by giving visual positive consequences (e.g., writing positive consequences on a whiteboard).

Another effective educational strategy could be to find out the children's interests and preferred instructional styles. One way this could be achieved was to assist the child to complete a Total Talent Portfolio (Renzulli & Reis, 1985). Although, this

information could be found if a teacher merely asked a child and their parents about their preferred (and thus probably effective) educational strategies.

Some of the children this study had difficulties with their working memory. It is possible that difficulties with working memory could mean teachers have lower expectations of Gifted children with ADHD thus they are not being challenged even though their long term memory seems fine. Issues with working memory could be addressed by using strategies that include their preferences. For example, the children in this study had a preference for visual information so a mnemonic strategy that included visual information (e.g., peg word device) could assist them to remember verbal instructions. Alternatively, some of the children in this study could have benefited from repeating information themselves.

Avoidance or attempts to avoid carrying out tasks they believed were purposeless was evident in the data from this section. A teacher could stimulate the children who did not complete tasks they believed did not have a purpose, by teaching tasks that involve making products (e.g., by utilising the ETM) or simply explaining to the children the purpose of the tasks they are carrying out. Avoidance could also relate to interest, because if children set their own goals they would have a purpose.

Being allowed to move assisted some of the children in this study to focus on learning. Therefore an educational strategy could be to allow the children to move (e.g., when on the mat). Although some of the children were able to stop moving when stimulated, implying the 'need' to move actually means they are not being stimulated and when they are stimulated no movement is necessary.

All of the children in this study referred to a preference for learning on computers. Thus, an educational strategy would be to allow children to use computers. Although, this will depend on the schools funding for technology. Nevertheless, the use of a computer was vital for a child like Zan who used the computer as a compensatory strategy. These compensation strategies should not be viewed as creating inequity (as Zan's teacher initially though) rather it could be viewed as

inequity if Zan was not allowed to use a computer. It is possible Randy could have also benefited from the use of a computer (e.g., for reading and writing difficulties).

All of these educational strategies could benefit the children in this study as it seems if these strategies are addressed it could reduce the impact of their learning disability ADHD (e.g., stop movement). Furthermore, the educational strategies suggested could be carried out in the 'normal' classroom. The strategies could also assist children in general (e.g., acknowledging children's interests could stimulate many learners). Although what has to be recognised is that all of the children in this study and in the classroom are individual and thus the strategies suggested here may not relate to all Gifted children with ADHD. Therefore, what is imperative is that teachers recognise each child is an individual and thus personalised learning is at the heart of true effective educational strategies (a component of which could be self managing as this would allow children to address their preferences).

9 Chapter 9: Social experiences results and discussion

9.1 Introduction

The third research question was focused on the social experiences of Gifted children with ADHD and how their social experiences impacted on their learning. However, before I address their social experiences in detail I wanted to describe how all but one child (Thomas) involved in this study seemed to have social difficulties in regards to relationships with chronologically same aged peers, as this seems to support the literature that indicated the Gifted with ADHD often had social difficulties (see 4.6-4.6.4). The children in this study described difficulties when attempting to join in with peers or seemed content not to try, these issues will be addressed within the first section *social difficulties with other children*. The second main section acknowledges how the children in this study developed *friendships with children of differing ages* and this appeared to impact on their learning (addressed in the final results section *preference for working alone or in groups*).

9.2 Results: Social difficulties with other children

Emily's father Pierre referred to how Emily *"struggles with kids her own age. She likes to be the boss and lots of kids don't want to be bossed around"* (transcript 2/2). Emily herself described difficulties she had when attempting to join in with peers, stating *"when I try and talk to them about something in a magazine they always go, cool (in a nasty tone) and I just go (ne ne makes a noise) I don't care"* (transcript 2/2).

Doris described how Emily had difficulties at play time:

> *…for Emily what is really hard is playtime or lunchtime is where it's free choice and they don't fit in socially and they don't relate to their peers it creates high anxiety so they need some kind of element of social structure, like maybe being a p.e monitor or something like that. So they have got structure to that time.* (transcript 1/2).

Joan described a Gifted child with ADHD she knew who could not fit in with his same aged peers he *"…didn't have any friends quite honestly until (pause and exhales) well really until he went to Uni. I mean certainly up until intermediate school he wasn't invited to anyone's birthday party or anything* (transcript 1/1). Taylor suggested he had only one friend, *"he's my best friend, he is my only friend"* (transcript 2/2). Although, Pierre indicated Taylor was content to not join in with others. Pierre stated:

> *I think the positive of that [not wanting to join in] is that he's quite comfortable, quite comfy in his own, in his own self you know, he doesn't have the need, feel the need to be around other people, that's the other side of that, he's quite content, knows himself.* (transcript 1/2)

Taylor seemed to be content to not always join in. However, Zan continued to try and join in and got bullied. Ben tried to suggest to Zan *"… if they reject you they might be great friends in three months or next year"* (transcript 1/2). The bullying seemed to impact on Zan, it *"unsettles and distracts him"* (Ben's transcript 1/2) and *"he [Zan] said he got depressed…"* (Ben's transcript 1/2). This sentiment was also evident in Joan's interview when she referred to a Gifted child with ADHD that she knew. Joan referred to an eight year old child who had *"… a list of 43 ways to commit suicide and some of them were pretty ingenious actually. That's not normal behaviour for an eight year old, you have to be pretty down and out to do that"* (transcript 1/1). This boy had social difficulties at school, Joan stated *"at primary school they were constantly throwing his books on the roof and saying 'your writing is dumb' and all that sort of stuff, so yeah he had a rough time through school"* (transcript 1/1).

Joan implied the Gifted boy with ADHD she had worked with knew he was having social difficulties. In contrast, Mark maintained Darrell was unaware of her social difficulties and thinks she has more friends than she really does. Mark stated *"I think she has got a lot of people that she thinks are friends that possibly don't choose to play or associate with Darrell"* (transcript 2/2). Lynn indicated, that in the past, Darrell's friends have tried to find her a task so they *"…can keep her occupied all lunch time so they can go and play in peace"* (transcript 2/2).

Lynn suggested Darrell's friends tried to keep her busy while they went away and played, while Emily's parents attempted to try and resolve Emily's social difficulties through using an Individual Education Plan (IEP). "*Emily was having all those constant social problems to the point that she was being reprimanded for her behaviours and I asked the teacher then well can we look at doing the IEP"* (Doris's transcript 2/2). However, *"the school 'said no, no because she is not bad enough'"* (Doris's transcript 2/2). The school implied that Individual Education plans were only for children with severe behavioural issues when the Ministry of Education (2000) indicated IEPs can be developed for Gifted children, as Lynn had suggested had occurred for Darrell.

9.3 Results: Friendships with children of differing ages

The first section addressed how the children in this study appeared to have difficulty establishing friendships with children of the same chronological age. Instead it seems the children in this study established friendships with children of differing ages. Half of the children interviewed described how they had younger friends. One child attempted to establish friendships with older children. Two other children established friendships with children of varying ages.

Friendships with younger children

Darrell, Randy and Emily seemed to enjoy playing with younger children. Darrell described how her two five year old friends. "*…Joanna and Nadene both like to play with me on the playground and I like to play with them…"* (transcript 2/2). Darrell felt that these two five year old children helped her learn in relation to social skills. *"…Joanna and Nadene they are a big help when it comes to becoming friends with others"* (transcript 2/2). Emily described how she played with younger children due to a shared interest in "*horses"* (transcript 1/2). Pierre indicated Emily also liked to play with younger children because *"she likes to be the boss and lots of kids don't want to be bossed around" (*transcript 2/2). Jane suggested Randy also enjoyed playing with younger children because he could be the leader or *"…boss them*

around… when he is with older kids he just gets lost in the crowd" (transcript 1/2). Unfortunately playing with younger children became an issue for Randy. Jane stated:

> *Quite often at school he [Randy] used to play with younger kids a lot and used to boss them around a lot and got told off because of that…the school told him not to play with younger kids, so that was not very nice.* (transcript 1/2)

Jane suggested she thought Randy played with younger children:

> *Because, he is used to playing with Jack [his younger brother] and he just bosses him around and he is so used to that and because he [Randy] is so small with the same age kids, he is feeling a bit vulnerable I guess. Especially when it comes to the physical sides of things I don't think he [Randy] feels very good about it.* (transcript 2/2)

Friendships with older children

In contrast, Zan maintained he had friendships with predominantly older children. Although part of this appeared to be due to a composite (year 5/6) classroom. Zan stated *"…most of the kids in my class are older than me and they are my friends"* (transcript 2/2). Angela indicated Zan is *"…attracted to naughty, exciting stuff"* (transcript 1/2). Angela added Zan *"…does have friends in his own age group, but he is attracted to (pause) sort of the cool kids, slightly older, slightly more knowledgeable, he wants to get in with them"* (transcript 2/2). Although as previously mentioned in 9.2 Zan and his parents indicated Zan had been bullied by the older boys he had tried to establish friendships with, so it is possible (like Darrell) some of the boys he considers friends may not be.

Friendships with same chronologically aged and intellectual aged peers

Although Zan's friends may have been older he also referred to how his friends were not as smart as him. Zan stated *"the first two friends that come to mind I think are not as smart as me"* (transcript 2/2). Zan suggested this could be because *"I am smarter than Jacob maybe and also maybe David because he doesn't enjoy learning as much as me so he probably doesn't learn as much"* (transcript 2/2).

Emily implied her classmates were not as smart as her as they always wanted help with their learning. Emily stated that her classmates asked "*Emily can you help me with this"* (said in a nagging tone) (transcript 2/2). Emily did not suggest whether her two five year old friends were smarter than her or not but Thomas, Randy and Darrell seemed to have or were beginning to establish friendships with children who were of the same intelligence as themselves ('like minded') and were also similar in age.

Pierre referred to how Thomas's closest friend *"… Stuart does stuff and he [Thomas] gets inspired by it, again it's being with someone of like mind, that he looks up to"* (transcript 1/2). Doris described how Stuart was *"…such a likeable child, but such as exceptional mind, absolutely, exceptional mind. He stands out truly as gifted…"* (transcript 1/2).

Thomas seemed to have other Gifted friends. Doris referred to how:

> *there is a boy in his [Thomas's] class that goes to One Day School as well and they've started doing things in their class like designing a new Pokemon book together and there's two or three, so if there is like minded kids that are coming together to work on something they are all passionate about, he loves that*. (transcript 1/2)

Thomas seemed to have friends who shared similar interests (e.g., in Pokemon). Jane suggested Randy also established friendships with Gifted children who were similar to him. Jane stated that at:

> *One Day School, so he [Randy] has got connections with the kids that are really similar to him but with other kids he doesn't seem to have that sort of connection. He doesn't seem to get invites to other kids birthday parties so I guess he is not really playing with other kids at the school, now that he has got two really good friends, Joshua and James they both come to the school [referring to One Day School]*. (transcript 2/2)

Jane indicated that (at the time of the interviews) Randy's closest friends attended One Day School. Although Randy had been friends with younger children in the past he now had established friendships with 'like minded' peers.

Darrell seemed to be in the process of establishing friendships with 'like minded' peers. Lynn referred to how Darrell:

> *seems now to be making more friends at places like One Day School and at Explorers who are closer in age to her. I am guessing that is because they are more on her wavelength. Whereas if you go into her class the kids are so spread out academically, in terms of humour and life experience, all sorts, she doesn't seem to be making friends there. …yeah certainly One Day School and at Explorer she [Darrell] is starting to make more friends her age. Age doesn't come into her concept about friendship. I don't think she is necessarily conscious about age she is just trying to find someone she gets on with. So she doesn't consciously go and look for that [friends that are the same age]. Just those that are playing in the area that she is that enjoy the same thing she does.* (transcript 2/2)

9.4 Discussion: Social difficulties with peers and friendships established with children of differing ages

This discussion addresses how the children in this study had experienced *social difficulties with other children*. The children's social experiences related to this study's third question. Because some of the parents and children initiated the conversation regarding social difficulties, it possibly indicated it was an issue they wished to discuss. Some of the parents and children, in the first interviews, discussed how their children had social difficulties (e.g., bullying) and friends of a different age than themselves (e.g., younger or older). Thus, I brought this topic up at the second interviews in order to further investigate the suggestions. The participants suggested that some of the children's social difficulties lead to problems interacting with children of the same age. In contrast, some of the children seemed to have good relationships with similar aged peers that were Gifted.

Some writers (Moon et al., 2001; Ramirez-Smith, 1997; Turk & Campbell, 2002) suggested that most Gifted children with ADHD have difficulty interacting with their peers. The findings from this study somewhat supported this claim as it found some of the Gifted children with ADHD had difficulty interacting with children of the same age. However, the children in this study had established friendships with children of

varying ages (e.g., younger or older) and some had even established friendships with peers (e.g., others of equal intellectual ability), such as, Thomas, Darrell and Randy. Thus to state that Gifted children with ADHD have difficulty with their peers may be an overgeneralisation because children that share the same the intellect could be considered more of an equal than someone who is only similar due to age.

Many writers (e.g., Baum & Owen, 2004; Flint, 2001; Lovecky, 2004; Mendaglio, 2005; Montgomery, 2003) suggested social difficulties could be due to emotional difficulties. However, when the participants in this study discussed social difficulties they did not mention that they felt emotional problems lead to social difficulties. In contrast some of the children in this study seemed to have social difficulties (e.g., trying to fit into groups) that lead to emotional difficulties (e.g., Zan felt depressed and the child Joan taught was suicidal). This appeared to link to Lovecky's (2004) statement that it feels different to be Gifted which implied it could be difficult for a Gifted child to socially interact and become friends with those who do not feel the same as they do because they are not Gifted.

It is unlikely that the younger children some of the Gifted children with ADHD played with would have shared the same intellectual ability. It is more likely as Guevremont's (1990, cited in Lovecky, 2004) suggested, some children with ADHD (like Emily and Randy) liked to play with younger children because it meant they could control the activities. This was indicated by Emily and Randy's parents who referred to how their children like to boss younger children around. In contrast, Zan appeared to relate to Moon et al. (2001) finding regarding the three Gifted/ADHD boys in their study who had befriended older and boisterous children. Angela indicated Zan established these friendships because he was attracted to exciting things. It is possible that Zan, Randy and Emily were playing with children of varying ages because they had difficulty interacting with children of the same age and were trying to find a 'like minded' (Winner, 1996) or 'true peer' (Roedell, 1989, cited in Lovecky, 2004).

Roedell (1990) indicated that a 'true peer' was a "…more developmentally equal peer met in a special class or interest-based activity" (para. 15). Roedell (1990) suggested a 'true peer' was someone who shared similar intellectual ability and interests. If Darrell was also searching for a 'true peer' it could also explain why as Lynn suggested Darrell was not "…*necessarily conscious about age she is just trying to find someone she gets on with"* (transcript 2/2). At the time of the interviews Darrell, Randy and Thomas seemed to have found 'true peers' in Gifted children that also attended One Day School.

An implication for a teacher is that they should not make classroom learning too dependent on friendships (in case children have not yet found their 'true peer' or if their 'true peer' is not in the same class as them). Although, this thesis has aimed to focus on inclusive classroom strategies it may be possible to at times incorporate school-wide strategies such as Renzulli's (1994) enrichment clusters (a component of the SEM) where non graded children come together to pursue a shared interest as this could assist some Gifted children with ADHD to find a 'true peer' who may not be the same chronological age as them. However in saying this it is sometimes difficult for teachers to change school educational strategies. Therefore, a teacher could establish an enrichment cluster that meets once a week in a lunch time when children of all ages could attend.

Overall, it seems the children in this study were attempting to find 'true peers' who shared the same intellectual abilities and interests. The significance of finding a 'true peer' is addressed in the next section entitled *preference for working alone or in groups.*

9.5 Results: Preference for working alone or in groups

The children and parents in this study were shown three pictures of a child or children working alone, beside others but completing their own work or in a group (see Appendix G). These three photos were used in order to find out how the Gifted children with ADHD in this study preferred to learn.

The children were asked questions relating to what they could see in the picture, whether they had learnt like this and how they liked to learn. The parents were asked similar questions relating to their child/ren's learning.

Alone

Two of the children said that they preferred to work alone. When Taylor was asked what was his favourite way to learn, after looking at the pictures, he stated "*working by myself*" (transcript 1/2). Taylor suggested this was because *" it's much easier…because there is no noise"* (transcript 1/2). Doris stated "*…from observations at the moment, if there's group activities going on he [Taylor] tends to be off the side doing his own individual thing…"* (transcript 1/2).

Taylor seemed to prefer working individually Zan also had a preference to learn *"just by myself"* (transcript 1/2). Zan stated *"I am used to it"* (transcript 1/2) and how it's *"just normal"* (transcript 1/2). Zan added *"yeah I think that is better"* because *"I don't go off topic and stuff"* (transcript 2/2). He described how when working in a group he finds it *"…a bit distracting"* (Zan's transcript 1/2) he elaborated saying he was distracted by "*all the other people, and I always talk to people and stuff"* Zan later stated *"like I always want to talk to someone about something"* (transcript 1/2).

Randy had a preference for group work, but seemed to enjoy working alone when he knew the task was not too hard. Thomas also seemed to enjoy working on tasks alone that he knew he could do well *"it's alright doing writing by ourselves and stuff, cause I can, write by myself really well"* (transcript 1/2).

Groups

Randy described how he preferred working in a group work such as when making a "*…poster about Thomas Edison"* (transcript 1/2). Jane also thought Randy *"…likes to learn with others"* (transcript 1/2). Randy suggested he liked to work with others *"because you can take a rest sometimes when other people do your work"* (transcript 1/2). Jane indicated *"maybe he [Randy] is not learning anything and he is quite*

happy to follow. Yeah he doesn't like to push himself or anything he won't fight with others he just gives it away" (transcript 1/2).

When we discussed whether Randy had a preference in regards to group work or working alone Jane stated *"…it really depends, it depends on what it is and how much help he needs"* (transcript 1/2). Sometimes when working alone *"he doesn't want anyone else to help him, he will get really angry with you. He [Randy] likes to work it out himself"* (transcript 1/2). Jane felt:

> *when he [Randy] knows he can do it he wants to do it on his own to get full credit. I have noticed that with maths if I give him something to work on, if it is not too hard for him he doesn't want anyone else to interrupt.* (transcript 1/2)

Buddies

Although not on the pictures three children referred to how they liked working with buddies.

Emily described how her preferred way to learn was to work with a *"buddy"* (transcript 2/2). When speaking to Emily's parents about her learning they suggested that like in her friendships she likes to be the boss. Doris stated *"I think with Emily she orchestrates the whole thing and takes charge…"* (transcript 1/2). Doris went on to suggest that when in a group Emily would take *"…a leadership role and kind of run it"* (transcript 1/2). Pierre also stated that he felt Emily's a *"leader not a follower"* (transcript 1/2). This seemed to relate to Doris's reference to Olive teaching the Gifted children at One Day School how to be leaders.

Thomas also appeared to have a preference for buddy work. Thomas said *"…it's a lot easier when we have to do a project with buddies yeah"* (transcript 1/2). Thomas made reference to working with a buddy last term when they *"…had to do facts about Tuatara"* (transcript 1/2).

In contrast, Darrell initially maintained she did not like to work with others when she stated *"I don't work well in a group"* (transcript 1/2) when asked *"what makes you*

think that?" (Darrell's transcript 1/2 researcher's voice) Darrell stated *"I know that!"* (transcript 1/2). Darrell added *"and oh (sighs) Mrs Tom (pause) the computer teacher says I have to be on a computer alone"* (transcript 1/2). Darrell did not seem to be concerned about working alone stating *"and I agree with her, I want to be alone!"* (transcript 1/2).

However, after further discussion Darrell stated *"but that's only what they think as long as it is not someone I don't like I will work nicely. Like (pause) if I'm with Sandra I will work nicely"* (transcript 1/2). Darrell suggested she liked to work with Sandra as a buddy. It seemed this could have been because Sandra was also Gifted and attended the Gifted program at Darrell's school. Mark implied Darrell may like to work with Sandra because Darrell does not like waiting for other children to catch up and this is the "*…time when she is capable of losing the plot and having a fit"* (transcript 2/2).

9.6 Discussion: Preference for working alone or in groups

This discussion will address the apparent relationship between the Gifted children with ADHD in this study that had established friendships with 'true peers' (Roedell, 1990) and liked to work with others, while those who had not established 'true peer' (Roedell, 1990) friendships seemed to prefer to work alone. Another finding this discussion will address is how two of the children (Randy and Thomas) suggested they liked to work alone when they knew they were capable of completing the task to a high standard as they were good at it.

The children who had established friendships with 'true' or 'like minded' peers appeared to be content to work with other children (e.g., in buddies or in groups). This suggested that establishing a friendship with a 'true peer' (Roedell, 1990) could assist with social interactions in general (or the children that had found a 'true peer' already had social interaction abilities that those who had not found a 'true peer' did not). Nevertheless, two of the three children who were yet to establish friendships with 'true peers' (Roedell, 1990), Zan and Taylor, preferred to work alone. This supported Lovecky's (2004) claim that once a 'true peer' (Roedell, 1990) friendship

was established it could lead Gifted children to develop social connections with others.

The only exception in this study was Emily who did not appear to have found a 'true peer' (Roedell, 1990) but preferred to learn in buddies. Although as previously mentioned by her parents, Emily particularly enjoyed being the leader when working with others which possibly linked to Guevremont's (1990, cited in Lovecky, 2004) suggestion that some children with ADHD like to boss around younger children. It is possible that at this time Emily's learning preference is to be a leader rather than to find a 'true peer' (Roedell, 1990) as Olive taught her how to be a good leader at One Day School and she is attempting to carry this out.

As previously addressed in 4.10 some Gifted/ADHD writers argued that group work was an effective way to learn (e.g., Ramirez-Smith, 1997) while others suggested it was ineffective (e.g., Zentall, 2006). Some of the children in this study who had found a 'true peer' enjoyed working with others (e.g., Randy). Although, it may not be beneficial for some Gifted children with ADHD to work in a group because as Jane indicated Randy follows others and does not challenge himself when working in a group. In addition, when working in a group Randy maintained he rested while others did his work. A research participant in Zentall et al. (2001) study GH2 (Gifted and talented with ADHD) referred to how when he worked in a group "…I just all of a sudden back out and go free. They are doing all of my work" (p. 511). King (1993, cited in Zentall et al., 2001) indicated this could be due to a lack of belief in ability rather than lack of effort. This implied the Gifted children with ADHD who stop working when in a group could have low perceived self efficacy (Bandura, 1995).

In contrast Randy and Thomas implied they had high perceived self efficacy in relation to particular tasks they knew they could do well as they wanted to work alone. According to Zentall et al. (2001) the children in their study who were Gifted with ADHD had the same perspective, and they too enjoyed to work alone on tasks they knew they could do well. Nevertheless, it is possible that perceived self efficacy could vary between tasks. This is because Randy seemed to have high perceived self efficacy evident in how he wanted to complete mathematics on his own as he knew

he could do it well (e.g., relating to high self efficacy) yet when in groups he indicated he took rests (possibly indicating low self efficacy as he does not think he can do the tasks well).

However, it seems unlikely that both Randy and Thomas would have low perceived self efficacy for all group tasks. Thus, it is possible that Randy 'sits back' because as Jane maintained, he did not want to be recognised as a high achiever, in keeping with his Chinese culture. Randy's low self efficacy could also relate to Jane's suggestion that he was having difficulty with his younger brother's high intelligence. If Randy does have low self efficacy he may benefit from assistance in developing higher perceived self efficacy. Bandura (1995) indicated one way a person could develop positive self efficacy was through succeeding at challenging tasks.

Although, Thomas did not seem to sit back in group tasks but had a preference for working alone when he knew he could do well. Both Thomas and Randy seemed to know the tasks they could do well, suggesting they had accurate perceived self-efficacy and related to Delisle and Galbraith's (2002) selective consumers as they seemed to use their perceived self efficacy to select how they wanted to carry out a task, such as, alone or in a group according to what suits their ability for that task (e.g., whether they can do well at it alone or whether it would be better for them to work in a group).

In conclusion, finding 'true peers' (Roedell, 1990) appeared to relate to classroom learning. Those children who had established friendships with 'true peers' (Roedell, 1990) did like to work with others when learning, either in buddy work or groups (with one exception Emily who had not found a 'true peer' but still preferred to work with others). This supported Lovecky's (2004) claim that once children had found a 'true peer' (Roedell, 1990) it could lead them to develop connections with others. Hence it is possible that the children's learning preferences (e.g., alone or group) relate closely to their current social capabilities. Although, for a variety of reasons including culture, group work may not be appropriate for all children at all times.

9.7 Chapter summary

A teacher could assist Gifted children with ADHD to find a ‘true peer’ in order to support them to develop the ability to work with others. Although, at times some of the children preferred to work alone (e.g., when they knew they could carry out a task well). As a child may prefer to work alone a teacher should not place too much emphasis on children working with others in the classroom. Furthermore, although children may enjoy working with their ‘true peer’ this child may not be a part of the same class. This perhaps indicated the best way to address whether children should work alone or in a group is to ask them their preference when they know the requirements of a task (e.g., so they know whether they can carry it out effectively alone).

10 Chapter 10: Conclusions, implications and future research

10.1 Introduction

The main aim of this research was to identify the learning experiences and preferred teaching strategies of children who had been identified as Gifted with ADHD. This chapter provides a brief overview of the study and its key findings, considers the implications for practice and suggests conclusions, strengths and limitations and some possible directions for future research.

10.2 Key findings and implications of the project

Although there is a body of literature on both Giftedness and ADHD, there has been little research to date on the preferred educational strategies of children who are both Gifted and have ADHD. This study therefore provided important insights into the learning experiences of this twice-exceptional group of children. The research questions were investigated by conducting semi-structured interviews with six Gifted children with ADHD, their parents and a gatekeeper at the George Parkyn Centre. The stories told by these children and their families indicated that even though they could be considered fortunate, in that their Giftedness had been recognised, their educational experiences were mixed. The children and their parents reported that the children's positive experiences were for the most part at external educational centres such as One Day School with often more negative educational experiences in their 'normal' classrooms. Experiences at normal school seemed to be characterised by what appeared, for various reasons, to lead the children to avoid challenging tasks. While the children seemed content in most cases not to challenge themselves, there were instances where behavioural issues arose that were possibly due to boredom or lack of motivation, rather than (or in addition to) factors associated with their ADHD. The parents expressed concern that this lack of challenge could lead to patterns of underachievement, and reluctance to persist when learning did become difficult.

Participants indicated patterns of underachievement and reluctance to persist seemed to be overcome when effective educational strategies were utilised. This study provided insights into the children's experiences in a range of contexts, and through this identified many effective strategies that could be carried out in the 'normal' classroom. These included, assisting the Gifted children with ADHD to become *learning goal oriented* (e.g., by utilising a reward system that provided immediate visual feedback) and acknowledging their interests (e.g., topics or preferred strategies). Other preferred strategies included, information that was visual, tasks having a meaningful purpose, allowing movement, and the use of computers. In addition, having a friendship with a 'true peer' (someone who is also Gifted and understands what it is like to be different) seemed to assist these children to overcome social difficulties and enabled them to enjoy working with others (which could be an integral part of the classroom learning environment). It is important these educational strategies are utilised otherwise these children could continue to underachieve as their Giftedness (in some settings) seemed to be masked by their disability (ADHD). Although when these effective educational strategies were used some of these children were able to overcome difficulties associated with their disability (e.g., wanting to move). [28]

However, this does not mean this study is suggesting that a 'normal' classroom teacher could address each child's preferred effective strategies during all learning times. In contrast, this study has emphasised that the best way to address the learning of Gifted children with ADHD may be to acknowledge learning preferences through individualisation, perhaps with children as self managers (to an extent that is appropriate for the individual). This is because self management could allow children to adapt learning to relate to their interests, making them stimulated and intrinsically motivated to learn. Self management could also allow children to utilise their perceived self efficacy. For example, they could decide whether they wanted to work

[28] Although as each child in this study is an individual they did not all relate to all of the difficulties (e.g., a child may have difficulty sitting still but did not have a problem with their working memory).

alone or in a group (in relation to whether they could do the task well alone or could benefit from support from other children).[29]

It seems acknowledgment of the previously mentioned educational strategies could mean these Gifted children with ADHD may exhibit their strengths as they should be stimulated to learn and exhibit their potential (e.g., strengths) thus teachers should have more accurate expectations. This is significant because a teacher's expectations of a Gifted child should be appropriately high. However, this study indicated that some 'normal' classroom teachers may have had low expectations that negatively impacted on these children's behaviour and academic abilities as they appeared (as previously mentioned in this section, 10.2) to be underachieving. In contrast at One Day School or other external learning centres (e.g., Kip McGrath), where it seemed their Giftedness was recognised, these children seemed to excel.

Some may suggest this indicates 'normal' teachers could benefit from professional practice on how to teach Gifted children, including those with difficulties such as ADHD. Nevertheless, this study indicated effective educational strategies for these children could apply to the 'average' child. Therefore it is not only a teacher of the Gifted (e.g., a One Day School teacher) but 'normal' effective classroom teachers that should be utilising these strategies. Furthermore, as indicated in 2.5 Gifted children are not only those at One Day School but are a part of every classroom, and in fact is where most could be found.

10.3 Conclusions

This study has not suggested new educational strategies but has indicated that effective educational strategies for some Gifted children with ADHD (e.g., acknowledging interest) could be those that are also effective for the 'average' child.

[29] 'Normal' classroom teachers should be able to assist the Gifted children with ADHD to become self managers (e.g., those who develop their own goals and manage their own tasks) with the encouragement and guidance of the New Zealand curriculum as managing self is one of five key competencies. The Ministry of Education (2007c) indicated the key competencies are more complex than skills and successful learners understand when and how to use the competencies.

Although the underlying message of individualizing learning may be a newer concept recognized by the Ministry of Education (2006) as personalised learning.

The educational strategies identified in this study were found through reading but the depth was gained from talking to the Gifted children with ADHD and their parents. So although the specific findings within this research may not be applicable to all Gifted children with ADHD, what this study emphasises is that teachers should be researchers who ask questions and seek answers by talking to children and their parents.

Talking to parents and their children about their interest and preferred, and thus effective, educational strategies is important. This is because although Gifted children should be acknowledged due to NAG 1-III and ERO Gifted children with ADHD are a group of Gifted children that are on the fringe. Gifted children with ADHD have been under-researched, yet it is understandably very important to these children and their families that their educational abilities are accommodated by using effective educational strategies so they can be assisted to meet their potential. Identifying effective educational strategies was particularly important because the children's educational experiences in the 'normal' classroom were not very positive. This may suggest in order for a teacher to identify effective educational strategies for a Gifted child with ADHD they would have to acknowledge that although the child had behavioural difficulties they could also have potential beyond that being exhibited in their classroom.

10.4 Limitations and strengths

What could be considered a limitation of this research was that it did not involve many participants. However, this occurred due to the scarcity of those who had been identified as both Gifted with ADHD. Although this research did not involve many participants this could be a strength due to the depth of information gained from talking to a small number of participants.

Another limitation of this research was that I did not know the children before conducting the interviews. It is possible if this had occurred that more insightful data could have been collected. However, I did not know these participants prior to this study as I selected to investigate a specific group of Gifted children. Nevertheless, although I did not know the participants before the study once they had responded to the letters I gave to the George Parkyn Centre to pass on I organised to meet the participants before I interviewed them. This was so they could feel more at ease with talking to me and ask questions. In addition, this meeting was conducted in a setting which they should have felt comfortable in as they had all attended or visited the George Parkyn Centre prior to this.

A strength of this research is that it involved speaking to children and their parents about their educational and social experiences rather than educators. This was significant because as suggested in 6.15 I believe it is parents who usually know their children best. This was evident as the parents could compare and contrast the teachers which they had found to be effective for their children. In addition, these parents often took their children to extracurricular activities which also allowed them to comment on these educators.

Another strength of this research was that there were two interviews conducted with the children and their parents (separately). This was beneficial because it meant if parents or children from two of the families raised what they considered to be a key issue I could ask the other participants if they felt it was important to them.

This research is somewhat novel as there does not appear to have been a lot of research undertaken on the Gifted with ADHD. There also does not seem to have been any New Zealand research conducted on the Gifted with ADHD. The literature that is available appears to focus on misdiagnosis. This misdiagnosis literature did not appear to be based on research but on other writers' perspectives on the possibilities of misdiagnosis. This study is unusual in that the children participants were all formally recognised as being Gifted by the George Parkyn Centre and formally diagnosed as having ADHD by a paediatrician or psychologist. This meant this study could move on from the current misdiagnosis focus of the literature to address some educational strategies. Thus, this study added to the current dearth of research regarding the Gifted with ADHD.

10.5 Directions for future research

Future research should be undertaken to address effective educational strategies for Gifted children with ADHD, as to date this study seemed to be only the third undertaken internationally and the first in New Zealand. This future research could be action research that utilises the educational strategies suggested in this study. However, the educational strategies the children in this study found effective may not be effective for other Gifted children with ADHD and what study indicated was that Gifted children with ADHD should have individualised learning.

Therefore, action research could establish and carry out Individual Education Plans (IEPs) with children who are Gifted with ADHD. At the beginning of the year the researcher could carry out meetings with members within each child's team and develop IEPs for the child for a period of time (perhaps a term). Individual education teams could include the child their, parents, 'normal' classroom teacher, One Day School teacher (or preferred extra-curricular teacher) and any other people the child could benefit from having involved in establishing an IEP (e.g., members of the team could be different for each individual child). The team could then establish children's preferred educational strategies that could become components of their IEP.

Furthermore, this study indicated truly individualised learning could involve the child (to an agreed extent) self managing their education. This is because as previously suggested in 10.2 a teacher may not be able to carry out each individual child's preferred effective educational strategies in all learning situations.

This action research could truly establish whether an educational strategy, recommended for the Gifted by the Ministry of Education (2000), that is perhaps not often utilised, could assist these Gifted children with ADHD to meet their potential.

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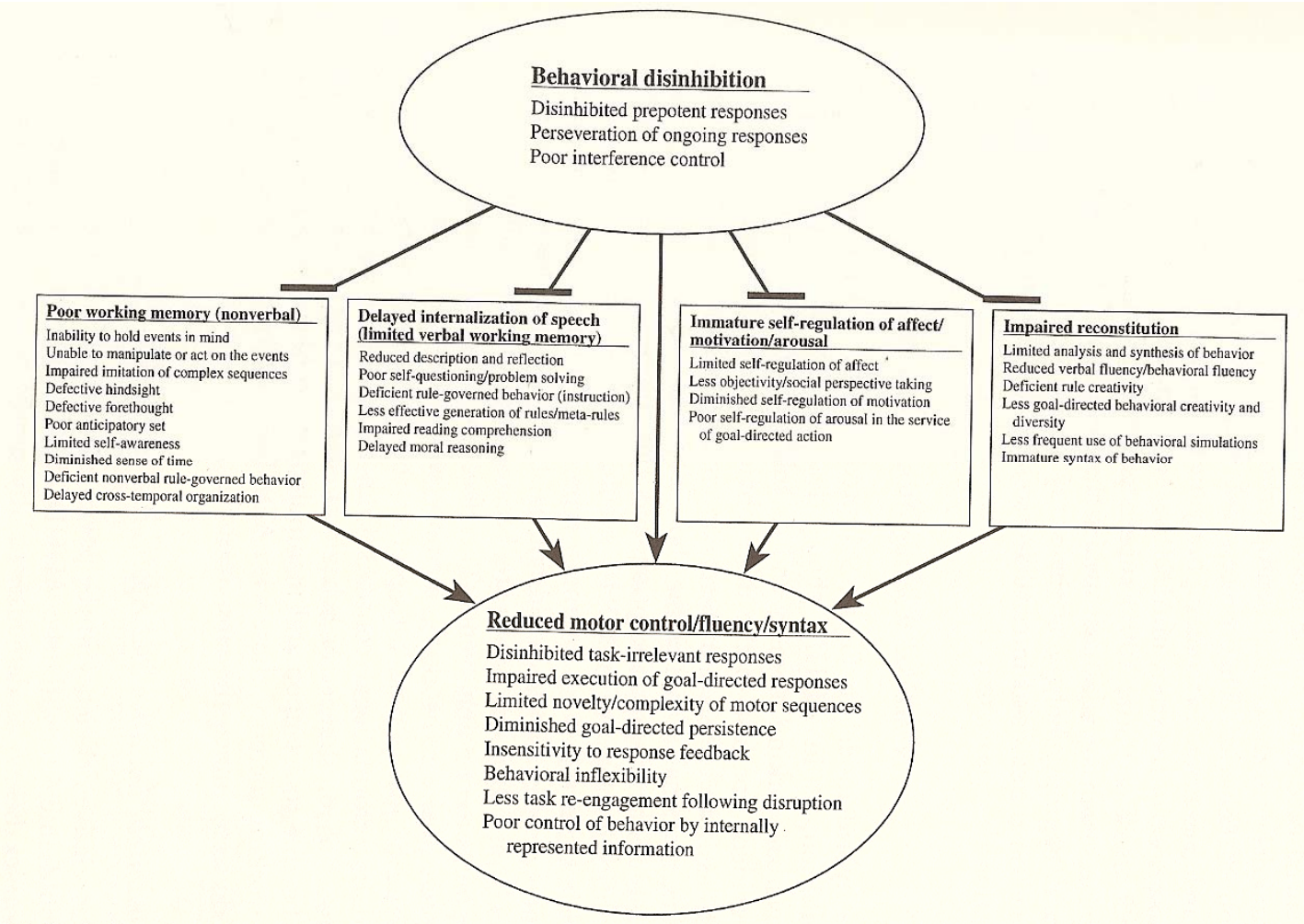
12 APPENDICES

The appendices contain the following

A) Models
B) Introductory letters
C) Information sheets
D) Consent forms
E) Question sheets
F) First interview protocols and second interview questions
G) Pictures used in interviews
H) Chronology of the study

Appendix A: Models

Barkley's Hybrid Model of Executive Functions



[31]

[31] From *ADHD and the nature of self-control* (p. 237), by R.A Barkley, 1997, New York: Guilford. Copyright 1997 by Guilford. Reprinted with permission.

Dweck's Ahievement Goals and Achievement behaviour (Attribution Theory)

Table 1
Achievement Goals and Achievement Behavior

Theory of intelligence	Goal orientation	Confidence in present ability	Behavior pattern
Entity theory → (Intelligence is fixed)	**Performance goal** (Goal is to gain positive judgments/avoid negative judgments of competence)	**If high** →	**Mastery-oriented** Seek challenge High persistence
		but	
		If low →	**Helpless** Avoid challenge Low persistence
Incremental theory → (Intelligence is malleable)	**Learning goal** (Goal is to increase competence)	**If high** → **or** **low**	**Mastery-oriented** Seek challenge (that fosters learning) High persistence

32

[32] From "Motivational Processes Affecting Learning," by C. Dweck, 1986, *American Psychologist, 41*(10), p. 1041. Copyright 1986 by the American Psychological Assocation and C. Dweck. Reprinted with permission.

Enrichment Triad Model

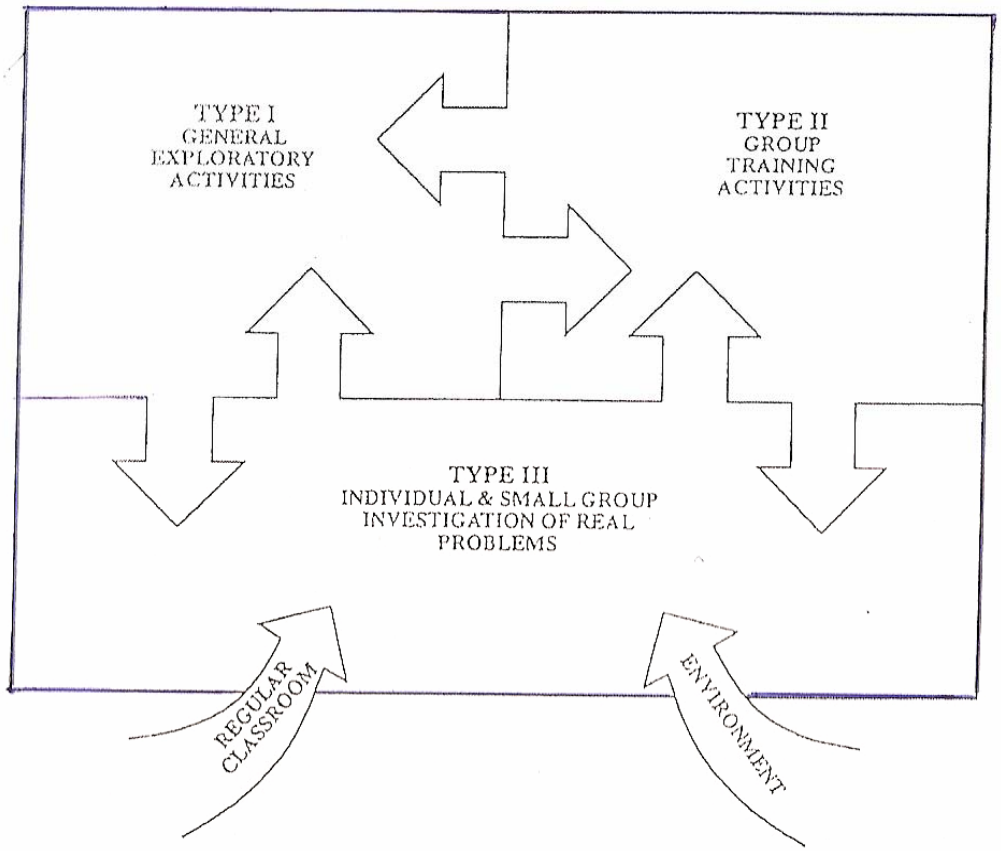


Figure 4. The Enrichment Triad Model.

33

[33] From *Schools for talent development: A practical plan for total school improvement (Executive summary)*, (p. 13), by J.S Renzulli, 1994, Mansfield Center, CT: Creative Learning. Copyright 1994 by Creative Learning and J.S Renzulli. Reprinted with permission.

Schoolwide Enrichment Model

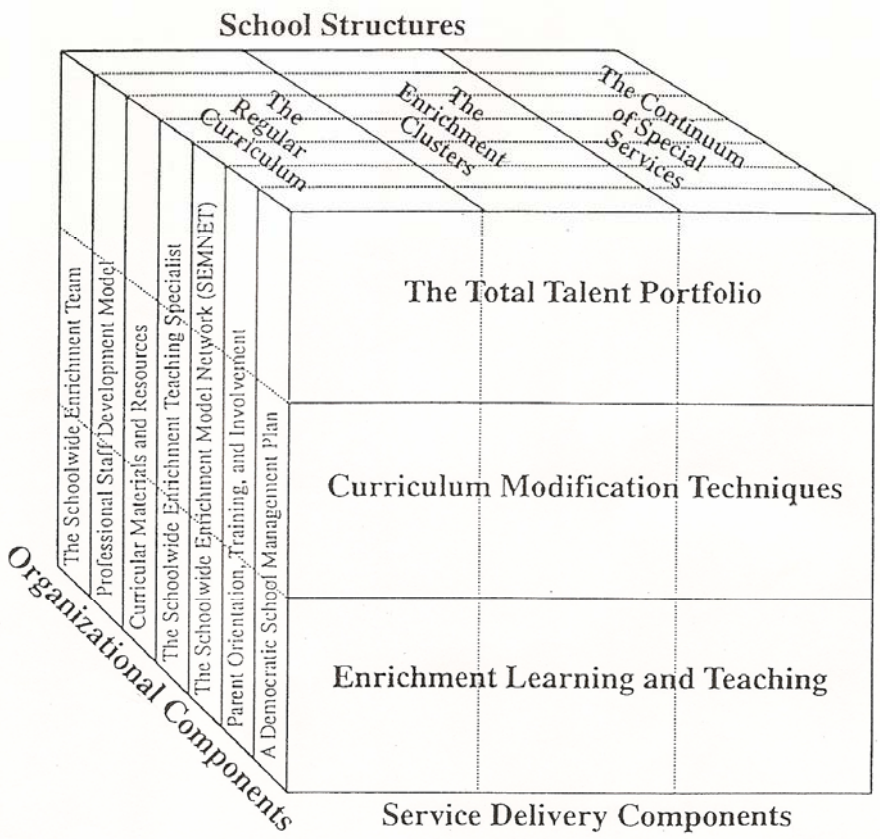


Figure 1. The Schoolwide Enrichment Model: Relationship between two types of components of the model and school structure.

34

[34] From *Schools for talent development: A practical plan for total school improvement (Executive summary)*, (p. 5), by J.S Renzulli, 1994, Mansfield Center, CT: Creative Learning. Copyright 1994 by Creative Learning and J.S Renzulli. Reprinted with permission.

Schoolwide Enrichment Model's Dimensions of Total Talent Portfolio

Joseph S. Renzulli

Abilities	Interests	Style Preferences			
Maximum Performance Indicators	*Interest Areas*	*Instructional Styles Preferences*	*Learning Environment Preferences*	*Thinking Styles Preferences*	*Expression Style Preferences*
Tests •Standardized •Teacher-Made Course Grades Teacher Ratings Product Evaluation •Written •Oral •Visual •Musical •Constructed (Note differences between assigned and self-selected products) Level of Participation in Learning Activities Degree of Interaction With Others Ref: General Tests and Measurements Literature	Fine Arts Crafts Literary Historical Mathematical/Logical Physical Sciences Life Sciences Political/Judicial Athletic/Recreation Marketing/Business Drama/Dance Musical Performance Musical Composition Managerial/Business Photography Film/Video Computers Other (Specify) Ref: Renzulli, 1977b	Recitation & Drill Peer Tutoring Lecture Lecture/Discussion Discussion Guided Independent Study * Learning /Interest Center Simulation, Role Playing, Dramatization, Guided Fantasy Learning Games Replicative Reports or Projects* Investigative Reports or Projects* Unguided Independent Study* Internship* Apprenticeship* *With or without a mentor Ref: Renzulli & Smith, 1978	*Inter/Intra Personal* •Self-Oriented •Peer-Oriented •Adult-Oriented •Combined *Physical* •Sound •Heat •Light •Design •Mobility •Time of Day •Food Intake •Seating Ref: Amabile, 1989; Dunn, Dunn, & Price, 1975; Gardner, 1983	Analytic (School Smart) Synthetic/ Creative (Creative, Inventive) Practical/ Contextual (Street Smart) Legislative Executive Judicial Ref: Sternberg, 1984, 1988, 1992	Written Oral Manipulative Discussion Display Dramatization Artistic Graphic Commercial Service Ref: Renzulli & Reis, 1985

Figure 3. Dimensions of Total Talent Portfolio.

35

[35] From *Schools for talent development: A practical plan for total school improvement (Executive summary)*, (p. 9), by J.S Renzulli, 1994, Mansfield Center, CT: Creative Learning. Copyright 1994 by Creative Learning and J.S Renzulli. Reprinted with permission.

Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder

Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

(1) six (or more) of the following symptoms of **inattention** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Inattention

(a) often fails to give close attention to details or makes careless mistakes in schoolwork, work, or other activities
(b) often has difficulty sustaining attention in tasks or play activities
(c) often does not seem to listen when spoken to directly
(d) often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions)
(e) often has difficulty organizing tasks and activities
(f) often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework)
(g) often loses things necessary for tasks or activities (e.g., toys, school assignments, pencils, books, or tools)
(h) is often easily distracted by extraneous stimuli
(i) is often forgetful in daily activities

(2) six (or more) of the following symptoms of **hyperactivity-impulsivity** have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

Hyperactivity

(a) often fidgets with hands or feet or squirms in seat
(b) often leaves seat in classroom or in other situations in which remaining seated is expected
(c) often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness)
(d) often has difficulty playing or engaging in leisure activities quietly
(e) is often "on the go" or often acts as if "driven by a motor"
(f) often talks excessively

Impulsivity

(g) often blurts out answers before questions have been completed
(h) often has difficulty awaiting turn
(i) often interrupts or intrudes on others (e.g., butts into conversations or games)

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before age 7 years.

C. Some impairment from the symptoms is present in two or more settings (e.g., at school [or work] and at home).

[36]

[36] From *Diagnostic and statistical manual of mental disorders: DSM-IV Text Revision (4th ed.)* (p. 92), by American Psychiatric Association, 2000, Washington, DC: American Psychiatric Association. Copyright 2000 by American Psychiatric Association. Reprinted with permission.

Diagnostic criteria for Attention-Deficit/Hyperactivity Disorder continued

D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E. The symptoms do not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and are not better accounted for by another mental disorder (e.g., Mood Disorder, Anxiety Disorder, Dissociative Disorder, or a Personality Disorder).

Code based on type:

314.01 Attention-Deficit/Hyperactivity Disorder, Combined Type: if both Criteria A1 and A2 are met for the past 6 months

314.00 Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type: if Criterion A1 is met but Criterion A2 is not met for the past 6 months

314.01 Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type: if Criterion A2 is met but Criterion A1 is not met for the past 6 months

Coding note: For individuals (especially adolescents and adults) who currently have symptoms that no longer meet full criteria, "In Partial Remission" should be specified.

314.9 Attention-Deficit/Hyperactivity Disorder Not Otherwise Specified

This category is for disorders with prominent symptoms of inattention or hyperactivity-impulsivity that do not meet criteria for Attention-Deficit/Hyperactivity Disorder. Examples include

1. Individuals whose symptoms and impairment meet the criteria for Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type but whose age at onset is 7 years or after
2. Individuals with clinically significant impairment who present with inattention and whose symptom pattern does not meet the full criteria for the disorder but have a behavioral pattern marked by sluggishness, daydreaming, and hypoactivity

[37]

[37] From *Diagnostic and statistical manual of mental disorders: DSM-IV Text Revision (4th ed.)* (p. 93), by American Psychiatric Association, 2000, Washington, DC: American Psychiatric Association. Copyright 2000 by American Psychiatric Association. Reprinted with permission.

Delisle and Galbraith's table of Underachievers vs Selective Consumers

Underachievers . . .	Selective Consumers . . .
. . . do not understand causes or cures	. . . can explain both the problem and possible solutions
. . . are dependent and reactive	. . . are independent and proactive
. . . tend to withdraw	. . . tend to rebel
. . . respect or fear authority figures	. . . see teachers as adversaries; can be contentious
. . . need both structure and imposed limits	. . . require little structure; need "breathing room"
. . . exhibit uniformly weak performance	. . . exhibit performance that varies relative to the teacher and/or content

Underachievers . . .	Selective Consumers . . .
. . . generally require family intervention	. . . can usually be dealt with within school resources
. . . may change over the long term	. . . may change "overnight"
. . . are often perfectionistic; nothing they do is ever good enough	. . . are frequently satisfied with their accomplishments
. . . have a poor academic self-image	. . . see themselves as academically able

[38]

[38] From *When gifted kids don't have all the answers: How to meet their social and emotional needs* (p. 177, 178), by J. Delisle, and J. Galbraith, 2002, Minneapolis, MN: Free Spirit. Copyright 2002 by Free Sprit. Reprinted with permission.

Delisle and Galbraith's table of Underachievers vs Selective Consumers

	For Selective Consumers	For Underachievers
Supportive Strategies	Eliminating (or at least significantly reducing) work already mastered	Holding daily class meetings to discuss student concerns and progress
	Allowing independent study on topics of personal interest	Directive atmosphere shows the student that the teacher is in charge and is competent
	Nonauthoritarian atmosphere	Daily/weekly/monthly written contracts of work to be completed
	Permitting students to prove competence via multiple methods	Free time scheduled each day to show importance of relaxation and free choice

	For Selective Consumers	For Underachievers
	Teaching through problem-solving techniques over rote drill	Using instructional methods that are concrete and predictable
Intrinsic Strategies	Students help determine class rules	Students are aware of specific rewards for attempting and/or doing their work
	Assigning specific responsibilities for classroom maintenance or management	Allowing students to evaluate work prior to the teacher assigning a grade
	Teacher practices reflective listening—comments to students serve to clarify statements, not evaluate them	Frequent and positive contact with family regarding child's progress
	Students set daily/weekly/monthly goals with approval of teacher	Verbal praise for any self-initiating behaviors
Remedial Strategies	Self-selected, weekly goals for improvement determined between student and teacher	Programmed instruction materials, where students grade their own papers immediately on completion
	Private instruction in areas of weakness	Peer tutoring of younger students in areas of strength
	Use of humor and personal example to approach areas of academic weakness	Small-group instruction in common areas of weakness (e.g., spelling, sequencing, phonics)
	Familiarizing students with learning-styles research and its personal implications for classroom performance	Encouraging students to work on projects which don't involve a grade

39

[39] From *When gifted kids don't have all the answers: How to meet their social and emotional needs* (p. 185, 186), by J. Delisle, and J. Galbraith, 2002, Minneapolis, MN: Free Spirit. Copyright 2002 by Free Sprit. Reprinted with permission.

Appendix B: Introductory Letters to Participants

Introductory Letter to the Gatekeeper

Address
Telephone
Email

Dear Joan,
As we have emailed and discussed I am currently working on a thesis on gifted children with ADHD. Enclosed with this letter is a letter to the George Parkyn Centre Board of Trustees with my research proposal and ethical application (which as agreed was approved by the Waikato University Ethics Committee before posting it to you to pass onto the George Parkyn Centre Board). I understand I may need to attend a Board meeting to speak about my research.

Along with the letter to the Board of Trustees is a letter for parent/caregivers who are interested in both them and their child participating. I would ask that you or a Board member (when I have approval from the George Parkyn Centre Board) please send these to people who you believe would be appropriate (on my behalf). On these letters are my contact details. This is so I do not have their contact details until they have agreed to participate.

In addition, I would also greatly appreciate it if you could still be a participant (as you too are a parent/caregiver of a gifted/ADHD child). If you still are able to willing to talk to me I will bring you a consent form when I first visit my participants.
Thank you Joan I really appreciate all of your help.
Yours sincerely,
Kylee Edwards

Introductory letter to the George Parkyn Centre

Address

Telephone

Email

To The George Parkyn Centre Board,

My name is Kylee Edwards. I am currently working on a thesis on gifted children with ADHD. I have been in contact and met one of your staff members regarding participants for my research being obtained from the George Parkyn Centre. She felt some children who attend the centre would be recognised as relating to these two exceptionalities (with your centre's identification of giftedness and a form of formal identification of ADHD). I would ask that someone from the George Parkyn Centre contact participants and then if they feel they would like to participate they can contact me.

It is noteworthy that the focus of this research is not on the George Parkyn Centre itself but will investigate the question *What are the educational and social experiences of some children who have been identified as gifted with the learning disability (GLD) Attention Deficit Hyperactivity Disorder (ADHD)?*

Along with this letter I have enclosed my ethical application and my research proposal. The questions I may use to direct discussion are also included. All of these questions would not be used, but merely some if re-directing back to the topic was necessary. The research method I will use is called narrative storying and will entail me talking to these children and their parent/caregivers (including your Assistant Director –as you will know she is a parent/caregiver of a child, now adult, who was recognised as gifted and as having ADHD) about their school and social experiences (which I will tape record, if permission is gained from parents/caregivers and the George Parkyn staff member involved and the children through their consent forms).

Part of this process involves checking I have documented their experiences accurately. Thus, to make sure I have depicted their stories truthfully.

Thank you for your time. I hope you too feel I can work with the George Parkyn Centre to hear these stories.

I have also included 10 letters for parent/caregivers and 10 letters for their children for either a George Parkyn staff member or a Board of Trustees member to please send (on my behalf) to those who you believe would be appropriate (those who are recognised as gifted/ADHD). This is so I do not know their contact details until they agree to participate.

Yours faithfully,
Kylee Edwards

Introductory Letter to Parent Participants

Address

Telephone

Email

Dear Parent/caregiver,

My name is Kylee Edwards. This letter is to give you some more information about the research I would like you and your child to be a part of.

I am a University of Waikato Masters student working on a research project on gifted children with ADHD. I have approached you as the George Parkyn Centre believes your child relates to both exceptionalities (gifted and ADHD). I chose to research the gifted with ADHD as I find the topic very interesting and as I teach about gifted children at Waikato University. I would also like to make you aware that I would not be aiming to emphasis stereotypical generalisations but find out about you and your child's educational and social experiences. My aim is to find some teaching strategies and approaches that help your child learn in order to assist those who teach them.

If you are interested in participating in this research I have included my contact details below. You can ring, email or cut off and fill in the slip below and post back in the self addressed envelope.

Thank you for you consideration. I look forward to your prompt response.

Yours faithfully,

Kylee Edwards

My contact details

Kylee Edwards

Address

Phone

Email

If posting please complete this slip and post back in the self addressed envelope

Name:

Address:

Phone:

Email:

Introductory Letter to Children Participants

Address
Telephone
Email

Dear George Parkyn Centre member,
My name is Kylee Edwards this letter is to ask you to be a part of my research.

I am writing a thesis (sort of a small book) about people who are gifted and have ADHD. I have been reading a lot about this but I need to talk to some people so I can write about it myself. I would like to talk to you about what you find helps you to learn.

If you would like to talk to me about your experiences talk to your Mum, Dad or caregiver (they have a letter too with a form to send to me).

I really hope you would like to be a part of my research. I look forward to hearing from you. If you have any questions you can ring or email me (my contact details are on your parent/caregivers form).

Yours faithfully,
Kylee Edwards

Appendix C: Information Sheets

Information Sheet for Parents/Caregivers/Gatekeeper

Dear Parents/caregivers,

Here is some information about my study. The question I will be investigating is

What are the educational and social experiences of some children who have been identified as gifted with the learning disability (GLD) Attention Deficit Hyperactivity Disorder (ADHD)?

I am specifically trying to find out about approaches and strategies that help your child learn.

Please note:

1. Your name will remain anonymous
2. You are able to withdraw from the research at any time up until mid November when the stories have been transcribed (see below for how to withdraw)
3. The information will be kept securely in accordance with Waikato University Guidelines (in a locked storage cabinet indefinitely)
4. If the information you or your child gives me is used in future publications you all will remain anonymous
5. You can be present when your child tells their story so both you and they can feel more comfortable about me talking to them
6. I would like to talk to you two times on two different occasions for around 30-60 minutes per person (although, if this is too long for either you or your children I will arrange another time to meet you)
7. With your permission I will record the stories you tell me

If you wish to withdraw from the project or if you have any other questions please contact me by phone on …. Alternatively, my email is …

If you have any concerns regarding me you should direct these to my supervisor. My Supervisor is Dr Sally Peters, her contact details are …. These complaints may be taken to the School of Education ethics committee.

Thank you for your time

Yours faithfully,
Kylee Edwards

Information Sheet for children

Dear participant,

This is an information sheet to explain what it means to be a participant in the research.

The research question I will investigate is

> *What are the educational and social experiences of some children who have been identified as gifted with the learning disability (GLD) Attention Deficit Hyperactivity Disorder (ADHD)?*

This is basically my title for the thesis (like a book) that I will write. It is important that you know

1. I will not write your name you will remain anonymous (this is so no-one knows I am writing about you, you can choose a pretend name)
2. If you start off being a participant and no longer want to you can stop, but not after I have written all about you have until mid November when your stories will have been written down
3. The information you give me will be kept safe in a locked filing cabinet forever
4. Sometimes when people write a thesis they then use this information to write in a journal (but again, if this happens) I will not write your real name
5. Your parent/caregiver can be present when I speak to you
6. I would like to talk to you at two different times for about 30-60 minutes (although if this is too long I will talk to you another time too)
7. With your permission I will record the stories you tell me

If you agree to be a participant for this research all you would have to do would be talk to me as my research method is called storying, so you will be telling your story.

If you have any other questions please ask your Mum or Dad for my contact details.

Yours faithfully,
Kylee Edwards

Appendix D: Consent Forms

Consent Form for Parents

I agree with the following statements (please tick):

I understand that my identify will remain anonymous (due to the use of pseudonyms) and all information shared will be kept confidential ☐

I understand that my participation is voluntary and that I can withdraw from this research project up until mid November when the stories have been transcribed ☐

I understand that the information I share will be kept in a locked filing cabinet indefinitely ☐

I understand the story conversations I have with the researcher will be tape recorded and then transcribed ☐

I understand that the findings of this research could be presented at conferences and written in academic journals ☐

I understand that I will be collaborated with throughout the research process which includes my opinions regarding information I have shared which has been transcribed ☐

If you have any concerns regarding the researcher (me) you should direct these to my supervisor. My Supervisor is Dr Sally Peters, her email is…These complaints may be taken to the School of Education Ethics Committee.

Parent/caregiver one

I…….. (print name) have read and understood the nature of the research project and agree that I will participate as requested.

Signed……. Date ……..

Email…… …...

Phone……...

Parent/caregiver two

I…….. (print name) have read and understood the nature of the research project and agree that I will participate as requested.

Signed……. Date ……..

Email…… …...

Phone……...

Consent Form for Children

I agree with the following statements (please tick):

I understand that I will have a pretend name that I choose so no one will know what is written is about me ☐

I understand that I choose to participate and that I do not have to keep participating in this research if I do not want to. Although, I cannot stop participating after mid November when I will have written down your stories ☐

I understand that the information I share will be kept in a locked filing cabinet forever ☐

I understand the story conversations I have with the researcher will be tape recorded and then she will listen to this and write down what I have said ☐

I understand that the findings of this research could be presented at conferences and written in academic journals. Although, no-one will know its me as she will still use the pretend name. ☐

I understand that the researcher will talk to me during two times when I will tell my stories but she will also talk to me to check what she has written from the tapes is correct. If it is not what I meant to say I can change it. ☐

If you have any concerns regarding the researcher (me) you should direct these to your parent/caregivers

Parent/caregiver one

I…….. (print name) have read and understood the nature of the research project and agree that my child will participate as requested.

Signed……. Date ……..

Email……

Phone……...

Parent/caregiver two

I…….. (print name) have read and understood the nature of the research project and agree that my child will participate as requested.

Signed……. Date ……..

Email……

Phone……...

Child

I…….. (print name) have read and understood the nature of the research project and agree to participate as requested.

Signed……. Date ……..

Appendix E: Question sheets

Question Sheet for Adults

Parent one:
Name:_____

Gender: (please circle)
M F

Age range (please circle)
20-30 30-40 40-50 50-60 60-70

Ethnicity:_____

Occupation:_____

……

Parent two:
Name:_____

Gender: (please circle)
M F

Age range (please circle)
20-30 30-40 40-50 50-60 60-70

Ethnicity:_____

Occupation:_____

About your child:

1. Did your child attend an Early Childhood Centre? If yes, where?

2. What is the name of the current school they attend? Have they always gone there? If no could you please give some details of the other school/s.

3. What is your child's home/first language?

4. Are there any cultural values or issues you feel I should be aware of?

5. How familiar is your child with this George Parkyn Centre? How many times do you think they would have attended (e.g., over what period of time did they attend once a week)?

Question Sheet for Children

Name:_____

Age:_____

Gender (please circle)

M F

Ethnicity:_____

Place in family:_____

Information about you:

6. What is the name of the current school you attend? Have they always gone there? If no, what other schools have you gone to?

7. What is your home/first language?

8. Is there anything you would like me to know about your culture?

4. How many times do you think you have been to this classroom at the George Parkyn Centre?

Appendix F: Interview Protocol

First Interview Protocol for adults

Time of interview:

Date:

Place:

Interviewee:

Description of the context:

Background noise:

Describe the purpose of the interview:

Because I know (from our previous discussions) you have been advocates for your child's learning the purpose of this interview is for you to help me understand what you think helps or hinders your child's/children's learning.

Do you have a preference for a pseudonym?

Note: Use the child's name not pronouns

First questions (simple to assist with placing at ease)

- What school does your child go to?
- What year level are they in?
- Can you tell me what their classroom looks like?
- We have talked a little bit about this, but do you consider your child is gifted in a particular area?
- What do you consider them to be gifted in? Why?
- Had anybody else discovered this before you? Did you have to do anything for others to recognize this gift?

Theme two : Effective learning strategies and approaches (deliberately placed here in order to address the positive first)

1. What places where you think your child learns?
2. When you think of all these places, can you think of one person who is particularly good at helping them learn?
3. How do you think this person has helped your child learn?
4. Do you think other things could be taught this way? Why/why not?
5. When you think of tasks that your child finds *challenging* who do you consider helps them best?
6. Is it the same person as you previously referred to?
7. Can you think of an example of a *challenging* task this person helped your child learn?
8. How did this person help?
9. Do you think other things could be taught this way? Why/why not?
10. When you think of tasks that *your child* finds *interesting* who do you consider usually develops these tasks?
11. Can you give me an example?

Theme one: Ineffective learning strategies and approaches

12. Can you think of a task or tasks your child *does not like* to learn?
13. How do you think they could have been helped to learn this task?
14. Is there anything else you would want the person who is helping to know?

Alternative questions for 16-18 if needed

Can you think of a task your child finds *boring* to learn?

How do you think they could have been helped to learn this task?

Is there anything else you would want the person who is helping to know?

Theme three: Social experiences

15. How do you think your child feels about learning with *others?* What do you think makes you think that?
16. Can you think of a time when they seemed to *enjoy* working with others?
17. Can you think of a time when they seemed to *dislike* working with others?
18. How do you think your child feels about learning with *alone?* What do you think makes you think that?
19. Can you think of a time when they seemed to *enjoy* working alone?
20. Can you think of a time when they seemed to *dislike* working alone?
21. How do you think your child feels about learning *alongside others but undertaking different tasks?* (may need to show photo) What do you think makes you think that?
22. Can you think of a time when they seemed to *enjoy* working *alongside others but undertaking different tasks?*
23. Can you think of a time when they seemed to *dislike* working *alongside others but undertaking different tasks?*

First Interview Protocol for children

Time of interview:

Date:

Place:

Interviewee:

Description of the context:

Background noise:

Describe the purpose of the interview (Gollup, 2000):

I am here to get your help. I am trying to learn about young people who are gifted and have ADHD. It's really important to me to find out how you like to learn. I need to find out so I can tell others what you think so hopefully it can help other young people who are gifted with ADHD. There are no right or wrong answers. Its okay that other people may think different things, I just need to know your thoughts because you are the expert about you.

What would you like your pretend name to be when I write about this?

First questions (simple to assist with placing at ease)

- What school do you go to?
- What year level are you in?
- Can you tell me what your classroom looks like?
- Do you sit at desks?
- Are you allowed to sit where you want to or do you have to sit in the same place each day?
- Do you sometimes get to choose where you sit? (mat time?)

Theme two: effective learning strategies (deliberately placed here in order to address the positive first)

1. What are some places you think young people learn?
2. Have you learnt at these places?
3. Suppose I was a young person wanting to learn at one of these places, who would you tell me was really *good* at helping you to learn?
4. Can you please draw a picture of this person?
5. I was wondering what were some reasons why you thought this person was *good* at helping you to learn?
6. Can you think of a time when this person helped you learn something that you found really *interesting*?
7. Where was it you learnt this?
8. Who else was there when you learnt this?
9. What do you think made this learning so *interesting?*
10. Are there other things you learn this way? Why/why not?
11. Do you think more things should be taught this way?
12. Is there anything else you would want to tell another young person about this person who helped you learn this *interesting* task?
13. Can you think of another time when you were taught something *fun?*
14. Was this person who taught you something *fun* the same person as the one you drew?
15. Where was it you learnt this?
16. Who else was there when you learnt this?
17. What do you think made this learning so *fun?*
18. Are there other things you learn this way? Why/why not?
19. Do you think more things should be taught this way?
20. Is there anything else you would want to tell another young person about this person who helped you learn this *fun* task?

21. Can you think of another time when you were taught something *challenging?*
22. Was this person who taught you something *challenging* the same person as the one you drew?
23. Where was it you learnt this?
24. Who else was there when you learnt this?
25. What do you think made this learning so *challenging?*
26. Are there other things you learn this way? Why/why not?
27. Do you think more things should be taught this way?
28. Is there anything else you would want to tell another young person about this person who helped you learn this *challenging* task?

Theme one (ineffective learning strategies):

29. Can you think of a task you *didn't like* to learn?
30. How did this make you feel?
31. What do you think made you not like learning this?
32. How do you think you could have been helped to learn about it?
33. If another young person was to learn this task what do you think the person who is going to help them should know?

Alternative questions for 29-32 if they do not find any tasks they don't like to learn

Can you think of a task you found *boring* to learn?

How did this make you feel?

What do you think made you not like learning this?

How do you think you could have been helped to learn about it?

If another young person was to learn this task what do you think the person who is going to help them should know?

<u>Theme three: social experiences</u>

Photo one (picture 8)

34. What can you see in this picture?
35. How do you think those young people are learning?
36. Have you ever learnt like this?
37. How did you feel about learning like this?
38. If you were to tell another young person what it is like to work with *others* what would you say?

Photo two (picture 18)

39. What can you see in this picture?
40. How do you think this young person is learning?
41. Have you ever learnt like this?
42. How did you feel about learning like this?
43. If you were to tell another young person what it is like to work with *alone* what would you say?

Photo three (picture 15)

44. What can you see in this picture?
45. How do you think these *young people are* learning?
46. Have you ever learnt like this?
47. How did you feel about learning like this?
48. If you were to tell another young person what it is like to *work beside other people but doing different tasks* what would you say? (choice)
49. How do you like to learn best?
50. How does this make you feel?

Prompts:

1. tell me more
2. could you explain your response more
3. I need more detail
4. what does ….mean?

Creswell (2005)

Second Interview Questions for Parents

Basic questions first

Firstly I did just want to check the predominant type of ADHD that your child has, whether it is hyperactive, inattentive or combined?

Also, whether they have any co-morbid diagnoses?

Describe the purpose of the interview (Gollup, 2000):

Like last time I need your help in addressing what helps your child learn, makes it difficult and also social and emotional aspects and how they impact on learning. What I have done is drawn some pictures of things which came up in a number of interviews that have been suggested to either help the child learn and a few about things that don't. When I interviewed your child I placed these cards on the ground like a game so they could turn over the pictures and tell me what they thought about them.

- Do these things help you learn? (simple closed question to start with)
- Is there anything else you would like to tell me about that?

So if it is okay with you I will show you the same cards I went through with your child/children and get your perspective on them also and then I have some further questions.

Note this question was used throughout the interview at appropriate times

*Is there anything else you would like to add?

Go through the cards, which include pictures of:

- a computer (technology)
- moving to learn (e.g., when reading or maybe they really enjoy physical education?)
- when topics are of interest
- praise
- working with lots of people or one on one
- when task or instructions are repeated
- pretend (friends/plays)
- seeing to learn (e.g., posters, whiteboard)
- humour
- memory (whether their memory helps or hinders in relation to learning)
- choice (topics or after completing class work)
- when someone who helps you learn is organized and/or gives instructions (maybe written or verbal)
- rules
- rewards (sticker charts, television, games)
- Thematic learning (e.g., the theme could be water and the children learn about this in all the subjects, maybe for art they draw a picture of the Titanic and in science learn about dams)
- whether they prefer to be given little pieces of information or big pieces (i.e. for homework whether it is better for them to be given it in pieces with a task each day or all of the work on Monday to be completed by Friday)
- books (particularly factual books, or do you believe he enjoys fiction more?)
- 'tasks that you do that you think you would like to run away from' or think 'I'd much rather be doing…' (suggested by a parent as a way to find out boring tasks)

Questions

1. Do you think your child/children are currently meeting their potential?
2. I was talking to another young person about their learning and they told me that sometimes they really like it and can't stop, does this happen to your child/children?
3. I was wondering what your thoughts were about pointless tasks. Do you think your child/children encounter these?
4. I also talked to them about learning new topics, how do you think they find this?
5. I was also wondering whether you thought they liked creating things?

6. Is there anything else you think we haven't discussed that you think I should write about?

Friendship

Parents were then asked questions regarding their children's friends in relation to:

- Age
- Interests
- Intelligence
- Impact on learning

Prompts:

5. tell me more
6. could you explain your response more
7. I need more detail
8. what does ….mean?

Creswell (2005)

Second Interview Questions for Children

Describe the purpose of the interview (Gollup, 2000):

Like last time I need you to help me learn about your learning and what helps you to learn and what makes it difficult.

I initially will pick up discussion around something I know about the child from the first interviews (e.g., interest in snakes) which they can explain to me, to assist with them being the expert

Picture card game

I then said, I want to play a little bit of a game where we turn over the pictures on the floor and you tell me what you think about them.

- *Do these things help you (no one else) learn? or do they make learning harder?*(simple closed question to start). Then the children can explain their decision.

Go through the cards

- a computer (technology)
- moving to learn (e.g., when reading or maybe they really enjoy physical education?)
- when topics are of interest
- praise
- working with lots of people or one on one
- when task or instructions are repeated
- pretend (friends/plays)
- seeing to learn (e.g., posters, whiteboard)
- humour
- memory (whether their memory helps or hinders in relation to learning)

- choice (topics or after completing class work)
- when a someone who helps you learn is organized and/or gives instructions (maybe written or verbal)
- rules
- rewards (sticker charts, television, games)
- Thematic learning (i.e the theme could be water and the children learn about this in all the subjects, maybe for art they draw a picture of the Titanic and in science learn about dams)
- whether they prefer to be given little pieces of information or big pieces (i.e. for homework whether it is better for them to be given it in pieces with a task each day or all of the work on Monday to be completed by Friday)
- books (particularly factual books, or do you believe he enjoys fiction more?)
- 'tasks that you do that you think you would like to run away from' or think 'I'd much rather be doing…' (suggested by a parent as a way to find out boring tasks)

Questions

Note this question was used throughout the interview at appropriate times

*Is there anything else you would like to add?

5. I was talking to another young person about their learning and they told me that sometimes they really like it and can't stop, does this happen to you?

2. Sometimes some learning tasks can seem a bit silly, they don't seem very important. Have you ever done a task like that?

3. I also talked to them about learning new topics, what do you think about learning these?

4. I was also wondering what you thought about creating things?

5. Do you think in your learning at the moment you are doing the best you can? (potential)

6. Is there anything else you think we haven't talked about that you think I should write about?

Friendship

Children were then asked questions about their friends. The following bullet points were used as discussion points. For example, whether their friends were the same:

- Age
- Liked the same things (Interests)
- Were as smart as them (Intelligence)
- Whether they thought friends helped them learn, or made learning harder (Impact on learning)

Prompts:

9. tell me more
10. could you explain your response more
11. I need more detail
12. what does ….mean?

Creswell (2005)

Appendix G: Pictures

First Interview Pictures for the Children

These are smaller versions (originals were A3) of the photos which were shown to the children (sometimes an insignificant edge may have been cropped)

Photo one (picture 8 from the picture set) [40]

93/328 Learning Media

[40] Image from Everyday Art Experiences (Picture Pack), published by Learning Media on behalf of the Ministry of Education, 1993. Reprinted with permission.

Photo two (picture 18 from the picture set) [41]

93/328 Learning Media

[41] Image from Everyday Art Experiences (Picture Pack), published by Learning Media on behalf of the Ministry of Education, 1993. Reprinted with permission.

Photo three (picture 15) [42]

93/328 Learning Media

[42] Image from Everyday Art Experiences (Picture Pack), published by Learning Media on behalf of the Ministry of Education, 1993. Reprinted with permission.

An example of a Second Interview Picture

This is an example of one of the picture cards children were shown and asked to talk about in the second interview

Appendix H: Chronology of the study

Simplified general overview of the research timetable

April 2007-June 2007

- Contact gatekeepers to find participants.
- Made contact with the gatekeeper at the George Parkyn Centre
- First meeting occurred with gatekeeper
- Began writing Ethics document

July 2007

- Gained Ethical approval from University of Waikato Ethics Committee
- Gained Ethical approval from George Parkyn Centre Board

August –September 2007

- First meeting with participants (Auckland and Hamilton)

October 2007

- Organising appropriate times to meet participants

November 2007

- Collect data from first interview
- Transcribed first interview data

December 2007

- Second interviews
- Took first interview data to participants for cross-checking
- Transcribed second interview data and sent to participants for cross-checking

January 2008

- Draft Analysis Complete
- Sent to participants for cross-checking

February-April 2008

- Develop discussion from analysis