

Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

Underachievement in gifted and talented students:
An examination of possible methods of identification, causal factors and
interventions in the New Zealand primary school setting.

A thesis presented in partial fulfilment of the requirements for the degree of

M.Ed

At Massey University, Hokowhitu, Palmerston North, New Zealand

Jennifer M. Horsley

2004

ACKNOWLEDGEMENTS

I wish to acknowledge and thank:

the two teachers with whom I worked during this project who shared their knowledge and experiences and provided unending support with a great deal of good humour!

my supervisors, Tracy Riley who gave invaluable guidance with the 'gifted' part of this research; Jenny Poskitt, with her excellent understanding of methodology, who assisted me in writing up this study

Jemma, Blake, Sam and Kit for giving me the time to write and understanding that there can be more to 'mothering' than ironing and preparing home-cooked meals

and finally, my husband Michael who provided sound counsel throughout and believed that this project would eventually, be completed.

Abstract

This study uses the New Zealand primary school setting, to attempt to identify giftedness and talent, and the behaviours identified by Whitmore (1980) as those associated with underachievement in these able students.

The researcher trials one method for identifying able students in the New Zealand context using data already collected in New Zealand schools. The Enrichment Triad (Renzulli, 1997) is used to devise an intervention to gauge possible reversal effects in the presence of underachievement in gifted and talented students.

This study is written at a time when New Zealand schools are preparing themselves to meet the new requirements of the National Administration Guidelines (NAGs) that must be implemented by 2005. These guidelines specifically charge schools with demonstrating their ability to meet the needs of their gifted and talented students. Within this population the author contends, there is a subgroup of able student who are underachieving. The reasons for the underachievement are varied and well evidenced in overseas literature (Siegel & Reis, 2003; Laycook, 1979; Rimm, 1986; Clark, 1992; Butler-Por, 1987). What is needed, the author contends, is a consistent approach to identifying these gifted, underachieving students, and an individualised plan based on student interests, for beginning the reversal of this underachievement.

CONTENTS

Acknowledgements		iii
Abstract		iv
Contents		v
Introduction		1
Chapter 1		
Chapter 2		
	The Literature Review	
	2.0 Introduction	5
	Section One	
	2.1 The Terminology	5
	2.2 Defining giftedness as it relates to this research	6
	2.3 What is 'above average ability'?	7
	2.4 What is 'task commitment'?	8
	2.5 What is 'creativity'?	8
	2.6 What is a 'gifted underachiever'?	8
	2.7 What factors can lead to underachievement in gifted students?	12
	2.8 The importance of identifying our gifted underachievers	17
	2.9 Specific interventions for gifted underachievers	18
	Section Two: The Enrichment Triad Model	
	2.10 Overview of The Enrichment Triad Model	21
	2.11 Background to The Enrichment Triad Model	23
	2.12 The Schoolwide Enrichment Model	24
	2.13 Studies using The Enrichment Triad Model as a method of intervention	25
	2.14 Significance of this research	26
Chapter 3	The Methodology	
	Section One	
	3.0 Introduction	29
	3.1 What is action research?	29
	3.2 Types of action research	30
	3.3 What are the stages in action research?	31
	3.4 What interventions does action research use?	32
	3.5 What are the practical features of AR and how do they suit research investigations in classrooms?	33
	3.6 What data collection tools does action research use?	33
	3.7 Summary	34
	Methodology in Action	
	Section Two	
	3.8 Definitions	34
	3.9 Data collection tools for 'above average' and 'underachieving' criteria	35
	3.10 Data collection tools used in this research	36
	3.11 Sequence and time frame of this research	37
	3.12 The setting	37
	3.13 The teachers, researcher and participants	37
	3.14 The cycles	38
	3.15 Reliability and validity	40
	3.16 Summary	40
Chapter 4	The Interventions	
	4.1 Introduction	41
	Study One: Eliza	
	4.2 Background Information	41
	4.3 Parents	41
	4.4 Peers	42
	4.5 Background to previous interventions	42
	4.6 Identification	42
	4.7 The Parent Check-list	43
	4.8 Pre-Intervention Student Questionnaire (1)	45

	4.9	Pre-Intervention Student Questionnaire (2)	45
	4.10	The Intervention	46
	4.11	Post-Intervention Questionnaires	51
	4.12	Post-Intervention Questionnaire (1)	51
	4.13	Post-Intervention Questionnaires (2)	52
		Study Two: Alice	
	4.14	Background Information	52
	4.15	Parents	52
	4.16	Peers	53
	4.17	Background to previous interventions	53
	4.18	Identification	54
	4.19	The Parent Check-list	54
	4.20	Pre-Intervention Student Questionnaire (1)	55
	4.21	Pre-Intervention Student Questionnaire (2)	55
	4.22	The Intervention	57
	4.23	Post Intervention Questionnaire (1)	65
	4.24	Post Intervention Questionnaire (2)	66
		Study three: Leeann	
	4.25	Background Information	66
	4.26	Parents	66
	4.27	Peers	67
	4.28	Identification	68
	4.29	Teacher and parent check-list	69
	4.30	Pre-Intervention Student Questionnaire (1)	69
	4.31	Pre-Intervention Student Questionnaire (2)	70
	4.32	The Intervention	71
	4.33	Post-Intervention Questionnaire (1)	75
	4.34	Post Intervention Questionnaire (2)	75
	4.35	Follow up	76
	4.36	Summary	76
		The Findings	
	4.37	Introduction	77
	4.38	Pre-intervention findings	77
	4.39	The interventions	77
	4.40	Post intervention	78
	4.41	Summary	80
Chapter 5		Discussion	
	5.0	Introduction	81
		Section One	
	5.1	The New Zealand setting	81
	5.2	How was giftedness defined for this research?	81
	5.3	How was gifted underachievement identified?	83
	5.4	The importance of identifying gifted underachievers	83
	5.5	The effectiveness and validity of the research	85
	5.6	Why 'gifted and talented'?	91
	5.7	Teacher education	91
	5.8	Limitations of this research	92
		Section Two	
	5.9	Recommendations for future research	92
	5.10	Measuring intelligence	92
	5.11	IQ testing	93
	5.12	Identifying giftedness	93
	5.13	Longitudinal study	94
	5.14	Professional development	94
	5.15	Early identification	94
	5.16	Summary	95
Chapter 6		Conclusion	
	6.0	Conclusion	
		Final thoughts	97
References			115

FIGURES AND TABLES

		Page
Figure 1	Three Ringed Conception of Giftedness	7
Figure 2	Behavioural Checklist	10
Figure 3	The Enrichment Triad	23
Figure 4	The Circle of Action and Reflection	32
Table 1	Comparison of Identification Methods	36
Table 2	Time Frame	37
Figure 5	The Cyclic Model of Action Research	39
Table 3	Behavioural Checklist - Eliza	44
Table 4:	Pre-Intervention Questionnaire Responses - Eliza	45-46
Figure 6	Eliza's Flow Chart	50
Table 5	Behavioural Checklist - Alice	55
Table 6	Pre-Intervention Questionnaire Responses - Alice	56 - 57
Figure 7	Alice's Idea	61
Table 7	Behavioural Checklist - Leeann	68 - 69
Table 8	Pre-Intervention Questionnaire Responses - Leeann	70
Figure 8	Leeann's Idea	73

APPENDICES

		Page
Appendix A	Information Sheet (Principal)	100 - 101
Appendix B	Information Sheet (Parent)	102 - 103
Appendix C	Parent Consent form	104
Appendix D	Student Consent form	105
Appendix E	Teacher Confidentiality agreement	106
Appendix F	Student Questionnaire (1)	107-108
Appendix G	Student Questionnaire (2)	109
Appendix H	My Bright idea	110
Appendix I	Planning Sheet : The Enrichment Triad	111
Appendix J	Parent teacher Check-list	112
Appendix K	Anecdotal Observations: Eliza	113
Appendix L	Anecdotal Observations: Alice	114

Introduction

From discussion with colleagues, I know that I am not alone in having felt at some time, the frustration of working with a seemingly able child who fails to reach the level of attainment that one feels they are capable of. Despite the teacher's or parent's best efforts and the use of many different approaches to solving the 'problem', these students don't achieve what we nebulously term 'their full potential'. Staffroom conversations centred on these students often include words related to 'lazy', 'unmotivated' or 'stubborn'. This situation is even more frustrating when these students have demonstrated high ability yet they fail to achieve at a level commensurate to this evidenced potential.

This study was centred on three students considered to have high ability and yet each was failing to achieve at a level that their teachers and parents felt matched their ability. Over the period of this study, as the teacher facilitating the project, I worked with a previous teacher, one current teacher and each child and her parents to gain greater understanding of the possible reasons for this underachievement. It was a course that led to closer understanding of the issues relating to each child's learning and life situations that were impacting on her ability to achieve at her full potential. This research did not 'solve' the problems, but it did provide some possible reasons for each child's underachievement and a path for the future. It also led me to examine criteria for identifying a gifted underachiever within the New Zealand context. It appears that many overseas countries use Intelligence Quotient (IQ) data to determine a student's giftedness. This data is not readily or frequently available in New Zealand schools, so it seemed necessary to find some other form of standardised data to use in identification of the gifted underachiever. Therefore, the two research questions for this study were:

1. What information can be used to identify gifted students who are underachieving in a New Zealand primary school?

2. In what ways can the use of Type III investigations (Renzulli et al, 1997) lead to a reversal in the cycle of underachievement in gifted students?

My inspiration for this study came through two avenues. Firstly, through my interest in gifted education, I had come to realise that there was a process to work through in identifying giftedness and establishing programmes for these able students. Classroom practice has led me to believe that within this group of students was a subgroup that could possibly be classified as 'underachieving gifted'. I use the term, 'possibly', because there was little information available on specific identification of underachieving gifted primary students in the New Zealand setting. Underachievement in gifted and talented students is an area that has been identified and addressed by researchers in other countries (Baum, Renzulli and Hebart, 1995; Davis & Rimm, 1989; Dowdall & Colangelo, 1982; Rimm, 1986; Clark, 1992) but this data usually relates to older students. However, there was not a great deal of New Zealand information written specifically on gifted underachievers and this was an area that I felt I had recognised in my classroom.

Secondly, I was motivated by my observation over a two year period of one particular student who, although seemingly very able, failed to work for her previous teachers. She had angry outbursts and frequently approached people in what can only be described as a belligerent manner. But when I engaged this child in conversation, I quickly realised that she had an excellent understanding of life, general knowledge and what was happening in her classroom. Her ability to articulate so clearly, suggested that she could be of 'above average ability', but was choosing not to share her knowledge or ability with her teachers. This child was to be in my class for the year in which I was undertaking this study and I welcomed the opportunity to investigate further the reasons for her behaviour.

I chose action research (AR) as the preferred method of data collection for this study. Tomlinson (1995) regards this type of research as especially fruitful for those with an interest in gifted learning and it seemed an appropriate method to use as the students selected for this study needed to exhibit the behaviours identified as being present in gifted underachievers. Joanne Whitmore (1980) provided a list of these behaviours she had identified in gifted underachievers, and I used them as a basis for my gifted underachievers' criteria coupled with the Three Ringed Conception of Giftedness (Renzulli, 1985) and standardised Progressive Assessment Test data (Reid & Elley, 1991)

There were three reasons I chose to use the Type III Investigations for the Schoolwide Enrichment Model.

1. It was the Enrichment Model being trialled in this school.
2. It 'fitted' with the Principles of gifted education described by the New Zealand Government (Mallard, 2002).
3. There was already overseas research using this model that supported Type III Investigations for use with gifted underachievers (Baum, Renzulli & Hébert, 1996).

Two of these students were in my class for the year of the study, and the other was with a teacher who had been working overseas. As she had no immediate knowledge of The Schoolwide Enrichment Model (Renzulli & Reis, 1985) it was decided to withdraw this child from her class to enable her to work with me during her class's afternoon 'topic time'. This withdrawal provided an interesting and unexpected insight that helped to inform the practice of both her teacher and myself, and provided us with an alternative pathway to motivate this student into completing her 'routine' class work. Unexpected outcomes are perhaps more usual when using Action Research, as Kember (2000) states (in reference to Action Research) "diversions and by-ways may be part of the most relevant and effective route" (p. 27).

To assist the reader, this thesis is organised into six chapters. Chapter One introduces the topic and discusses the motivation behind this study; Chapter Two reviews the literature pertaining to this research; Chapter Three considers the Methods used; Chapter Four presents the interventions and the findings; Chapter Five provides discussion of the research and possible future directions for other research into gifted underachievers, and Chapter Six concludes this study.

CHAPTER TWO: Literature Review

2.0 Introduction.

This review has two parts. The first part describes the gifted student, underachieving gifted students and the causal factors identified as leading to underachievement in gifted students. The second part looks at research that specifically uses The Enrichment Triad, the intervention used for this research.

SECTION ONE

2.1 The terminology: gifted, talented, able

The terminology used to describe the 'extremely intelligent' student, varies according to individual preference or the country in which it is being used. Historically, high intelligence based studies labelled the participants 'gifted' (Hollingworth, 1926). The phrase 'gifted and talented' was widely used during the 70's and 80's (McAlpine, 1996). In many New Zealand schools, the term 'Children with Special Abilities' has been touted, often shortened to 'CWSA' (McAlpine, 1996) and another term often used to describe these students in New Zealand schools is 'able'. Literature suggests that this term 'able' originated in the United Kingdom (McAlpine, 1996). Whereas these definitions – 'gifted', 'talented', 'gifted and talented', and 'able' are most often used to describe the same behaviours, Gagne (1995) moves to differentiate between 'gifted' and 'talented'- purporting that 'gifted' relates to natural intelligence and 'talent' is nurtured. It appears however, that New Zealand is not yet differentiating between these terms. In 2002, the New Zealand Labour Government announced the finding of the working party on Gifted and Talented (Mallard, 2002), choosing to refer to this group of learners in this document as 'gifted and talented'.

2.2 Defining giftedness as it relates to this research:

Early definitions of giftedness were based on cognitive measures of academic achievement. Terman (1926) defined giftedness as the top 1% level in general intellectual ability. This narrow definition recognised only those students who were intellectually gifted as determined by a test of intelligence. An academic focus on intellectual giftedness was also reflected in the research of an early New Zealand researcher, Parkyn (1948) who purported that giftedness could be measured by intelligence quotient (IQ). Parkyn later introduced the thinking that perhaps social, emotional and moral domains could be included in this concept. This idea of a multi-categorical approach to defining giftedness was taken further by Howard Gardner (1983) who presented research suggesting there were seven types of identifiable intelligence, the number increasing to nine over the next decade.

However, it is the 1978 research and definition by Joe Renzulli that I believe best encapsulates the modern definition of giftedness. Renzulli defines giftedness in terms of 'gifted behaviour' and not in terms of 'gifted people'. He contends that it is the presence of *specific behaviours* that determine whether one is gifted. Renzulli and Reis (1997) state that

"Gifted behaviour consists of behaviours that reflect and interact among three basic clusters of human traits: above-average ability, high levels of task commitment, and high levels of creativity. Individuals capable of developing gifted behaviour are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Persons who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through the regular instructional programs (p. 8)."

Renzulli (1978) has found that these traits do not need to be present in equal quantities, but must be present to create 'gifted behaviour'. Therefore, as shown in Figure 1, Renzulli's diagram that represents giftedness or gifted behaviours has 'giftedness' at its intersection, where the circles containing each of the traits, overlap.

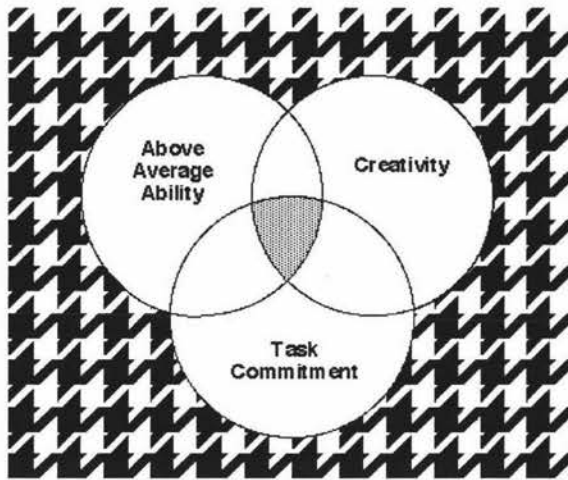


Figure 1: Three Ringed Conception of Giftedness
(Renzulli & Reis, 1985)

Renzulli further describes the interactions between the three rings in his definition of giftedness by describing that these gifted and talented children are those possessing “**or capable of developing** this composite set of traits and applying them to any potentially valuable area of human performance.” (Renzulli, 2002, p.73). A gifted child therefore, may exhibit **or be capable of** exhibiting any or all of the following characteristics: above average ability, task commitment and/or creativity.

2.3 What is ‘above average ability’?

Renzulli describes above average ability in relation to the Three Ringed Conception of Giftedness (1985) as an ability that is above average but not necessarily superior ability (2002). He further describes it as the top 15 – 20% of performance. Renzulli suggests this may be general ability, referring to one’s ability to process information and process it accordingly, or specific ability. Specific ability is the student’s capacity to acquire knowledge or perform in a specialised area. Renzulli gives the examples of an archaeologist or mathematician as those who could be considered to have specific skills or abilities (p. 71).

2.4 What is 'task commitment'?

Renzulli describes task commitment in relation to the Three Ringed Conception of Giftedness (1985), as perseverance, endurance, hard work, practice and the confidence in one's ability to engage in important work. He also makes the salient point that these manifestations of task commitment are the results of opportunities, resources, and encouragement provided within the context of the student's learning environment.

2.5 What is 'creativity'?

The third circle of the Three Ringed Conception of Giftedness (1985) Renzulli uses the term creative to refer to someone who is recognised for his or her creative accomplishments, or persons who have a facility for generating many interesting and feasible ideas (2002). Renzulli stresses the importance of focusing attention on alternative methods to assess this complex behaviour. He also writes that it is often the experiences a child has received that provide their ability to demonstrate creativity.

2.6 What is a 'gifted underachiever'?

If a child's potential is obstructed..." the child will remain gifted but will be what we call an underachiever" (Renzulli, 2002, p. 34). There are some researchers who consider it difficult to define 'underachievement' in gifted or talented students, as they acknowledge that the definition may be based on *subjective* rather than *objective* measurement (Whitmore 1980). Gagne (1992) suggests that some "underachievers in school can be described as intellectually gifted but without any corresponding talent". Moltzen (1996) describes underachievement as "unfulfilled potential". Other researchers choose to label underachievement in talented students as:

- a discrepancy between expected and actual performance (Davis & Rimm, 1989; Dowdall & Colangelo, 1982)

- “students who demonstrate high ability on a measure of intelligence but fail to perform in school at a level commensurate with their potential” (Baum, Renzulli and Hébert; 1995, page 10).

With this range of definitions, what is deemed to be ‘underachievement’ is perhaps best described as a ‘value judgement’. This judgement may be based on a student’s ability to measure up against what the teacher holds as a ‘worthwhile accomplishment’. Whitmore (1986) describes this as a values conflict between adult and child. She developed a scale for use in diagnosing underachievement in gifted students. The criteria in the scale are behaviours that Whitmore describes as indicators of underachievement in gifted students. The scale was used by Whitmore, with primary aged children and was applied in conjunction with Stanford Binet or Wechsler Intelligence scores to identify underachievers. In addition to having a high IQ score, each student in Whitmore’s research also needed to exhibit at least 10 of the behaviours shown in Whitmore’s (1980) scale, including all of those marked with a tick (see Figure 2). The behaviours marked with a box, are the additional behaviours that Whitmore (1980) used to help identify underachievers in her study, and were used (in conjunction with the ✓ behaviours) to identify a further three behaviours consistent with Whitmore’s identification of underachievement in gifted students.

- Poor test performance
- ✓ Achieving at or below grade-level expectations in one or all of the basic skill areas: reading, language arts, mathematics
- ✓ Daily work frequently incomplete or poorly done
- ✓ Superior comprehension and retention of concepts when interested
- ✓ Vast gap between qualitative level of oral and written work
- Exceptionally large repertoire of factual knowledge
- A vitality of imagination, creative
- Persistent dissatisfaction with work accomplished, even in art

- Seems to avoid trying new activities to prevent imperfect performance; evidences perfectionism, and self-criticism
- Shows initiative in pursuing self-selected projects at home
- ✓ Has a wide range of interest and possibly special expertise in an area of investigation and research
- ✓ Evidences low self-esteem and tends to withdraw or be aggressive in the classroom
- Does not function comfortably or constructively in a group of any size
- Shows acute sensitivity and perceptions related to self, other, and life in general
- Tends to set unrealistic self-expectation, goals are too high or too low
- Dislikes practice work or drill for memorization and mastery
- Easily distractible, unable to focus attention and concentrate efforts on tasks
- Has an indifferent or a negative attitude toward school
- Resists teacher efforts to motivate or discipline behavior in class
- Has difficulty in peer relationships; maintains few friendships

(Whitmore, 1980, p. 237).

Figure 2: Behavioral Check-list

In Baum, Renzulli and Hébert's (1995) study into the reversal of underachievement in gifted students, a student was defined as an underachiever if there was evidence of both high potential and concomitant underachievement. Acknowledging the problem of limited consensus amongst other researchers as to what constitutes a gifted underachiever, these researchers (Baum et al, 1995) deliberately kept their definition of gifted underachievement broad to allow for interpretation within the individual participating school areas. Their documentation included evidence such as a discrepancy between performance and potential; grades below expectation based on ability; occurrence of behaviour problems in the regular classroom hindering

student achievement; minimal effort shown by the student; student attitude displaying indifference and lack of motivation even if achieving adequately; or reports from psychologist, special educators, counsellors, or classroom teachers confirming underachievement (p 6).

A gifted underachiever therefore, could be defined as a student who exhibits behaviours associated with gifted underachievers (Whitmore, 1980) in conjunction with evidence of above average ability (Baum et al, 1995). It is also possible to consider Renzulli's definition of a gifted student here (applying the Three Ringed Conception of Giftedness, 1985) and make the supposition that the gifted underachiever is perhaps represented as the child who is **capable of developing this composite set of traits**. When one reviews the composition of the three rings (above average ability, creativity and task commitment) it seems that when considered alongside these other definitions of gifted underachievement (Whitmore, 1980; Baum et al, 1995) the behaviour most likely to be missing with these gifted underachievers is that of task commitment. When viewed against Whitmore's list (1980) again, many of the behaviours that suggest underachievement could be described as those that suggest a lack of task commitment. Therefore, it is possible to use these three tools to identify a gifted underachiever;

- Above average ability, evidenced in PAT testing, (Reid & Elley, 1991)
- Whitmore's (1980) checklist (including the six behaviours marked with a check)
- A lack of task commitment (defined by Renzulli (1985) as perseverance, endurance, hard work, practice and the confidence in one's ability to engage in important work. Again, it is important to note that Renzulli suggests that this factor is influenced by opportunities provided in the student's learning environment and this is important to consider when identifying causal factors of underachievement in gifted students.

2.7 What factors can lead to underachievement in gifted students?

There appear to be four main causal factors of underachievement in gifted students. They are:

- Family
- School
- Peers
- Self

Family

There is research to suggest that family dynamics are a causal factor in gifted underachievement. However, the data pertaining to family influence often takes differing viewpoints. No one clear picture emerges. It does appear though, that for some underachieving gifted students, lack of positive *affective* behaviour from the parents to the child may have an influence on achievement (Mandle & Marcus, 1988). Current research into factors contributing to underachievement in gifted students that is being conducted by The National Research Centre on the Gifted and Talented (Siegel & Reis, 2003) has found that family dysfunction, strained relations with family members, problems with siblings and sibling rivalry have a role to play in underachievement in some gifted students. Parental discord (Laycook, 1979) family disruption (Rimm, 1986; Clark, 1992) and parental expectations (Butler-Por, 1987) are other factors cited as reasons a child may be an underachiever. Rimm (1995) found that inconsistency in parenting styles appeared to occur more frequently in the homes of underachieving children and concluded that the particular style of parenting appeared to be less important than having a parent demonstrate consistency in their approach to parenting. Research by Fine and Pitts (1980) and Reis, Hébert, Diaz, Maxfield and Ratley (1995) found that more family conflicts occurred in underachievers' homes than in the homes of achieving students. In their article 'The Underachievement of Gifted Students: What do we know and where do we go?' Reis and McCoach (2000) speculate that although it is

impossible to state a causal relationship between family conflict and underachievement, one can ask:

- Do students underachieve because they come from families in
- conflict?
- Does the underachievement of the child create problems in the family unit? Or
- Is there a dynamic interaction between the underachiever and the family? (p160)

It seems that for some students, family interactions impact on their success at school. But, as the following sections will show, family interactions are only one possible causal factor in the identified cause of underachievement in gifted students.

School

School, especially through the provision of inappropriate curriculum and teaching methods, may lead the gifted child to consciously make a choice not to succeed (Reis, 2000; Butler-Por, 1987; Whitmore, 1980). Bell and Roach (1986) describe 'problem behaviour' that occurs when a gifted student gains mastery of a task ahead of his peers, and quickly becomes bored with the classroom procedure. They suggest that the manifestation of behaviours resulting from this boredom vary from child to child, and it is often this behaviour that creates a difficulty between the child and his teacher. This data is consistent with the findings of Baker, Bridges and Evans (1998) and that of Fehrenbach (1993). Fehrenbach also found that a lack of acceleration opportunities for gifted learners decreased the likelihood of meaningful involvement in school experiences also resulting in underachievement. Negative interactions with teachers, unrewarding curriculum and an absence of opportunity to develop appropriate schoolwork habits are recurring factors within the school leading to underachievement. Hereto, is a probable link to Renzulli's Three Ring Conception of Giftedness, in specific relation to the circle containing the behaviour 'task commitment'. As Renzulli (1985) has explained, task commitment is an outcome directly influenced by the student's

learning environment and opportunities provided therein. As the work of Baker, Bridges and Evans (1998) and Fehrenbach (1993) shows, inappropriate curriculum can lead to a gifted child choosing to underachieve.

Most research into the need for qualitative differentiation for gifted and talented students has come from overseas sources, but in recent years New Zealand has shown a 'new' awareness of the need to make provision for teaching these students. With this awareness is the recognition that 'one size does not fit all' and that this group of students may require specialised programming to meet their needs. This is acknowledged by the Government (Mallard) and was announced in the findings of the working party on Gifted and Talented (2002).

This party produced a document that outlined the establishment of a set of core principles that provide a "solid basis for supporting the achievement and well-being of gifted and talented learners." (Mallard, 2002, no page given). The principles are thus:

1. Schools should aim to provide all learners, including those who are gifted and talented, with an education matched to their individual learning needs
2. Gifted and talented learners are found in every group within society.
3. Maori perspectives and values must be embodied in all aspects of definition, identification, and provision for gifted and talented learners.
4. The early childhood and school environments are powerful catalysts for the demonstration and development of talent.
5. Schools and early childhood centres should provide opportunities for parents, caregivers, and whanau to be

involved in the decision making that affects the learning of individual students.

6. Programmes for gifted and talented learners should be based on sound practice, take account of the research and literature in this field, and be regularly evaluated.
7. Gifted and talented learners should be offered a curriculum that has been expanded in breadth, depth, and pace to match their learning needs.
8. Schools and early childhood centers should aim to meet the specific social and emotional needs of gifted and talented learners.
9. Provision for gifted and talented learners should be supported by ongoing high-quality teacher education.

(Mallard, 2002)

A programme that meets the child's individual needs is clearly important for all children and especially highlighted for the gifted student. Inappropriate programming and curriculum therefore, can lead to negative classroom experiences for the child, and can begin the spiral of underachievement.

Peers

Competition from peers – or perceived competition can be a contributing factor in underachievement, particularly in gifted females. When performing under competitive conditions, gifted girls are deemed more likely than boys to experience deteriorating self perceptions and performance (Schuard & Hillman, 1990). Competition between gifted girls and their less able peers is another factor that can affect peer relationships. In a review of the work of Reis and Rizza (2001) it was found that gifted and talented females view competition in two ways:

- as a competitive attitude resulting in success, or

- as a competition resulting in undermining relationships and derision in groups of students.

The recommendation of this report was that schools should cultivate individual success based on progress and accentuate personal power.

Attempting to live up to peer expectations can lead to gifted children experiencing salient social evaluative pressure (Baber, 1990). Baber's research is consistent with the findings of Reis and Rizza, and suggest that this pressure can be detrimental to the gifted student's performance in the classroom, as can the gifted child's need to protect his or her ego and the fear of failure (Baer, 1998) leading to underachievement. Heacox (1991) and Rimm (1986) observed that many gifted underachievers are often governed by what their peers may think of them and need to gain confidence and self-assurance to move beyond this state.

Self

In addition to these three causal factors, there is research to suggest that another factor in underachievement in gifted students is self concept. Although there is not the same quantity of research into this factor, it is worth reviewing in relation to the connection between self concept and the influence of one's peers or family on a gifted underachiever. There is research (Heacox, 1991; Rimm, 1995; Mandel & Marcus, 1995) to suggest that self concept may be a factor affecting underachievement in gifted students. But whether this is a result of underachieving or a cause of the underachievement is not clear. Some research (Van Boxtel & Monks, 1992; Rimm, 1986; Whitmore, 1980) suggests that personal attributes, behaviour or disciplinary problems, learning disabilities, organisational difficulties, low self efficacy and inappropriate coping strategies may contribute to underachievement in gifted or talented students. Coping strategies vary from student to student and as with 'bored' behaviour, (through the provision of inappropriate curriculum) may lead to the student feeling 'different' (Bell & Roach, 1986). This can lead to low self

esteem and the concealment of the student's true talents. Linda Silverman (1993) suggests another causal factor may be the individual themselves who may be overly sensitive or tend towards perfectionism. There is also evidence to suggest that highly creative children who choose not to conform are often gifted underachievers (Butler-Por, 1993).

2.8 The importance of identifying our gifted underachievers:

Research highlights the importance of diagnosing and intervening where gifted underachievement is identified. Mahoney and Seeley (1982) describe the greater likelihood of delinquency amongst gifted children who are creative and divergent thinkers if their potential is overlooked. This observation came as a direct result of research carried out amongst 300 juvenile offenders, where a disproportionately high number were found to be gifted. This theme is continued in the writing of Olenchak (1999) who examined the effects of emotional negativity on intellect and self-development of underachieving gifted students with *non-traditional talents*. Olenchak's findings suggest that gifted young people who experience underachievement, are eventually placed at risk of self-doubt, and a "continuing spiral of failure" (p. 1). Overseas researchers have placed importance on the problem of underachievement in gifted students (Baum, Renzulli & Hébert, 1995; Olenchak, 1999; Heacox, 1991; Peterson & Colangelo, 1996; Rimm, 1986). *Academic* underachievement amongst those students identified as gifted, provides great cause for concern. In their article entitled 'Gifted Achievers and Underachievers: A comparison of Patterns found in School Files'(Peterson & Colangelo, 1996) , the authors suggest that school records be used to identify those gifted students who are at risk of underachieving, at an early age, thereby using prevention rather than remediation. Their research also found that adjustment problems increased as these students entered adolescence. In addition, there is evidence to suggest that 'self perceptions of competence decline dramatically during these years' (Benenson & Dweck, 1986; Stipek, 1981) if the students are allowed

to continue to under-achieve and receive no intervention to break the pattern.

Evidence suggests that for those children who are gifted in non-athletic or intellectual domains and do not receive appropriate school programmes and experiences, there is an increase in their underachievement. They may drop out of school, develop eating disorders, drug abuse, suicidal ideation and other unacceptable social and personal traits (Delisle, 1997; Kogan, 1995; Olenchak, 1999).

Indicators are that regardless of the cause of underachievement, it is imperative that intervention is sought to attempt to reverse the state before the symptoms reach this level of severity.

2.9 Specific interventions for gifted underachievers:

As Reis and McCoach state (2000) "...research on effective intervention models for this population (gifted underachievers) remains scarce" (p. 122). Early attempts at intervening where underachievement was identified in gifted students, focussed on counselling. Fine and Pitts (1980) and Mink (1964) believed family counselling was the best approach for the reversal of the underachievement pattern. However, Emerick (1995) disputed this and claimed that as an approach to reversing underachievement in gifted students, counselling achieved more failures than successes (p10).

In a keynote address at Confratute 2003 (Confratute is an annual teaching and learning conference held at Connecticut University that focuses on teaching the Schoolwide Enrichment Model) a learned panel comprising Reis, Baum and Siegel suggested that interventions for students who underachieve at school are characterised by the following problems:

- few and far between
- scarce research
- documented effectiveness inconsistent and inconclusive

- limited long-term success

However, available research suggests that intervention can interrupt the cycle of a gifted learner underachieving, if the underachievement is detected early enough (Peterson & Colangelo, 1996; Heacox, 1991; Baum, Renzulli & Hébert, 1995). Collaboration between the home and school is essential and there are models that have been used in an attempt to interrupt this cycle (Rimm, 1986; Heacox, 1991; Baum, Renzulli & Hébert, 1995). Rimm claims the TRIFOCAL Model (Rimm, 1995) has been effective in reversing underachievement in 80% of the cases in which it has been applied. This model focuses on treating underachievement in gifted students, by manipulating collaboration between the school and family, while introducing six steps. These steps are:

1. Assessment
2. Communication
3. Changing Expectations
4. Role Model Identification
5. Correction of deficiencies
6. Modifications of reinforcements.

Heacox (1991) uses a similar approach – which also involves the school, the family and the student. Her specific intervention strategies include Student, Parent and Teacher Self-Assessment, and refer to the need for a student to regain self-esteem through success. She urges realism in parenting and the need for the teacher to provide a positive role model and a 'safe' environment for the underachieving gifted student to achieve success. Ensuing strategies target specific areas and with the use of many checklists and Action planners that focus on goal setting, Heacox aims to reverse the cycle of underachievement.

One strategy she provides the student with is the opportunity to discuss with their teacher any topic that they feel motivated to study

independently. This strategy is the same as that proffered by Baum et al (1995) in their paradigm for reversing underachievement in gifted students. However, there are two major differences between the Rimm and the Heacox approach and that of Baum et al. The first is the provision in the Baum research, for some form of definitive identification of underachieving gifted students. The second difference is the specific reference and use of Type 111 Activities (Renzulli, 1997) as part of the Enrichment Triad as a form of intervention where students are deemed to be gifted and underachieving. However, it must be noted that some of the 'steps' described by Heacox (Assessment, Communication, Changing Expectations, Role Model Identification, Correction of deficiencies and modifications of reinforcements), are also found but not necessarily labelled as such in the research of Baum et al (1995) that utilises The Enrichment Triad.

To further discuss the lack of tangible identification data in Heacox and Rimm's Models, one can consider the difficulty in the 'practical' implementation of their approach to intervention in the New Zealand Primary class by considering the lack of tangible data to help *identify* the gifted underachiever. In some classrooms, many children might fit the criteria if it is based solely on a 'values' judgement. The intervention method introduced by Baum et al. provides a starting point for investigation into underachievement of gifted students that requires some tangible data and some subjective data, both of which transfer to a New Zealand setting. The American research of Baum et al uses the Whitmore's Checklist (figure 2) to identify underachieving gifted behaviours, and all students selected for the study demonstrated superior ability on either an intelligence or achievement measure, ranging from the 85th to the 99th percentile. Further evidence of underachievement was recorded by their teachers through identification of average or below average grades; a discrepancy between their test score on an intelligence test and their score on a standardised achievement test; behaviour, attitude or motivational problems; and special learning or organisational problems (p. 8). In

New Zealand, tangible data in the form of standardised test scores can also represent students scoring in these percentile areas. New Zealand Progressive Achievement Tests (PAT) group students into stanine ranges according to their percentile scores. These stanines range from a low of 1, to a top stanine of 9. The standardised PATs (Reid & Elley, 1991) show that the top 4% of New Zealand students could be expected to score a stanine 9 in testing, earning a verbal description of 'superior' (Reid & Elley, 1991, p23). A further 7% of students nationally, in the same year group or, of the same age group, could score stanine 8 in these tests and a further 12% could score a stanine 7, placing them in the area described as 'above average' (Reid & Elley, 1991). An American comparative study that was used to gauge the effectiveness of intervention on two groups of students had one group with test scores that seemed to equate to New Zealand stanine scores of 9, and the other group with scores equating to New Zealand PAT stanine scores of 7 and 8. Renzulli's American results suggested that both of these groups of students had achieved at a similar level, which led Renzulli to conclude that there was support for the inclusion of students (in gifted programmes) in somewhat larger proportions than just the top 5% (p. 8). This particular research of Renzulli's was focusing on the effectiveness of the Enrichment Triad – and it was a component of this triad that is used in the intervention study of Baum et al (1995).

SECTION TWO

THE ENRICHMENT TRIAD MODEL

2.10 Overview of The Enrichment Triad Model

Before gaining an understanding of Type 111 Activities as an intervention in reversing underachievement in gifted and talented students, it is necessary to look at the overview of the Enrichment Triad (Renzulli, 1997) of which Type 111 Activities form a part.

The triad is based on four principles of learning and teaching:

1. Each learner is unique.
2. Learning is more effective when students enjoy what they are doing.
3. Learning is more meaningful when content and process are learned within the context of a real problem.
4. Learning can be enhanced through informal instruction that uses application of students' constructed knowledge and skills.

(abridged)

(The National Research Centre on the Gifted and Talented, 1997)

This model has three types of enrichment labelled Type 1, Type 11 and Type 111. The 'Types' are as follows:

Type 1 Enrichment:

"...is designed to expose students to a wide variety of disciplines, topics, occupations, hobbies, persons, places and events that would not ordinarily be covered in the regular curriculum" (Renzulli & Reis, 1997, p15). This might involve guest speakers, a demonstration, a discussion, a video or movie, a trip, display books, use of the Internet - any type of introductory activity the educator can deliver.

Type 11 Enrichment:

"...consists of materials and methods designed to promote the development of thinking and feeling processes" (Renzulli & Reis, 1997, p15). This is the 'how to' segment, involving whole class or small groups. It includes cognitive and affective training, and in preparation for their Type 111 investigations, students may receive instruction in advance research skills. This component may also involve skills taught in communication or in how to access reference materials.

Type 111 Enrichment:

"...involves students who become interested in pursuing a self selected area and are willing to commit the time necessary for

advanced content acquisition and process training in which they assume the role of a first-hand inquirer” (Renzulli & Reis, 1997, p15). The learner assumes the role of a first hand inquirer and a practicing professional.” In this phase, the student creates a *product* that has evolved through the stages outlined above, but not necessarily in sequential order. Using The Enrichment Triad (1977) the learner may ‘dip’ into Type 1, discover a product they wish to create, and then divert back to Type 11 to gain the skills needed to produce Type 111. The arrows in the diagram of the triad (Figure 3) show that it is possible to move in and out of each Type Activity, as the need arises. The emphasis at this stage is on ‘creative productivity’. These three activities can be represented in diagrammatic form as shown in Figure 3.

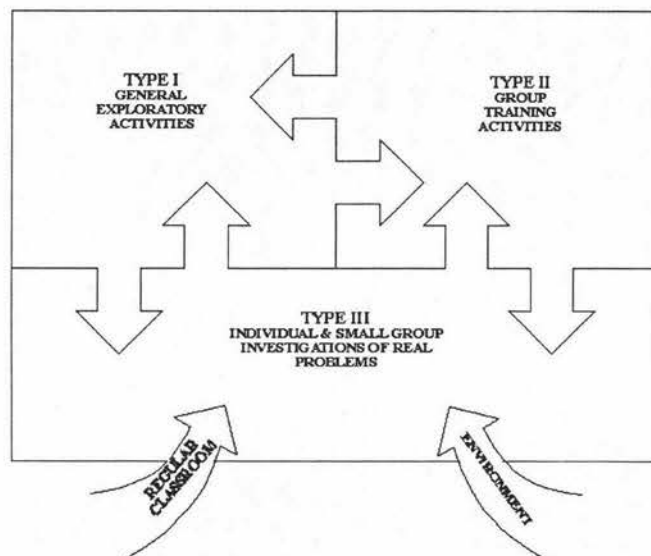


Figure 3: The Enrichment Triad
(Renzulli, 1977)

2.11 Background to ‘The Enrichment Triad Model’

This model was developed by Renzulli after 15 years of research and field testing. The original Enrichment Triad Model (1977) was adapted to include a ‘more flexible approach’ to identifying gifted students (Renzulli, 1994, p2). The basic difference is the inclusion of a higher number of gifted students than in the original model – an increase to

15 – 20% of above-average ability/high-potential students. In some articles, this revised Model is called 'The Enrichment Triad Model (SEM)'. 'SEM' refers to the Schoolwide Enrichment Model that was devised by Renzulli and Reis in 1988 and describes a Schoolwide plan for enrichment. The Enrichment Triad is a part of this plan. The Enrichment Triad was field tested in 11 school districts and these studies indicated positive growth for all those students involved – and that included a number of students not identified as gifted or talented.

2:12 The Schoolwide Enrichment Model

Although the whole concept of the SEM (Renzulli & Reis) will not be employed for this research, there are some components that need to be considered as they impact on the proposed interventions. Renzulli describes his model as:

"The Schoolwide Enrichment Model (SEM) ... is not intended to replace or minimize existing services to high achieving students. Rather, its purpose is to integrate these services into "a-rising-tide-lifts-all-ships" approach to school improvement and expand the role of enrichment specialists by having these persons infuse specific practices for high-end learning into the total school program. " (Renzulli, 1997, p3)

The three components of this model are:

The Total Talent Portfolio

This is a collection of data relating to each student in the school. It contains regularly updated information on each child's strengths, abilities, interests and learning styles. It includes personal goals and career goals. Once collected the teacher, parents and student are able to review the information and collaboratively consider the most appropriate enrichment and acceleration options (Purcell & Renzulli, 1998). Obviously, the data collected for this research cannot include every child in the school, but data that considers each participant's strengths and interests will be collected.

Curriculum Compacting

This feature is important in relation to the gifted underachiever's classroom experiences. As research shows, (Baker, Bridges & Evans,

1998; Fehrenbach, 1993; Reis, 2000; Butler-Por, 1987; Whitmore, 1980; Bell & Roach, 1986) it is important for the gifted child to receive appropriate classroom experiences, and the gifted underachiever is often the student who has already gained mastery of a concept being taught in the classroom, and has become bored (Bell & Roach, 1986). From this boredom can arise what is described as problem or inappropriate behaviour. Where Curriculum Compacting helps ameliorate this effect, is through the information the student needs to know being presented in a compacted format, thereby allowing time for enrichment or acceleration. However, before one can compact out the information the student needs, it is necessary to gain performance based assessment information (formative) and use this to consider compacting whatever information the student does not have, to allow them to move on to other learning experiences.

Enrichment Learning and Teaching

This element of SEM has already been explained in detail in section 2.10.

2.13 Studies using the Enrichment Triad Model as a method of intervention

Following identification of 17 underachieving students of high potential, Baum et al's study involved teachers trained in the implementation of The Enrichment Triad (Renzulli, 1977). These teachers were to work intensely with the nominated students in a Type 111 investigation. The study had four phases: the identification of students for the study, teacher familiarisation with the student's academic records and personal life through surveys, essays and informal interviews between the student and the teacher. The third phase involved the teachers working with the students on their Type 111 investigations and Phase 4 was the analysis of the project by researchers, with teachers.

One other study that focussed on Type 111 Activities as a method of intervening where a gifted child was deemed to be underachieving

was conducted by Emerick in 1988. She used various components of the Schoolwide Enrichment model (Renzulli & Reis, 1997) and Type 111 Activities to gauge the student's strengths and interests. In his summary of research pertaining to the Enrichment Triad Model, Renzulli (1994) describes Emerick's findings that perceived five factors as contributing to the reversal process of gifted underachievers:

1. the parent,
2. the teacher,
3. the nature and content of the class,
4. the personal goals of the underachiever, and
5. the out-of-school interests of the student.

This research that was based on The Enrichment Triad Model of Renzulli (1997) who identified similar factors contributing to the reversal process– the school (the teacher; the nature and content of class), the family (the parent), and peers (the nature and content of class). It is reasonable to suggest that the other factors described as contributing to the reversal process can also broadly fit these three groupings: when one considers the underachiever themselves and the level of influence the other factors have upon them, the out of school interests that are often affected/influenced by peers and the personal goals of the underachiever that can directly relate to the home and family situation. Therefore, it is possible to assume that the factors leading to underachievement in gifted students, and those that effect a reversal in this state, are similar.

2.14 Significance of this research

Most research that studies gifted underachievers comes from overseas (Baum, Renzulli and Hébert, 1995; Davis & Rimm, 1989; Dowdall & Colangelo, 1982; Rimm, 1986; Clark, 1992). There is little or no New Zealand research on underachieving gifted students. However, there is evidence to suggest that New Zealand students are gifted and talented. This is acknowledged amongst other places, in the government website that contains a statement from the Minister of

Education directing schools to uphold their responsibility to ensure they are meeting the needs of their gifted and talented students (<http://www.tki.org.nz/r/gifted/initiative.php>). It appears from overseas research that underachievement in gifted students exists in many populations. It seems reasonable to assume that we have this problem in New Zealand schools too and that we must look at the reasons and decide on appropriate interventions to assist these students achieve their potential. Overseas research highlights this problem amongst their talented population, and it is important that New Zealand acknowledges the needs of these students and accepts responsibility for ensuring they are not only correctly identified as gifted and talented, but that they are given opportunities to realise their full potential.

It is also important that we attempt to find some form of tangible data to aid educators in identifying the gifted underachiever. In this age when we are more aware than ever before of the need for differentiation of our gifted learners, it is no longer feasible to use 'instinct' alone as a form of identification of their underachievement. As overseas research suggests (Baum, Renzulli & Hébert, 1995; Whitmore, 1980) it is possible to identify specific behaviours in these students and to use standardised test scores to assist in identification.

This research aims to use Whitmore's checklist (1980), standardised test scores (Baum, Renzulli & Hébert, 1995) and the Three Ringed Conception of Giftedness (Renzulli, 1985) with the specific focus on identifying students for participation in the study, where they demonstrate above average ability, and creativity but lack task commitment. With the introduction of a Type 111 Activity as an intervention, it is hoped that it will be possible to gain some understanding of the accuracy of the identification data, and information that will assist the participants gain value from their learning experiences. Such information is likely to help the

teacher/researcher and other teachers add value to their students' learning experiences.

CHAPTER THREE: Methodology

SECTION ONE

3.0 Introduction

In this section, I describe action research as a methodology; discuss how it evolved in this research and, my reasons for using this approach. In the second part of this section, I discuss the application of action research to this research and the process I used to identify and intervene where underachievement was recognised in three students of above average ability.

3.1 What is action research?

Carr and Kemmis (1986:162) describe action research as

“... a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices and the situations in which the practices are carried out.”

(Carr & Kemmis, 1986:162)

Definitions of action research tend to have a common core and that core is the bridging between theory and practice. Elliott (1981) and Burns (2000) describe action research as the study of a social situation with a view to improving the quality of action within it. A further definition (Tomlinson, 1995; Schratz, 1993) describes action research as cyclical and suggests that as the researcher approaches each stage of the cycle, there is provision for not only reflection but for a change to practice. This change leads to decisions being more informed and contributing to practice, thus creating a theory of education and teaching which is “available, meaningful and significant to the teachers”(Burns, 2000: p449).

The definition of action research used to frame this study, is a merging of all these definitions, with the focus on the common core that is the bridging between theory and practice, with many cycles that spiral together. As Tomlinson (1995), Schratz (1993) Elliott (1981) Burns

(2000) Carr and Kemmis (1986) state, action research is a cyclical process and aims to bring about change to practice through informed decisions that arise through observations, action and reflection by the practitioner.

3.2 Types of action research

There are several types of action research.

Participatory action research: this action research has a “social and community orientation and an emphasis on research that contributes to emancipation or change in our society” (Cresswell, 2002: p609). Cresswell also claims that participatory action research aims to improve the quality of people’s lives. Stringer (1999) describes the purpose of participatory action research as the improvement of the quality of people’s, organisations, communities and family lives. Kemmis and Wilkinson (1998) identify six features of participatory action research that includes participatory action research being practical and collaborative.

Practical action research: this type of action research seeks to deal with specific, local issues (Schmuck, 1997). It is a small scale research project with a narrow focus on a specific problem. It is this model that is most often accredited to Elliot (1978).

Critical action research: This model was first described by Carr, Kemmis and McTaggart (1982) and differs from the other models in that the participants engage in communication with others. Critical action research is emancipatory, thereby allowing change to come about because of action. The stages of planning, observing, reflecting and action are more closely inter-related than in other models of Action Research.

Scientific action research: McKernan (1991) suggests that scientific action research was described by Lewin as a process based on

careful planning, analysis, gaining of information and evaluation, with each of these factors relating closely to rational scientific methodology (McKernan, 1991). Once again, the cycle or spiral is continuous.

Features common to each of these models – Participatory, Practical, Critical and Scientific Action Research - include the collection of data through the construction of planned cycles focussing on a specific problem. It is this planned approach to data collection that makes Action Research appropriate for an educational setting.

3.3 What are the stages in action research?

Lewin (1952) describes action research as having two stages, a diagnostic stage and a therapeutic stage. In the diagnostic stage Lewin suggests that the problem (or reason for research) is analysed and a hypothesis is formed. The therapeutic stage, according to Lewin, is the testing stage for the hypothesis that involves consciously changing a real life social situation. Lewin further describes this model as cyclic, and describes seven sub-stages:

1. the formation of initial ideas;
2. reconnaissance,
3. the formation of a general plan;
4. action steps,
5. implementation,
6. monitoring,
7. evaluation

Kemmis and Wilkinson (1998) describe the stages as cycles of self reflection. They suggest that this research begins with a plan, is followed by action and observation, then reflection, from which a revised plan is formed, more action and observation followed by further reflection with the spiral continuing until cessation of the research.

Burns (2000) suggests that the first stage of action research is the initial stage that arises through observation. He also suggests that from these observations, the researcher formulates his or her own intuitive implicit theories. Following this initial stage, the researcher is able to commence the study using a systematic, cyclical approach.

Action Research has steps that require the researcher to plan, act, observe and reflect (Kember, 2000). These stages may not necessarily occur in this order. A succinct diagram of the stages of Action Research is provided in Figure 4.

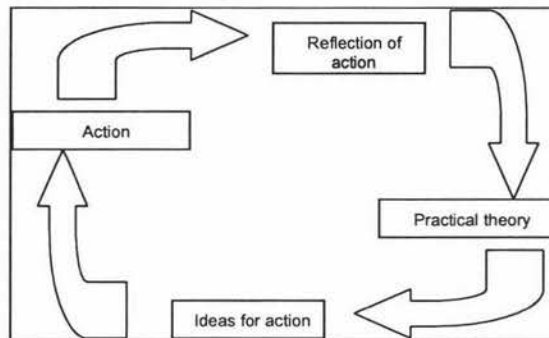


Figure 4: The Circle of Action and Reflection

Altrichter (1993)

Stringer (1999) describes the cycles as 'spirals' and explains each spiral in terms of looking, thinking and acting. Each of these definitions (Lewin, 1952; Kemmis et al, 1998; Altrichter, 1993; Kember, 2000; Stringer, 1999) describe similar stages of cyclical research and emphasise the need to observe, reflect, act and plan, then, to begin the cycle again and again. This cyclical process is the core feature of Action Research, and whether described as a cycle or spiral, it is clearly pivotal to this research paradigm.

3.4 What interventions does action research use?

Literature (Newby, 1997; Altrichter, 1993; Reason & Bradbury, 2001; Tomlinson, 1995) indicates that action research involves real life tasks and interactions between the researcher and participants and the researcher and other people.

3.5 What are the practical features of AR and how do they suit research investigations in classrooms?

Action research appears to be one research method that is gaining greater momentum in the educational workplace. Reasons for this could be that action research and practical inquiry:

- stem from practical questions that arise from teaching, counselling, and parenting.
- are undertaken by a practitioner in the education setting.
- make no distinction between the practice being researched and the process of researching it (the practitioner becomes a part of what is studied).

(Tomlinson, 1995, p470)

Burns (2000) suggests that action research provides in-service training for teachers, injects additional innovatory approaches to teaching and learning and provides a *“preferable alternative to the more subjective impressionistic approach to problem solving in the classroom”* (Burns, 2000: p449).

3.6 What data collecting tools does action research use?

Cresswell (2002) recommends that any or all of these tools be used to gather information in action research:

- Interview (key people)
- Questionnaires
- Observations
- Checklist
- Reviews (documents, records, materials)
- Notes
- Audiotapes
- Videotapes
- Photographs

This list is consistent with that compiled by Mills (2000), who divides the data collecting tools into three categories – ‘The Three E’s’ that are described as

1. Experiencing (Observation and field notes)

2. Enquiring (informal interviews, structured formal interviews, questionnaires, attitude scales (likert, semantic differential), standardised test
3. Examining (archival documents, journals, maps, audio and videotapes, artefacts, field notes)

3. 7 Summary

Participatory action research is an appropriate research method to use in a classroom where the teacher/researcher has diagnosed a problem and intervenes using a systematic and planned course of action, whilst monitoring the effect of this intervention.

SECTION TWO:

Methodology in Action

3.8 Definitions

In order to understand the identification methods used to select participants for this research, it is important to understand how the description 'above average ability' has been translated to the New Zealand setting.

The term 'gifted' or 'talented' or 'able' is defined in this research by the Three Ringed Conception of Giftedness (Renzulli, 1985). In his Three Ringed Conception of Giftedness (1985), Renzulli identifies three traits that a gifted child needs to have present "**or (to be) capable of developing**" (Renzulli, 2002, p.73). These traits are:

- Above average intelligence
- Creativity
- Task commitment

In the New Zealand setting, Reid and Elley (1991) describe 'above average' or 'superior' ability as evidenced in students who achieve a 7

or 8 (above average) or a 9 stanine in their Progressive Achievement Tests for either their class or age stanine.

As stated in the literature review associated with this research, Renzulli (1978) has found that these behavioural traits of the three rings (above average intelligence, creativity and task commitment) do not need to be present in equal quantities, but must be present to create 'gifted behaviour'. Renzulli (1997) reiterates that the one trait that must be constant in whatever identification system is used to identify *gifted* students is the trait for *above average ability*.

3.9 Data collection tools for 'above average' and 'underachieving' criteria.

The tools needed for data collection, were influenced by the two research questions:

1. What information can be used to identify gifted students who are underachieving in a New Zealand primary school?
2. In what ways can the use of Type III investigations (Renzulli et al, 1997) lead to a reversal in the cycle of underachievement in gifted students?

To begin to answer these questions, it is necessary to refer again to Renzulli's Three Ringed Conception of Giftedness (Renzulli, 1985). Consistent with Renzulli's (1985) recommendation that selection for inclusion in the 'above average' category should come through test scores and non-test criteria, the steps used in this research to identify able students who are underachieving parallel those used by Renzulli to identify giftedness, and include the behavioural checklist (Whitmore, 1980) used by Baum et al (1995) in their research to identify gifted or able underachievers. This information is contained in Table 1 on the following page.

A comparison of identification methods for selection of 'above average' students		
	Renzulli's (1985) recommendations for identification	The identification procedure for this research
Step 1	Test Score Nominations	Evidence of above average ability in PAT (Reid et al, 1991) stanine results (stanine 7, 8 or 9)
Step 2	Teacher Nomination	Current teacher's identification of underachievement behaviours (Whitmore, 1980).
Step 3	Alternate Pathways: for example, self nomination	Review of PAT data and school records from each previous year.
Step 4	Special Nominations: nomination from previous years' teachers	Previous teacher's identification using Whitmore's (1980) checklist
Step 5	Notification and Orientation of Parents	Parents identifying underachieving behaviours using Whitmore's (1980) checklist; inclusion of any anecdotal observations they have made.
Step 6	Action Information Nominations	

Table 1: Comparison of Identification Methods

These stages were not necessarily performed in this order, for example, with one participant there was consultation with her previous teacher prior to Step 1.

3.10 Data collection tools used in this research

As evidenced in Table 3.2 data collection tools used in this research were:

- Interview (previous teacher, current teacher, parents)
- Questionnaires (3 student participants: 2 questionnaires each, both before and at the completion of the intervention)
- Observations (by teacher and/or researcher of participants)
- Checklist (completed by parents, teacher and teacher/researcher (Whitmore, 1980))
- Document analysis (previous year's records, school reports, achievement records, and other standardised test data)
- Meetings (informal meetings between the three teachers involved in the study). These meetings were subsequently held on an on-going basis, and frequency was determined by the

different stages of the study. It was usual to meet weekly but depending on the stages of the cycles, we met more frequently if there were issues we needed to discuss.

3.11 Sequence and time frame of this research

The time frame for this research is shown in Table 2 below.

May	<ul style="list-style-type: none"> • Permission to conduct this research obtained from the Board of Management and Principal (Appendix A)
July	<ul style="list-style-type: none"> • Ethical approval received from MUHEC • Teacher meetings first convened • Confidentiality forms signed by the three teachers involved.(Appendix E) • Initial meeting between the three teachers involved in the project, to discuss any possible participants*, followed by • Teacher identification of possible participants, using: <ol style="list-style-type: none"> 1. PAT data, school records, reports, 2002, 2003 2. Whitmore's (1980) behavioural scales • Teacher/researcher approach to parents (interviews) of identified students • Parent completion of Whitmore's (1980) behavioural scales and consent forms (Appendices B & C) • Student completion of consent forms (Appendix C)
August	<ul style="list-style-type: none"> • Student questionnaires (pre-intervention) completed (Appendices F & G) • Initial teacher observation of on/off behaviour (Appendices K & L) • Initial planning for Type 111 Activities commenced. • Teacher meetings held on on-going basis
November	<ul style="list-style-type: none"> • Parent interviews (Formal) • Teacher meetings held on on-going basis
December	<ul style="list-style-type: none"> • Student completion of post intervention questionnaires • Teacher meetings held on on-going basis • Teacher/researcher feedback to Parents • Teacher/researcher feedback to Students • Teacher/researcher and other teachers' evaluation of interventions

Table 2: Time Frame

3.12 The setting

The school in which this research was conducted has a decile 10 rating. It is a single sex, girls' school.

3.13 The teachers, researcher and participants

My role was dual – that of teacher to two of the participants, and researcher involved with all three participants. As the study progressed, the third student worked on her individual project in my

classroom, during the afternoon, a usual practice for able students in this part of the school, as I was the teacher responsible for identification and planning for 'able students'. There were two other teachers involved in the project, one who had previously taught two of the students, one a current teacher of the third student. Both these teachers completed Whitmore's behavioural table (1980) for the participants who they were currently teaching or had taught previously, who were been considered as participants.

The participants for this research were three female students selected from Year 4 and 5 classes. For the purpose of this research, and in order not to identify them, they have each been allocated a pseudonym.

3.14 The cycles

The cycles varied for each participant but were structured around the following stages:

Step 1: Initial idea is formed; research questions framed.

Step 2: Discussion with current and previous teachers, review of school data and records to identify possible participants. Parent interviews.

Step 3: Student questionnaires completed

Step 4: Teacher Reflection: "what is the problem?"

Step 5: Identification of student needs (task commitment)

Step 6: Action following identification

Step 7: Teacher observation – playground and classroom

Step 8: Action relating to observation.

Step 9: Teacher reflection

Step 10: Further teacher planning

Step 11: Action (teacher) following planning

Step 12: Reflection: completion of post observation questionnaires by students and teacher/researcher

Step 13: Amend plan, new idea is formed (Cycle begins again)

Figure 5 details these steps within the context of Lewin's (1952) cyclic model of action research.



	<p>Step 1: Initial idea: Research Questions formed</p>	
<p><u>Steps 2 & 3:</u> Reconnaissance: Information gathered from teachers, parents and student</p>		<p><u>Step 13:</u> Amend Plan: New research questions are formed...</p>
<p><u>Step 4:</u> Formation of General Plan: Teacher reflection: what is the problem?</p>		<p><u>Step 12</u> Reflection by students and teacher/ researcher Evaluation of product by teacher/researcher and students.</p>
<p><u>Step 5:</u> Identify needs</p>		<p><u>Step 11:</u> Action Steps Completion of activity</p>
<p><u>Step 6:</u> Implementation:/Action Steps Based on identification of needs, Type 111 investigation planned: Formation of student's individual project plan. (2nd Cycle) Investigations continue</p>		<p><u>Step 10 (& 8):</u> Amend Plan: Adaptations or changes to: a) maintain student interest (Eliza) b) ensure the project is achievable (Leeann) c) ensure the curriculum tasks engage the learner (Alice).</p>
<p><u>Step 7:</u> Monitor: Teacher Observation</p>	<p><u>Steps 8 (& 10):</u> Amend Plan: Adaptations or changes to: a) maintain student interest (Eliza) b) ensure the project is achievable (Leeann) c) ensure the curriculum tasks engage the learner (Alice).</p>	<p><u>Step 9:</u> Teacher Reflection: Evaluate progress of Type 111 Activity</p>

Figure 5: The Cyclic Model of Action Research

Figure 5 portrays the cyclic model of this research in terms of problem identification, therapeutic action and evaluation as described by Lewin (1952).

As can be seen, the identified phases were repeated (cyclical). At each stage new questions were identified that could in effect, keep this project in motion.

3.15 Reliability and validity

Cohen and Manion (1989) describe triangulation as a tool that helps to explain the complexity of human behaviour more fully by viewing it from more than one standpoint. They suggest that this can be done by using, for example, questionnaires, interviews and observations to examine the same research question. Triangulation occurred in this study, through the completion of questionnaires by students, checklists by parents and checklist by teachers.

3.16 Summary

Participatory Action Research can be considered a suitable form of research for classroom use because of the cyclical nature of the differing stages and the facility this type of research has, to be both practical and collaborative in seeking to improve a situation - also a natural goal of teaching. In addition, the data collection tools suit an educational setting and can readily be adapted for use with children.

CHAPTER FOUR: The Interventions

4.1 Introduction

In this section I have provided a study of each participant to explain why I felt this research was necessary. Prior to intervention, each girl was demonstrating behaviour concomitant with underachievement (Whitmore, 1980), and failing to achieve at a level either or both their parents and teacher felt they ought to be working. As a consequence of these initial observations, I formed my own intuitive implicit theory (Burns, 2000) and used available school data to identify above average achievement in each girl (Reid and Elley, 1991), before using enrichment described by Renzulli (1997) as an appropriate intervention for use with able students. The planned interventions (Type 111, Renzulli, 1997) are described and the outcomes of these interventions are presented.

Study One: ELIZA

4.2 Background information

Eliza had gained a reputation for behaving inappropriately in the playground and the classroom. This was evidenced by her hitting other children, playing alone and inappropriate verbal responses.

One of Eliza's previous teachers felt that her linguistic skills far exceeded her written responses. She was also considered by this staff member to be 'astute' and very knowledgeable about world events. Her previous teacher and I both felt there was a mismatch in Eliza's ability to verbalise the actions for which she was responsible (perceived as those involving other students or her teacher) and whatever the underlying reasons were that made her appear to be so frequently unhappy.

4.3 Parents

Eliza's parents were concerned. They were separated and each had a new partnership. Eliza's parents acknowledged that Eliza was not

achieving at school as well as they thought she might. They reported that homework was often an issue with Eliza reluctant to complete it although she seemed capable of the work that was set.

4.4 Peers

Early playground observations suggested Eliza 'belonged' to no social group, had no special friends and demonstrated a preference for spending break and lunch times with the duty teacher.

4.5 Background to previous interventions

Earlier in the year a counsellor had been invited to attend a meeting with Eliza, her parents, the headmistress and the teacher/researcher. As a result, strategies were put in place to help Eliza interact in the playground and classroom. A need for regular contact with both parents was perceived and strategies were also employed to ensure this happened.

4.6 Identification

Using Renzulli's Three Ringed Conception of Giftedness (Renzulli, 1985) as the researcher and teacher, I looked to see what behaviours in these rings were evidenced in Eliza's behaviour. Her excellent verbal skills in terms of her reasoning and her ability to articulate suggested Eliza could have intelligence of above average ability. But using the definition I had chosen for this research, (Renzulli, 1985) I needed to find some data that also indicated above average ability. Her PAT results (Reid & Elley, 1991) for 2002 and 2003 indicated a stanine of 8 in maths for both years. This placed her in the 'above average' (Year 5, Class and Age Stanines) ability group for Maths. She did not meet the criteria for this above average group in her English tests, although at 8 years 9 months old, her Progressive Achievement Test (Reid & Elley, 1991) results in reading indicated a comprehension level of 10 – 11 years, and a vocabulary level of 10.5 - 11 years, which were above her chronological age. I felt this diagnostic data highlighted a deficiency in my identification plan for

gifted underachievers and that is discussed further in the Discussion section of this research. With regard to the other two circles (Renzulli, 1985) I felt that Eliza was creative in her approach to verbal problems, but I felt she lacked the behaviour in the third ring, which was 'task commitment'. Despite the lack of an English stanine in the above average range, I included Eliza in the research project because my criteria for identification did not specify in what subject, a student needed to score the 7, 8 or 9 stanine and Eliza had scored an 8 in Maths for two years.

At this stage, I reviewed Eliza's Year 4 PAT (Reid et al, 1991) data and found that her scores were consistent across these two years. I analysed Eliza's behaviour against Whitmore's checklist (Figure 4.1) and felt she matched many of those described behaviours including those Whitmore considered essential to the identification of a gifted underachiever. I spoke with one of Eliza's former teachers and invited her to discuss any behaviour she felt was evidence of underachievement. As this teacher had worked with Eliza in Year 3, there was no tangible quantitative data to support her evidence (there were no standardised tests for her other than a PAT listening test performed at this level) yet she felt that many of the behaviours cited by Whitmore (1980) were evident in Eliza's behaviour at that time, and still evident in her current playground behaviour. Following this discussion I approached Eliza's parents to discuss my proposed research and invited them to complete Whitmore's (1980) checklist.

4.7 The Parent Check-list

Both Eliza's parents completed Whitmore's (1980) checklist (Table 3) of behaviours associated with gifted underachievers. Their results are presented in Figure 4.1. One parent ticked 15 of the 20 boxes, and the other ticked 11. Whitmore identified 6 behaviours that needed to be present to diagnose underachievement in a gifted student and those

behaviours are indicated by shading in the table below. In addition to those 6 behaviours, Whitmore felt a total of 10 behaviours needed to be marked to identify underachievement in a gifted student.

		Student: Eliza
Parent	Teacher	Behaviours associated with underachievement
x	x	Poor test performance
x	x	Achieving at or below grade-level expectations in one or all of the basic skill areas: reading, language arts, mathematics
x x	x	Daily work frequently incomplete or poorly done
x x	x	Superior comprehension and retention of concepts when interested
	x	Vast gap between qualitative level of oral and written work
x x	x	Exceptionally large repertoire of factual knowledge
	x	A vitality of imagination, creative
x	x	Persistent dissatisfaction with work accomplished, even in art
x		Seems to avoid trying new activities to prevent imperfect performance; evidences perfectionism, and self-criticism
x		Shows initiative in pursuing self-selected projects at home
x	x	Has a wide range of interest and possibly special 'expertise' in an area of investigation and research
x	x	Evidences low self-esteem and tends to withdraw or be aggressive in the classroom
x x		Does not function comfortably or constructively in a group of any size
x x		Shows acute sensitivity and perceptions related to self, other, and life in general
x		Tends to set unrealistic self-expectation, goals are too high or too low
x x	x	Dislikes practice work or drill for memorization and mastery
x x	x	Easily distractible, unable to focus attention and concentrate efforts on tasks
x		Has an indifferent or a negative attitude toward school
x		Resists teacher efforts to motivate or discipline behaviour in class
x x	x	Has difficulty in peer relationships; maintains few friendships.

(Whitmore 1980)

Table 3 : Behavioural Check-list – Eliza

4.8 Pre-Intervention Student Questionnaire (1)

Eliza's responses (Table 4) are indicated by the numeral in the middle column on the table. Some of these responses needed additional comments. These have been written below the boxes and are italicised.

4.9 Pre-Intervention Student Questionnaire (2)

This was the second student questionnaire (Appendix G) that students were invited to complete both pre and post intervention.

Student Pre-Intervention Questionnaire (1) : Eliza										
1	2	3	4	5	6	7	8	9	10	
NOT True					TRUE					
All responses are recorded on this Likert Scale										
Question		Student Rating		Teacher Comment						
1. I LOVE coming to school each morning!		5								
2. I spend time in class daydreaming.		1		This response was a surprise because this did not match what I had observed. It appeared that she was daydreaming when she was off task: this score led to further teacher reflection as to the reasons Eliza appeared to be off task.						
3. I avoid trying new things because I may not be good enough at them.		1		This response was also inconsistent with what I observed in the class setting. Eliza demanded my time and attention before tackling tasks and I had erroneously assumed it was because she did not want to fail in the task if front of her peers. I realised there was obviously another reason she avoided tasks and I needed to determine what the reason was.						
4. I worry that my friends will find out that I am not doing well in school.		1		That Eliza did not care too much about what her peers thought was often evidenced in the way she behaved in the classroom. Yet, this was a contradiction to her efforts to make friends.						
5. I have many things going on in my life that are more important than school.		5		As this research progressed it became evident that outside of school events had become a barrier to her learning.						
6. I've found that when I work hard, I get good marks.		10		I felt this was an important link for Eliza to have made.						
7. Sometimes I feel so sad, I have a hard time even getting to school in the morning.		5		This was not consistent with what I frequently saw when Eliza arrived at school.						

8. I always do my homework without making a fuss.	5	This was not consistent with what Eliza's family had reported.
9. When I don't understand what's going on in class, I stop listening.	1	This was consistent with what I had observed. Eliza was an active listener and could be guaranteed to give a correct response to any question regardless of whether she gave the appearance of listening or not.
10 I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers.	1	Another interesting response that was totally against one of the main principles of gifted education that suggested that gifted students learn best when they are able to self select what they learn.

Table 4: Pre-Intervention Questionnaire Responses - Eliza

In this questionnaire, Eliza responded that she was best in maths (consistent with her PAT results) but she enjoyed her topic work most. She found writing to be her most difficult subject and she understood information in most subject areas. She thought she could improve in writing by “consintrating more” (sic). She felt she could catch up in that subject and that she did not feel she needed any help to do this. In the final question that asked what kept her from being successful in this subject, she replied that she did not know.

4. 10 The intervention

The period allocated for the interventions, was July (consent), August, September, October, November and December

4.10.1 Reflection: what is the problem?

Classroom observation (Appendix K) of Eliza showed an easily distracted student who was frequently off task. Her work was incomplete, previous strategies that had included challenging Eliza to increase the volume of written work using a variety of ‘rewards’ had only had limited success. She also craved friendship and at the time of this study, had once again, begun to develop behaviours that were socially inappropriate. She had a new friend who was finding her difficult. These behaviours included being overly possessive in the playground and not wanting this friend to play with anyone other than her.

4.10.2 Identification of Eliza's needs

I felt there were two aspects to Eliza's behaviour that we needed to concentrate on:

- 1) developing a more focussed approach to her work. I hoped that if this was achieved, the volume of work would also increase.
- 2) providing help to enable her to mix more easily with her peer group

4.10.3 Action following identification

Discussion with Eliza was proving difficult. She appeared to be moody, and was blaming others for her poor work ethics and for how she failed to mix successfully with her peers. I also noted that she looked even unhappier of late, than she had earlier in the year. During these initial discussions, I talked with her about this research and suggested that she might like to create a product, of her own choosing. We talked about what a product was and the sort of things she might choose to do. She seemed unmotivated by this idea and I left it alone because it appeared that she was upset or bothered by something or someone on most days, at this time. I felt I needed to observe her more before approaching her with further suggestions.

4.10.4 Teacher observation of participant

I chose to observe Eliza in the classroom and the playground and she was once again withdrawn and uninvolved with the other students. Outside, she continued to behave inappropriately and one afternoon, after she had physically pushed another student (following provocation) I withdrew her and tried to discuss the issue with her. For someone who was usually impressively articulate and observant, she was able to offer no excuse other than that she was feeling really sad. She could not express why and I felt that maybe her reasons were too personal, so I chose to focus on the behaviour I was witnessing and use that as a focal point for my attention.

4.10.5 Action relating to observation

I had noticed that in the past when Eliza had a problem, it helped her to realise that she was not the only person to have experienced this problem in some form or other. Using this strategy, and with the immediate focus off her by using me as the subject, Eliza compiled a list and we were able to make analogies between the message I might send people if I forgot to smile and how they might feel if I pushed them because I was feeling sad. During this discussion, she switched from the 'subject' being me, to herself and she chose to do that without reference. She was so honest and trusting, when she confessed that her sadness meant she could not put her worries out of her head in class time: that her problems as she saw them, never went away. At this time she confided that her current 'big' worry centred on what she perceived as an uneven distribution of time spent in each parent's home: that she felt incredibly guilty spending longer with her father than her mother. It seemed that her parents had allowed her to choose who she spent time with and although she was hoping for an equitable distribution this had not happened because there are seven days in a week, and the split meant four days in one home, and three in the other. She was feeling that she may unwittingly offend or hurt whichever parent had her for less time. I asked if she had discussed this with her parents and she said she did not know how to. I suggested we invite her parents in to discuss this so we could talk with them together. She agreed and also asked that her caregiver be included in the meeting.

4.10.6 Teacher reflection

I was quite uncomfortable with this situation and ensuing meeting, as I really felt their home situation was beyond my domain and to interfere was outside the teacher/researcher role. However, I realised that this was impacting on Eliza in a big way, not only interfering with her learning but also to some extent, undoing all the good she had achieved in the social field. I was aware that I had not begun the process of creating a Type 111 product with Eliza. However, I felt that

her immediate problems were of huge concern and at this stage it seemed far more important to help her regain stability and happiness. I considered removing her from this project because she was totally unfocused and there was not a great deal of time left in which to complete a product. I decided to defer this decision and arranged to meet with her parents, caregiver and the school principal.

4.10.7 Further planning

The meeting with Eliza's family group went well and allayed my initial concerns. They were a very kind, caring and intelligent group of people who told Eliza repeatedly that they did not mind where she stayed; their only concern was her happiness. They were absolutely fantastic and I found it to be an incredibly emotional and moving meeting. The effect on Eliza was really quite dramatic – big smiles and the obvious relief she felt was evident in her facial expression. As a group we discussed the importance of talking with her family BEFORE things became an issue. We had been over this before but obviously Eliza needed this reinforcement.

Following the meeting Eliza and I developed a plan to help her focus on her work. By using the previously successful strategy of suggesting that Eliza was not the only student to have problems, she suggested that her Type 111 Activity could be the development of a plan to help other students who also had difficulty focussing on their work. There was still time left in the school term and although I did not really feel this was sufficient time for Eliza to complete this project, she was enthusiastic. When she was given the opportunity to come up with a plan, she did.

4.10.8 Action following planning

Using her computer skills, Eliza developed a flow chart (Figure 6) that suggested strategies for if she (or another student) were unfocused. She was initially excited at the prospect of doing something to help other students and we discussed ways she could present her product.

She settled on the idea of some sort of pad that each student filled in and filed each time they used it.

4.10.9 Reflection following Action

Once she had decided on a plan, Eliza worked quickly and produced a flowchart (figure 7) depicting reasons a student might be unfocused and what they could do to change that. She made several versions and trialled them before she revised them. After she had completed it she used the colour photocopier to make herself several copies.

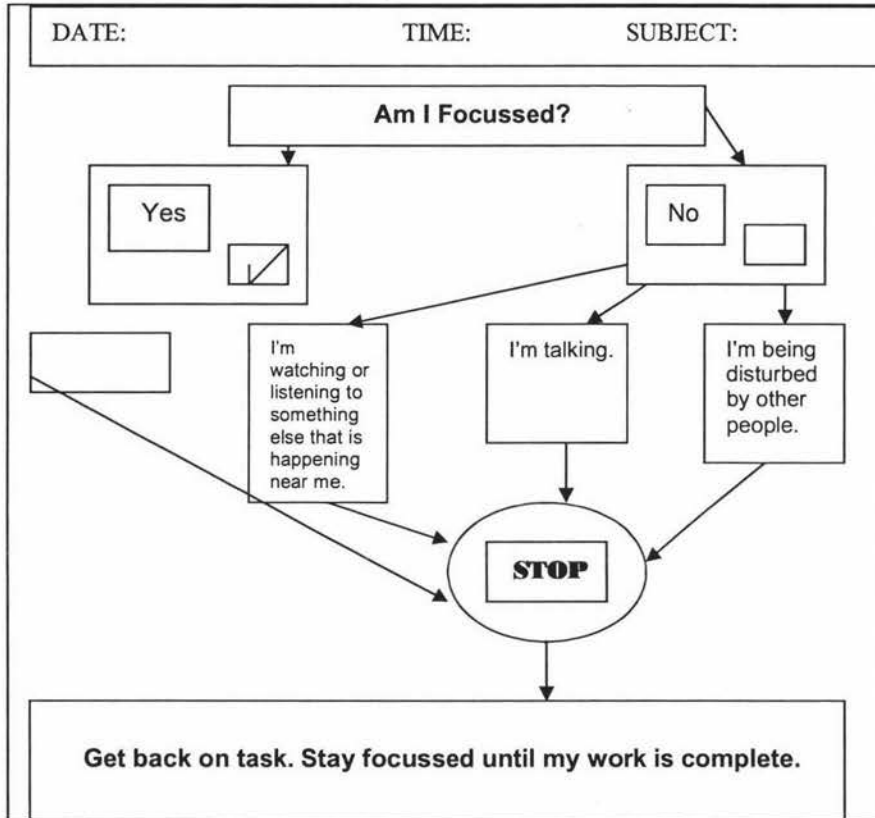


Figure 6

Eliza's Flow Chart

4.10.10 Observation

Although I knew she had made several copies, I never saw her using her chart or referring to it. When I suggested we look at completing her plan and making it into pads for other students, she was less than enthusiastic. When she had completed her post intervention questionnaires, I asked her why she did not use her project. She told

me that she did – that she had memorised what she had written at the different stages of the chart and that she did not need to have it on display to follow it in her head. And, she did not want the other students to know that she could be unfocussed so she managed the chart without showing them. Observations showed that she was on task: if was as if by identifying her own problems and having help to resolve them, she had cleared the way to work. She was definitely more settled socially following her latest parent meeting and this was also true of her classroom behaviour.

4.11 Post-Intervention Questionnaires

December

At the completion of the study, Eliza was given the same two sheets she had used at the start of the research, to record her motivation and likes and dislikes at school as well as the subjects she felt she did or did not do well in, and any reasons for this.

4. 12 Post-Intervention Student Questionnaire (1)

The changes that occurred were interesting. It is important to recall that a score of '1' signalled the statement was 'NOT true', and score of 10, signalled 'TRUE'. The largest swing from an ambivalent '5' to 'True' was recorded in the very first statement 'I LOVE coming to school' which suggested a huge change in attitude, perhaps a reflection of her more settled home life and once again, an established friendship.

Her score for statement 2 - 'I spend time in class daydreaming' had changed from '1'(NOT true) to '5', and in statement 5 she had moved from '5' to '10' (I have many things going on in my life that are more important than school). This was where I had initially felt Eliza would have recorded her score. She kept the same ranking in questions 3, 4, 6, 9 and 10. More changes were identified in question 7 ('Sometimes I feel so sad, I have a hard time even getting to school in the morning') where she recorded a change from '5' to '10', and in question 8 "I

always do my homework without making a fuss” where she downgraded her score of ‘5’ to ‘1’ (NOT True). Again, I felt these two answers provided the most significant change, and now provided a more realistic picture of how I found Eliza to be operating in the classroom and with what her family felt was happening at home.

4.13 Post-Intervention Student Questionnaire (2)

Eliza recorded the same answers to most of the questions as she had in the pre-intervention questionnaire(2), but one change that was noteworthy in light of what actually evolved as her intervention, was her response to the question that asked how she could improve in a subject she chose. Instead of her previous answer “By consintrating more” (sic) she wrote “Plan before I write”.

Study Two: ALICE

4.14 Background information

Alice was one of those students who a former teacher felt, could easily ‘get lost’ in the school system. Biddable, even tempered, Alice was frequently overshadowed by other more demanding or seemingly more confident students. She usually completed her work, albeit in a slow and often sloppy manner. When her former teacher had monitored and observed Alice she always noted that she was on-task but what she was actually producing was frequently below an acceptable (year and age) level and lacked any real thought.

4.15 Parents

At the initial parent interview of 2003, her parents expressed their concern that Alice was not achieving to her full potential and they felt that this behaviour had been present for many years. At that time, I had felt that Alice lacked self confidence and that this was evidenced in her work. Her father disputed this. He claimed that Alice was lazy and needed to be pushed. Both parents felt that Alice was very

creative but had not yet had an opportunity to demonstrate this. They reported that Alice appeared to be totally unmotivated to complete any homework. She was prepared to sit for long periods but did not concentrate and this was becoming a nightly stress for the whole family.

Her parents were very supportive of Alice. However, they were concerned and when I approached them with my concerns and invited them to complete Whitmore (1980) checklist they were happy to comply.

4.16 Peers

Alice had several well established long term friendships and appeared to have social skills which enabled her to mix well with a wide group of students. I never observed her on her own in the playground. She was a bus pupil and lived some distance from school but made the effort to see her school friends regularly out of school hours. She played sport on Saturday with her peers and was supported in this activity by her parents.

4.17 Identification

Following this parent interview and after discussion with Alice's previous teacher, I decided to review the standardised data the school had on Alice to see if she could meet the criteria for inclusion in this research. Initially, this included reviewing data from earlier years, but other than her 2002 PAT (Reid et al, 1991) test results, that were consistent with her scores for the following year, these records lacked tangible evidence of data associated with achievement. In 2003, she scored a Stanine 7 in maths – placing her in the 'above average' category. I felt that creativity was most definitely evident in any art work she had completed and her parents had also commented that they felt Alice was very creative. In her other PAT scores (Reid & Elley, 1991) with a chronological age of nine years, she attained a reading comprehension age of 12 – 13 years, and a vocabulary age of

12 – 13. Data from the previous year's PAT (Reid et al, 1991) was similar to that gained in 2003.

It seemed that Alice exhibited the behaviour in two of the rings in Renzulli's Three Ringed Conception (Renzulli, 1985), those of above average ability and creativity. Task commitment was the behaviour that appeared to be lacking. I reviewed her classroom behaviour against Whitmore's (1980) checklist and found that here too, she met the criteria for a gifted underachiever. I approached her parents and they filled in their checklists.

4.18 The parent and teacher check-list

Both Alice's parents and I (her current teacher) completed the checklist and placed 'x' in the boxes (Table 5) where it was felt Alice's behaviour was evidenced. This information can be seen in Figure 4.3.

4.19 Teacher reflection

Alice's parents placed an 'x' in only 3 of the behavioural boxes identified by Whitmore (1980). This caused me to re-visit my identification plan and to review the literature on identifying gifted underachievers, to see if the identification had to be made by parents, teacher or by both. The research by Baum et al (1995) only mentions identification using Whitmore's behaviours, by the teacher, not parents. Although Alice's parents were able to verbalise their concerns and saw some but not all of the requisite behaviours they most definitely felt that she was an underachiever. As Alice's teacher I believed I had evidenced all the behaviour indicated by Whitmore as essential in identification of a gifted underachiever. In addition to Whitmore's checklist, I had based my identification of Alice on the data required for this research: that of two behaviours listed in Renzulli's 3 Ringed Conception of Giftedness (1985) using additional standardised test data (PAT, Reid et al 1991).

Parent	Teacher	Student: Alice Behaviours associated with underachievement
	x	Poor test performance
x x	x	Achieving at or below grade-level expectations in one or all of the basic skill areas: reading, language arts, mathematics
x x	x	Daily work frequently incomplete or poorly done
	x	Superior comprehension and retention of concepts when interested
x x	x	Vast gap between qualitative level of oral and written work
		Exceptionally large repertoire of factual knowledge
x x	x	A vitality of imagination, creative
		Persistent dissatisfaction with work accomplished, even in art
	x	Seems to avoid trying new activities to prevent imperfect performance; evidences perfectionism, and self-criticism
x x	x	Shows initiative in pursuing self-selected projects at home
	x	Has a wide range of interest and possibly special 'expertise' in an area of investigation and research
	x	Evidences low self-esteem and tends to withdraw or be aggressive in the classroom
		Does not function comfortably or constructively in a group of any size
		Shows acute sensitivity and perceptions related to self, other, and life in general
	x	Tends to set unrealistic self-expectation, goals are too high or too low
		Dislikes practice work or drill for memorization and mastery
x		Easily distractible, unable to focus attention and concentrate efforts on tasks
	x	Has an indifferent or a negative attitude toward school
		Resists teacher efforts to motivate or discipline behaviour in class
		Has difficulty in peer relationships; maintains few friendships.

(Whitmore, 1980)

Table 5: Behavioural Check-list - Alice

4.20 Pre-Intervention Student Questionnaire (1)

Alice's responses are recorded in Table 6.

4.21 Pre-Intervention Student Questionnaire (2)

In her second questionnaire, Alice felt that she was best in 'topic'. Linking in to this idea of being 'best' in topic, Alice wrote that she like 'researching'. She wrote that she found maths most difficult and this was interesting because she had scored her highest PAT (Reid et al,

1991) stanine in maths. When asked if she understood the information being taught in her most difficult (maths) subject she responded “most of the time”. And, in response to the question asking which subject she could improve in, she wrote “spelling”, by “Rembering (sic) to take it home and hand it in”. She was asked to record any help she might need to catch up and replied “don’t know” (sic). And to the final two questions that asked what kept her from being successful in that subject (spelling) she wrote “responsibility”.

Student Pre-Intervention Questionnaire (1) : Alice										
	1	2	3	4	5	6	7	8	9	10
	NOT True								TRUE	
All responses are recorded on this Likert Scale										
Question	Student Rating	Teacher Comment								
1. I LOVE coming to school each morning!	5	This response could be described as 'ambivalent' and I think it is consistent with what was seen in the classroom.								
2. I spend time in class daydreaming.	4	I had not noticed Alice appearing to daydream. She seemed focussed when observed, although as previously noted, her actual output was often disappointing.								
3. I avoid trying new things because I may not be good enough at them.	5	This was an interesting response, because I had not felt that this was a concern of Alice's. My earlier observation to her parents that Alice might lack self confidence that had been reputed by her father may have been closer to the truth. I felt it was worth considering this when it came time to trial an intervention.								
4. I worry that my friends will find out that I am not doing well in school.	6	Interesting because Alice seemed to be so secure socially, and seemingly retained her friends without any untoward or obvious effort. I checked with her former teacher and neither she nor I had any recollection of Alice being involved in peer conflict, but Alice appeared to feel that her peers could influence her performance by noting whether or not she performed well.								
5. I have many things going on in my life that are more important than school.	4									
6. I've found that when I work hard, I get good marks.	9	An informative response that suggested Alice had made a link between effort and achievement. This had not been evident in my classroom or in the previous year. This response could be considered as a further reason that it was appropriate to include Alice in this study.								
7. Sometimes I feel so sad, I have a hard time even getting to school in the morning.	3	Again, this seemed an appropriate response that required no further investigation.								

8. I always do my homework without making a fuss.	3	This was not consistent with what Alice's family had reported.
9. When I don't understand what's going on in class, I stop listening.	4	Alice appeared to listen and was usually able to respond appropriately to questions if they were asked.
10. I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers.	4	This response was interesting as the proposed intervention strategy was based on allowing the student to self-select the product they created.

Table 6: Alice's pre-intervention questionnaire responses

4.22 The intervention

The period allocated for the interventions, ran from late July until the end of November.

4.22.1 Reflection: what is the problem?

Discussion with Alice's parents and previous and current teacher observations (Appendix L) had indicated that Alice was not performing at a level commensurate with

- a) parental expectation
- b) some standardised data results
- c) teacher expectations

Responses from her questionnaires indicated she may have concerns about peer perception and self efficacy. In addition, it appeared that in Alice's mind she knew there was a link between effort and achievement, yet she did not seem to be able to produce the effort deemed necessary for a student at this level, especially for one identified as 'above average'.

4.22.2 Identification of Alice's needs

With reference to Alice's father's thoughts that she was unmotivated and my concerns that she was lacking in self confidence, it seemed important that this intervention:

- a) motivate Alice to work with enjoyment and enthusiasm
- b) increase her self-confidence
- c) ensured Alice maintained her 'standing' with her peers

4.22.3 Action following identification

Alice and I discussed problems and real solutions that other students had worked on. There had been an article in the newspaper about a student in another school who had developed nesting boxes for penguins and this was an excellent example of students 'solving' real problems. Alice was very interested in trying this herself, and 'solving' a real problem. Over a period of several weeks, she looked at different issues but each of those she dismissed for differing reasons and finally settled on a very real problem within this school: The Lost Property.

Alice was aware of this problem because it was a frequently raised issue in weekly assemblies and she had a weekly music lesson in the room where the lost property was housed. Alice identified that it was a 'real' problem because she knew

- a) there was great deal of it
- b) it smelt when she went to the music room
- c) it was annoying the music teacher who shared the room with the Lost Property.

The Lost Property boxes also housed 'found' lunch boxes and these appeared to be the source of the odour. This school has a uniform and a great deal of the clothing was un-named. As it all looked alike, apart from its size, it was often very difficult to find the owner.

4.22.4 Planning

Alice was keen to begin her project and we sat together to negotiate the time that she could have. We decided that she needed to work in her other subjects but we agreed that this project would fit well into Topic time. This would work well within the class programme as the other students were pursuing individual study in that period so Alice could work alongside, on her project.

4.22.5 Action

The first action phase did not occur as I had expected because Alice was so enthused and motivated by the idea of her project, the day after deciding what she wanted to study, she arrived at school with her outline and ideas that she had worked on at home. This enthusiasm was something new in Alice, and I had not seen her motivated to work in her own time. It was also interesting to note the format Alice had chosen to present her ideas: she had used her artistic skills to create posters. We had not even reached this part of the planning stage in class.

4.22.6 Teacher reflection

I spent time considering the reasons Alice was so motivated with this project. There were several reasons that seemed obvious:

1. She had ownership of the project
2. She was pleased to have been chosen to do 'something' special (signified by her signing the consent form, knowing that she was one of only three students to do this). She was delighted to have total control over the presentation of her project

I also felt that she was pleased to be working on something that she felt was 'different' from that which the other students were doing, thereby raising their curiosity and putting her in a 'control' situation where she was able to tell them she was working on a solution to the lost property. Other students asked to work with her and I left this open as I felt the project was Alice's to manage and she did not at this stage, have any formal planning to suggest who else she may wish to involve.

4.22.7 Further planning

At Alice's instigation, this project was happening more quickly than I had expected so it was important that we find time on the day she arrived with her work from home, to review what she had prepared and make a formal plan for what she wanted to do next. Together we

developed an overall plan, in which Alice set out her goal to solve the problem. She completed the 'My Bright Idea' sheet that had been devised for another student's use but adapted for Alice to use. She recorded her ideas and they are shown in italics in Figure 7.

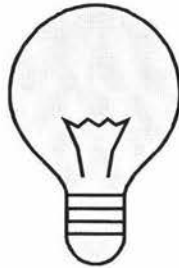
Alice had already drawn designs for her product that she had chosen, and this was to be a couple of posters. She chose to work on the computer to complete them. This was an interesting choice as I did not feel she was as familiar with the draw programme on the computer as she felt she was. But she was enthusiastic and was given free reign to present her posters using any medium she chose. We discussed wording and the aesthetics required in order for the poster to be effective and looked at some commercial posters to see how they were presented. This was in effect, a Type 11 Activity (Renzulli, 1997).

4.22.8 Observation

Alice's classroom work improved immensely during this activity period. She applied herself throughout the two weeks it took her to complete her posters. When I discussed this with her, she explained that it was because she was so eager to begin working on her products. There were occasions when she finished her work ahead of the rest of the class and this had not happened previously. She was motivated to complete her posters but some of the time in those two weeks was interrupted by other activities that were happening in the school so our delay was not due to Alice, but to things that were beyond our control.

My Bright Idea

By: Alice



I plan to create *a solution to the lost property*

My first step is to: *Put up posters around the school*

Then I need to do the following things:

1. *sort out the lost property*
2. *puts adds (sic) in school magazine*
3. *talk in assemble (sic)*
4. *send notes home to perants (sic)*

I will know when I have completed my project because:

All the lost property will be gone

I will call my project: *ALP*

Figure 7: Alice's Idea

4.22.9 Reflection relating to observation

I had believed my class programme provided choices for my students: that Alice was given choice in the way she completed and presented her homework, in the way she responded to texts in class and the same in her other subjects as the topics and time allowed. Yet when she was given this project, she had worked as I had not seen her before. I met with her former teacher and she reviewed the work Alice was doing on her project, and reported the same as I had – this motivation in Alice was new. I felt there were several reasons that this was happening:

1. Alice enjoyed being 'in control'
2. She had not previously used the computer to draw and was enjoying that challenge

3. She felt important doing something different to what the others were studying during Topic time.

Sometimes a self selected topic followed after I had worked with the whole class on Type 1 and Type 11 Activities (Renzulli, 1997) and that self-selection of Type 111 Activities occurred after the students had undertaken these Type 1 and 11 Activities. Alice was slow to complete her work, so she often completed the learning associated with Type 11 Activities after the other students, many of whom had begun their self-selected work. This left Alice and some other students' shorter time to complete a self-selected project and she usually worked on a modified form of study within her group rather than as an individual.

When I reflected further on this, I realised that Alice was most often in a small group that worked with me. This group was chosen because I felt that these students needed extra teacher assistance to remain on task or to receive help with their work. Alice was in that group to ensure she completed her work within the required time frame; therefore, she had not been given the same opportunities as some of the other students because she worked slowly. It seemed ironic that I had felt the individual projects the other students were working on, gave me additional opportunities to give extra time to this small group of students who needed this additional assistance.

4.22.10 Action relating to reflection

During this research period I changed my Homework Activities to become even more open ended, in an effort to give all the students opportunities to respond in a way that they wanted. One of our topics related to the Himalayas and I asked the students to transport Sir Edmund Hillary and his climbing party, 100 years hence. The students needed to describe what they thought he would find and where he would be exploring. They were only limited by their imaginations. At this same time, I had a before-school enrichment programme running in my classroom, where four groups of able students from four

classes, were creating websites. Alice's homework was amazing – she created a web site that transported Sir Edmund into space 100 years ahead. Her father reported that she had had no idea how to make a website but had brought her homework home and asked him to teach her.

4.22.11 Teacher reflection

This was another example of Alice seemingly wanting the type of experience that had not been offered to her in the classroom. Her father was delighted that she was so motivated and felt this was a new side he had not seen of his daughter. Although I had felt I was providing differentiated learning opportunities, I was not doing so for all my students and I was providing Alice – and possibly some others, with learning opportunities that were inappropriate.

4.22.12 Alice's project

Alice continued her project and other steps were built in as she identified them. She spoke at Assembly to promote her posters, and we laminated them and put them up in the areas around the school that she felt would attract the most attention. She undertook to sort the lost property every Friday afternoon immediately after lunch finished. She never had to be reminded to do this.

She did not eventually write a notice for the school magazine but that was because the school Principal felt this was not necessary and not because Alice had failed to write it. Her friends were still keen to be involved so I allowed Alice to choose someone to take with her each Friday to sort and return lost clothing and to 'bin' the remaining lunch boxes. This she continued until the end of the school term in December. The music teacher was delighted and told Alice so. Her room no longer had a clutter of clothes and the odour disappeared with the lunch boxes.

4.22.13 Teacher reflection

Having witnessed the change in Alice's attitude to learning when she was

1. in control of her own learning
2. given choice

I was challenged to ensure she was motivated in all areas. As her former teacher had observed, she was one of those students who could easily 'slip through the cracks' because she did not ask to be noticed as some students do. I felt that if this was true for Alice then it was possibly true for other students as well. I had offered enrichment opportunities to the students I had identified as able: I simply had not identified Alice in this category, because the way in which she worked had not suggested that she was able. Because Alice was underachieving, she was missing out on what appeared to be, appropriate motivational learning opportunities.

4.22.14 Action relating to observation

Alice had a raised profile in the school due to her entreaties in Assembly for the students to collect their lost property. It was well known that she had successfully managed this project and staff who were unaware of the research associated with the project, reported their delight in watching the confidence with which Alice addressed the Assemblies and managed the project. Award certificates were a weekly part of the culture of this school, and I prepared a large colourful one that I had signed and also invited the Principal to sign. Following this, I had the certificate laminated. This certificate congratulated Alice for the work she had put in to solving 'the Lost Property Problem' in the school.

4.22.15 Teacher reflection

At the outset, I had doubts about including Alice in this research. As previously discussed, although I felt she met the criteria for an able underachiever, her parents did not select the boxes identified by Whitmore (1980) as essential in the identification of a gifted

underachiever. In addition, her only 'above average' stanine was for Maths. Yet this language/art based project really motivated Alice and revealed an enthusiastic, motivated and creative student.

4.23 Post- Intervention Questionnaire (1)

December

Alice made some changes to her initial response when she completed her Post Intervention Questionnaire (Motivation).

In the initial question, I LOVE coming to school each morning!, she scored a '6' whereas she had previously scored a '5'. I did not feel this was a vast change. Her next three responses were unchanged and they related to daydreaming in class, not attempting new things in class and worrying about her friends finding out she was not doing well in school. Question 5 that asked her if she had many more things going on in her life more important than school. She moved down the scale to a '3' indicating that this statement was closer to being 'Not True' than 'True'. She retained the '9' she had used initially to indicate she received good marks when she worked hard but made a major change to her response in the next question: 'Sometimes I feel so sad, I have a hard time even getting to school in the morning'. Having previously scored '3', she now gave this question a rating of '8', near the 'True' mark. I felt this response merited a comment and on being asked if there was any reason for this, Alice replied that she often felt like this when she was getting a "Hard time at home....blamed for something her brother had done," Her responses to questions 8 and 9 remained unchanged, but the final question that stated: 'I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers' had a changed rating from '4' to '9'. This was a noteworthy movement towards 'True' and it was also a reflection of what I had observed in the classroom and what her father had observed at home with her homework.

4.24 Post- Intervention Questionnaire (2)

Alice's responses to the second questionnaire were similar to the first, except that she had changed her best subject to 'Art' from 'Topic' and suggested that the subject she could improve in was 'Writing' instead of 'Spelling'. She felt she could improve if she edited better by using a Dictionary.

Study Three: LEEANN

4.25 Background information

Leeann was younger than the other participants. She was in a Year 4 class and had been formally identified as 'gifted' in the previous year when her parents had taken her to an educational psychologist for IQ testing. Her score (Wechsler, 1992) indicated intelligence in the gifted area with strength in all areas of the test. However, her teacher felt that her classroom work was not providing evidence of this giftedness. The teacher reported that Leeann failed to complete any of the assigned work. She time wasted, day dreamed and did not meet deadlines. Although she had wonderful ideas that she expressed verbally, she was not getting them down on paper, a requirement expected of her by her teacher. She seemed to be unfocused in class.

4.26 Parents

Leeann's mother reported that in two and a half hours, Leeann had read 280 pages of the new Harry Potter book. Initially, her mother had doubted this claim and proceeded to question Leeann on the essence of what she had read. Leann was accurate in all her responses, leading her Mother to believe her claim. Her parents were keen to help in any way Leeann's teacher could suggest and various strategies had been trialled without any great success. Her teacher had allowed her to work on an individual research project hoping that this might motivate Leeann. Knowing that Leeann had an interest in animals, the teacher selected for her, the topic of 'Hector's Dolphins'. Leann's

teacher reported that although there were 'flashes' of motivation, long term , this project turned out to be as much of a case of the teacher pushing Leeann to complete, as any other work she set. Her parents and her teacher felt that Leeann lacked motivation for 'regular classroom learning'. Her teacher also felt that there were gaps in some of her knowledge, but Leeann resisted her attempts to fill them. Her teacher had tried various strategies to stimulate her but it appeared that Leeann was not motivated to complete her work under any circumstances the teacher had contrived to create.

4.27 Peers

Leeann had difficulty forming friendships with children of similar ages. This was especially evident in the playground where she chose to play with older girls. In the previous year, because of my interest and study into gifted students, I had been invited to work with Leeann to see if I could help her gain the skills she needed to mix more happily with her peers. This was a process that involved me spending time with Leeann, compiling a description of her playground activities, things that upset her and she felt went wrong, and her hopes for the way in which she would like to spend these breaks. She really did have a preference for spending her break times with the older girls and found her peers (although she is younger than the students in her class by almost a year) quite immature. They chose games she did not want to join in and it seemed that when she was invited to play, she felt she had to be 'The Boss' of the game. This was not well received by her peers and at lunch and morning tea, Leeann was either alone in the playground or with a group of older students. She also talked about 'being different' and this was something she had articulated when she described not wanting to play the same 'baby' games as her classmates. As our discussions progressed, we had mutually decided that it was probably OK to be different, but despite agreeing on this, we also felt that it was not easy. Leeann and I decided that she needed strategies to help her cope in the playground. We spent time role playing where one of us joined in a game and looked at

appropriate ways this could be done. Working through this process with Leann was like dealing with a miniature adult. She was so thoughtful in her responses that it would have been excusable to think you were dealing with someone far older and more mature. This role play did appear to have a positive effect and when observed in the playground at a later stage, Leeann seemed much happier.

4.28 Identification

Although Leeann had already been identified as gifted, to gain consistency in this research, I applied the same criteria for her selection as I had with the other participants. Her PAT (Reid et al, 1991) age stanines were 9's for english (comprehension and vocabulary), 6 for maths and 8 for listening. These results meant that she met the 'above average' (Renzulli, 1985) criteria for listening, and was in the 'superior' range for english. During consultation with her current teacher, Leeann was described by her as verbally creative. This teacher said that Leeann had the most wonderful ideas that she often failed to capture on paper. Her earlier school records failed to provide any other tangible evidence of underachievement apart from a stanine '9' for Listening Comprehension (Reid et al, 1991) in her Year 3 test. However, comments in her school reports indicated that she was considered by previous teachers to be a very able student.

It appeared that Leeann exhibited the traits of two of the three rings (Renzulli, 1985) but the traits of the third ring 'task commitment' were not yet present. Her teacher completed Whitmore's checklist, as did her parents. The results are detailed in Table 7 below.

Parent	Teacher	Student: Leeann
		Behaviours associated with underachievement
	x	Poor test performance
	x	Achieving at or below grade-level expectations in one or all of the basic skill areas: reading, language arts, mathematics
xx	x	Daily work frequently incomplete or poorly done
xx	x	Superior comprehension and retention of concepts when interested
	x	Vast gap between qualitative level of oral and written work

	x	Exceptionally large repertoire of factual knowledge
xx	x	A vitality of imagination, creative
		Persistent dissatisfaction with work accomplished, even in art
		Seems to avoid trying new activities to prevent imperfect performance; evidences perfectionism, and self-criticism
xx		Shows initiative in pursuing self-selected projects at home
	x	Has a wide range of interest and possibly special 'expertise' in an area of investigation and research
x	x	Evidences low self-esteem and tends to withdraw or be aggressive in the classroom
		Does not function comfortably or constructively in a group of any size
		Shows acute sensitivity and perceptions related to self, other, and life in general
x		Tends to set unrealistic self-expectation, goals are too high or too low
xx	x	Dislikes practice work or drill for memorization and mastery
x	x	Easily distractible, unable to focus attention and concentrate efforts on tasks
		Has an indifferent or a negative attitude toward school
x		Resists teacher efforts to motivate or discipline behaviour in class
	x	Has difficulty in peer relationships; maintains few friendships.

(Whitmore, 1980)

Table 7: Behavioural Check-list - Leeann

4.29 Teacher and parent checklist

Leeann's parents did not place an 'x' in all six of the boxes

Whitmore (1980) considered essential in identifying a gifted underachiever. However, Leeann's teacher scored her behaviour in these essential boxes. As the interventions were to be classroom based, I made the decision to include Leeann in this study based on her teacher's evidence.

4.30 Pre-Intervention Student Questionnaire (1)

Leeann's responses are indicated below in Table 8 on page 70.

Student Pre-Intervention Questionnaire (1) : Leeann									
1	2	3	4	5	6	7	8	9	10
NOT True		All responses are recorded on this Likert Scale						TRUE	
Question			Student Rating	Teacher Comment					
1. I LOVE coming to school each morning!			5						
2. I spend time in class daydreaming.			2	This was interesting as there were times that Leeann was observed to be off task and it was assumed that she was daydreaming when she evidently felt she was not.					
3. I avoid trying new things because I may not be good enough at them.			1						
4. I worry that my friends will find out that I am not doing well in school.			1	The question that this questionnaire did not ask, is whether this response was because Leeann felt there was nothing that she did not do well or whether it was because she was not worried about what her friends thought.					
5. I have many things going on in my life that are more important than school.			5						
6. I've found that when I work hard, I get good marks.			10	An interesting comment when it is viewed against the poor standard and incomplete work Leeann was choosing to hand to her teacher.					
7. Sometimes I feel so sad, I have a hard time even getting to school in the morning.			5	This was an interesting response because since Leeann had received assistance with her relationships with her peers in the play ground, she did not seem 'sad' or bothered by anything.					
8. I always do my homework without making a fuss.			5	Leeann may have felt this was an honest response, but her mother reported that at times she needed a great deal of prompting. The organisation that enabled her to do her work at home only seemed to occur if her Mother physically cleared Leeann's desk for her and collected the tools she needed to do her homework. This appeared to be an almost daily after-school ritual.					
9. When I don't understand what's going on in class, I stop listening.			1						
10. I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers.			4						

Table 8: Pre-Intervention Questionnaire Responses - Leeann

4.31 Pre-Intervention Questionnaire (2)

In this questionnaire, Leeann stated that she felt she was best in "topic", and found maths – especially times tables and division, most difficult. She wrote that she found summative tests difficult but that she understood what was being taught in her most difficult subject (maths).

The school activities she enjoyed the most were studying different topics, writing, and computer skills. She felt she could improve her writing by “writing faster” and indicated that although she felt she was behind in that subjects she could catch up. When responding to the question that asked what extra help she might need to catch up, she wrote “NONE” in very large upper case letters. The barrier between Leeann and success in her writing was perceived by Leeann to be “other people chattering LOUDLY”. She wrote that if she moved her attention to her work and did not listen to “noisy people” it would help.

4.32 The Intervention

The period allocated for the interventions, ran from late July until the end of term in December.

4.32.1 Reflection: what is the problem?

Leeann’s teacher’s classroom observations showed a child who was frequently not applying herself to her work and giving the impression of someone who was totally disorganised, who failed to complete much of her allocated work. It appeared to this teacher that Leeann had many wonderful ideas, but in spite of this, she failed to develop the ideas or record them on paper.

4.32.2 Identification of Leeann’s needs

After meeting and discussing Leeann’s needs, her teacher identified the following areas to focus on:

1. organisation
2. planning
3. completion of tasks

4.32.3 Action following identification of needs

Leeann and I met to discuss her project. She understood immediately what a ‘product’ was and quickly stated that her product would be a book. Her task was to decide the sort of book she wanted to write. The following day she announced that she was writing a Cook Book.

Her initial ideas were huge and made it obvious that we needed to develop a plan that was achievable and could be managed reasonably within the time available to us.

4.32.4 Teacher reflection

Although it was wonderful to see Leeann so enthusiastic and motivated by her suggestion she had little idea of the size of the project that could be reasonably managed within the time frame. I felt there was a delicate balance between diminishing her enthusiasm and getting her to understand task manageability.

4.32.5 Action following reflection


As it was our school's anniversary and we had all participated in events to mark the occasion, I suggested to Leeann that she write to some of our former Principals and students and invite them to contribute to her cook book. She was enthused by this idea and compiled a list that included current staff and some senior office-bearing students. At the same time, we discussed the need to plan the project, to ensure manageability and to make sure we were organised to complete the book before the end of Term Four. The planning sheet I created for Leeann was headed 'My Bright Idea' and is recreated in the figure 4.6. Her responses are recorded in italics.

4.32.6 Teacher reflection

The planning sheet was completed (Figure 8) and because of my limited understanding of copyright, I approached the school Librarian and asked her to meet with Leeann to take through the copyright issues as they related to this proposed cookbook, and the copying of recipes. I was also wary of Leeann's proposal to sell the book. I did not attend the meeting but Leeann and the Librarian reported that it had gone well and Leeann had decided not to sell, but to gift her book to people. Her initial reason for wanting to sell it appeared to relate to her wish to donate money to charity.

My Bright Idea

By: Leeann



I plan to create *a recipe book*

My first step is to:
Write letters to people that ask them for recipes that I will be able to put in my book.

Then I need to do the following things:

- Write Thank you letters*
- Type the recipes and print them*
- Make a cover for the book*
- Put the book together*
- Have it published*

Sell it in the shops
Give some to my family and friends

I will know when I have completed my project because: *My Cook Book will be completed with all the recipes in it.*

I will call my project: *'(School Name) Cook Book'*

Figure 8: Leeann's Idea

4.32.7 Action following reflection

Initially, Leeann came to my classroom after lunch and worked steadily using the computer to create and personalise letters to those people she wanted to contribute to her book. However, in the second week of the project, there was a decline in the number of afternoons she appeared. I met with her teacher and she reported that Leeann was failing to complete class work; therefore she was unable to come and work with me. I met with Leeann and discussed with her, her non-completion of class work. She had no excuse but re-iterated that she wanted to work on her cook book.

4.32.8 Teacher reflection

At this point I realised I had failed to set up a 'proper system' for negotiating the time Leeann could spend working on her project in my classroom. I spoke again with her teacher and I agreed to barter with her for Leeann to have time with me, conditional upon Leeann completing the work her teacher required of her. I met with Leeann and she was happy to comply.

4.32.9 Action following reflection

The first day this barter system was trialled, Leeann's teacher reported that Leeann had completed all her work within the required time. In fact, her teacher felt she had completed it effortlessly. She spent that entire afternoon in my classroom working independently typing the recipes she had begun to receive. This was the beginning of a pattern that became established throughout the remainder of the research period. Her teacher noticed a big improvement in Leeann's attitude towards her work when she was 'buying' time for herself to work on her project. Although it was not practicable for her to come to my room every day (due to other curricula activities that it was important she participate in) she came as often as she was able.

4.32.10 Further planning

With fewer recipes received than originally anticipated, Leeann adapted her original plan from the creation of a Recipe Book to a 2004 Calendar featuring a recipe each month. She hand decorated each page after she had typed it and added an additional page where she thanked her contributors. The end-of-year deadline was almost upon us and with the help of a willing Teachers' Aide, Leeann chose paper colours and appropriate bindings for her Calendars. The final task relating to her product was to write a thank you note on school letterhead, and to enclose one with each calendar in envelopes she addressed to each contributor.

4.32.11 Teacher reflection

Leeann followed her plan until completion with the exception of Step 6 that involved selling her book. She referred to the plan when she needed to and commented that it had helped her to have a written plan rather than one "in her head". Her satisfaction upon completion was immense. She had delivered some within the school and was gratified by the effusiveness with which they were received. Once she had self-selected her own topic and had planned it, she had managed this project with minimal adult help.

4.33 Post-Intervention Questionnaire (1)

December

Although some items remained unchanged, there were some noteworthy changes in her responses to her pre-intervention questionnaire. For Question 7 'Sometimes I feel so sad, I have a hard time even getting to school in the morning' Leeann moved her score from '4' up to '10' (True). When asked to explain this response further, she said it was because of people at home picking on her and because she sometimes had thoughts about death. Another major change was in Question 10, 'I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers' where she moved from a '4' to a '9'. She commented that she would like the opportunity to choose her own projects more often.

4.34 Post Intervention Questionnaire (2)

"I have been honest in all of the questions"

Leeann

This heading was at the top of this questionnaire. She recorded some changes and they were in what she now felt was the subject in which she was best. That had changed from 'topic' to 'english'. Multiplication and division remained her most difficult subjects. Most enjoyable school activities or projects had changed from "studying different topics, writing, computer skills" to "art and writing, designing". Rather than feeling she still needed to improve in writing, she felt she could

improve in maths by learning her times tables. She said “yes” she could catch up if she was given multiplication charts. Rather than blaming others’ for her lack of success this time, she said it was “the times tables (9x, 7x, 12x)” that kept her from being successful. When asked what she could do about this she wrote “learn my times tables”.

4.35 Follow up

During an informal feedback session with Leeann’s mother, she spoke of the enjoyment and motivation evident while Leeann was working on this project. Her mother was able to identify links between Leeann having chosen this project topic, and her level of motivation. She asked that the information gained through this study, especially focusing on Leeann’s ability to complete work when she had something she looked forward to doing, was recorded for future teachers to read and act upon.

4.36 Summary

At the conclusion of the research phase of this work, the words of Reason & Bradbury (2001 p. 448) “...no one action research project can be ‘perfect’”, seemed almost prophetic. This research had not proceeded according to plan in that it had begun much later than intended and there were in the case of Eliza, obstacles that I had not foreseen. However, even with this very limited sample size, there were some significant themes that appeared to emerge, consistent with the literature relating to underachievement in able students. This particularly concerned *task commitment* and the value the students placed on completing their tasks when they had been able to design the tasks themselves. In addition, it appeared that each student showed improvement in their motivation when they had a clear plan to work from. Although there appear to be links between the findings of this New Zealand research and to the literature written on gifted underachievers, there remained some unanswered questions. These questions arose as a direct result of this work and it is those questions

and the bridge between this research and the theory of gifted underachievement that are addressed in the following section.

The Findings

4.37 Introduction

This section reviews the findings of this research in the context of the New Zealand setting in which it was conducted.

4.38 Pre-intervention findings

It appeared from this research that prior to intervention each student had produced evidence of above average ability and creativity – two of the three behaviours in Renzulli's Three Ringed Conception of Giftedness (1985). It was the behaviour in this third ring – task commitment - that was missing or not evident in the classroom. The absence of this behaviour was identified by each student's parents, their current teacher and for two of the students, a teacher who had taught them in a previous year. Additional behaviours also described as those found in students who are gifted underachievers (Whitmore, 1980) were identified by the parent and teacher group for each student.

4.39 The interventions

The interventions were chosen after an assessment of each student's needs by their current teachers. These interventions were specific to each child. It appeared that two of the three students completed their projects in the way that I (in my role of researcher) had expected and in a way that they had intended. Eliza appeared to complete her project in a way that she felt satisfied her needs, but I felt could have been used further in the work of others'. It can be suggested that this disparity in the way we viewed the completion of the projects, differed from researcher to student, and this is consistent with research (Renzulli, 1985) that suggests that task commitment can be visible in 'important work', and this 'important work' is related to the child's

perception of what is important. It may have been that Eliza considered it important to use her product for herself but did not consider using it to help others as important. This differed from the way in which Alice viewed her task: she chose a project that developed a high profile in the school and was well received by her peers and staff members. This suggests that a motivational factor for Alice could be a task that she saw as relevant and purposeful beyond herself. I believe that Leeann saw her task as important because had told me on more than one occasion that she had always wanted to write a book.

For all three students, it seemed important that these projects were:

- self selected
- controlled by the student, not the teacher

These two conditions were factors that appeared to influence the completing of the project, as well as the thorough planning completed before Leeann's and Alice's projects commenced. Again, both these factors are a part of task commitment and consistent with research that states that these manifestations of task commitment are the results of opportunities, resources, and encouragement provided within the context of the student's learning environment (Renzulli, 1985).

It appeared that before Eliza was able to really focus in class, she had to feel that her home situation was resolved to her satisfaction. Family disruption (Rimm, 1986; Clark, 1992) has been identified as a causal factor in underachievement in gifted students.

4.40 Post intervention

Questionnaire 1

On completion of the post-intervention questionnaire, changes were recorded in the following:

- 1) changes nearer to 'True' than 'Not True' when responding to the statement "Sometimes I feel so sad, I have a hard time even

getting to school in the morning". When asked to explain further, two of the students related this feeling to incidents that occurred in their homes prior to setting off for school. One student stated that her sibling caused her to be blamed for things she claimed she had not done. The other suggested that she was often told off at home in the mornings. The third student, who gave no reason for this change in her rating, was observed on several occasions arriving at school upset following an altercation with her caregiver or sibling on her journey to school.

- 2) An increase in rating by two of the students (Alice and Leeann who finished their projects giving the appearance of being totally committed to completing their tasks) was the "I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers". This item could be seen as having a direct link back to 'task commitment' and what the student perceived as 'important work'. Having ownership of the project, the profile they received and the value others' also placed on what they were doing also appeared to be influential factors in the satisfaction students felt at the completion of the project.

Questionnaire 2

In the second post questionnaire it appeared that students had made a connection between improvement in a subject and being able to take responsibility for that improvement. They specified that they could improve

- in their writing by using a Dictionary
- in Maths by learning timetables
- by concentrating more
- by planning before writing

Each of these changes requires effort on behalf of the individual seeking to bring about that change, hence the correlation between effort and improvement. One could suggest that planning to expend

effort leading to improvement may also come under the broad umbrella of 'task commitment'.

4.41 Summary

This behaviour termed 'task commitment' appeared to play a large part in the student's success or apparent ambivalence at school. It appears to be important that the student is working on something they have selected for themselves, value and is valued by others, that has been planned before it is started. Peer perception seems to play a role in success, as does any form of altercation in the home or on the way to school.

No one factor was influencing achievement, but rather a combination of a couple or several different factors. For example, it didn't appear that social difficulties alone were responsible for one participant's underachievement: this factor was coupled with difficulties at home. However, one condition that I had not expected to find so strongly identified in the student responses seemed important for all three students. That was the need to leave their home without dissention in the morning, in order to arrive at school and have the best opportunity to achieve both social and academic success.

CHAPTER FIVE: Discussion

5.0 Introduction

The purpose of this chapter is to identify any possible relationships between the findings of this research that considered underachievement in gifted and talented students, and New Zealand and international literature. I will also consider questions that arose from this research that could be addressed in future research relating to gifted underachievers.

SECTION ONE

5.1 The New Zealand setting

As already mentioned, prior to the commencement of this study New Zealand research relating to gifted and talented *underachievers* was hard to find. The great body of knowledge relating to this topic comes from overseas with much of it originating in the United States of America where means of identifying giftedness often include the use of IQ tests. With this option not as easily accessed in New Zealand it is important that we find other methods that are available for teachers. To ensure consistency in our identification, this method needs to be standardised, and for it to be of benefit to educators, it needs to reflect overseas data to enable New Zealand educators to associate their findings with established international theory.

5.2 How was giftedness defined for this research?

Consistent with Renzulli's definition, this research focussed on specific behaviours associated with gifted students (definition, Chapter 2, 2.2). I used Renzulli's Three Ringed Conception of Giftedness (Renzulli, 1985) as a method of identifying gifted students. However, as that definition was prepared using measures for the American setting, it seems important to define what each of the three rings (above average, creativity and task commitment) means, in the New Zealand school setting.

5.2.1 What is 'above average'?

In this research, a student was considered to be 'above average' if they had scored a stanine of 7, 8 or 9 in any one domain of their PAT (Reid & Elley, 1991) testing. This form of identification is consistent with Renzulli's (1997) recommendation for identifying gifted students using a single test or sub-test score. However Riley, Bevan-Brown, Bicknell, Carroll-Lind and Kearney (2004) caution the use of PAT testing as a solitary measure of giftedness, in their recent review of literature pertaining to identification of gifted students in New Zealand schools. They advise that the primary use of these tests is to assist the teacher to measure the student's basic skills development and understandings. For the purpose of this research, PAT tests were only used as one type of identification, and this multi pronged approach is a recommendation arising from the research of Riley et al (2004). Other identification methods included teacher observation and parent identification.

5. 2.2 What is 'creativity'?

Creativity had several guides in this research and this was consistent with Renzulli's (2002) awareness of the importance of focusing on alternative methods to assess creativity and the salient reminder that creativity is often the product of experiences. Working with Eliza, there was teacher evidence of verbal creativity: her ability to think and articulate very quickly. For Alice, creativity was defined by her parents as artistic ability and with Leeann creativity was identified by her parents and teachers in her imaginative writings and verbal ramblings.

5.2.3 What is 'task commitment'?

Prior to the commencement of the interventions, this was the ring the teacher and teacher/researcher felt was missing in each student.

Renzulli (1985) considered task commitment to be evidenced by perseverance, endurance, hard work, practice and confidence in one's ability to engage in important work. An important part of Renzulli's definition must be the reference to 'important work', and this is most

likely linked into the child's perception of what was important work. From the findings of this research, it appears that important work for Alice and Leeann was considered to be work that they:

- a) were able to select for themselves
- b) was controlled themselves (child dominated projects)
- c) was well received by others, suggesting that this work had relevance for these students, beyond themselves.

5.3 How was gifted underachievement identified?

The information gained through this research appears to suggest that there is no one profile that reflects underachievement. However, when Renzulli's Three Ringed Conception of Giftedness was used to identify giftedness, each participant demonstrated evidence of two of the rings ('creativity' and 'above average intelligence') but lacked the traits of the third ring, 'task commitment'. In addition (and consistent with the research conducted by Baum et al (1995), Joanne Whitmore's (1980) list of behaviours evidenced in gifted underachievers was used to further confirm the identification of behaviours that were consistent with underachievement in gifted and talented students.

5.4 The importance of identifying gifted underachievers

Peterson & Colangelo (1996) suggest that school identification of gifted students at risk of underachieving, must be done at an early age, thereby using prevention rather than remediation. Perhaps one issue that literature has yet to fully explore is the age when it is critical to have identified the gifted underachiever thereby beginning an intervention to interrupt the cycle. Much of the literature used in this study came from research that pertained to older students. Using the previously described identification methods, each of the students participating in this research, was deemed to be underachieving and in either Year 4 or Year 5. This suggests that as young as these students were, achievement that was concomitant to the expected potential was evident at this early age.

As previously stated in this literature, overseas research suggests that regardless of the cause of underachievement, it is imperative that intervention is sought to attempt to reverse the state (Delisle, 1997; Kogan, 1995; Olenchak, 1999). Clearly, these able students need intervention that is targeted at the individual: as this research and that of others has shown (Mandle & Marcus, 1988; Siegel & Reis, 2003; Rimm, 1986; Clark, 1992; Butler-Por, 1993; Reis, 2000; Butler-Por, 1987; Whitmore, 1980; Bridges & Evans, 1998; Fehrenbach, 1993; Schuard & Hillman, 1990; Baer, 1998; Van Boxtel & Monks, 1992) there can be many different factors that attribute to the underachievement spiral and no one solution will suit all students.

The government has acknowledged the need to address high achievers within our schools. As part of this package, the Minister of Education (Mallard) announced the findings of the working party on Gifted and Talented (2002) that lists the core principles that establish a "solid basis for supporting the achievement and well-being of gifted and talented learners." (Mallard, 2002, no page given). These principles (Chapter 2) quite clearly charge the educator with providing an appropriate learning experience for every gifted student, to enable them to achieve at a level commensurate to their ability. This therefore must also mean addressing any perceived barriers to the student's success. To further confirm this stance, the government has issued a mandate that informs schools that by Term One of 2005, they must be able to demonstrate how they are meeting the needs of their gifted and talented learners, including those who are at risk of not achieving (National Administration Guidelines, 2004).

Within the Ministry of Education principles for gifted education, is the need for programmes (for the gifted student) to be based on sound practice, using research and literature. For this to be realized there must be teacher education that reaches all teachers in New Zealand schools. The need for on-going teacher education (both pre-service and in-service) has been recognized in the handbook produced by the

Ministry of Education (2000), in the recent research commissioned by the Ministry of Education (Riley et al, 2004) as well as in the National Administration Guidelines (NAG) amended in 2003 to include gifted students. As was evidenced in this study, where the teacher is less familiar with the principles of providing a programme to match the needs of the gifted student, there can be disparity between achievement and perceived potential.

5.5 The effectiveness and validity of the research

Reason and Bradbury (2001) suggest the researcher needs to consider the following four questions with regard to validity of the research:

Question 1: Is the work useful: are the participants able to use what they learned?

For each case study, there appeared to be benefits to the participants:

Eliza

I feel a longitudinal study that continued to focus on Eliza over a number of years, would be the most reliable gauge of any permanent change this research had on her social skills and intellectual achievement.

Prior to commencement of the intervention, I felt there were two areas I needed to help her develop:

1. a more focussed approach to her work leading to an increase in her volume of work.
2. the ability to mix more easily with her peer group

When she had finished the project to her satisfaction, her post-intervention questionnaires recorded her awareness of the need to be more focused and she was observed by the teachers associated with the project, to be more frequently happy in both the playground and classroom.

Alice:

The areas I perceived that I needed to help Alice with were:

1. motivating her to work to with enjoyment and enthusiasm

2. increasing her self-confidence
3. ensuring she maintained her 'standing' with her peers

This project demonstrated to Alice's peers and members of staff that she was capable of planning and completing a project no-one would previously have considered giving her. The effect of this was to give Alice greater confidence in her own ability, evidenced in her improved attitude and performance in the classroom. Furthermore, the success of the project led Alice to realise that she was an able student and I do not think this was something she had seriously considered before. These findings were consistent with overseas research that suggests that self perceptions of competence decline dramatically if the students are allowed to continue to under-achieve and receive no intervention to break the pattern (Benenson & Dweck, 1986; Stipek, 1981).

Leeann

The following areas that needed development were included by Leeann's teacher. They identified the need for Leeann to focus on:

1. organisation
2. planning
3. completion of tasks

Leeann was able to develop and follow through with a plan: a process that saw her learning independently of the teacher/researcher. She recognised in herself, the need to be planned and she stopped blaming others' for her distraction in class recording that it was "the times tables (9x, 7x, 12x)" that kept her from being successful, not other people chattering loudly, as she had previously written. Leeann exhibited an increased locus of control.

For each participant it appeared that the use of Renzulli's 'Type' activities enabled them to develop self-regulation strategies that assisted them in planning, activating and completing a project.

Question 2: Was anyone helped by this research?

The benefits to the three student participants have already been addressed but it is important to also consider benefits to

- a) The teacher(s)
- b) The researcher
- c) The parents
- d) The school community

The Teachers

Of the three teachers who were involved in this study, there were obvious benefits to two, one of those being the teacher/researcher. Leeann's teacher has (in 2004) retained her interest in gifted education but is not necessarily an advocate of the Renzulli approach. However, she is using Talent Pool Identification booklet prepared by the teacher/researcher prior to this research. The third teacher is now including The Enrichment Triad 'Type' Activities (Renzulli, 1985) in her planning and she is very enthusiastic about the range of products her students have produced.

Parents

It is to be hoped that the parents of the participants have gained a better understanding of the environment in which their child works best. Each set of parents received feedback on this study (informal interviews, formal interviews, letter outlining strategies for success) that could help to guide them in future years to assist their daughter select areas of interest.

The Researcher

I gained a great deal from this study and some of what I learned, was unexpected.

1. Attitude towards School

The responses to the post-intervention questionnaires that clearly indicated the girls' reluctance to come to school some mornings surprised me. I had expected that any negative responses to this

question to be because the participants were unhappy at school (because of school factors) but the responses that suggested their reluctance was due to something that occurred at home were a surprise. And to some extent, were also a relief.

2. Programming

Prior to the commencement of this study, I had believed my programming was differentiated to meet the needs of individuals. This research indicated otherwise and I needed to respond in a way that demonstrated empathy with the environment and did not impose on other students' learning.

3. Classroom Management

In meeting these self-imposed requirements, I found myself supervising multiple individual studies. Initially I had thought this would be an almost impossible situation, but in reality, it was manageable. Through this study, I gained a better understanding of the way a classroom can follow an educational model and adapt classroom practices to meet individual learner's needs, in addition to ensuring all other 'routine' processes are continued. At times it was akin to juggling, with many balls in the air at once. My belief and that of my two colleagues, that the individual projects would be completed, sustained and encouraged me and I feel this belief that was embedded in a strong knowledge base of literature relating to gifted and underachieving students will serve me well in the ensuing years. I also believe that *knowing* something because it has been researched both in practice and through literature, means that you are able to justify, explain and better understand your practice. You are not merely teaching something because there is an expectation that you will teach it.

The School Community

School reports reflect each child's success in working on their individual projects and I hope that this information will assist the girls' future teachers to plan appropriate activities. Another benefit to the school must be the library material purchased that relates to

Schoolwide Enrichment and is housed in the staffroom and readily accessible to all the staff.

Question 3: Is this choice of research method ecologically sensitive to the context?

Classrooms are very busy spaces and in order to ensure that each student is treated fairly, any research must be conducted as an adjunct to normal classroom practice. I was fortunate that this school has low class numbers (fewer than 25 students in each class) and acknowledge that a larger class size could have made this research a great deal more difficult to facilitate.

Question 4: Have new behaviours been created as a result of this research?

The areas to consider in relation to this question are behaviours relating to:

- a) The participants
- b) The teachers
- c) The researcher

The Participants

Real proof of the establishment of new behaviours would be best measured in a longitudinal study. An ideal learning environment is undoubtedly one that provides a sound educational programme meeting the needs of the individual. It is possible to surmise that these students would have shown a reversal in their underachievement status, regardless of whether or not they were identified as 'gifted' merely because they were being provided with appropriate learning experiences.

As the classroom research drew to a close, I was reminded of an article by Renzulli - "A Rising Tide Lifts All Ships"

(<http://www.gifted.uconn.edu/semart03.html>) and wondered if the

application of individual, student-interest based tasks, were in fact reason enough for any change in student attitude.

The Teachers

New behaviours for the teachers have been evidenced in 2004 through one teacher's inclusion of Renzulli's Type Activities (1985) in all her topic planning, ensuring she is meeting the needs of her gifted and talented learners. In addition both teachers who have remained in this school are using the Talent Pool document created by the teacher/ researcher in 2003. In 2004, I moved from this school and the second teacher has taken over the responsibility for gifted and talented students.

The Researcher

One of the behaviours that I have changed as a result of this study is the inclusion of more reflection in my practice. This year, I am working with older students, and welcome the opportunity to apply practices that enable me to better meet the needs of diverse learners.

I am also aware of the behaviours that indicate underachievement and that there is a great deal more research that must be conducted before we have a definitive method for identifying gifted underachievers in New Zealand schools. However, I am using cumulative PAT information coupled with Whitmore's (1980) behaviours to identify students who warrant further investigation as they possibly qualify to be considered as underachieving gifted or talented learners. I believe I am more attuned to the behaviours associated with underachievement regardless of the gifted and talented label and when I find it evidenced, I now consider it a professional challenge to adapt my programme to engage these learners. And, as I have already mentioned, I believe that my practice has changed to better meet the needs of a diverse group of learners.

5.6 Why 'gifted and talented'?

It is important to examine our reasons for wanting to identify a student as gifted and talented. Primarily, it appears that identification is the focus for ensuring qualitative differentiation and appropriate programming for our most able students: ensuring they receive an appropriate curriculum to help them achieve their potential. Research also suggests that for some gifted students, there are emotional and social implications attached to being gifted and this may require expert intervention and support (Bell & Roach, 1986; Silverman; 1993). But it is my contention, that the real value in identifying our gifted students, is in not only providing appropriate planning but also guaranteeing that

- 1) funding is available to help them achieve their potential
- 2) opportunities are presented to facilitate and further promote that child's giftedness
- 3) support is available to both the student and his or her family
- 4) teachers receive on-going training in providing appropriate educational settings for our most able students

5.7 Teacher education

In 2002, gifted education was a focus of staff development at this school. It was to have remained a focus for 2003, with the Talent Pool Document introduced and a library compiled to assist staff in further development. However although it seems that the Schoolwide Enrichment Model (Reis & Renzulli, 1997) was being used in some rooms, it was not used by all teachers, in all classes. This conundrum is recognised by Renzulli and Reis (1997) and in their book 'The Schoolwide Enrichment Model – A How-to Guide for Educational Excellence' in which they provide a comprehensive plan for ensuring the classroom teacher is implementing all phases of the enrichment process. With New Zealand educators in the emergent phase of their identification and programming for gifted students, it does not yet appear that this comprehensive approach to meeting our gifted students' needs is being fully implemented (Riley et al, 2004). Another factor that needs to be considered is teacher willingness to adopt new

approaches to their practice. Staff Development in any field must take into account many important factors including:

- a) the composition of the staff and their willingness to accept change
(Renzulli, 1974 p 49)
- b) staff knowledge of the subject (being developed)
(Showers, Joyce & Bennett, 1987)

5.8 Limitations of this research

One obvious limitation was the small size of this study. Had I been designing this research now with the value of hindsight, I would have hoped to have been able to include more than three students. I would also have encouraged the other teacher (in whose class the third participant was a student) to have greater ownership of what happened with this student in terms of her intervention, rather than rely on me to conduct the intervention with her student. However, the ways things evolved in this study were influenced by the character of the school, workloads and other on-site situations and I believe we three teachers felt we achieved completion and made effective use of the time available to us. I also believe we each took from it greater knowledge of gifted programming and an understanding of behaviour that is consistent with underachievement in this group of students.

SECTION TWO

5.9 Recommendations for future research

Although this research was conducted with a small sample, new questions were identified that could be considered for future research.

5.10 Measuring intelligence

At the moment it appears that New Zealand schools choose a variety of ways in which they identify their gifted and talented students. However, it would simplify matters if it was possible to use a national,

or even an international definition that measured the intelligence quota of the student.

5.11 IQ testing

One obvious measure is an IQ test such as the WISC 111. In New Zealand, this test is currently administered by trained educational psychologists. One immediate problem would be the need to have a large contingent of suitably qualified people to administer the test. This leads me to consider the following points:

- Is the New Zealand educational system prepared for an influx of parents and educational institutions requesting psychological measurement?
- What criteria would this system need for an IQ test to be deemed necessary?
- Who would bear the cost of this assessment?
- If it was decided that IQ testing was to be conducted on a 'user pays' basis, does this set the scene for IQ testing disparity?
 1. Would this IQ testing be requested more frequently in schools with a higher decile ranking? and,
 2. Would New Zealand students in low decile areas miss out in being identified as 'gifted and /or talented'?

5.12 Identifying giftedness

I believe that the methods used to identify participants for this research are one area requiring further research. My main concern focuses on whether a stanine in *any* domain (e.g. Mathematics or English) necessarily qualifies the student to be labelled 'gifted' and this concern is consistent with the issues raised by Riley et al (2004) in their paper that examines the planning and provision for gifted and talented students in New Zealand. I understand that for a child to be identified as gifted according to Renzulli's definition (1997) means they may qualify in one or multiple domains. The area I would like to investigate further is whether Eliza for example, did not score a stanine 7, 8 or 9 in English because she was underachieving and not

fulfilling her potential, or whether she was simply good at Mathematics but was not really a gifted student. At the moment, the only way I could confirm a 'gifted' diagnosis using quantitative data, would be to have an IQ test administered and as I have already suggested this is difficult in New Zealand where IQ testing is not readily available to classroom teachers.

5.13 Longitudinal study

Given ideal conditions, I would like to have conducted a longitudinal study of these students, to see if their progress was maintained over the next few years.

5.14 Professional development

To ensure that the students continue to have their needs met through the implementation of the enrichment triad, it would be essential to ensure that their future teachers are consistent in their approaches to these students, which means that the teachers need to have a level of professional development to ensure they are competent and confident in identification, programming and evaluating gifted programmes. I would like to view a national collection of longitudinal data on students that compares their PAT scores (that will most probably have been performed in Years 3 – 9) with their actual performance in national or international examinations (NCEA, Cambridge A Level Examinations). This data could offer possible links between the students's indicated potential and their level of ability. This longitudinal study of New Zealand students, using their cumulative PAT scores and other standardised New Zealand examination data, may make it possible to develop a profile of our gifted and talented students from an early age.

5.15 Early identification

One question I would like to see addressed in future research is the age at which a profile highlighting concomitant achievement could be effective. If an eight year old student displays behaviours consistent with underachievement, is it pivotal that this cycle is interrupted at the

age of eight, or is age irrelevant? Further research could investigate at which age 'underachievement' behaviours began and at which point they were or could be, habituated. It would also be of interest to further discuss at what stage Alice for example, decided that school needs were best met with the response she was offering: compliance, submissive behaviour but little enthusiasm due to the lack of opportunities to really demonstrate the extent of her creativity. Whether or not she had made this a conscious decision, would also provide interesting information.

5.16 Summary

The two key questions this research aimed to investigate were:

1. What information can be used to identify gifted students who are underachieving in a New Zealand primary school?
2. In what ways can the use of Type III investigations (Renzulli et al, 1997) lead to a reversal in the cycle of underachievement in gifted students?

The results of this study, show that with reference to the New Zealand Government's guidelines for teaching gifted students (Mallard, 2000) through implementation of Renzulli's Three Ringed Conception of Giftedness (1985) and with reference to Whitmore's (1980) table for identification of behaviour of gifted underachievers, it is possible to identify an underachiever. The contention remains over whether or not this child is a *gifted* underachiever. This research showed that these behaviours of underachievers are evidenced in primary school aged students.

This research also found that the identification of a 'gifted underachiever' (using the measures of this research) is based on teacher and parent subjectivity and there can be (Tables 3, 5 & 7) disparity in the way parents and teachers view the child's behaviours.

The reasons attributed to the underachievement varied amongst these participants but were consistent with the reasons cited in overseas research (Baum et al, 1995):

- inappropriate curriculum
- a curriculum that did not challenge the participant intellectually
- a curriculum that did not provide opportunities for the student to demonstrate the full measure of her creativity
- social curriculum that interfered with learning

It appeared with the introduction of individual programmes that made allowance for curriculum modification, coupled with some counselling (Eliza and Leeann) and the introduction of self-regulating activities, it was possible to set these students up for success, enabling them to achieve completion in a project at a level perceived to be commensurate with their evidenced ability.

It is important to note the impact and influence of both home and peers on these three students' learning, and the fact that a teacher may not necessarily be aware of influences that may impact on a student's ability to learn.

Although I do not yet have enough evidence to suggest I have found a foolproof, easily accessed and relatively inexpensive method for identifying gifted underachievers in a New Zealand setting, I feel I have made a small start in a direction that our country's educators need to take. One area that I do feel I have been able to trial with success, is the implementation of Task 111 Activities (Renzulli et al. 1997) in order to raise student achievement. Underachievement, whether in a gifted or non-gifted student, is a concern for parents and educators. Wherever the real solution to the problem lies it does appear to be important that we are able to identify and where possible, remedy or ameliorate the effects of the causal factors of the gifted or talented student's underachievement.

CHAPTER 6: Conclusion

Final thoughts

I believe New Zealand is still in the emergent stage of implementing practices to identify, programme and meet the needs of our gifted and talented students. At an even earlier stage than this, is our identification of the gifted *underachiever*. From conversations with colleagues, I believe this subgroup of students is present in all educational settings.

As a result of my research of New Zealand and overseas literature on this topic, I consider that there is a need for educators to focus on the establishment of *practical* methods for teacher identification of gifted and talented underachievers. I also believe that there is a necessity for the implementation of professional development for *all* teachers in New Zealand to enable them to plan and put into practice strategies that will assist in achieving a reversal in student underachievement.

This research highlights the difficulty in the New Zealand education system of identifying giftedness without any tangible data other than cumulative test scores and anecdotal recordings. In order to sanction teachers to be able to identify these students, it is my belief that there must be a standardised method of identification that provides tangible, quantitative data *in addition to* anecdotal evidence, information provided by parents and previous teachers and cumulative records.

Although this research was conducted with a very small sample, it does appear that there are many factors that may influence underachievement, including home and family life. This research suggests that as teachers, we may not be aware of these influences. It seems that on occasion, these factors may become an impediment to a student's ability to perform to their full potential and exacerbate any potentially difficult situations already present in the school environment.

As a classroom practitioner, I believe in the value added to a student's learning through the implementation of Renzulli's (1997) Enrichment Triad to plan and implement whole class and individual projects. I have seen the positive effect generated by a student self-selecting an activity of their choice, and then following the activity through to completion. Although this approach involves a great deal of teacher planning and possible changes to classroom management, it is my belief, that the ends justify the effort.

This thesis has been a journey, and like most forms of travel, it has opened my mind to different ways to think and act. Another benefit of travel is having time to reflect. As a result of this reflection, I have made changes that influence my practice, and I now feel that the important function of facilitating students on their educational journey must be made with reference to their *interests* and not be solely driven by school documents that specify units of work that must be covered within a given period of time.

It is my belief that our duty as educators is to assist our students achieve success. Success may take many forms but clearly, it is a part of a whole that includes emotional, academic and social factors. The research of others (Siegel & Reis, 2003; Laycock, 1979; Rimm, 1986; Clark, 1992; Butler-Por, 1987) has shown that success for gifted and talented students relies on a plethora of influences. New Zealand educators may need a great deal of professional development to help them identify barriers to success in our gifted and talented students, and to make appropriate planning and provisions for these students. We need to be able to do this fulfil our obligations as specified in the new NAG's, effective from Term 1, 2005.

Teachers, like their students, need to be set up for success. With the right level of government funding for professional development and a willingness from teaching staff to consider existing paradigms for planning and facilitating work with our able students, I believe we can

begin the undertaking that will lead to the reversal of underachievement of our gifted students.

APPENDICES

Appendix A (Massey Logo)

Underachievement in Gifted Students: Identification and Intervention

INFORMATION SHEET

Principal and the Board of Management

My name is Jenny Horsley and I am a Year 5 teacher and Senior Syndicate leader at (School Name). As a Masters of Education student at Massey University, I would like to conduct my thesis research in the school. The purpose of this research is to assess the effectiveness of intervention strategies on students identified as being talented or gifted, yet not achieving to the extent which their abilities indicate they are capable. After you have read this information sheet, could you please indicate your written approval or otherwise, for me to conduct this research within our school? In addition, could you please grant permission for me to access the participants' school records for the purpose of this research?

Participants will be chosen from my Year 5 class, following standardised testing to find disparity between test scores and actual performance. The participants must also meet the school criteria for giftedness as described by Renzulli (1977) in the Three-Ring Concept of Giftedness. Additionally, there will be consultation with the previous year's teachers to gain their thoughts on those students who are identified for this research. It is anticipated that the number of participants will be limited to three, as the actual class size is only 20 and it is doubtful that more than this number of students will be judged to be 'gifted underachievers'. Specific intervention for this research involves the use of The Schoolwide Enrichment Model (Renzulli, 1997) and will focus on products emerging from Type 3 activities. Students will also be asked to complete a Student Questionnaire. They will be actively involved in this research (for reporting purposes) from June until August. In order to preserve their anonymity, participants in this research will be given a unique identifier. Before writing to ask if their child can participate in the research, the researcher will speak with parents and obtain verbal permission. If granted, the researcher will send home the Parent Information Letter that asks permission for their child to participate and provides them with background information to the study. The researcher will also obtain information from the parents, through the use of a Parent Checklist about their child. Furthermore, the research will be explained to each of the participating students, with their written consent gained.

All data gathered for this research will be stored in a locked filing cabinet, to ensure it is not inadvertently confused with participants' school records. The researcher will retain the consent forms and information used for 5 years. Data will be collated and presented to Massey in standard thesis format. It is

envisaged that a summary of the research will be available from the first week of November, and will be provided upon request. Requests may be made to the researcher through email or directly. The data collected will only be used for the purposes of this research, and any other publications or presentations which may arise.

All participants in this study will have their rights explained, and these include the right to:

- Decline to participate;
- Decline to answer any particular question;
- Withdraw from the study ;
- Ask any questions about the study at any time during participation;
- Provide information on the understanding that their name will not be used unless they give permission to the researcher; and
- Be given access to a summary of the project finding when it is concluded.

This research project adheres to the Code of Ethical Conduct for Research, Teaching and Evaluations; however, if you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Campus Human Ethics Committee: Palmerston North, telephone 06 350 5249, email S.V.Rumball@massey.ac.nz. extension 8625. I can be contacted at school (school 'phone number) or emailed(School Email address).

Parent Information Letter

Dear Parents

As part of my study for my Masters degree in Education, I have chosen to undertake research which investigates the effectiveness of intervention strategies for students identified as being talented or gifted, yet not achieving to the extent which their abilities indicate they are capable. I have chosen your daughter as a potential participant in this research. She has met the criteria I am using to identify gifted students who may be underachieving: the school criteria for giftedness as described by Renzulli (1977) in the Three-Ring Concept of Giftedness; a discrepancy between her scores on standardized tests and classroom performance; and some of the attributes described by Whitmore (1980) in a checklist designed to assist teachers in the identification of gifted underachievers. If you would like, I am happy to discuss these criteria with you.

I would also like to invite you to share your insights regarding your daughter's abilities and achievement by completing a confidential parent questionnaire and checklist. The questionnaire and checklist are based upon the work of Diane Heacox (1991) and Jo Anne Whitmore (1980). They are designed to give parents an opportunity to share their perceptions of their child's special abilities and educational experiences. Your daughter will also be asked to complete a student questionnaire which probes her perceptions of and motivation towards school.

Based upon the information gained from the identification procedures outlined above, I will be implementing specific interventions aimed to motivate your daughter. I will be using The Schoolwide Enrichment Model (Renzulli, 1997) and will focus on products emerging from Type 3 activities. Your daughter will be actively involved in this research from June until August.

During the course of the research, anecdotal records based upon classroom observations, and my planning and delivery details of the intervention will be recorded. All data gathered for this research remains confidential. Your daughter will not be identified in the research report, as each participant will be given a pseudonym, or unique identifier. Data will be stored in a locked filing cabinet, to ensure it is not inadvertently confused with your daughter's school records. The consent forms and information used will be retained for 5 years, at which time it will be destroyed. Data will be collated and presented to Massey in standard thesis format. It is envisaged that a

summary of the research will be available from the first week of November, and will be provided upon request. Requests may be made to the researcher through email or directly. The data collected will only be used for the purposes of this research, and any other publications or presentations which may arise.

Both you and your daughter have the right to:

- Decline to participate;
- Decline to answer any particular question;
- Withdraw from the study ;
- Ask any questions about the study at any time during participation;
- Provide information on the understanding that your name will not be used; and
- Be given access to a summary of the project finding when it is concluded.

If you agree to participation, please sign and return the enclosed parent consent form. It has two purposes: one is to obtain your permission for your daughter's participation; the second is your consent to complete the parent questionnaire and checklist. Please discuss the information in this letter with your daughter, ensuring she understands the purposes and her rights as a participant, and ask her to sign the student consent form.

Furthermore, I am happy to discuss the research with you and/or your daughter upon your request.

This research project has the approval of the Board of Directors of (School Name) and adheres to the Code of Ethical Conduct for Research, Teaching and Evaluations; however, if you have any concerns about the conduct of this research, please contact Professor Sylvia V Rumball, Chair, Massey University Campus Human Ethics Committee: Palmerston North, telephone 06 350 5249, email S.V.Rumball@massey.ac.nz.

If you have any questions or concerns regarding this research, you can contact me or my supervisor. This research is being supervised by Dr. Tracy Riley, a Senior Lecturer in Massey University's Department of Learning and Teaching. She can be contacted at T.L.Riley@massey.ac.nz or 06 3505799, extension 8625. I can be contacted at school (school 'phone number) or emailed (school email address)

Kind Regards

Jenny Horsley

Appendix C

(Massey Logo)

Underachievement in Gifted

Students: Identification and intervention

PARENTAL CONSENT FORM

(One consent form for each parent)

This consent form will be held for a period of five (5) years.

I have read the information sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree (please circle one) to my daughter,
_____ (Full Name – printed) participating in this study
under the conditions set out in the Information Sheet.

I agree/do not agree (please circle one) to complete the parent questionnaire and checklist as outlined in the Information Sheet.

Signature: _____ Date: _____

Full Name (printed) _____

Appendix D

(Massey Logo)

Underachievement in Gifted Students:
Identification and Intervention

STUDENT CONSENT FORM

This consent form will be held for a period of five (5) years.

I have read the information sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/do not agree (please circle one) to participate in this study under the conditions set out in the Information Sheet.

Signature: _____ Date: _____

Full Name (printed):

Appendix E

(Massey Logo)

Underachievement in Gifted Students:
Identification and intervention

CONFIDENTIALITY AGREEMENT

This consent form will be held for a period of five (5) years.

I

(Full Name – printed)

agree to keep confidential all information concerning the
project Underachievement in Gifted Students: Identification
and intervention.

Signature:

Full Name - printed

Appendix F

Student Questionnaire Motivation

Use this scale to answer these questions. A score of **10** means **TRUE**, or 'this is really, really true for me.' A score of **1** means **NOT TRUE**, or 'this isn't true for me.'

1. I LOVE coming to school each morning!

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

2. I spend time in class daydreaming.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

3. I avoid trying new things because I may not be good enough at them.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

4. I worry that my friends will find out that I am not doing well in school.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

5. I have many things going on in my life that are more important than school.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

6. I've found that when I work hard, I get good marks.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

7. Sometimes I feel so sad, I have a hard time even getting to school in the morning.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

8. I always do my homework without making a fuss.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

9. When I don't understand what's going on in class, I stop listening.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

10. I know I would do better and enjoy school more if the teacher would let me choose a study to do my way – not hers.

1	2	3	4	5	6	7	8	9	10
NOT True									TRUE

Adapted from UP FROM UNDERACHIEVEMENT, Free Spirit Publishing Inc. By Diane Heacox, Copyright 1991 p 44 & 45

Appendix G Student Questionnaire(2)

Please answer these questions as well as you are able.

1. What subject are you best in?

2. What subject is the most difficult for you?

3. What do you like most about your best subject?

I like _____

4. What is the hardest thing for you to do:

Your daily work,

Summative tests or

Homework

5. Do you understand the information being taught in your most difficult subject area?

6. What school activities or projects do you enjoy the most?

I enjoy _____

7. Of all your subjects, which one do you think you could improve in?

I think I could improve in

8. How could you improve in that subject?

9. If you feel you are behind in that subject, do you think you could catch up?

Yes

No

10. What extra help might you need?

11. What keeps you from being successful in that subject?

What could you do about this? _____

Adapted from UP FROM UNDERACHIEVEMENT, Free Spirit Publishing Inc. By Diane Heacox, Copyright 1991, p 48

APPENDIX H

My Bright Idea

by _____



I plan to create

My first step is to

1. _____

Then I need to do the following things:

1.

2.

3.

4.

5.

6

7.

I will know when I have completed my project because

I will call my project

APPENDIX I

(Based on) The ENRICHMENT TRIAD (Renzulli, 1977)		
Type 1	Type 11	Type 111
The BIG ideas:	What skills are needed for this study?	Creative Productivity: I'm going to create...

Type 111 Planning Sheet

APPENDIX J

Parent /Teacher Behavioural Check-list

(Whitmore, 1980)

Parent	Teacher	Student:
		Behaviours associated with underachievement
		Poor test performance
		Achieving at or below grade-level expectations in one or all of the basic skill areas: reading, language arts, mathematics
		Daily work frequently incomplete or poorly done
		Superior comprehension and retention of concepts when interested
		Vast gap between qualitative level of oral and written work
		Exceptionally large repertoire of factual knowledge
		A vitality of imagination, creative
		Persistent dissatisfaction with work accomplished, even in art
		Seems to avoid trying new activities to prevent imperfect performance; evidences perfectionism, and self-criticism
		Shows initiative in pursuing self-selected projects at home
		Has a wide range of interest and possibly special 'expertise' in an area of investigation and research
		Evidences low self-esteem and tends to withdraw or be aggressive in the classroom
		Does not function comfortably or constructively in a group of any size
		Shows acute sensitivity and perceptions related to self, other, and life in general
		Tends to set unrealistic self-expectation, goals are too high or too low
		Dislikes practice work or drill for memorization and mastery
		Easily distractible, unable to focus attention and concentrate efforts on tasks
		Has an indifferent or a negative attitude toward school
		Resists teacher efforts to motivate or discipline behaviour in class
		Has difficulty in peer relationships; maintains few friendships.

APPENDIX K

Classroom Observation – Eliza

	'ELIZA'	Thursday 14 August
	WRITING	
10:50	T. has modelled task → move to desk to get writing book.	
11:00	Desk lid still up: arguing with 'L' on her left. T intervention → reminds of task	
11:05	Writing book found (!) in very untidy desk. Open at correct page (no writing)	
11:10	Date written. Brainstorm commenced. Dictionary used to ensure EVERY word is correctly spelt.	
11:30	Brainstorm complete → only two lines written in story (correct spelling). Looking into space → lost interest.	
	MATHS Monday 12 th .	
9:30	Group moves to desks with task (cut & paste.) E - no scissors - T focuses.	
9:40	Cut out one shape - didn't glue onto page.	
9:45	Three shapes: no glue used	

Comment: WRITING
Following the modelling of the task, there was time for the students to ask questions. I learned later that there had been an altercation in the playground at morning recess, between E and L and this was affecting E still. Her desk was disorganised but the correct book was eventually located. She wouldn't take risks and approximate in her draft writing - she wanted every word written correctly and this had the effect of limiting her written vocabulary and slowing down her writing. She frequently didn't know what to write - and required one-to-one assistance to get started. Most of the rest of the class had written between 3 and 4 paragraphs.

This day's writing was one of many examples of Eliza's ability to focus on a topic and to remain focussed until completion. She found this difficult due to;

- the social curriculum of the playground that spilled into the classroom
- her desire to spell every word correctly the first time she wrote it
- her inability begin tasks on time and to remain focussed until completion.
- her poor organisation skills

APPENDIX L

Classroom Observation – Alice

'ALICE': Wednesday 13 August

WRITING

- 10:50 Begins task (diary writing)
 10:55 Working on brainstorm.
 11:00 Writing – 10 words on page.
 11:05 Still focussed → 12 words.
 T intervention → "begin writing" story / diary.
 11:10 On task → bent over book pencil in hand, appear to be thinking.
 11:15 Writing
 11:30 (Task end) Total of 4 sentences (& brainstorm).
 No editing.

THURS 14 August.

WRITING (we went Rock Climbing yesterday)

- 11:00 To desks following class preparation/ instruction. Alice opens book, records date.
 05 Brainstorm → approximatly spelling but engaged in task.
 10 Brainstorm → 14 words.

Comment:

WEDNESDAY: Consistent with my other observations of Alice, she seemed to engage in a task and remain focussed until the time period was complete- but her work wasn't necessarily finished. She worked slowly and appeared to think a great deal. Usually, at the end of the writing period the students had approximately 10 minutes in which time to edit there spelling – but Alice always needed this time to finish off her last sentence and she usually had to take her editing home to complete.

THURSDAY: The previous day we had (as a class) been rock climbing and I felt this was such a successful shared experience that Alice might find it easier to record her ideas in writing. It made little difference to the volume she produced.

References:

- Altrichter, H. et al (1993) Teachers Investigate their Work. London: Routledge.
- Baber, E. (1990). Measuring and changing teachers' differential behaviour as perceived by students and teachers. Journal of Educational Psychology 82, 683-690.
- Baer, J. (1998). Gender differences in the effects of extrinsic motivation on creativity. Journal of Creative Behaviour, 32, 18 - 37.
- Baker, J.A., Bridges, R. & Evans, K. (1998). Models of underachievement among preadolescents: The role of personal, family, and school factors. Gifted Child Quarterly, 42, 5 – 14.
- Baum, S.M., Renzulli, J.S., Hebert, T., (1995). The Prism Metaphor: A New Paradigm for Reversing Underachievement. The National Research Centre on the Gifted and Talented. Connecticut.
- Bell, C. & Roach, B. (1986). A New Problem for Educators: Identification of the Non-Achieving Gifted Student. Education. Winter. 107, 2, 178.
- Benenson, J.F., and Dweck, C.S. (1986) . The development of trait explanations and self-evaluations in the academic and social domains. Child Development, 57. P1179 – 1187.
- Burns, R. B. (2000). Introduction to research methods. (4th edition) Longman. Australia.
- Butler-Por, N. (1987). Underachievers in school. New York. Wiley.
- Butler-Por, N. (1993). Underachieving gifted students. In K. A. Heller, F.J. Monks, & A.H. Passow (eds.), International handbook of research and development of giftedness and talent (pp 649-668). Oxford:Pergamon.
- Carr, W. & Kemmis, S. (eds.) (1986), Becoming Critical: Education, Knowledge and Action-research. Falmer Press, London.
- Clark, B. (1992) Growing up gifted (4th ed.). New York: Macmillan Publishing Company.
- Cohen, L., & Manion, L. (1989) Research methods in education. (3rd Edition). London. Routledge.
- Cresswell, J.W. (2002). Educational Research Planning, Conducting and evaluating quantitative and qualitative research. New Jersey: Merrill Prentice Hall.

Davis, G.A., and Rimm, S. B.(1989). Education of the gifted and talented (2nd Ed.).Englewood Cliffs, NJ: Prentice Hall.

Delisle, J.R. (1997). Gifted adolescents: Five steps toward understanding and acceptance. In N. Colangelo and G.A. Davis (Eds.). Handbook of Gifted Education (2nd ed.). Boston: Allyn and Bacon.

Dowdall, C.B. and Colangelo, N. (1982). Underachieving gifted students: Review and implications. Gifted Child Quarterly, 26. P179 – 184

Elliott, J. (1978). What is action research in schools? Journal of Curriculum Studies, 10 (4), Oct – Dec 1-2

Elliott,J. (1981). Action research: A framework for self-evaluation in schools. Schools Council Programme 2, Teacher-Pupil Interaction and the Quality of Learning Project Working Paper No. 1.

Emerick, L.J. (1995) Academic Underachievement Among the Gifted: Reversing School Failure. In Research Related to the Enrichment Triad Model.

Fehrenbach, C.R. (1993). Underachieving gifted students: Intervention programs that work. Roeper Review, 17, 88-90

Fine , M. J., & Pitts, R. (1980). Intervention with underachieving gifted children: Rationale and strategies. Gifted Child Quarterly, 24, 51-55.

Gagne, F. (1992). On the differentiated nature of giftedness and talent. Paper presented to the Guiding the Gifted Conference. Auckland, New Zealand.

Gagne, F (1995). From Giftedness to Talent: A developmental model and its impact on the language of the Field[1]. Roeper Review; 18, 103- 112.

Heacox, D. (1991) Up from Underachievement. Minneapolis, MN: Free

Hollingworth, L.S. (1926). Gifted Children: Their nature and nurture. New York: Macmillan

Kember, D. (2000) Action Learning and Action Research: Improving the quality of teaching and learning. Kogan Page Itasca, Illinois: Charles C. Thomas.

Kemmis, S. & McTaggart, R (1982). The action research planner. Victoria: Deakin University.

Kemmis, S. & Wilkinson, M. (1998). Participatory action research and the study of practice. In B. Atweh, and P. Weeks (eds.) Action research in practice: Partnerships for social justice in education. (pp21 – 36). London and New York: Routledge.

Kogan, N. (1995). Motivational and personality patterns in performing artists. Paper presented at the Esther Katz Rosen Symposium on the Psychological Development of Gifted Children, Lawrence, KS.

Laycock, F. (1979). Gifted Children. Chicago: Scott, Foresman.

Lewin, K. (1952), 'Group decision and social change' in eds. T. Newcomb & F. Hartley, Readings in Social Psychology, Hold, New York.

Mahoney, A.R. and Seeley, K.R. (1982). Study of juveniles in a suburban court. Technical report. Washington, DC: US Department of Justice.

Mallard, T. (2002) Government backs gifted and talented students [On-line] Retrieved 6 July 2002:
<http://www.beehive.govt.nz/ViewDocument.cfm?DocumentID=15598>

Mallard, T. (2002) Government support for gifted and talented children [On-line] Retrieved 6 July 2002:
<http://www.beehive.govt.nz/ViewDocument.cfm?DocumentID=14507>

Mandel, H.P., & Marcus, S.I. (1988). The Psychology of Underachievement. New York: John and Sons

Mandel, H.P., & Marcus, S. I. (1995). Could do better. New York: John Wiley and Sons.

McAlpine, D. (1996) In D. McAlpine & R. Moltzen (Eds.), Gifted and Talented, New Zealand Perspectives. Massey University.

McKernan, J. (1991). Curriculum action research: A handbook of methods and resource fore the reflective practitioner. London: Kogan Page.

Ministry of Education (2004). The National Administration Guidelines(NAGs) [On-line] retrieved 1 August 2004:
<http://www.minedu.govt.nz/index.cfm?layout=document&documentid=8187&data=l>

Mink, O.G. (1964). Multiple counselling with underachieving junior high school pupils of bright-normal and higher ability. Journal of Educational Research, 58, 31-34

Moltzen, R. (1996) In D.McAlpine & R Moltzen (Eds.), Gifted and Talented, New Zealand Perspectives. Massey University.

National Research Centre on the Gifted and Talented (1997) [Online] retrieved July 6 2003
<http://www.gifted.uconn.edu/sem/semexec.html>

Newby, M.J. (1997) Educational action research: the death of meaning? Or, The practitioner's response to utopian discourse. Educational Research Volume 39 Number 1,

Olenchak, F.R. (1999). Affective development of gifted students with non-traditional talents. Roeper Review, May/June. Vol. 21. Issue 4, p293

Peterson, J.S. and Colangelo, N. (1996). Gifted Achievers and Underachievers: A Comparison of Patterns Found in School Files. Journal of Counseling and Development. March/April, Vol. 74. Issue 4. P399-408.

Reason, P., & Bradbury, H (2001) (Eds.). Handbook of action research: Participative inquiry and practice. London: SAGE

Reid, N and Elley. W. (1991) Progressive achievement tests. Wellington: NZCER.

Reis, S. (2000). Case Studies of the Talented Students with Learning Disabilities. The National Research Centre on the Gifted and Talented.

Reis,S., Baum, S. & Siegle (2003). Underachievement Panel. Confratute 2003, University of Connecticut

Reis, S. M. & McCoach, D. B. (2000). The underachievement of gifted students: what do we know and where do we go? Gifted Child Quarterly, 44, 150-170.

Reis, S. M. , Hebert, T. P., Diaz, E. P., Maxfield, L. R., & Ratley, M. E. (1995). Talents in two places: Case studies of high ability students with learning disabilities who have achieved. Storrs, CT: University of Connecticut, National Research Centre for the Gifted and Talented.

Renzulli, J.S. (1977). The enrichment triad model: A guide for developing defensible programmes for the gifted and talented. Mansfield Centre, CT: Creative Learning Press.

Renzulli, J.S. (1978) What Makes Giftedness? Re-examining a Definition. Phi Delta Kappan. November, 60. P 180 – 184.

Renzulli, J. & Reis, S. (1985) The Schoolwide Enrichment Model. A Comprehensive Plan for Educational Excellence. Creative Learning Press, Connecticut.

Renzulli J.S., (1994) Schools for Talent Development: A Plan for Total School Improvement (Chap.3)

Renzulli, J. & Reis, S. (1997) The Schoolwide Enrichment Model. A How to Guide for Educational Excellence. Creative Learning Press, USA.

Renzulli, J.S. & Reis, S.M., (2002). What is Schoolwide Enrichment? In Gifted Child Today, Fall 2002, Vol. 25 No.4

Renzulli, J (no date given) A Rising Tide Lifts All Ships: Developing the Gifts and Talents of All Students. [On-line]Retrieved 6 December 2002 from the World Wide Web: <http://www.gifted.uconn.edu/semart03.html>

Riley, T., Bevan-Brown, J., Bicknell, B., Carroll-Lind, J., & Kearney, A. (2004). The extent, nature, and effectiveness of identification and provisions for New Zealand gifted and talented students. Final report. Wellington: Ministry of Education. [On-line]. Retrieved 6 May 2004 from the World Wide Web: www.minedu.govt.nz/goto/gifted

Rimm, S.B. (1986) Underachievement syndrome: Causes and cures. Watertown, WI: Apple Publishing Company.

Rimm, S. (1995) Why bright kids get poor grades and what you can do about it. New York: Crown Trade Paperbacks.

Rizza and Reis, S. (2001) Competition and Gifted Girls. Gifted Child Quarterly (45(1), 54-62)

Schatz, M. (1993). (ed) Qualitative Voices in Educational Research. London: Falmer.

Seigle, D & Reis, S. (2003) Key Note Address, Confratute. University of Connecticut. 12 July 2003

Showers, B., Joyce, B. & Bennett,B. (1987). Synthesis of research on staff development: A framework for future study and a state-of-the- art analysis. Educational Leadership, 45(3), 77-88

Shucard, S. B., & Hillman, S. B. (1990, August). Feedback and goal conditions: Effects on attributions of gifted adolescents. Paper presented at the annual meeting of the American Psychological Association, Boston.

Stipek, D.J. (1981). Children's' perceptions of their own and their classmates' ability. *Journal of Educational Psychology*, 73, p 404-410.

Stringer, E.T. (1999) Action Research. Sage Publications

TKI (2003) Initiatives for Gifted and Talented Learners [On-line]
Retrieved 6 July 2003 from the World Wide Web:
http://www.tki.org.nz/r/gifted/initiatives_e.php

Tomlinson, S.A. (1995). Action Research and Practical Inquiry: An Overview and an Invitation to Teachers of Gifted Learners. Journal for the Education of the Gifted. Vol.18, No.4. P 467 –484.

Van Boxtel, H. W., & Monks, F.J. (1992). General, social and academic self-concepts. Gifted Child Quarterly, 41, 5 – 17.

Wechsler, D. (1992). Wechsler Intelligence Scale for Children. 3rd Edition (Australian Adaptation) San Antonio. Brace and Company

Whitmore, J.R. (1980). In Baum, S.M., Renzulli, J.S., Hebert, T., (1996). The Prism Metaphor: A New Paradigm for Reversing Underachievement. The National Research Centre on the Gifted and Talented. Connecticut. p6

Whitmore, J. R. (1986). Understanding a lack of motivation to excel. Gifted Child Quarterly, 30, 66-69.