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“STUDENT VOICE”

Perceptions of the
Gifted Kids Programme Alumni

2000-2007

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

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ABSTRACT

Whilst there is some international research available regarding withdrawal programmes and out-of-school options for gifted students, there is little information internationally or nationally surrounding a withdrawal model that students can attend over an extended period, nor information that details the perspectives of the participants involved. This case study explored the effectiveness of a nationwide New Zealand out-of-school gifted education provider. It investigated the experiences and perceptions of 174 students who had attended the Gifted Kids Programme (GKP), during their primary and/or intermediate schooling.

The purpose of the study was to gain insight into the effectiveness of this provision by measuring how the goals advocated by the Gifted Kids Programme were perceived by the students who were involved in the programme, and to determine the value students placed on these goals both during and after their involvement in the programme. Data was collected through an online questionnaire and follow-up focus group sessions.

The key finding of this study was that attending the Gifted Kids Programme was perceived to be of great value to the students who participated in the research. The research indicates students had positive experiences which stimulated both cognitive and affective growth. It shows that this one-day-a-week programme has provided a research-based and appropriately differentiated programme for the participants. Themes of self-confidence, opportunity, talent, challenge and like-minded peers arose from the student responses. The findings provide validation for the Gifted Kids Programme as a provider of gifted education within a continuum of provisions. It also demonstrates the importance of using students' perceptions to inform educational provisions.

CONTENTS

	<i>page</i>
Acknowledgements	ii
Abstract	iii
Contents	iv
List of Tables	vi
List of Charts	vii
Appendices	viii
Chapter 1 Introduction	
1.1 Introduction	1
1.2 Definition and Terminology	2
1.3 Gifted Students in New Zealand	4
1.4 A Continuum of Provisions	6
1.5 The Need to Evaluate	8
1.6 The Value of Student Perspective	8
1.7 Research Rationale	9
1.8 Research Boundaries	11
1.9 Organisation of Thesis	11
1.10 Summary	12
Chapter 2 Background Information	
2.1 The Gifted Children's Advancement Charitable Trust	13
2.2 Operation	14
2.3 The Gifted Kids Programme (GKP)	15
2.4 The GKP Curriculum	16
2.5 The Gifted Kids Programme Alumni (GKPA)	18
2.6 Summary	19
Chapter 3 Literature Review	
3.1 Introduction	20
3.2 Provisions for Gifted	21
3.3 Alternative to the Inclusive Classroom	24
3.4 Withdrawal or Pull-out Programmes	25
3.5 Out-of-School Provisions	32
3.6 Effective Curriculum for Gifted Students	37
3.7 Evaluating Gifted Programmes	42
3.8 Student Voice as part of Evaluation	47
3.9 Summary	48
Chapter 4 Methodology	
4.1 Introduction	49
4.2 Research Design	51

4.3	The Sample	55
4.4	Data Generating Instruments	61
4.5	Data Analysis	78
4.6	Ethical Considerations	80
4.7	Reliability, Validity and Possible Limitations	85
4.8	Summary	88
Chapter 5	Results	
5.1	Introduction	89
5.2	General Demographics	89
5.3	Strengths and Talents	92
5.4	Peers and Friendships	100
5.5	Breadth and Depth of Learning	108
5.6	Challenge	115
5.7	Excellence	120
5.8	Student Reflection	124
5.9	Summary	127
Chapter 6	Discussion	
6.1	Introduction	129
6.2	A Focus on Strengths and Talents	130
6.3	A Focus on Like-Minds Together	134
6.4	A Focus on Breadth, Depth and Challenge	136
6.5	A Focus on Excellence	140
6.6	Contribution to Current Body of Literature	142
6.7	Future Implications & Recommendations	143
6.8	Limitations	144
6.9	Summary	145
Chapter 7	Conclusion	148
	References	152
	Appendices	189

TABLES

List of Tables	<i>page</i>
Table 1: Advantages of a Withdrawal/Pullout Programme	28
Table 2: Limitations of a Withdrawal/Pullout Programme	31
Table 3: Potential Advantages and Limitations of Out-Of-School Provisions	35
Table 4: Online Questionnaire Participant Demographics	58
Table 5: Advantages of Internet Questionnaire Approaches	65
Table 6: Limitations of Internet Questionnaire Approaches	67
Table 7: Questionnaire Overview	70
Table 8: The Scale of Verbal Data Dimension	72
Table 9: Focus Group Interview Demographics	76
Table 10: Ethical Dilemmas and Measures to Overcome Them	83
Table 11: Areas of Strength and/or Talent.	93
Table 12: Opportunity to Develop Strengths and/or Talents	96
Table 13: Areas of Continued Development post the GKP Experience	98
Table 14: Strengths and Limitations of Talent Development at GKP	100
Table 15: Strengths and Limitations of Peer Relationships at GKP	108
Table 16: GKP Curriculum Areas	109
Table 17: Learning and Teaching Strategies Implemented	110
Table 18: Areas of Perceived Challenge	117
Table 19: Factors contributing to Individual achievement at GKP	121
Table 20: Effectiveness of GKP Goals as Perceived by the GKPA	125
Table 21: Greatest Benefits of attending the GKP Programme	126

FIGURES

List of Figures

Figure 1: Gender Representation	90
Figure 2: GKP Unit Attended	91
Figure 3: Student Length of Attendance at GKP	92
Figure 4: A Comparison Graph between Time to Develop Talents at GKP and Time to Develop Talents after GKP.	99
Figure 5: Shared Qualities with GKP Peers	102
Figure 6: Academic Challenge Perceived from Like-minded Peers	105
Figure 7: Home-school Peer Reaction to GKP attendance	106
Figure 8: Most Implemented Mental Edge Teaching and Learning Strategies	111
Figure 9: Most Implemented Talent Development Teaching and Learning Strategies	112
Figure 10: Most Implemented Conceptual Curriculum Teaching and Learning Strategies	113
Figure 11: Areas of Challenge compared to Areas of Talent	118
Figure 12: Striving for Excellence	122

APPENDICES

	<i>page</i>
Appendix A: Letter to GKP Board for Consent	189
Appendix B: Information for Caregivers	192
Appendix C: Information for Online Participants	196
Appendix D: Information for Focus Group	199
Appendix E: Consent for Online Participants	202
Appendix F: Consent for Focus Group	203
Appendix G: Online Questionnaire	204
Appendix H: Focus Group Interview Questions	212
Appendix I: Confidentiality Agreement	213

CHAPTER 1

INTRODUCTION

1.1 Introduction

Every child has the right to an education that allows them the opportunity to develop and demonstrate their cognitive and affective potential, thus allowing them to actualise their natural abilities and to prepare them for their future in society. The format of delivery and context of this education varies from country to country and from culture to culture.

Within the current international politics of education the focus of a majority of governments and educators is on the learning needs of students who underachieve (Winebrenner & Brulles, 2008). Those who achieve to a satisfactory level are deemed to be successful regardless of possible untapped potential. Gifted students are recognised as one faction of an education system and yet globally are a group whose needs have been historically underserved (Tannenbaum, 2000). The New Zealand Ministry of Education (MOE) acknowledges that gifted education in this country has also suffered from a similar fate (MOE, 2000, 2001).

Over the past decade however, the MOE has elevated the development of gifted education. This has been the first concentrated and ongoing nationwide promotion since formalised education began in New Zealand in the late 1800's (Moltzen, 2004). Emerging from this focus have been a series of initiatives including, National Education Guideline changes (MOE, 2002), handbooks for educators and parents (MOE, 2000, 2008), nationwide research (Riley, Bevan-Brown, Bicknell, Carroll-Lind & Kearney, 2004), the establishment of a nationwide gifted advisory group to the MOE, gifted and talented advisors, Talent Development Initiatives beginning in 2003 and 2005, an Education Review Office (ERO) Report (Education Review Office, 2008) and finally a review of these Ministry initiatives in 2008 (due out in 2009).

These developments have attempted to highlight the needs of gifted learners in New Zealand, the importance of identifying and addressing their unique differences and of

promoting appropriate programmes and evaluation. Whilst a variety of differentiated options is advocated, the Ministry emphasis is on all teachers being teachers of gifted and maintains gifted education needs to occur predominantly in an inclusive classroom setting (MOE, 2000). Therefore the majority of gifted students in New Zealand are educated within a heterogeneous mainstream school setting.

Reflection on provisions presently available to gifted students in New Zealand has highlighted an increased general awareness of identification and needs, however for the majority of schools involved, a lack of appropriate provision and programme review (Riley et al., 2004; ERO, 2008). This Ministry research also recommends increased professional development, community communication, programme development including evaluation, and research on effectiveness as necessary factors to enable educators to best meet the needs of gifted learners (Riley et al., 2004; ERO, 2008). In an era where the place of learning is rapidly changing and becoming increasingly flexible (VanTassel-Baska, 2007) educators need to be encouraged to look beyond traditional classroom settings and recognise the value in accessing specialist services and out-of-school alternatives as additional avenues to support gifted students in their optimal development.

This research aimed to unpack the value of one out-of-school provision as a valid option on the gifted provisions continuum, plus support the premise that there will always be students who do not 'fit the norm' and that specialised teachers delivering a specialised programme can enhance learning effectively.

1.2 Definition and Terminology

Defining giftedness is a complex and subjective undertaking as there is no universally accepted definition of gifted and talented, intelligence, talent development or creative productivity (Moltzen, 1999). Whilst there is consensus that these are fluid concepts which may look different in different contexts and cultures (Moltzen, 2004), theorists and researchers over centuries have found only one facet remains the same; giftedness

means different things to different people. “Giftedness is what one society or another wants it to be, and hence its conceptualization can change over time and place” (Sternberg & Davidson, 2005, pp. 3-4).

Like any discipline of specialised study, gifted education represents a spectrum of ideologies and resulting definitions. These definitions can generally be classed as conservative or liberal. Conservative definitions tend to rely on Intelligence Quotient (IQ) based information as opposed to liberal definitions which are based on broader data collection (MOE, 2000).

In recent years, internationally and nationally, the more liberal view has been advocated. Popular definitions centre on high level performance and potential, precocity in relation to intelligence and creativity (Freeman, 2002), ease and speed of learning (Gagne, 2009), or students being qualitatively different from the norm (The Columbus Group, cited in Morelock, 1992).

The world of gifted education has been exposed to this growing concept of giftedness as a multifaceted phenomenon (Renzulli & Reis, 1997) and as such no single set of measurable criteria can be completely effective for identification. Giftedness is something that takes time to develop and what is perceived by educators is frequently only the potential for giftedness (Tannenbaum, 1983). The absence of a uniform agreement has ensured the definition of giftedness has been fraught with conflict surrounding subsequent identification, subjectivity and how those with non-traditional giftedness, such as creative, cultural, or spiritual giftedness, or those who may be learners with learning disabilities, can be recognised and provided with appropriate programming.

Esping and Plucker (as cited in Karnes & Stephens, 2008) claim that never has intelligence theory been more diverse and complex, nor more potentially confusing. This variation in range and breadth of the concept of giftedness has amplified the confusion and the ability of advocates to defend its existence. As Gagne (1995) remarked, giftedness is “defined too loosely while being measured too restrictively”

(p. 104). This lack of a definitive definition has also created a paradox for educators and the definitions adhered to reflect both personal perspectives and biases revealing underlying beliefs and professional perspectives, which depend on access to professional development and exposure to effective gifted education practices. However a definition is an essential foundation from which to build appropriate programmes for gifted students.

In 2000 the Ministry of Education released a handbook for teachers. This handbook encouraged educational communities to develop their own definition of giftedness most relevant to all parties in their population. Consequently there have been a range of definitions adopted by New Zealand schools. Present terminology used in New Zealand to refer to gifted students takes its lead from the Ministry of Education where the terms ‘gifted and talented’ are used synonymously and interchangeably in all Ministry policy and guidelines (MOE, 2000, 2001, 2002, 2008).

In this study, the term ‘gifted’ will be the terminology used to describe students who have been identified for the Gifted Kids Programme (GKP). GKP defines a gifted child as, “one who has the innate ability to achieve at an exceptional level, in relation to his/her same age peers, in one or more areas. This ability may be demonstrated or potential” (Gifted Children’s Advancement Charitable Trust (GCACT), 2008a, p. 5).

1.3 Gifted Students in New Zealand

Henderson states (2004, p. 1), “*Giftedness is a concept surrounded by complexities*”. These complexities have resulted internationally in an array of responses to meeting gifted students’ needs and a feeling by many that the gifted population, in general, is underserved (Hong & Milgram, 2008). This statement is replicated in New Zealand by the June 2008 ERO report which states that gifted students attend schools which, for the majority, are unable to demonstrate their achievement and progress, do not recognise their social and emotional needs nor employ a shared communication strategy regarding their holistic wellbeing (ERO, 2008). The report concludes, “In most schools, the

provision of gifted and talented education was not yet well embedded and school-wide understanding of gifted and talented was limited” (ERO, 2008, p. 10). This is despite gifted education in New Zealand undergoing the previously mentioned endorsement over the past decade.

Through a MOE mandate (MOE, 2002), effective from January 2005, all state and integrated schools are required to identify gifted students, plus deliver and evaluate appropriate programmes to meet their individual needs. This directive was pre-empted by the broad range of prior mentioned initiatives including core principles, initial professional development for schools that opted in, a contestable funding round and website resource support.

Riley et al. (2004) concluded the lack of teacher professional development to increase awareness and confidence, access to resources, support, funding and timing, plus cultural misunderstanding, meant there were still barriers to identification and programme implementation and review. The more recent ERO Report (ERO, 2008) reiterates these findings with recommendations to the Ministry of Education for targeted, high quality professional development, development of links between educational organisations and improved assessment strategies.

In New Zealand, gifted students spend most of their education in an inclusive classroom setting. Whilst a range of differentiated approaches is promoted in the MOE handbook, the government preference, aligning with the inclusive education principles of the New Zealand education system, is for this to occur within the classroom setting (MOE 2000). Initially promoted in New Zealand for students with wide-ranging needs under Special Education (MOE, 1995), inclusive education claims to be nondiscriminatory and valuing of diversity. Resistance to inclusion within the education system may be seen as reflecting disablist attitudes and practices (Ballard, 1996). The ERO report (2008) indicates however, the majority of New Zealand teachers are unable to deliver appropriate programmes for gifted students without some level of support. Consequently alternatives need to be sought or support needs to be provided.

MOE research into gifted education (Riley et al., 2004) surveyed 1285 schools and concluded that a combination of acceleration and enrichment options were the preferred methods of providing gifted education. The preferred delivery was ability grouping, with pull-out or withdrawal programme being common occurrences. The effectiveness of such programmes was not part of the research. This use of alternatives to an inclusive classroom setting match the findings of Braggart and Moltzen (2000) who also stated withdrawal and pullout programmes are New Zealand's most popular supplementary provision in gifted education. This was once again reiterated in the ERO report on gifted education (ERO, 2008).

1.4 A Continuum of Provisions

It is acknowledged in New Zealand that gifted students benefit greatly from a continuum of educational provisions (MOE 2000, 2008), as a range of learning options is integral to meeting a range of needs. The concept of a continuum of services is not a new approach in education, however it does not always sit comfortably with the inclusive classroom educational approach.

It does however align with the beliefs of international researchers who also advocate one size does not fit all and that a range of experiences and opportunities needs to be offered to gifted students (Borland, 1989; Reis, 2009; Renzulli & Reis, 1997; Tomlinson, 2003; Treffinger, Young, Nassab, Selby & Wittig 2008). The MOE (2000) handbook for teachers reminds educators that a continuum of provisions needs to be available for gifted students and although these provisions are most likely to start within a regular classroom setting, they might not necessarily remain there. Advocates for gifted education are also reminded that education does not occur solely in a school environment and that parents also play a role in the educating of their children.

Withdrawal and pull-out programmes are sometimes out of classroom, or at times, out-of-school methods of catering for the needs of gifted students (Rogers, 2002). Although they provide a haven for many gifted students, and an opportunity to learn and coexist

with like-minded peers in a place where their personal abilities are valued and strengthened, the degree of effectiveness of this method is difficult to ascertain. Reasons for this include differences between programme goals, the curriculum delivered, educator awareness, knowledge and ability, financial support and parental involvement (Delcourt, Lloyd, Cornell & Goldberg, 1994). These variables make effectiveness difficult to demonstrate and comparison not always relevant. Compounding this is a lack of research around withdrawal programmes available both internationally and nationally to validate claims of effectiveness (Riley et al., 2004).

Although research into the effectiveness of withdrawal programmes for gifted students is limited, there is over twenty years of research that demonstrates gifted children do need additional educational support to succeed and that ability grouping, possibly through withdrawal programmes, can be an effective part of this (Archambault, Westberg, Brown, Hallmark, Zhang & Emmons, 1993; Clark, 2008; Delcourt, Loyd, Cornell & Goldberg, 1994; Feldhusen & Moon, 1992; Kulik & Kulik 1992, 1997; Rogers, 2002; Vaughn, Feldhusen & Asher, 1991; Westberg, Archambault, Dobyns & Salvin, 1993). Additional necessary components to this success would be curriculum modification (Wiggins & McTighe, 1998), concept-based instruction (Erickson, 1998; Roberts & Roberts, 2005), problem-based learning (Delisle, 1997), differentiation (Renzulli, 1994; Tomlinson, 1999), strategies to enhance high-level thinking skills (Renzulli, 1994; Roger, 2002), and talent development (Rogers, 2002; Treffinger, Nassab, Selby & Wittig, 2008; VanTassel-Baska & Stambaugh, 2006).

As stated previously the MOE (2000) promotes an inclusive classroom as the best place for gifted students to learn. This approach combined with the lack of research on other alternatives mean withdrawal and pull-out programmes, both within the school setting and outside the school setting, come under speculation that they are able to effectively meet the needs of gifted students. A failure to recognise withdrawal programmes as a viable option for schools promotes the misunderstanding that an inclusive classroom is one that operates without outside assistance, a huge expectation for any classroom educator (Cathcart, 2006). However, a consequence is that withdrawal programmes must

undertake review processes to demonstrate effectiveness and research into their effectiveness needs to be documented.

Schools looking to provide a continuum of provisions for gifted students need to make informed choices about accessing selections outside their own environment such as the Chemistry Olympiad, the Creativity in Science and Technology (CREST) programme, Future Problem Solving, the New Zealand Marine Studies Centre, the Gifted Education Centre and the Gifted Kids Programme¹.

1.5 The Need to Evaluate

Evaluation of a gifted programme is just as essential to the successful functioning of the programme as its educational goals and objectives (Monaco, 1999). Not only is evaluation a growing educational trend (Carter, 1986) and an accountability requirement, it allows for reflection, growth and change in order to meet the needs of students. Evaluation should be formative, ongoing and not defined solely as an annual event or progress check. It needs to be an integral part of the design of gifted education programmes. Callahan (2004) claims in gifted education this is rarely the case, programme evaluation is frequently neglected, executed poorly or often omitted. Yet timely evaluation will identify both elements of effectiveness and propose future direction (Fetterman, 1993) to validate the worth of the programme. There should be evident links between programme evaluation and programme improvement (Avery, VanTassel-Baska & O'Neill, 1997).

1.6 The Value of Student Perspective

Erickson and Schultz (1992) when discussing research on curriculum, claim that student voice has been “conspicuously absent from research literature” (p. 468). They believe research has been predominantly skewed to focus on the perspectives of all but those who are active students.

¹ For more details on these and other out-of-school provisions see Riley (2009).

They claim although the data gathered has been used to guide curriculum development and identify areas of strength and need it has generally come from an educator or administrator viewpoint.

Greene (1994), another advocate of evaluating from a participant perspective, claims students "can effectively give voice to the normally silenced and can poignantly illuminate what is typically masked" (p. 531). Listening to the voice of the past-pupils was deemed an important factor and therefore forms the major source of data collection in this research.

1.7 Research Rationale

This research aimed at exploring the perceptions of pupils who had attended a withdrawal programme specifically designed for gifted students, The Gifted Kids Programme (GKP). GKP has offered their one-day-a-week withdrawal programme in New Zealand since 2000. The GKP Alumni (GKPA) is the name given to the GKP past students. Although only 14 began the programme in 2000, currently the programme has approximately 450 students attending. Consequently the Alumni are an increasing group. This is the first research undertaken on past GKP students.

GKP delivers a one-day-a-week programme that clusters like-minded students from neighbouring schools to support their affective and cognitive development. Five core goals are delivered through a focus on complex thinking skills, talent development, a conceptual curriculum and the social and emotional needs of the gifted. The students who attend the programme have been identified as gifted through a research-based, multi-faceted process which includes data triangulated from schools, home and via a student attended group workshop facilitated by specialist GKP educators (GCACT, 2006). The core group of students enrolled is year three to year eight, and although a minimum of two years is advocated by the programme, many students, if identified early enough, may participate for three years or more.

The GKPA are past pupils who have moved on to their secondary school education. GKP endeavours to keep in touch with these students through formal and informal meetings each year. This study aimed to explore the perceptions of existing past GKP pupils as they reflected on the curriculum they participated in during attendance at GKP.

The first objective was to design an appropriate data gathering tool to inform the researcher of the impact GKP had on its students. The second objective was to see how well, in the eyes of the past pupils, the GKP curriculum goals met their needs, and finally, if there were any suggestions that past pupils would recommend to enhance the programme for present or future students.

It is anticipated that this study will add to current New Zealand research in the education of gifted students as little research has been undertaken on the impact of one-day withdrawal programmes of this nature. It is also anticipated that the students' voice will allow the Gifted Kids Programme and any other providers or schools offering withdrawal programmes, to reflect on present programming and encourage the use of student voice in programme evaluation.

This research explored the following questions;

How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the following areas;

- to identify and develop strengths and interests,
- to develop friendships with like-minded peers,
- to broaden and deepen their learning,
- to acknowledge and embrace new challenges, and
- to strive for personal excellence.

In retrospect, what recommendations would Alumni students suggest to GKP?

1.8 Research Boundaries

It is important to clarify the boundaries of this research. The aim of this research was to highlight the students as the centre of this programme and to allow their voice to inform readers of the value of their GKP participation from their individual perception. It does not include the voice of the teacher, home schools or families and therefore must be viewed as only part of a whole picture, albeit a valuable and worthy piece.

The research does not attempt to evaluate the overall effectiveness of the curriculum delivered by GKP, to make any conclusions about the quality of the teaching offered nor to compare the different teaching and learning classrooms (Units) to each other. However, as the research is based on the goals and therefore programme delivered by GKP, inference of effectiveness will be made through the students' responses and comments. The expected outcome is enhanced understanding of one perspective, that of the students, in the hope that this will assist with ongoing programme development.

1.9 Organisation of Thesis

Chapter One: Introduction, this chapter introduces the thesis and establishes the setting for the study. It includes an overview of content and outlines the research questions.

Chapter Two: Background, this chapter introduces and explains the Gifted Kids Programme, and gives the reader necessary information to put the research into context.

Chapter Three: Literature Review, this chapter presents a summary of findings from a review of literature related to gifted education, withdrawal and out-of-school provisions for gifted students.

Chapter Four: Methodology, the methodology used in this research is explained and examined in this chapter. This includes explanations on use and descriptions of methods used.

Chapter Five: Results, this chapter analyses the data results and presents the findings.

Chapter Six: Discussion, this chapter discusses the results in relation to the literature review and to curriculum for gifted students.

Chapter Seven: Conclusion, this chapter concludes the research, clarifies limitations and makes recommendations in regard to withdrawal and pull out programmes.

1.10 Summary

Whilst this research is targeted at past-pupils of an established outside-of-school gifted education provider, the data collated will be of interest not only to students past and present in GKP, the staff, Trust Board, sponsors and families but also to educators offering withdrawal/pull-out programmes and/or out-of-school provisions as options for their gifted students. It may also be of interest to those involved in running gifted education programmes where like-minded students are clustered together and the curriculum is specifically designed to fit the needs of gifted students. This research adds to a growing body of national research around gifted education and specifically adds a student voice to those of educators and administrators.

CHAPTER 2

BACKGROUND INFORMATION

2.1 The Gifted Children's Advancement Charitable Trust

Established in 2000 by Christine Fernyhough and Craig Anderson, the Gifted Children's Advancement Charitable Trust (GCACT) was designed predominantly to meet the needs of gifted students in low socio-economic communities. This establishment was in response to a need observed by the co-founders as they worked in low decile schools on a reading promotion programme, Books-in-Homes. The initial focus of the Trust was the establishment of one-day-a-week Units, hosted in low decile schools and the delivery of specialist gifted education to year 3-8 students one-day per week (GCACT, 2008b).

The Trust presently operates three entwined arms:

- The Gifted Kids Programme (GKP), a one-day-a-week specialist education programme for year 3-8 students;
- GiftNet, free professional development for schools who contribute to the programme; and
- GKP Consult, gifted education specialist services to schools needing support with in-school gifted education programmes, or clusters of schools wishing to set up their own one-day model.

The GCACT addresses important issues of equity regarding ethnicity and socio-economic status in gifted education. This is achieved through careful placement of teaching and learning classes, Units, in areas of lower economic means, the educating involved of schools on underserved population identification procedures and through the development of resources for gifted minority students (GCACT, 2008b).

In addition, GKP, as an organisation, is unique in New Zealand in that it prioritises links with communities by providing free professional development entitled GiftNet, to involved schools. This support is delivered in partnership with the MOE as part of a contestable fund: Talent Development Initiative (TDI) and in 2008 was entering its sixth

year of delivery. Professional development assists schools with developing and supporting their own programmes whilst ensuring sustainability within their own environments. This support is predominantly delivered through a format of mini-conferences where national and international experts plus researchers in gifted education are provided with regular forums to share their work, practical hands-on after-school workshops and access to a substantial gifted education library with resources addressing both theory and classroom practice. An additional section of GiftNet supports self-selected clusters of schools to specifically improve their in-class delivery of gifted education. These schools work as a group with mentors on specific goals particular to their own gifted population and needs (GCACT, 2008c).

2.2 Operation

The GCACT Board operates in a governance role for the organisation. Made up of representatives from both the business and education sectors it meets on a regular basis to discuss the operation of the Trust. An Executive Principal and two Associate Principals oversee the GKP units which are divided into northern and southern coverage areas, with each Unit having a lead teacher and class teaching staff. This Senior Management team also supervises the professional development delivery, run by a coordinator, and the direction of the general programme. A focus group of experienced staff has the responsibility for thinking critically and creatively on all aspects of GCACT delivery. This group works collectively to create amendments, suggestions and resources for the programme. In addition, the focus group looks at future directions for the organisation and for gifted education in New Zealand schools.

All staff meet collectively at least twice a year and within their geographical regions on a more frequent basis. The programme has annual internal effectiveness review procedures and uses time together to collate and discuss programmes offered and to undertake professional development with their staff. Recommendations and suggestions are followed up by the focus group and the senior management team.

The Trust is a not-for-profit charitable trust, funded primarily by donations from businesses, individuals, families, and school contributions, plus grants from philanthropic organisations and contestable funding from the Ministry of Education.

2.3 The Gifted Kids Programme (GKP)

GKP opened with one class, one-day-a-week in Tamaki, Auckland in 2000 and grew rapidly to the 31 one-day classes operating in 2008. Teaching and learning Units operate out of nine host schools located in Whangarei, Auckland, Manukau, Rotorua, Lower Hutt and Wellington, all found in the North Island of New Zealand. In 2008, approximately 450 students attended the programme, coming from an estimated one hundred and ten different primary or intermediate schools. Some of these schools have been involved in the programme since its inception (GCACT, 2008b).

Students are referred to the programme based on outstanding academic and/or creative performance or potential ability, identified by their school and/or family and following a workshop with the specialist GKP Entry Selection team. The workshop is a three hour session co-ordinated by three GKP educators, experienced in the identification of gifted children. Students, in groups of up to 16, participate and interact in a range of activities designed to identify characteristics of giftedness most suited to the curriculum offered by GKP (GCACT, 2006).

Data from school, home and workshop is gathered, triangulated and compared to GKP Entry Selection benchmarks. The Gifted Kids Programme defines a gifted child, as “one who has the innate ability to achieve at an exceptional level, in relation to his/her same age peers, in one or more areas. This ability may be demonstrated or potential” (GCACT, 2008a, p. 5). Therefore students are accepted onto the programme both for performance and for potential. If necessary more data is requested from school or discussion undertaken between home and/or school. In addition students may be placed on the programme on a trial basis to ensure the programme is able to meet their needs. The data gathered on entry selection is used as the basis of each student’s Learning

Profile. The profile is collated by the GKP teacher and includes information on learning styles, strengths, talent goals and relevant social and emotional issues.

Students receive enrichment and acceleration in a differentiated programme to suit their learning needs and strength areas. Talent development goals are set annually and a learning journal profile is collated over the year to share progress and achievement. Both the goals and portfolio are shared with student's home school teacher and family (GCACT, 2000b).

2.4 The GKP Curriculum

Teaching staff across all classes, deliver a programme differentiated specifically for gifted students from years 3-8, via a GKP-developed curriculum, TALENT. Emphasis is placed on students interacting with like-minded peers to experience and embrace talent development, abstract and complex thinking skills, and a conceptual curriculum through the exploration and support of their personal social and emotional development (GCACT, 2008a).

The core goals for the students attending the programme are that students:

- Engage with learners of like minds;
- Strive for personal excellence;
- Acknowledge and embrace new challenges;
- Develop talents and explore strengths and interests; and
- Participate in authentic and conceptual learning experiences resulting in depth and breadth of learning (GCACT, 2008a).

The curriculum is research-based and has been evaluated and reviewed annually since its inception in 2003 (GCACT, 2007b). Through the TALENT curriculum GKP provides students with academic enrichment, accelerated learning and creative extension in addition to social, emotional, and cultural support that matches their unique needs. The curriculum challenges students individually whilst enabling them to work with like-

mindful peers and specialist teachers and mentors. It provides holistic educational instruction and promotes potential as well as performance. Participation in the programme contributes to academic achievement while increasing self-esteem, self-motivation and developing social skills. It assists with students feeling 'normal' and has a positive impact on behaviour problems and issues such as perfectionism, sensitivity and underachievement (GKP, 2008a).

The GKP curriculum is an ever-evolving document and has developed significantly from the programme's beginnings in 2000. The initial core of the programme predominantly dealt with higher-level thinking skills. In 2004 the programme introduced a conceptual curriculum approach, then in 2005 GKP formalised its talent development focus. The next major step was in 2006 when the curriculum saw the strengthening of its core goals and in 2008 saw the introduction of more formalised social and emotional support (GCACT, 2008a). Consequently many of the alumni students will have participated in slightly different GKP experiences. In 2007 the programme underwent a full curriculum review which resulted in further amendments to the curriculum and goal changes in 2008 (GCACT, 2008a). The goals did not change dramatically yet reflect more accurately the present curriculum.

The 2009 goals are now that students attending the Gifted Kids Programme will interact with learners of like-minds to:

- Develop an understanding of themselves as gifted individuals;
- Explore and develop gifts, talents and interests;
- Engage in abstract and complex learning;
- Experience and embrace new challenges; and
- Create and innovate (GCACT, 2009).

Curriculum Components

The TALENT curriculum consists of four equally advocated cornerstones. The document advocates the supported development and eventual combination of these cornerstones in a variety of authentic settings:

- i) Affective Development, which allows students to explore issues relating specifically to social and emotional aspects of giftedness,
- ii) Mental Edge, the development of skills and strategies to promote higher order and abstract thinking processes,
- iii) Conceptual Curriculum, in which an annual concept is explored through generalisations and a variety of contexts,
- iv) Talent Development, the deliberate focus on individual strengths and abilities in order to actualise gifts and talents. At the time of this research the Affective curriculum component had just been formally detailed in the curriculum document (GCACT, 2009).

2.5 The Gifted Kids Programme Alumni (GKPA)

The purpose of the GKPA is partially to assist students with their transition into secondary education but also to provide them with a forum to meet and share their experiences post-GKP. These sessions are held informally at GKP Units or in combination with local Universities to promote tertiary education and career planning awareness. Additionally from the perspective of the organisation, a benefit of keeping in touch with these pupils is to see how they fare at college and after college, to offer support when it might be deemed necessary and to assist with ascertaining the value of attendance at GKP (GCACT, 2004).

The GKPA was first established in Auckland in 2002 and comprised fewer than twenty year nine and ten students. This group met socially with Board members and staff at an informal gathering hosted at Auckland University by the University recruitment team. Past-pupils were eager for this interaction and spoke favourably at this meeting about the founding of an alumni (GCACT, 2007b). This group has continued to meet and invitations go out to all eligible Auckland and Northland past pupils.

In 2003 the Wellington GKPA was established, once again with links to a tertiary institute, Victoria University. The Wellington Alumni meets a minimum of twice a year, once informally at one of the GKP Units when students talk about college and are

involved in GKP type activities, then again at the University for lectures, workshops and orientation type activities and often a social outing towards the end of the year. Rotorua established their alumni at the start of 2008.

All past-pupils are invited to be part of an alumni but can also request they be removed from the mailing list at any stage after they have left GKP. The majority of alumni students tend to be in their first one or two years after leaving GKP, although there is a smattering of older aged students. Many of the older ones are involved in sport or out of school employment but send their apologies to meetings. In addition to the organised meeting times the alumni students are invited to major GKP events and often compete in chess tournaments and help out with community sharing nights.

2.6 Summary

The GCACT exists to support schools in their delivery of gifted education. For most schools this support comes in the dual format of one-day-a-week withdrawal/pullout classes for gifted students and professional development for their staff. As an out-of-school provider GCACT needs to provide information to all stakeholders that exhibits not only core goals and curriculum but also the effectiveness and value of the programme offered.

CHAPTER 3

LITERATURE REVIEW

3.1 Introduction

One current debate among educators working in gifted education focuses on the format for delivering instructional services to this group of students (Brody, 2004; Clark, 2008; Riley et al., 2004; Robinson, Shore & Enersen, 2007). Researchers generally agree the core curriculum in schools does not adequately meet the needs of these students and a differentiated approach needs to be taken (Borland, 1989; Cathcart, 2005; Clark, 2008; Feldhusen & Moon, 1992; Gallagher, 2008; Maker, 1982; Tomlinson 2003; Winebrenner, 2001). Research also supports the benefits of like-minds being together (Cathcart, 2005; Clark, 2008; Fiedler, Lange & Winebrenner, 1993; Kulik and Kulik, 1997; Moon, Feldhusen & Dillon, 1994; Rogers, 1993, 2002, 2006a, 2006b; Vaughn et al., 1991). Of dispute however is whether gifted students' needs are best met through specialised programmes for high ability groups or inclusive mixed-ability classrooms.

Specialised programmes often take place outside the classroom, where students of similar high ability are placed together for instruction. Withdrawal or pull-out programmes are the most commonly implemented approach for ability grouping gifted learners (Borland, 1989; Riley et al., 2004; Roberts, 2005; Rogers, 2002; Schroth, 2008). In New Zealand, there is a Ministry of Education focus on educating gifted students in inclusive, mixed-ability classroom settings through differentiated instruction (MOE, 2000; Riley et al., 2004).

In the past two decades research completed in New Zealand on provision for gifted and talent students has identified enrichment delivered through withdrawal programmes as a most common strategy employed by schools to meet the needs of their gifted students (ERO, 2008; Keen, 2003; Moltzen, 1993, 2004; Riley et al., 2004). However there is limited research available on out-of-school withdrawal programmes.

This study explores the experiences of students who attended an out-of-school withdrawal programme, the Gifted Kids Programme, since its inception in 2000 to the year 2007, solely from the students' own viewpoints. It attempts to determine how students interpret this intervention programme both in regard to their education and to themselves as gifted individuals. This literature review is divided into three parts. The first looks at withdrawal programmes/pull-out programmes and out-of-school provisions as a means of catering for the needs of gifted students. The second part discusses best practice in gifted curriculum and the final section looks at the literature related to both programme evaluation and the use of student voice as a means to communicate effectiveness.

3.2 Provisions for Gifted

Over recent years an increasing amount of attention has been given to the needs of gifted students both nationally and internationally (Moltzen, 2004; Gallagher, 2007). How this has translated into effective educational programming within educational systems has often been dependent on the presence of, or lack of, government policy (Gross & Sleaf, 2001; Moltzen, 2004), teacher awareness and professional development (Dettmer, Landrum & Miller, 2006; Dixon & Moon, 2006; Gubbins, Westberg, Reis, Dinnocenti, Tieso, Muller, Park, Emerick, Maxfield, & Burns, 2002) and adequate resourcing, including funding and time (Gallagher, 2008; Riley, 2004a). Wide variances in these areas have both encouraged and limited recognition and programming for gifted students; however they have also allowed the issue to stay at the forefront of educational issues.

Gifted students' abilities differ from their peers to such a degree that differentiated curricula and instructional techniques are necessary to ensure students receive an education that allows for the same cognitive and affective growth that is accessed by other students (Cathcart, 2005; Clark, 2008; Gross, 2004; Karnes & Stephens, 2008; Neihart, 2003; Roberts, 2005; Rogers, 2006b). Provisions are built on basic principles of what is appropriate for gifted students. An effective curriculum for students who are

gifted is essentially any curriculum that has been modified or differentiated to meet their unique needs. The individual characteristics of each student serve as the basis for decisions on how the curriculum should be modified (Feldhusen, 1995; Maker 1982; VanTassel-Baska 1994; Winebrenner, 2001). A differentiated curriculum allows the teacher to respond to variances among learners and, with an appropriate match between task and profile, enables effective teaching and learning to occur. It is moving away from one size fits all, to what size are you? (Tomlinson, 1999).

A common way of providing such differentiation is through offering enrichment and/or acceleration. Both strategies when implemented correctly allow for depth of learning, skill growth and development of thinking skills (Davis & Rimm, 2004). Enrichment via a withdrawal programme is the most commonly utilised strategy, outside the regular classroom, for the gifted population in New Zealand (ERO, 2008; Riley et al., 2004).

Enrichment

“Enrichment is a broad term used to refer to program organisation that extends, supplements, and sometimes replaces aspects of the school’s structure” (Coleman & Cross, 2001, p. 298). As an educational term enrichment can be used to refer to programme delivery or to curriculum programming (Schiever & Maker, 2003). Purposely planned enrichment generally occurs outside of the regular class setting but within a school setting, the content and duration can be varied. However, the intent is to extend and challenge learners who have already mastered core content (MOE, 2000; Roberts, 2005, 2008a). An enrichment programme provides greater depth and/or breadth through offering challenge and growth in the area of a students’ giftedness (Roberts, 2005, 2008a; Schiever & Maker, 2003). In addition creative productivity is encouraged through the exposure to studies of interest, fields of study, mentors and exposure to advanced content, process skills and methodology (Renzulli & Reis, 1997). Rogers (2002) claims effective enrichment has three important learning steps, i) exposure, ii) extension and iii) in-depth mastery. In essence, enrichment is a programme offered to learners that is beyond what is traditionally available in their regular classroom setting (Roberts, 2005, 2008a).

Enrichment can be delivered in a number of formats including curriculum compacting, using a model such as the Renzulli Enrichment Triad Model (Renzulli & Reis, 1997), interest centres, anchor activities, enrichment clusters, web quests, or via withdrawal or pull-out programmes (Karnes & Stephens, 2008). Difficulties can occur during school enrichment programmes when the duration of the programme is short, the selection of appropriate students is not rigorous or there is a lack of understanding by educators of how to provide effective enrichment (George, 2003; Townsend, 2004).

Acceleration

“Acceleration occurs when children are exposed to new content at an earlier age than other children or when they cover the same content in less time” (Townsend, 2004, p. 290). Sometimes called vertical development, acceleration is most likely to be found within a classroom setting and, like enrichment, acceleration can also be a method of delivery or a curriculum model (Schiever & Maker, 2003). When related to gifted education acceleration is usually recommended for students whose academic needs are so advanced they cannot be met within the regular classroom setting (Karnes & Stephens, 2008). Fundamentally acceleration is an academic intervention that needs to be well planned to ensure that student readiness is matched with complexity of curriculum (Colangelo & Assouline, 2009).

There are a variety of common acceleration strategies or groupings that can be employed; early entrance, grade skipping, subject matter acceleration, telescoping, distance learning, advanced placement, curriculum compacting, dual enrolment and continuous progress (Karnes & Stephens, 2008). As a tool for differentiating, acceleration has been soundly and positively researched yet is widely under-utilised in the education system (Colangelo, Assouline & Gross, 2004; Gross, 2004; Rogers, 2002; VanTassel-Baska, 2005). This can partially be attributed to misunderstandings about how acceleration can be employed, with the majority of educators viewing it solely as grade skipping (Cathcart, 2005; VanTassel-Baska, 2005).

Acceleration v Enrichment

In the 1970's and 1980's acceleration versus enrichment was a highly debated topic (Brody, 2004). Subsequent research suggests gifted students would benefit from an integration of the two and that rather than being mutually exclusive, there are elements of both within each other (Brody, 2004; Kirschenbaum, 1992; MOE, 2000; Moltzen, 1993; Riley et al., 2004; Roberts, 2005, 2008a; Rogers, 2002; Townsend, 2004). Townsend (2004) implies that in fact one complements the other and using both allows greater flexibility to meet individual needs. Schiever and Maker (2003) go further in saying acceleration and enrichment are inextricably bound together. In New Zealand, research into school programmes indicated planned enrichment was more likely to occur than planned acceleration (Riley et al., 2004).

3.3 Alternatives or additions to the inclusive classroom

A means of providing enrichment and acceleration is through implementing withdrawal or pull-out programmes or accessing out-of-school providers. The basis of this type of provision is that students of like-ability are placed together with an adapted curriculum to increase learning outcomes (Borland, 1989; Kulik, 2003; Robinson, Shore & Enersen, 2007; Rogers, 2002; Schroth, 2008). These programmes may build upon, extend or be totally different from the regular activities undertaken by the student in-class (Riley et al., 2004).

A variety of different grouping strategies, either within the classroom, out of the classroom or possibly out of the school grounds, are recommended for gifted students. The most commonly employed options in grouping are:

- withdrawal programmes (also known as pull-out programmes);
- cluster grouping;
- regrouping for specific subject instruction;
- within class groups;
- cross year level grouping;

- mixed ability cooperative grouping;
- special classes; and
- special schools (Rogers, 2002; Schroth, 2008).

Within class, pull-out programmes, special classes and special schools are the most frequently employed strategies for gifted students (Delcourt, Cornell, & Goldberg, 2007) with the withdrawal/pull-out option being the most implemented programme (Swiatek & Lupkowski-Shoplik, 2003). For the purpose of this study only withdrawal/pull-out programmes and out-of school provisions were of relevance for comparison.

Like-Ability

One of the strongest arguments for the use of ability grouping and special classes is the desire for like-minded students to be able to interact (Winner, 2000). Such grouping is substantiated by research demonstrating powerful cognitive gain (Kulik & Kulik, 1992; Rogers, 2002; Vaughn et al., 1991) and smaller affective gain (Rogers, 2007). Self-concept is built through interaction with peers (Cathcart, 2005; Clark, 2008; Robinson, et al., 2007) as frequently gifted students build stronger relationships with their intellectual peers than their chronological peers (Adams-Byers, Whitsell, & Moon, 2004; Davis & Rimm, 2004; Silverman, 2003). Having like-minded friends allows gifted students opportunity to find true intellectual challenge and to develop a better understanding of themselves (Neihart, 2003; Silverman, 2003). In addition some research points to gifted students perceiving themselves as more academic within a like-ability setting (Gross, 1999; Olszewski-Kubilius, 2007) and therefore more likely to demonstrate greater motivation and set higher academic goals (Neihart, 2003).

3.4 Withdrawal or pull-out programmes

Definition

Withdrawal or pull-out programmes are defined by ERO (2008) as programmes where “students are regularly removed from their regular classroom for work with a specialist teacher, participation in a mini-course, seminar, educational field trip or interactions with a special guest” (p. 54). The classifications, withdrawal and pull-out, are often used

interchangeably. In essence like-ability students spend the majority of their time in the mainstream class setting then a specified time in the withdrawal setting, where they receive specialised tuition with other identified gifted and talented learners (Borland, 1989; Clark, 2008). As one alternative, noted on the MOE (2000) provision continuum for gifted students, these programmes may run within or outside of the regular school setting (MOE, 2000). The duration of a withdrawal/pull-out programme varies as they may last for a few hours, a half-day, full-day, a few weeks, a month, a term or a year.

Purpose

Withdrawal/pull-out programmes exist in schools as a means of ability grouping in order to offer enrichment and/or acceleration (VanTassel-Baska, 1992). They are also recognised as a means of supporting social and emotional needs (Delisle, 1995, 1999; Robinson, 2003; Silverman, 1993). As a modification of school organisation, the major purpose is to provide enriching experiences through adding to options available to class teachers (Clark, 2008; Karnes & Stephens, 2008).

Mainstream classroom conditions make it difficult for teachers to adapt instruction for the wide variance of needs in their classes (Cathcart, 2005, 2006; Gagne, 2009; Gallagher, 2007). Impediments include large class sizes, demands on teacher time, lack of teacher skills and poor understanding of gifted curriculum, and these issues frequently result in appropriate differentiation for gifted learners not taking place (Archambault et al., 1993; Westberg et al., 1993; Westberg & Daoust, 2003; Whitton, 1997). In addition Tomlinson (2003) states teachers often have negative attitudes about gifted learners or perceive the gifted will make it on their own. These negative attitudes can impinge on services offered to gifted students (Davis & Rimm, 2004; Geake & Gross, 2008; Rakow, 2005). The use of “well thought out learning experiences (in the form of withdrawal/pull-out programmes) can capitalise on students strengths and interests” (MOE, 2002, p. 36), in a way that is difficult to replicate in a mainstream classroom environment (Keen, 2004).

Key Elements

The key elements of a withdrawal/pull-out programme are:

- outside of the regular classroom;
- a specialised educator;
- like-ability students;
- smaller class size;
- curriculum and instruction differentiated to students' needs;
- elements of individualisation;
- more complex thinking strategies and inquiry procedures than would be available in their regular class;
- acceleration and enrichment;
- opportunities to work in areas of interest and/or ability.

(Rogers, 2002; Strip, 2000)

Advantages

Major advantages of withdrawal/pull-out programmes focus on ease of implementation, interaction with other gifted students, specialised teachers and differentiated curricula (Cox & Daniel, 1984). Feldhusen and Saylor (1990) discuss that in order to develop educational conditions to best meet the needs of gifted students, options of special schools and/or special classes are necessary. This is supported by the research of Archambault et al. (1993), Westberg et al. (1993), and Westberg and Daoust (2003), who found classroom teachers were unable to deliver appropriate differentiation in a heterogeneous setting. Smee (1999) concludes for some gifted students remaining in a chronological age class setting can severely limit the ability to reach their potential, there is little room to grow and the level of challenge is not commensurate with their abilities. In addition, Silverman (1993) believes gifted students in mainstream classes, where the curriculum is inadequate to meet their needs, are often bullied, mocked and socially isolated.

Table 1: Advantages of Withdrawal/Pull-out Programmes

	Olszewski-Kubilius, Grant, Seibert (1994) Olszewski-Kubilius & Lee, (2004)	Moon, Feldhusen & Dillion, (1994)	Vaughn, Feldhusen, Asher (1991)	Kulik & Kulik (1992)	Renzulli & Reis (2004) SEM	Rogers (1991, 1997 update)	Davis & Rimm (2004)
Increased self esteem/Self perception/Self efficacy	Y	Y	-	-	Y	Y	Y
Social support through like-minds	Y	Y	Y	Y	Y	Y	-
Increased learning due to intellectual challenge/ abstract/ in-depth	Y	Y	Y	Y	Y	Y	Y
Raising of self expectations	Y	Y	-	-	Y	-	-
Increased risk taking	Y	Y	-	-	Y	-	-
Growth in acceptance of others	Y	-	-	-	Y	-	-
Creativity	-	Y	Y	-	Y	Y	-
Development of talent (interest/strength)	-	Y	Y	-	Y	-	-

NOTE: Y indicates 'yes' this feature was evident in the research.

Table 1 compares withdrawal/pull-out strength areas from a variety of researchers. When withdrawal programmes were differentiated to meet the needs of gifted students

substantial academic gains were found by all researchers. Rogers (2006) in expanding on her meta-analysis study of 1991 and 1999, describes a range of effect sizes (ES) depending on the subjects being taught, an ES of .30 or higher is considered to have a substantial impact on student's learning. Her studies found the withdrawal/pullout grouping gain was .65 when studies related directly to in-class work, .44 when focusing on critical thinking skills and .32 when looking at creativity activities. This compares favorably to her findings of a .49 gain for elementary students in full time ability grouping and a .34 gain for in-class grouping. The cluster grouping gain was .62. This type of ability grouping is where the top 5 to 8 students are deliberately placed together for instruction in a mixed ability classroom.

Vaughn et al. (1991), in completing a meta-analysis of nine withdrawal/pull-out programmes, found significant positive achievements particularly in critical and creative thinking skills. The research of Kulik and Kulik (1992, 1997) also demonstrated academic advantages of ability grouping, when accompanied by advanced conceptual curriculum; however the gain was described more through the curriculum followed than the type of grouping used. Their later meta-analysis looked at five different grouping strategies with 'enriched classes for the gifted and talented' demonstrating a .41 gain.

Davis and Rimm (2004) noted that withdrawal can contribute to increases in skill and knowledge but also in positive self-concept development. Like-minds together allow for the programme to be more closely developed to meet individual needs. Positive social interaction as an outcome is supported by Cohen, Duncan and Cohen (1994), who found enhanced peer relationships developed within a pull-out setting. Students were found to have greater social acceptability, social competence, and greater awareness of friendships and were perceived less often as aggressors or victims.

Limitations

Despite withdrawal/pull-out programmes being commonly used in gifted education internationally there is little empirical little research related to the effectiveness of this approach (Riley et al., 2004). This paucity, partially due to the wide variation in what is

offered in withdrawal/pull-out programmes (Cathcart, 2005; Winebrenner, 2001) has made them difficult to measure in terms of effectiveness, to compare to each other and to defend as a viable ability grouping option for gifted students.

Widespread criticism of withdrawal/pull-out programmes relates to fragmented delivery, a mismatch of needs and instruction, poor communication with the class teacher, and an inappropriate curriculum, as seen in Table 2 (Borland, 1989; Clark, 2008; Cox & Daniel, 1984; Moon et al., 1994; Vaughn et al., 1991). Ideally withdrawal/pull-out programmes should extend to work being undertaken in the regular classroom however this is rarely the case. Rogers (2002) confers, many withdrawal/pull-out programmes are poorly planned and lack appropriate curriculum which results in little substantial academic effect or lack necessary accelerative focus to truly challenge the gifted (Davis & Rimm, 2004; Kulik, 2003).

In addition there are concerns about the possible social and emotional effects of students being withdrawn from their regular class (Clark, 2008; Davis & Rimm, 2004). Bevan-Brown (1996) cautions in the New Zealand setting that students of a minority culture can feel more isolated and 'singled-out' in a withdrawal/pull-out setting if they are the only member of their culture represented within the group.

Of greatest concern is that if withdrawal is the only provision implemented it will seldom meet the students' needs (Clark, 2008; Gagne 2009). Recommendations for the use of withdrawal/pull-out programmes include ensuring they are used in combination with other strategies, planning curricula appropriate for students' needs, including measures of integration with the students' regular programme (Moon et al., 1994; Riley, et al., 2004; Rogers, 2006a, 2006b)

Table 2: Limitations of Withdrawal/Pullout Programmes

	Cox & Daniel (1984)	Moon, Feldhusen, Dillon, (1994)	Vaughn, Feldhusen, Asher (1991)	VanTassel-Baska (1989, 1992)	Davis & Rimm, (2004)	Clark (2008)	Bevan-Brown (1996)
Fragmented instruction / poor communication with class	Y			Y		Y	
Lack of depth and or breadth, rigour/filler, more of the same		Y		Y	Y	Y	
Mismatch with students needs		Y	Y	Y		Y	
Disruption for student/missed instruction	Y	Y		Y		Y	
Costly, specialist and resources							
Isolated students		.			Y	Y	Y
Part time solution	Y			Y			
Increased boredom in class		Y					

NOTE: Y indicates 'yes' this feature was evident in the research.

3.5 Out-of-School Provisions

Definition

An out-of-school provision is an opportunity or programme beyond the regular or traditional classroom and often school setting (MOE, 2000; Riley, 2007a, 2007b; VanTassel-Baska, 2007). Using an out-of-school provision to provide or support a gifted programme involves accessing resources, mentors and programmes offered within the wider community (Riley, 2007a; VanTassel-Baska, 2007). Sewell (1996) advocates “genuine issues, problems, and people in the local community are a valuable and often underutilized resource for gifted children” (p. 230). Out-of-school provisions can fill in the ‘missing gaps’ and foster talent development for students who have needs that are supplementary to the regular school environment (VanTassel-Baska, 2007).

Out-of-school provisions can be divided into two categories; school-based or community-based. School-based provisions are designed to work within the curriculum and occur during the regular school timetable, eg: one-day-a-week programmes, correspondence school, distance learning, competitions such as Future Problem Solving. Community-based programmes could include after-school, weekend or holiday programmes, camps and gifted groups. Some community providers could fit in to both categories such as local museums or galleries.

In New Zealand, educators are encouraged to offer a continuum of opportunities for gifted students, beginning with the classroom context and moving beyond if necessary (MOE, 2000). Out-of-school provisions for gifted students generally include activities beyond the normal school hours such as after-school clubs, weekend and holiday programmes or camps and competitions (Riley & Meuli, 2007; Rogers, 2002) but may also include off-site educational providers such as distance learning, virtual learning, one-day programme providers or Learning Experiences Outside the Classroom (LEOTC) provisions which occur during the school day (Riley, 2007a).

New Zealand research in 2004 (Riley et al.) concluded 46% of schools used out-of-school provisions as part of their provision for gifted students. The schools were

predominantly primary and secondary based and of these 39% accessed a one-day-a-week programme such as the Gifted Kids Programme or the Gifted Education Centre. The majority of programmes offered in this research were academic or creative based and catered for individuals as opposed to teams or groups (Riley, 2007b).

Purpose

Education does not exist in a vacuum; family, school and the wider community are all involved in meeting the needs of gifted students (Freeman, 2002; Keen, 2004). Like the performing arts and sports, which have long been nurtured both inside and outside of the school setting, there are a number of out-of-school provisions which exist to complement and supplement programmes offered within the traditional education environment (Freeman, 2002; Riley, 2007a). For gifted students these out-of-school provisions are often able to provide the additional stimulus, specialists and authentic environment that schools find difficult to replicate. Olszewski-Kubilius and Lee (2009) state advanced curriculum with faster paced instruction matched to student abilities, access to sustained intellectual peers, challenging classes and specialist teachers as the four main purposes for the existence of programmes outside the school environment.

Key Elements

The key elements of an out-of-school provision are:

- the local or extended community;
- specialised educators and/or mentors;
- specific educational purpose;
- like-ability students;
- specialised curriculum;
 - advanced content and pace,
 - exposure through enrichment,
 - talent and interest development.

(Riley, 2007a; Rogers, 2002; Treffinger et al., 2004; VanTassel-Baska, 2007).

Advantages

Out-of-school provisions for gifted students have many of the same advantages, and limitations as do in-school withdrawal/pull-out programmes. They are also equally difficult to compare (Freeman, 2002). In addition there is frequently an overlap between what happens at school and what happens in an out-of-school provision (Freeman, 2002; Riley, 2007a; VanTassel-Baska, 2007). Freeman (2002) also notes the accessing of specialists within the community is an international trend that is allowing greater programme flexibility, authenticity and potential career development.

Out-of-school provisions can enhance self-confidence, self-esteem, motivation and personal responsibility; students are viewed in a different light and are able to make different choices about their learning (Olszewski-Kubilius & Lee, 2004). Community provisions are seen to support social networking amongst families providing support not just for the student but for their parents and siblings as well (Olszewski-Kubilius et al., 1994; Rogers, 2002).

If the provision matches a student's interest or talent and provides an appropriate curriculum then both cognitive and affective gain will be made (VanTassel-Baska, 2007). United States research into out-of-school provisions is the most prolific internationally partially due to the length of time these services have been operating (Freeman, 2002). The provisions are largely community based and research into these indicates above average or exceptional achievement, increased ability in thinking skills, positive attitudes and enjoyment, the setting and reaching of higher goals, leadership development and long-term friendships with peers (Enersen, 1993; Moon et al., 1994; Olszewski-Kubilius, 2007).

Limitations

A lack of follow up back at school, funding, unified identification, equitable access, as well as difficulties in evaluating effect due to the overlap with school programmes (Freeman, 2002; Olszewski-Kubilius, 2007; VanTassel-Baska, 2007) are seen as major limitations of out-of school provisions. Evaluation can also be difficult as the

programme is planned and provided away from the regular class teacher (Freeman, 2002). Montgomery (2001) queries whether transfer of knowledge and/or skills eventuates and believes “it may be good for the students at the time, but lacks any kind of performance or transferability” (p. 262).

In addition VanTassel-Baska (2007) claims out-of-school provisions may weaken school based opportunities and ownership, are heavily dependent of schools for identification, can make students/families dissatisfied with their school and in some areas have attracted the “for profit sector” (p.10) which may confuse the perception of schools and families.

Table 3 demonstrates potential strengths and weaknesses as collated by Riley et al. (2004) in Ministry of Education research. The bold type indicates items that match those of withdrawal/pullout programmes offered within the school setting but outside of the regular classroom.

Table 3: Potential Advantages and Limitations of Out-Of-School Provisions

Potential Advantages	Potential Limitations
<ul style="list-style-type: none"> • Alleviates boredom • Interaction with like-minded peers • Differentiated curricula to develop students’ interests and strengths • Labels the programme, not the student, as gifted • Students, teachers and parents enjoy the opportunities for recognition and provision • Allows other students an opportunity to shine when gifted students are removed from the school • Lower student: teacher ratio • Highly visible with potential for positive publicity • Ease of implementation of a gifted provision (for schools) • Requires a limited number of specialist teachers (in schools) 	<ul style="list-style-type: none"> • Fragmented instruction • Lack of articulation with regular curriculum • Lack of continuity, one-off • Lack of substance and rigour • Disruption to school routines, including interruption of preferred activities (for children) • Missed instruction: ‘double dose’ of work • Part-time solution to giftedness • May not address individual needs • Isolation from cultural peer group • Costly in terms of personnel and resources, and for students • May be perceived as ‘the gifted programme’ leading stakeholders to limit other opportunities <p>Riley et al. (2004)</p>

Rogers (2002) recommends out-of-school provisions should provide opportunities for:

- advanced learning opportunities in appropriate areas of interest and/or talent;
- like-mind/like-ability interaction plus interaction with people of varying ages and abilities;
- elements of choice and enrichment offered in a range of learning styles;
- communication, memory and problem solving techniques; and
- help students feel comfortable about their identity and the world they live in.

VanTassel-Baska (2005) tightens this guideline by stating programmes should be integrated with other approaches, follow a planned differentiated curriculum, be culturally appropriate, regularly evaluated, plus include close communication with classroom teachers and opportunities for their professional development. Riley (2007a) cautions programme benefits and challenges are speculative and variable from programme to programme. Greater research is needed in New Zealand on the effectiveness of out-of-school provisions offered to warrant the high percentage of schools utilising their services (Riley, 2007a).

One-day-a-week programmes

One-day-a-week programmes are both withdrawal/pull-out and out-of-school provisions, although some may be offered in the school setting. In New Zealand there are two charitable trusts which offer programmes to primary and intermediate aged students, the Gifted Kids Programme and the Gifted Education Centre (formerly known as the George Parkyn Centre). These programmes provide access to specialised curriculum and educators for approximately 1000 students each year. There have been no published empirical studies completed on these programmes nor do they have published effectiveness research aside from anecdotal reports (Riley et al., 2004). Both programmes claim to offer like-ability students an opportunity to be cognitively challenged within a responsive specialist environment (Riley et al., 2004). The ERO report (2008) advises it is important to share educational goals and effectiveness measures with out-of-school providers and suggests schools involved in the report need to improve communication between these programmes and the students' regular school.

3.6 Effective Curriculum for Gifted Students

Both withdrawal/pullout and out-of-school provisions claim their strengths are based on the prerequisite of an appropriate planned and differentiated curriculum. An effective curriculum for students who are gifted is essentially any curriculum that has been modified to meet their unique needs (Tomlinson, 2003). These individual characteristics of each student must serve as the foundation for decisions on how the curriculum should be adapted (Feldhusen, 1995; Maker & Nielson, 1995; VanTassel-Baska, 1994; Winebrenner, 1991). A differentiated curriculum allows the teacher to respond to variances among learners as an appropriate match between task and profile enables effective teaching and learning to occur.

Gifted students have a number of generalisable cognitive characteristics: rapid learning in some areas, ability to grasp complex and abstract concepts, advanced verbal ability, and well-developed thinking skills (Clark, 2008; Gross, 2004; Renzulli, 1986). Whilst Reis (2008) cautions educators to avoid the use of a single checklist to identify gifted students as the manifestation of characteristics across populations, culture and time can alter, Johnsen (2009) claims knowing the characteristics of gifted learners is the first step in identification. Attention to diversity of talent, the dynamic concept of giftedness, under-representation and early identification are issues that need addressing when identifying students needing additional support (Johnsen, 2009).

Rogers (2002) states the following criteria as necessary to match a differentiated curriculum with the learning needs of gifted students:

- daily challenge in their specific areas of talent;
- regular opportunities to work in their areas of passion and talent;
- various forms of acceleration;
- opportunities to socialise and learn with like-ability peers; and
- specific instruction, differentiated in pace, review, practice and content.

These criteria align with the differentiation features of VanTassel-Baska (2003a): acceleration, complexity, depth, challenge and creativity.

Talent Development

Gifted students benefit from being challenged and given to develop in their areas of passion, interest and/or talent (Piiro, 2000; Rogers, 2002). Gagne's (1985) research set the stage in education for a focus on talents. He proposed an underlying set of gifts such as intellectual, creative, socio-affective, perceptual-motor, and other unspecified abilities. With these basic abilities, the student interacts with catalysts such as teachers or parents and participates in learning, and practice experiences. With encouragement and support, a child's talents develop from these experiences.

VanTassel-Baska (2004) views talent development as focusing on the optimal not the minimal for each student. It is an example of appropriate differentiation; teaching students at suitable opportunities in their development and helping individuals improve themselves in contexts that matter to them (Piiro, 1999; VanTassel-Baska, 2004). Feldhusen (1998) states that students whose talents are at levels exceptionally higher than their peers require access to instructional resources and activities that are commensurate with their talents and it is only through this that students will reach their potential. Talent development focuses on students as individuals. It extends gifted students and is essential to their development as worthy human beings (Rogers, 2002).

The opportunity for regular practice or involvement, student interest and values, including passion and commitment, quality instruction accompanied by timely feedback and feed-forward are all essential elements advocated by VanTassel-Baska (1994). Modeling and mentorships can be focused on talent development and for gifted students demonstrate moderate to high effect sizes notably in the areas of cognitive development, self-esteem, and social understanding (Rogers, 2002). Ericsson and Liner (cited in VanTassel-Baska, 1994) suggest imitation of achievement, feedback from real life, preparation for specific events and reflection on past events and performances is needed to move students forward from one plateau to the next.

Complexity and Acceleration

Appropriate complexity can be obtained through programme differentiation (VanTassel-Baska, 2003a). Content, process and product, as well as environment, are the most commonly recognised areas in which a teacher can manifest differentiation (Tomlinson, 2003; VanTassel-Baska, 2004). Content refers to the concepts, ideas, information and facts and can be differentiated through a variety of methods including acceleration, compacting, flexible pacing and level of depth (VanTassel-Baska, 2004). Differing the approach to process enables students to demonstrate a higher level of response. The goal is to stimulate thinking, questioning and metacognition and to think about issues, concepts and ideas in more abstract and complex ways. Other ways to support process differentiation are group interaction, simulations, flexible pacing, and self management. Demonstrating what students have learned can be undertaken using a wide variety of products. For gifted students more authenticity is necessary and desirable. Synthesising rather than summarising, being open to teacher, mentor, peer and self-evaluation in the process are all strategies a teacher can employ to improve outcomes.

Depth

In a deep approach to learning, ideas are understood as part of a conceptual overview so the student learns to organise understanding, and recall and use information more easily (Knapper, 1995). Depth for one child may not be the same as depth for another. This is similar for intensity. A deep approach to learning generally involves relating new experiences to previous experiences and provides a longer term retention of understanding, whereas the surface approach generally hinges on memory of key words without distinguishing principles clearly (Wenning, date unknown). Giftedness can be furthered only by participation in learning experiences that challenge and extend from the point of the child's talent, ability and interest (Clark, 2008).

Challenge

Borland (2003) believes the whole purpose of gifted education is to provide challenge. Gifted students can be offered challenge through the provision of an abstract, in-depth conceptual-based curriculum (Cathcart, 2005). "A concept is an idea that is timeless,

abstract, broad and can be shown through a variety of examples” (Erickson, 2001, p.5). Using broad concepts creates opportunities to learn and apply integrated and complex ideas (Berger, 1991). Gifted learners are global thinkers. They characteristically are more able to grasp abstract ideas and underlying principles (Cathcart, 2005). They need to see the big picture of tasks undertaken and work best from understanding the meaning and purpose of what they are doing (Cathcart, 2005; Riley, 2004b; Roberts & Roberts, 2005; Rogers, 2002). Many gifted students have a heightened awareness of how things are connected and can frequently transfer knowledge to a variety of different settings. This leads them to deeper levels of understanding that they can then apply to present and future life experiences. Challenge can also be offered through curriculum compacting, the depth and complexity of the curriculum or from being exposed to new learning in all areas, particularly talent.

Creativity

Creativity is a natural human process (Torrance, 1990) and a trait in gifted students that is hard to define, even harder to identify and harder still to evaluate, yet must not be ignored (Robinson et al., 2007). Within the classroom setting creativity needs to be celebrated, encouraged (Renzulli, 1986; Torrance, 1990), developed and explored through the teaching of strategy (VanTassel-Baska, 1989), problem setting and solving (Runco & Nemiro, 1994), and the provision of self-initiated learning (Torrance, 1990).

Curriculum Models incorporating Withdrawal/Pull-out

Three successful curriculum models with withdrawal/pull-out elements are the Schoolwide Enrichment Model (SEM) (Renzulli & Reis, 1997), the Levels of Service Model (Treffinger et al., 2004) and the Purdue Three-Stage Enrichment Model (Feldhusen & Kollof, 1978). These programmes have all been implemented within the New Zealand setting (Riley et al., 2004) and through research found to have positive academic and self concept gains (Rawlinson, 1996).

Schoolwide Enrichment Model (SEM)

The SEM model has been revised and adapted since its introduction in 1977 (Renzulli & Reis, 1997). Known as the “single most popular programming model” (Davis & Rimm, 2004, p. 150) the basic intention is to enhance curricula and opportunities through the development of talents in all students. Through exposure to multiple interrelated components gifted students are able to develop independence, higher levels and quality of learning experiences (Renzulli & Reis, 2009). There are three levels of participation. Type I allows students to examine an authentic problem within an interest area. Type II involves learning the applicable skills and strategies to engage in higher level thinking with the third level, Type III activities, being most suited to gifted students due to the opportunities for self-selection, advanced level of content and process necessary, authentic outcomes, self-directed learning skills necessary plus the development and use of task commitment, self-confidence and creativity to complete the tasks (Renzulli & Reis, 2009). Type III activities are most likely to be undertaken in a withdrawal/pull-out setting.

The SEM Model has been successfully evaluated for effectiveness (Renzulli & Reis, 1997). Its strength is the combination of both acceleration and enrichment. SEM is a researched model which is practical, yet flexible. It begins in the classroom and yet is open to a multitude of opportunities both within and outside the classroom setting. The activities undertaken are not isolated and can relate to and/or carry over into the regular in-class curriculum (Gentry, Moran & Reis, 1999). SEM is intended to include all students not to exclude them (Davis & Rimm, 2004), a factor which appeals to many educators.

The Levels of Service (LoS) Approach

The LoS approach, like SEM, was designed as a flexible and inclusive model with a gifted educational component that promotes the individual strengths and talents of students (Treffinger, Nassab & Selby, 2009). LoS involves a variety of programming services and builds upon students’ interests, strengths, problem solving and learning styles to differentiate instruction and the curriculum (Treffinger et al., 2004). There are

four major programming levels with the overview being services for all, many, some and few. Levels III and IV shift the focus to smaller groups of students with level IV responding to the students who demonstrate a need for an outstanding level of talent development, expression and productivity (Treffinger et al., 2009). As yet there is little empirical research on the LoS model although the programme has been operating for more than 20 years (Treffinger et al., 2007).

The Purdue Three-Stage Model

The Purdue Three-Stage Model was designed especially for gifted and talented students (Feldhusen, Koloff, Cole & Moon, 1988). The programme implements the development of creative and critical thinking skills, creative problem solving skills, and independent inquiry through a combination of acceleration instruction, talent development, independent learning and self-actualisation (Karnes & Stephens, 2008). Like the other two mentioned here the model is content-free and prescribes process rather than curriculum (Riley, 2004b). Students have choices (Moon, Feldhusen, & Dillon, 1994). The model moves through sequential stages of development: Stage 1 provides instruction and experience for advanced thinking abilities, Stage 2 develops creative problem solving and Stage 3 focuses on independent study skills (Riley, 2004c).

Both short and long term effects of this model have been researched. Kollof and Feldhusen (1984) found enhancement of creative thinking and self-concept at elementary level. Moon et al. (1994) completed a retrospective study of students who had participated in the Model for at least three years. This study found positive gains in thinking which appeared to have been transferred to other learning situations, plus growth in both self-motivation and independent learning (Moon et al., 1994).

3.7 Evaluating Gifted Programmes

Programme evaluation is the systematic study of the value, impact and success of services provided (Callahan, 2001). It is part of the process towards excellence that any organisation undertakes as part of ensuring effectiveness and appropriateness and is an

important measure of accountability. Therefore evaluation should be seen as of benefit to the organisation not as a threat to its existence (VanTassel-Baska & Feng, 2003).

However a gifted programme evaluation is defined, such as a process of determining adequacy (Mason & Bramble, 1978), or an examination of processes and products (Ross-Fischer, 1996), inherent in the process is the opportunity for beneficial growth and change (McCulloch & Searle, 2001). Carter (cited in Buchanan & Feldhusen, 1991) states one common evaluative characteristic regardless of the goal as, “evaluation seeks to gather information to help people make decisions” (p. 247).

Evaluation of a gifted programme is just as essential to the successful functioning of the programme as its educational goals and objectives (Monaco, 1999). Not only is evaluation an increasing educational trend (Carter, 1986) and an accountability requirement, it allows for reflection, growth and change in order to meet the needs of students. Evaluation should be formative, ongoing and not defined solely as an annual event or progress check, it needs to be an integral part of the design of gifted education programmes. Callahan (2001) claims this is rarely the case, that gifted programme evaluation is frequently neglected, executed poorly or often omitted. Callahan (2004) also suggests poor preparation and poor questioning lead to inappropriate and ineffective evaluation. Yet timely evaluation will identify both elements of effectiveness and propose future direction (Fetterman, 1993). To validate the worth of the programme there should be evident links between programme evaluation and programme improvement (Avery et al., 1997).

Common Elements

Although different evaluation processes will focus on different contextual areas, Alexander and Muria (cited in Monaco, 1999) believe there are four common elements.

Evaluation is:

- the basis for decision making and should lead to effective change;
- an ongoing process requiring systematic implementation;
- dependent on information;

- a collaborative effort.

VanTassel-Baska and Feng (2003) concur that a collaborative process of evaluation is a necessity. This is also supported by Carter and Hamilton (1985) who additionally highlight the importance of including all key decision-makers. Callahan (1995, 2001, 2004) repeatedly emphasises the importance of collaboration and advocates for internal and external stakeholder input, she also highlights the importance of timely evaluation. There is no disagreement that evaluation is a data gathering process and that analysis of the data can provide information relevant to the programme being monitored, improved and or enhanced for the best interests of all students. Effective evaluation needs to be designed with a clear and shared purpose and understanding. To assist with ensuring a purposeful evaluation can be classified according to desired outcome.

Outcome Evaluation

Tyler (1950) defines evaluation as “The process of determining to what extent the educational objectives are actually being realized” (p. 69). That is, to what degree the programme delivered to the target population meets the defined goals and needs of that group. Evaluation can be designed to measure programme effectiveness. Judgment is a fundamental component of this definition but the only criterion to which it is being applied is to the achievement, or lack thereof, of the outcomes. It is assumed that at the programmes inception, objectives and goals were included in the planning.

Evaluation as judgment.

Eisner (1991), House (1980), and Stufflebeam (1983) define programme evaluation as an assessment of the programme’s worth. In these instances evaluation is seen as a judgmental process. When it is viewed in this light, the evaluation can be perceived as an ordeal and a threat to the staff, parents and students involved in the programme which is being subjected to the evaluation, raising their anxiety levels.

Evaluation for information.

Programme evaluation can be viewed as a non-judgmental process of information gathering which provides information for decision making (Alkin & Ellet, 1985; Stufflebeam, Foley, Gephart, Guba, Hammon, Merriman & Provus, 1971). This evaluative definition is often more acceptable to those undergoing evaluation. Evaluation for information is a process of gathering data which is then conveyed to the decision-making community who utilise it to inform further decisions in regard to the educational programme. This approach indicates a shift from the judgmental approach to one of factual reporting.

Evaluation providing criteria for improvement

The Stanford Evaluation Consortium defined evaluation as “a systematic examination of events occurring in and as a consequence of a contemporary program - an examination conducted to assist in improving this programme and other programmes having the same general purpose” (Cronbach, Ambron, Dornbusch, Hess, Hornik, Phillips, Walker & Weiner, 1980, p.14). Cronbach et al. (1980) strongly reject any definitions of evaluation as a process whereby judgment is passed. This is a development of Cronbach’s (1982) evaluator as an educator concept. The above definition indicates that evaluation has a dual nature, it accepts that there is a judgmental role in the process, as identification of areas of weakness require critical judgment, but also highlights that once weaknesses are detected they can be used as areas for improvement, this style of evaluation is often described as formative evaluation and is common practice in education both with students and programmes (Chen, 2004; Spaulding, 2008).

Psychological/Sociopolitical Evaluation

In this setting, “Evaluation is being used to increase awareness of the programme and its special activities to motivate or shape the desired behaviour of evaluatees, or promote public relations” (Nevo, 1983, p. 119). While it is difficult to imagine evaluation being used in these scenarios, it is quite possible that evaluation in this sense could be used as a public relations exercise.

Administrative Evaluation

Dornbusch and Scott (1975) have stated that a 'somewhat unpopular' function of evaluation is its use merely for authority's sake. A person in a managerial position uses the evaluative process merely to demonstrate their position of authority. This is an abusive evaluation procedure and could have severe psychological repercussions on the evaluatee and the evaluator/s.

With the lack of a single, cohesive definition of evaluation it would be prudent to combine a number of elements from some of the above definitions to ensure that all the beneficial aspects of evaluation are included. An example would be combining the suggestions of Borland and Callahan.

Programme evaluation is a necessary and important aspect of gifted education. It is a disciplined inquiry that should have a clear purpose, be supported by a comprehensive written plan, examine all programme components using a range of tools and methods and be designed to make changes or adjustments to programmes according to outcomes (Borland, 1989; Callahan, 1991).

New Zealand Programme Evaluation

Research in New Zealand on the effectiveness of gifted provisions is sparse (Riley et al., 2004). Little literature exists to support either positive or negative outcomes for gifted students. In 1993, Callahan in a handbook on research into giftedness, cited New Zealand as an example of paucity in programme evaluation and that the few evaluations found were subjective judgments lacking hard data (Reid, 2004). Reid (2004) believes this scarcity can be attributed to New Zealand schools establishing their own provisions but not formalised programmes with goals and objectives. Reid (2004) is skeptical of the few evaluations that have been published, as he deems few of these "approach the degree of sophistication and rigour required to provide valid and reliable data to aid informed decision making" (p 433). The 2008 ERO report claims only 23% of schools reviewed had developed programme evaluation procedures, or means of measuring student outcomes. As mentioned, there has been no published research completed on

either of the two New Zealand based one-day-a-week gifted out-of-school providers (Moltzen, 2004; Riley et al., 2004).

3.8 Student Voice as part of Evaluation

The value of student perspective is often overlooked in the very programmes they undertake (Fullan, 1991). Both current and retrospective student voice adds a depth to reflection and evaluation that can only come directly from students. Delpit (1988) promotes the understanding that the teacher can not be the only expert in the classroom and therefore the collation of data from students is essential to a successful programme. Gifted students, many of whom are articulate by nature, are able to clearly communicate effective strategies and the aspects of effective environment that support their learning (Nettleship, 2006).

Few studies on gifted withdrawal/pull-out programmes have been undertaken from students' perspectives. The majority look at programmes via cognitive gains through tests scores (Kulik & Kulik, 1992; Moon et al., 2004; Rogers, 2002; Vaughn et al., 1991) and a survey response to measure affective gains (Rogers, 2002). This type of research assists with formative assessment for administrators and educators in order to make programme or instruction adjustments (Hertzog, 2003). This is supported by Poskitt and Taylor (2008) in New Zealand when educators discuss the benefits to their programme of involving students' views in assessment but not in evaluation of effectiveness.

The impact of individual student experiences has rarely been addressed (Hertzog, 2003). To understand the complexity and multiplicity of the outcomes of students' experiences, students need to be included on an individual basis in programme evaluation. Examples of studies completed from a student perspective are Subotnik and Steiner (1994) which primarily describe experiences after their involvement in a Talent Search programme. There are a number of domain specific studies (Moon et al., 1994, Renzulli & Reis, 1994) plus a larger volume of research on acceleration (Kulik & Kulik, 1992; Moon et al., 2004; Rogers, 2002, Vaughn et al., 1991). Although these studies include the students' perspective they generally take the format of a survey rather than open-ended

questions or interviews (Hertzog, 2003). Student perspective forms the sole basis of this research.

3.9 Summary

Conclusions drawn from this literature review provide a clear reminder that gifted students need instruction at a level and pace as well as conceptual complexity that matches their advanced levels of ability and achievement. Homogeneous grouping with intellectual peers, in relevant and flexible contexts and settings, provides positive cognitive and affective development for gifted students. Planned, relevant and authentic withdrawal/pull-out and out-of-school programmes can be used as an effective means of providing services as they are often more easily able to differentiate curriculum and to provide specialist educators, however they need to be rigorously planned and evaluated. Such evaluation is a key component of the success of any programme for gifted students and the students themselves need to be part of the reflective process.

Treffinger et al. (2004) state the greatest challenge for gifted advocates is not in definition or identification but in programming: “effective programming is the very heart of gifted education” (p.1). Like Cathcart (2006), they claim that teachers cannot deliver quality gifted education in isolation and that a variety of programming plus professional partnerships are a necessity for success.

The paucity of programme review in New Zealand and in particular, of withdrawal/pull-out out-of-school provisions, provided the motivation for this research into the Gifted Kids Programme and in particular from past student perspectives. This research aims to look at the measure of success as perceived by the GKP Alumni.

CHAPTER 4

METHODOLOGY

4.1 Introduction

As the literature review demonstrates, there is a lack of research evaluating the effectiveness of programmes for gifted and talented students, especially from the perspective of the students. These learners, for whom programmes are designed, often have limited opportunities for their voices to be heard. There is no published empirical research in New Zealand at present on the perceived value of the one-day-a-week programme model. This research examined the effectiveness of the Gifted Kids Programme (GKP), a one-day-a-week programme for gifted year 3-8 students in New Zealand, through the perspective of its past pupils. An evaluative research design was employed, as the customary rationale of this design is to provide information that can be used to guide modifications or adaptations with an emphasis on seeking to 'improve', rather than prove, what currently exists (Stake, 1980, 1995; Stufflebeam, Madaus, & Kellaghan, 2001). Employment of such a design can also contribute to a discipline's knowledge base (Merriam, 1998).

Educators acknowledge that programme evaluation is an essential element in maintaining quality programmes (Reid, 2004). One indispensable component of evaluation is reflection. Cooper (1999) states "reflection is the decision-making system's way of correcting itself" (p. 8) as it adds to the body of knowledge amassed for future use. Although reflection may, and should, take place at any point of the teaching and learning cycle, the impetus and primary purpose of this research was evaluative. It arose from the desire of the researcher to better understand the effectiveness of the Gifted Kids Programme from the perspective of students who had already experienced a minimum of one school year on the programme.

The researcher was also influenced by the New Zealand Ministry of Education gifted education research (Riley et al., 2004) which advised, "Despite the fact that pullout programmes are the most common provision world wide, the research related to

effectiveness of this approach in enhancing cognitive and affective outcomes for gifted and talent students is rather limited” (Riley et al., 2004, p. 94). This was reinforced again in 2008 with the Education Review Office report on gifted education in NZ stating, “Most schools did not evaluate effectively the impact of programmes and provisions for gifted and talented students, both internal and external to the school” (p. 38). As well as providing important feedback on the goals of the GKP programme, the researcher anticipated this study could also be utilised in increasing the understanding of withdrawal/pull-out and out-of- school programmes in New Zealand.

Tannenbaum (1983) states successful evaluation methods and measures relate directly to objectives of the programme under appraisal. This research investigates the following questions in order to align directly with the GKP programme goals:

1. How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the GKP core goal areas;
 - to develop friendships with like-minded peers;
 - to strive for personal excellence;
 - to identify and develop strengths and interests;
 - to acknowledge and embrace new challenges; and
 - to broaden and deepen their learning?
2. In retrospect, what recommendations would alumni students suggest to enhance or improve the GKP experience?

To answer these research questions a case study approach was applied involving data collection through an online survey and focus group interviews. This chapter outlines the methodology implemented in undertaking this research, justification for using qualitative case study as the approach, how the questionnaire was developed, the researcher’s role and the methods employed in implementation and analysis. The chapter will also clarify the nature of the students involved in the research and ethical procedures undertaken.

4.2 Research Design

Qualitative Research

Theory

Qualitative research is a complex and evolving field of inquiry (Agostinho, 2004). Its complexity arises from the embracing of human disciplines through multiple perspectives (Denzin & Lincoln, 2005). Evolution in this field has a reasonably short history in comparison to conventional scientific research methods (Erlandson, Harris, Skipper & Allen, 1993). Debate on the limitations of qualitative research often stems from the difficulties in being able to generalise on findings (Lincoln & Guba, 1985; Yin, 2002), and the bias or lack of skill of the researcher (Guba & Lincoln, 2005). Additional deliberation centres on what constitutes quality and rigour (Agostinho, 2005; Lincoln & Guba 1985; Yin, 2002).

The term qualitative research is used predominantly as an umbrella term to depict research undertaken in a natural setting to investigate a human or social issue (Creswell, 2003; Denzin & Lincoln, 2005; Neuman, 2007). It has also been used interchangeably with case study - an investigation on a particular matter (Merriam, 1998), grounded theory - the generation of theory from data (Neuman, 2007; Peine, 2003) and naturalistic inquiry (Lincoln & Guba, 1985, 2005), however it is not synonymous with any of these.

The approach to qualitative research is focused on the what, why, how and where of a project and attempts to find meaning or clarify understandings (Berg, 2004). It explores meaning, concepts, definition, characteristics and description (Berg, 2004; Dabbs, 1982; Glesne, 2006; Patton 2002). Qualitative research seeks to understand the world as it is experienced by those living and interacting within it, through looking at their perspectives and interpretations (Creswell, 2007). Patton (2002) advocates the fundamental characteristic of qualitative research is to understand the context from the participants' perspectives, not the researcher's.

Qualitative research embraces an array of methods and techniques. These research methods were developed in the social sciences to enable researchers to study cultural and social phenomena (Merriam, 1998). Examples of qualitative approaches are:

- action research, problem solving whilst researching cause and effect;
- case study, an attempt to explain further a particular phenomenon;
- grounded research, theory developed by a participant-observer; and
- ethnography, holistic research on human society (Creswell, 2003; Glesne, 2006).

Qualitative data sources include observation, interviews, questionnaire, documents and texts including the students' and researcher's impressions.

As qualitative research focuses on understanding, the resulting product is often richly descriptive (Merriam, 2002). Discussion and conclusions are a mixture of description and data analysis (Merriam, 1998). By nature it tends to produce large amounts of information which then need summarising (Myers, 2000). Summarisation is a requirement, as rarely are the collation methods and forms self interpreting (Bouma, 2004).

Case Study

The term case study is a generic term adopted in the investigation of an individual, group or phenomenon and is one of several approaches used in qualitative research. It can be undertaken quantitatively or qualitatively or through employing a combination of both methods. Case study is the gathering of enough information about a 'case' to effectively understand how it operates or functions (Berg, 2004). Stake (2006) describes it as not solely a methodological option but as a choice of what is to be studied. Merriam explains it as "an examination of a specific phenomenon, such as a program, an event, a process, an institution, or a social group" (1998, p. 9). Case study therefore is both a process of inquiry about the case and also the product of that inquiry (Stake, 2006 p.436).

In case study, emphasis is placed on observation, exploration and description, rather than a focus on universal truth (Berg, 2004; Glesne, 2006). It is rich in detail and in depth (Berg, 2004) and frequently new variables and questions for further research come from the completion of the study (Yin, 2002). Case study is generally the preferred method of research when investigating how and why questions, when the researcher has little control over the case and when the study has a contemporary focus within a real life context (Bassey, 1999; Stake, 1995; Yin, 2002).

A case study can be either a single-case study or a multiple-case study. The decision of which to use is dictated by the nature of the case and the research questions (Yin, 2002).

There are three types of single-case studies:

- i) critical case, testing a well formulated theory;
- ii) unique case, of which there is only one, for example, a rare disease; and
- iii) revelatory case, a case which has been previously inaccessible for research (Yin, 2002).

Stake (1995) characterises case study as intrinsic, instrumental, and/or collective (the study of more than one instrumental case). Although the type of case study being undertaken is dependant on the purpose of the research, these case 'types' are not mutually exclusive (Stake, 1995). An intrinsic case study focuses on a case that is of particular interest to the researcher, an instrumental case is pursued in order to advance understanding about a particular issue and a collective study is a combining of case studies to allow for possibility of stronger interpretation and greater generalising (Stake, 2006). When a case study is linked with a specific area of discipline or interest it can be named to reflect that interest, such as an historical case study, an ethnographic case study or an evaluative case study (Merriam, 1998).

The purpose and value of case study is explained by Merriam (1998). "A case study design is employed to gain an in-depth understanding of the situation and meaning for those involved. The interest is in process rather than outcomes, in context rather than a specific variable, in discovery rather than confirmation" (p. 19). Merriam (1998)

expands further on case study characteristics by describing them as “particularistic, descriptive, heuristic, and reliant on inductive reasoning” (p. 16). Particularistic refers to focusing on a specific phenomenon, descriptive means the end product is informative. Heuristic qualities discuss the growth in the readers understanding of the context under study. Inductive reasoning is necessary as both the researcher and reader are exposed to new understandings, concepts and relationships (Merriam, 1998; Stake, 1995).

Drawing from Yin’s (2002) case research design, the organisation of case study reflects four main stages:

- i) design definition;
- ii) data collection;
- iii) data analysis; and
- iv) interpretations and implication.

Research purposes, questions and theoretical assumptions are made prior to the selection of case, methods, instruments, and data sources. Next instruments are piloted and refined which is followed by the conducting of data collection. Finally during data analysis there is comparison of interpretation in order to elaborate or expand on findings.

Practice

In order to seek students’ perceptions about their experiences at GKP, a qualitative research approach, in a case study format, was applied as the primary means of data gathering. As with all qualitative research, the researcher was the primary instrument for data collection and analysis.

This study was partially a critical case study, as it explored the previously formulated theory that gifted students benefit greatly from differentiated learning experiences when placed in ability grouped situations (Cathcart, 2005; Clark, 2008; Riley, 2004c; Rogers, 2002, 2006a; VanTassel-Baska, 2003a) but also a revelatory study as it was the first research completed on past GKP pupils from a past student perspective. In this research, intrinsic and instrumental case study types were of greatest significance as the researcher

had a personal interest in the subject, but also aimed to add to the understanding of the effectiveness of withdrawal programming for gifted students. The research also contains the four necessary characteristics of case study; particularistic, descriptive, heuristic and inductive advocated by Merriam (1998). Finally, as it exhibits a strong evaluative component it can be described as an evaluative case study.

4.3 The Sample

Theory

Population and Sample

The population is the entire group of people of particular interest to the researcher and research project (Burns, 2000). A population shares a set of characteristics (Burns, 2000; Couper, 2000). A sample is the subset of the population from which the researcher can extrapolate generalisations and conclusions about the whole population (Sekaran, 2003). A good sample is considered to a) be selected at random, b) be unbiased and c) be large enough to satisfy statistical meaning (Hussey & Hussey, 1997).

There are two categories of survey samples: probability and non-probability. Probability samples are generated when every individual has a known chance of being selected to participate whereas non-probability samples involve students being selected on a basis of convenience or availability - not everyone in the applicable population receives an opportunity to participate. For probability sampling, randomisation is a feature of the selection process, rather than an assumption about the structure of the population. Probability in this instance refers not to the probability of being selected but that the complete population could be accessed. This makes it possible to produce unbiased estimates of population totals, by weighting sampled units according to their probability of selection.

In non-probability sampling, there is an assumption that there is an even distribution of characteristics within the population. Elements are chosen arbitrarily and there is no way to estimate the probability of any one element being included in the sample. In addition

it is impossible to estimate sampling variability or to identify possible bias as no assurance is given that each item has a chance of being included in the sample. Reliability cannot be measured in non-probability sampling (Burns, 2000; Cook, Heath & Thompson, 2000; Denzin & Lincoln, 2005; Dillman, 2000; Gillham, 2000a; Patton, 2002).

Sample Size

Once the population has been clearly defined, a representative sample needs to be drawn (Burns, 2000, Gillham, 2000a). There is a variety of sampling methods that can be employed, individually or in combination, to draw probability samples. Factors commonly influencing the choice between these designs relate to cost, desired outcome, accuracy requirements, availability of information and the nature and quality of the sample. Methods include:

- random sample, in which names are drawn from an established sample;
- systemic sampling, where a set interval is selected and appropriate names are identified;
- stratified sampling, which is a measure added to random sampling to ensure groups within the population are each sampled randomly;
- cluster sampling, which involves the division of the population into groups then a sample of the group is selected. Cluster sampling is of advantage if the population is geographically distanced;
- quota sampling, where specific targets are set for involvement (this is often combined with stratified sampling); and
- opportunity/convenience sampling, where the researcher has no alternative but to use a convenient based group (Burns, 2000; Gillham, 2000a, Patton, 2002).

Once the type of sample is chosen, the sample size must be decided. In qualitative research there are no strict criteria for sample size (Patton, 2002). Judgments about usefulness and credibility are left to the researcher and the reader (Eisner, 1991). The size of the sample however is important, generally the smaller the sample, the lower the accuracy, however, size is less important than representativeness (Burns, 2000). It is

unlikely that an entire population could be involved in the research, however valid generalisations cannot be made unless the sample is representative of known variables related to the characteristics that are being researched (Bartlett, Kotrlik, & Higgins, 2001; Burns, 2000).

One suggestion regarding sample size is the work of Gay and Diehl (2003) who advocate that the type of research should dictate the sample size. They outline three types of research:

- Descriptive Research, the development of theories based on observation, requires 10% of the population (20% for a small population);
- Correlation Research, the measuring of relationships between variables, requires at least thirty subjects to establish a relationship; and
- Experimental Research, the predicting of outcomes based on controlled variables to establish cause and effect relationships, requires thirty subjects per group as a minimum.

The Students

Practice

This research was undertaken using a 'population' of pupils who had attended the Gifted Kids Programme prior to 2008. Due to the age of the students when the programme originated the students at the time of this research were predominantly attending secondary school. These students were all eligible Gifted Kids Programme Alumni (GKPA) members. The study explored the perceptions of the GKPA in relation to their experiences at the one-day-a-week programme for gifted students and in specific relation to the curriculum goals of the programme.

The sample used in this research was a closed population, meaning there were set parameters around involvement (Sue & Ritter, 2007). The sample was probability based as all GKPA students were invited to participate. This process necessitated seeking permission from the Gifted Children's Advancement Charitable Trust to access a database from the Head Office in Auckland. Although all student records are kept up to

date whilst students attend the programme, once they leave GKP it is up to alumni students to advise GKP of change of addresses, or whether they wish to be removed from the database. Due to the transient nature of the GKP population, the data-base was assumed by GKP administration to be at least moderately out of date.

The initial mail-out information sheet and consent was sent out to 804 GKPA students. These students were a mixed representation of all GKP units throughout the North Island, and a mix of gender and school year. As all responses were accepted, the researcher foresaw the sample as being a combination of cluster sampling and opportunity sampling as the actual representation of students was not known until after the questionnaires were completed (Burns, 2000). Guided by the work of Gay and Diehl (2003), the researcher estimated that the response would be around 20% at 160 for this Descriptive Research.

After the initial mail out, a large number of invitations were returned to the sender due to invalid addresses and the database was adjusted. The online questionnaire remained active for the month of April with the majority of responses coming in the first two weeks. The questionnaire yielded 196 responses of which 22 were unusable as were mostly incomplete; this resulted in 174 analysable questionnaire responses. Table 4 indicates the location, gender and year of the respondents.

Table 4: Online Questionnaire Participant Demographics

UNIT	Host area	Gender		Age									Total
		Female	Male	11	12	13	14	15	16	17	18	19	
Whangarei	Tikipunga	16	12	-	3	4	7	5	3	6	-	-	28
Auckland	Tamaki	13	8	-	-	2	4	4	4	5	2	-	21
	Waikowhai	7	8	-	-	2	4	2	5	1	1	-	15
	Hillary	6	6	-	-	2	5	4	1	-	-	-	12
Rotorua	Rotorua	14	14	1	3	9	4	6	3	2	-	-	28
Wellington	Rata/Naenae	24	25	-	2	7	9	11	8	6	6	-	49
	Wainui/Wilford	2	16	-	-	1	3	4	6	4	1	1	20
	Wellington	1	2	-	1	-	-	-	-	-	-	-	1
Total		83	91	1	9	27	36	36	30	24	10	1	174

The Researcher

Theory

The researcher in a case study is expected to describe a situation in relation to the focus but not get involved (Berg, 2004). Lincoln and Guba (1985) recommend that research such as this, i) adopt the characteristics of a naturalistic paradigm, ii) develop an appropriate vehicle through which data will be collected and interpreted and, iii) prepare a research design that utilises accepted strategies for naturalistic inquiry. A naturalistic approach is one that is sensitive to the issues of how the researcher may bias the results. It enables safeguards to be built to ensure maximum validity. Strauss and Corbin (1990) stress “theoretical sensitivity” as a useful skill for a researcher. Unpacked, this refers to “the attribute of having insight, the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn’t” (Strauss & Corbin, 1990, p.42).

Patton (2002) explains the credibility of qualitative research is reliant on the confidence readers have in the researcher’s ability to make suitable decisions in the field and to be sensitive to the material collected. Strauss and Corbin (1990) believe this sensitivity comes from the researcher’s awareness of professional literature, professional experiences and personal experiences including the way these interact with the study undertaken. A researcher brings to their work their personal and professional experience, knowledge and understanding and consequent constructs and expectations to any research they undertake.

Practice

The researcher in this study was an experienced educator at both classroom teaching and senior management levels. The majority of her teaching experience occurred within a New Zealand state school setting with 5-13 year old students, predominantly in low decile communities and in multi-cultural contexts. For the past six years the researcher has specialised in gifted education, completing post-graduate papers with a specific focus on gifted education whilst employed as an educator in a senior management role for GKP.

The researcher in this instance was responsible for the compilation and design of the questionnaire surveys and focus group guidelines, the subsequent collection and the analysis of data gathered. As an employee of the Gifted Kids Programme bias must be acknowledged, therefore the following steps were put in place to manage this bias as effectively as possible:

- i) ethical considerations were adhered to, based on Massey University Human Ethics Committee guidelines (MUHEC, 2007);
- ii) the database was accessed solely by GKP administrators (not the researcher);
- iii) the questionnaire was anonymous;
- iv) an independent moderator was used for the focus group interviews; and
- v) focus group data was coded by self-selected pseudonyms to ensure student privacy.

As some of the students involved were taught by the researcher prior to 2008, the above measures were taken to ensure the researcher was not aware of individual students' responses to the research.

The Setting

As the research was predominantly delivered through an online questionnaire, participation was undertaken by students wherever they had access to the internet. The information letter encouraged students without access to the internet to use their school or local library, or during the month the questionnaire was open, to visit a GKP classroom where they could utilise the computers there. This was suggested by GKP management who informed their teaching staff of the arrangement.

The focus group interviews took place in Wellington and in Auckland only and were held in the staffrooms of respective GKP host schools, thus ensuring familiarity with the school but outside of the GKP classroom environment so as not to influence responses.

4.4 Data generating instruments

Theory

Case study research can include both qualitative and quantitative data. Methodologists have identified several techniques of case study data collection however they caution that it is not necessary or advisable to use all of them (Bogdan & Biklen, 2007; Patton, 2002; Stake, 1995; Yin, 2002). Generally a case study involves the use of different methods of collecting information and making observations (Hamel, Dufour & Fortin, 1993). Three predominant data gathering techniques employed in qualitative research are: observation, interview and document analysis (Merriam, 1998). Other techniques, such as questionnaires are also used. Often only one or two strategies are employed.

Practice

Data gathering tools for this research were selected from a range of strategies recommended for case study (Berg, 2004; Merriam, 1998; Stake, 1995; Yin, 2002). The predominant data collection technique was an online questionnaire. Although case study often relies on observation (Berg, 2004; Sudweeks & Simoff, 1998), Yin (2002) points out the “case studies are a form of inquiry that does not depend solely on ethnographic or participant-observer data” (p. 11) and “need not always include direct and detailed observation as a source of evidence” (p.14). As the population sample was geographically spread across the North Island this was deemed to be the most time and cost efficient way of gathering data.

Information pertaining to the GKP one-day-a-week programme was pursued in the initial stages of research to assist with the design of the questionnaire. This included material available on the organisation itself and the curriculum it delivers. These were all internal documents belonging to the Gifted Children’s Advancement Charitable Trust (GCACT) and have not been published for public use.

Data analysis was undertaken during and after data collection. It involved identifying the dominant themes and clustering them into categories relating to the main aims of the

research (Merriam, 1998). Focus group interviews were conducted at the conclusion of the questionnaire to further develop emerging themes.

Survey-Questionnaire

Theory

Conventional survey methods for examining social attitudes, behaviours and interaction include face to face interviews, telephone interviews, mail and online surveys and questionnaires (Aakar & McLoughlin, 2007). According to Burns (2000) the questionnaire is the most commonly employed method of data gathering in educational research. Questionnaires gather information from a portion of the population with the intent that results can be reliably projected from the sample to a larger population. Information is collected by means of standardised procedures so that every individual is asked the same questions in same way. The intent is not to describe the particular individuals who are part of the sample but to obtain a composite profile of the population. Results are presented in anonymous summaries, such as statistical tables and charts and accompanying generalisations (Burns, 2000).

Mixed views are held by educationalists regarding the use and usefulness of questionnaires in the field of educational research. Although some claim they are an efficient use of time, cost effective, allow for anonymity and ensure the same questions are used for all (Burns, 2000; Buchanan, & Feldhusen 1991; Kitchenham, Pickard & Pfleger, 1995), others claim inadequate completion of responses, interpretation of data being left to the researcher and poor response rates as major disadvantages (Burns, 2000; Buchanan & Feldhusen, 1991; Gilham, 2000b).

The Internet

The internet has changed the way people interact and go about their everyday lives, even more so for the present youth generation. Today as teenagers are enveloped in a world of communication technology, the internet and cell phones fuel their daily life (Lazar, 2001; Lenhart, Madden and Hitlin, 2005). Research indicates that consumers now spend more time in front of a computer than a television (The Guardian, 2006) and that the

majority of this time is spent communicating with others through email, instant messaging forums, blogging and file sharing (Lenhart & Madden, 2007). Almost two-thirds of New Zealand homes are connected to the internet (Statistics New Zealand, 2006) and a push by the New Zealand government to ensure internet access in schools has resulted in 100% of New Zealand schools being able to access the internet (2020 Communications Trust, 2005).

Initially a tool for information sharing, the internet is now a part of life, especially for the generation of students presently in our education system. If not accessible within their own homes, the use of information technology is prevalent in schools, local libraries and cafes. For many gifted students it is a preferred way of learning and of advantage to their education (Bergen, 2001). Present youth culture makes online surveys specifically targeted at this group, an attractive option for both the researcher and the participant (Alvermann, Moon & Hagood, 1999).

Internet developments have consistently grown at a phenomenal rate and its presence is felt in all spheres of human life from business to defense, from government to education and into the fields of industry and academia (Baloh & Trkman, 2003; Solomon, 2001). Bryman (2008) concludes that websites are not only potential sources of data but sources in their own right. Up until the 1970's the majority of survey type research was completed face to face however the era of expanding internet access has introduced a new and increasingly used communication medium, the electronic or web-survey (Sargent, 2007). Internet advancements have assisted with the evolution of such web-surveys (Roberts, 2007). Early electronic surveys were predominantly email and in text only format (Topp & Palowski, 2002) providing only basic print and primitive layout and appeal. In 1994, the introduction of HyperText Markup Language (HTML) provided the means for formatting design. The first web-survey was administered in 1995.

Online survey/questionnaire types

The advent of the Internet has brought significant advances in survey methodology (Dillman, 2000). Two major types of web research, email surveys and web-based surveys have emerged from this development.

Email questionnaires began as soon as email emerged however was initially contained within closed population samples such as individual companies or universities (Ye, 2007). An email survey involves collation of email addresses, often through list-servs, then emailing out questionnaires. The recipients read and respond at will. This format predominantly utilises email as a form of post, and is thought of as an online paper and pencil survey (Beidernikl & Kerschbaumer, 2007).

The second development, web-based surveys, is online forms which allow the user to select an option or write a response. The recipients are directed to a web-page which contains the questionnaire; the responses are then available to the researcher. Web-based research is becoming more common due to developments of external providers and the ease of computer collation (Dillman, 2000).

Web-surveys are divided into three types, point of contact, email and web-based (Jansen, Corley & Jansen, 2007). Web-surveys can be provided by web-based survey companies. Resources include the templates and tools necessary to make clear and safe questionnaires. The programmes operated by the companies allow easy access to editing tools and viewing of collated data. Another huge advantage of this technique is that the data collected is categorised and sorted for later analysis (Lazar & Preece, 1999; Schmidt, 1997).

Advantages and limitations of an internet questionnaire approach

There are advantages and limitations (see Tables 5 and 6) with any form of data collection and it is the researchers' responsibility to be aware of these and act accordingly. Online research is relatively new to the research field yet trends indicate use will continue to increase (Dillman, 2000).

Table 5: Advantages of Internet Questionnaire Approaches

Advantages	Jansen, Corely & Jansen (2007)	Roberts (2007)	Sue & Ritter (2007)	Perkins (2004)
Time efficient	Y	Y	Y	Y
Accessible/larger sample size	Y	Y	Y	Y
Easy to vary format	Y	Y		
Can ensure confidentiality	Y	Y	Y	
Can capture data directly into a data base	Y			Y
Cost efficient	Y	Y	Y	
Resource efficient	Y		Y	Y
Reduce survey error			Y	Y

NOTE: Y indicates it was an advantage noted in research

Advantages

Internet surveys have continued to grow in popularity as e-tools for conducting surveys become more advanced, easier to master, more readily available and the use and speed of available internet increases (Sue & Ritter, 2007). Common advantages of using electronic survey measures evolve around ease of convenience, reduced time and cost efficiency when compared to the use of traditional mail-out measures (Couper, 2000; Couper, Traugott & Lamais, 2001; Jansen et al., 2007; Lefever, Dal & Matthiasdottir, 2007; Perkins, 2004; Roberts, 2007; Sue & Ritter, 2007). Software to create surveys is readily available for the researcher or alternatively web survey businesses can create, collate and analyse web-surveys to specification. The streamlining of technology for creation, delivery and collation lessens resources needed and increases efficiency and convenience.

Web-surveys have multiple capabilities far beyond those of other self-administrated questionnaires. They can provide a dynamic interaction between the researcher and the

participant (via instructions which can be provided to support the participant), answer choices can be offered and pictures, animation and video can be inserted (Dillman, 2000). Coding and data management can all be handled electronically and provide a complete data base ready for analysis. This removes the human data entry error.

Comparative studies with mail surveys demonstrate a similar response yet the ease and speed of the internet plus additional functions, such as data collating, make it a more appealing option (Truell, Bartlett II & Alexander, 2002).

Limitations

Increasing literature on electronic research methods reflects growing concerns around associated methodologies (Jansen, Corley & Jansen, 2007). A predominant concern centres on coverage and sampling, principally through lack of access to the internet (Crawford, Couper & Lamais, 2001; Lefever et al., 2007). The populations these disparities tend to include are those of low socio-economic status and minority ethnicities (Selwyn & Robson, 1998). Further concerns within this population lie with the ability of the researcher to design the survey and the respondents' familiarity with the computer, use of the internet and type of internet connection available (Jansen et al., 2007; Perkins, 2004; Roberts, 2007; Sue & Ritter, 2007). A second sampling concern is one of self-selection bias (Witmer, Colman, & Katzman, 1999). This can be seen as a limitation due to the tendency of some individuals to respond to an invitation to participate while others ignore it. Students also have the option of incorrectly completing data. This can limit the researchers' ability to generalise on the findings (Wright, 2005).

Additional problems pertaining to the online nature of delivery mostly relate to technical difficulties or issues. These can be summarised as either human related or equipment related. Human related issues tend to centre on personal skill and ability with the computer, and then double entry, when a participant may stop completing the form and return at a later date. Technical issues can relate to the speed of internet access, the compatibility with computer software, freezing or crashing of programmes and error

messages, all of which can put the participant off from completing the questionnaire (Wright, 2005). Table 6 lists main limitation points.

Table 6: Limitations of Internet Questionnaire Approaches

Limitations	Jansen Corley & Jansen (2007)	Roberts (2007)	Sue & Ritter (2007)	Perkins (2004)
Time consuming to develop	Y	Y		
Poor response rate	Y	Y	Y	Y
Ethical and security issues	Y	Y		Y
Technical issues	Y	Y	Y	Y
Sampling issues including			Y	Y

NOTE: Y indicates it was a limitation noted in the research

It is important to note that some of these disadvantages are not unique to online survey research (Wright, 2005). This method can lead to questions on reliability, validity, sampling and generalisability as well as emerging issues such as security, access, privacy and ethics. The prior areas are also concerns when using traditional research methods however the latter have issues specific to electronic research.

Response Rates

Response rates for online surveys present conflicting support. Whilst there is some concern regarding low response rates when implementing online surveys compared to mail surveys (Cook et al., 2000; Couper, 2000), subsequent research states similar response rates to mail surveys (Truell et al., 2002) and also increased response rates (Jansen et al., 2007). A meta-analysis of factors influencing responses rates in Internet surveys completed in 2000 (Cook et al., 2000) concluded that the dominant factors in a high response rate were follow-up contacts with non-respondents, personalised contacts and contacting people prior to sending out the survey. Crawford et al. (2001) found that

familiarity with the internet and easier access through hardware and broadband delivery has had a positive impact on response rates.

Managing online survey data

Web-surveys increasingly offer advantages of data collation, either through the survey host provider or related computer programmes. Some hosts also offer data analysis or are able to export data to an alternative analysis programme (Sue & Ritter, 2007). Online surveys can also eliminate the need for transcription of open-ended responses which can be of particular assistance with large sample sizes or complex questionnaires. Additionally many hosts allow researchers to view their findings in real time as survey results are automatically updated.

Ensuring Success

To maximise a successful survey outcome Sue and Ritter (2007) outline three main factors that need addressing:

- a) The respondent factors: the respondents must have access to and the ability to use the Internet and ideally not be bound by a particular physical location.
- b) The questionnaire factors: the questionnaire needs to be constructed with the type of question and the length of questionnaire in mind.
- c) The evaluator factors: time frame, budget and personal technological expertise of the researcher need to be taken into account before deciding upon a web-survey as the best means of gathering data.

As with all modes of survey research, careful attention needs to be given to all procedures to maximise valid and reliable responses. As web technologies are in constant evolution this needs to be addressed accordingly, however basic principles of good surveying also apply to electronic related research.

Survey-Questionnaire

Practice

An online questionnaire was the primary source of data collection in this research. The decision to employ this method of data collection was based on research indicating

benefits of decreased costs, faster response time and increased response rates (Jansen et al., 2007). Additional benefits for the researcher were the ability of the internet to 'capture' the interest of the targeted population plus access the geographically 'spread-out' nature of the GKPA students. The questionnaire developed and administered for this research was completed by all GKPA who chose to reply to the researcher's mailed request. The questions solely related to students' perceptions of their one-day experiences.

A series of basic principles was adhered to when developing the questionnaire: the use of relevant questions in simple language; an avoidance of ambiguity, hypothetical, personal or leading questions; the asking of one question at a time, plus the use of a rating scale and opportunity for open-ended responses (Amedeo, Gollledge, & Stimson, 2008; Brace, 2004; Oppenheim, 2001). Every question had clear links to the research foci (Tiechurst & Veal 2000). Finally the wording of the questionnaire was deliberately grouped around the GKP core goals, with brief explanations given at the start of each major section. Students were given multi-choice options, Likert scale options and open-ended response opportunities. The combination of responses is referred to as a mixed-methodology design. This provided the researcher with the opportunity to mix measurement with opinion thus combining some elements of quantitative and qualitative information (Cohen, Manion & Morrison, 2000). Questions were designed for clarity and simplicity but also reflected the target audience of secondary-aged gifted students.

The set of questions was initially developed in Microsoft Word, then transferred into Survey Monkey, the online survey engine utilised in the research. The questionnaire was divided into seven parts, as shown on Table 7, each specifically relating to the GKP curriculum goals and a request for general information to ascertain representation.

Table 7: Questionnaire Overview

Part	Context	Content
1	General Information	<i>clarification of age, gender, Unit attended, years at GKP, etc.</i>
2	Strengths and Talents	<i>advantages or disadvantages to working in areas of strength/talent.</i>
3	Peers and Friendships	<i>like minds together, social and emotional support, feeling valued by peers in this environment, feeling challenged by peers, peer culture developed, self acceptance, ease in developing friendships, learning about and understanding the value of fitting in.</i>
4	Learning	<i>teaching and learning information, opportunities for depth and breadth, complex thinking, talent development, conceptual curriculum, autonomy.</i>
5	Challenge	<i>opportunity, challenge, openness to risk taking.</i>
6	Excellence	<i>raised expectations, ability to self reflect and improve, plus persistence.</i>
7	Other	<i>an opportunity to offer any other comments and also make suggestions to enhance and/or improve the programme.</i>

The researcher made a conscious decision to have four choices on the continuum to avoid having a neutral position so that the respondents will be required to take a stand on every item (Buchanan & Feldhusen, 1991; Gillham, 2000b). To implement this choice the researcher employed the use of a Likert scale. A Likert scale is a rating scale that is primarily used for assessing opinions that can be placed along a continuum. Respondents consider the choices and select one that best reflects their feelings (Buchanan & Feldhusen, 1991). The questionnaire can be found in Appendix G.

Survey Monkey was the specific online survey tool used in this study. Survey Monkey was initiated in 1999 in Oregon, USA. It is an online survey tool that enables users to create their own surveys to suit their own needs. The programme is both professional looking and cost efficient, yet allows for the personalising of surveys, the collation of data in accessible formats and initial analysing of data in graph formats or Excel spreadsheets. The responses were collated in a database hosted by Survey Monkey. Resulting data was transferred by the researcher into both Adobe and Microsoft Excel formats to analyse and collate relevant spreadsheets, graphs and open-ended responses for qualitative analysis.

The questionnaire was piloted with a small group of non-GKP secondary students and some professional colleagues to estimate time needed for completion and to identify any potential misconceptions or confusions. Some minor adjustments were made as a result of the pilot.

Interviews

Theory

The use of interview as a data gathering tool in research implies that students are valuable sources of information and that much can be learned from direct conversation (Vaughn, Schumm, & Sinagub, 1996). Gillham (2000c) concurs that interviews are indispensable in case study research, as their direct nature can enable a wealth of information to be shared. Interviews can be divided into three main categories, unstructured, semi-structured and structured (Patton, 2002). The main features of each being:

- *unstructured*: informal, conversational, spontaneous, open-ended and involving a natural flow of interaction;
- *semi-structured*: a guided approach, a set of issues to discuss, no questions in advance, the researcher interviews, ad-libs and adapts to responses; and
- *structured*: formal, standardized, following a specific set of questions, prepared in advance with little deviation from the plan.

Table 8 demonstrates an expansion on this theory by Gillham (2000c) with a continuum of his own, the scale of verbal data dimension.

Table 8: *The Scale of Verbal Data Dimension*

Unstructured			Structured			
<i>Listening to conversation</i>	<i>Using 'natural' conversation to conduct research</i>	<i>Open-ended interviews, a few key open questions</i>	<i>Semi-structured interviews, both open and closed questions</i>	<i>Recording Schedule, verbally administered questionnaires</i>	<i>Semi-structured questionnaires, Mix of open and closed questions</i>	<i>Structured questionnaires, specific closed questions</i>

Focus Group Interviews

Powell and Single (1996) define a focus group as “a group of individuals selected and assembled by researchers to discuss and comment on, from personal experience, the topic that is the subject of the research” (1996, p. 499). A focus group interview is an organised research technique that gathers data through group interaction on a topic determined by the researcher (Morgan, 1996). It can be an alternative or additional method of gathering data from research subjects and is an instrument that supplements, complements and triangulates other data gathering techniques (Morgan, 1993, 1997).

A focus group generally consists of a small assembly of people led by a moderator who guides the group through a series of discussion questions (Heary & Hennessey, 2002). The goal of the group is to elicit a discussion that allows the researcher to see the world from the students' perspectives. Originally popular for its value in market research it has been used increasingly over the past two decades and is increasingly being used in education (Vaughn et al., 1996).

Merton and Kendall (1946, cited in Vaughn et al., 1996) set the parameters for focus groups as a research methodology. They describe focus groups as having four major uses:

- i) explaining of relationships between stimulus and effect;
- ii) understand the ‘why’ behind an event or target interpretations;
- iii) verification in data interpretation; and
- iv) alternative interpretations of findings.

Focus groups can initiate research at the preliminary stages, be used to evaluate during a study or to assess and generate further avenues of research (Kreuger, 1988).

Advantages

Focus group interviews have advantages that differ from the one-to-one interview situation. Hess (1968, cited in Vaughn et al., 1996) concludes five distinct advantages:

- i) *synergism*: when group interaction stimulates broader data, or more in-depth responses and opinions;
- ii) *snowballing*: when the students feed off each others contributions;
- iii) *stimulation*: when the discussion is taken up with enthusiasm and excitement;
- iv) *security*: the group supplies a level of support for each other; and
- v) *spontaneity*: as the students join in at will, obligatory answers are removed and their responses can be more genuine. This also allows a certain amount of flexibility.

Byers and Wilcox (1991) call this the ‘loosening effect’ as state in a relaxed environment, sharing views about a common field , students sense their opinions are valued and consequently are more likely to be expressive, honest, spontaneous and direct.

Johnson and Christensen (2008) believe focus group interviews to be a particularly suitable tool for interviewing students. They note that students can have more confidence in this setting, become more articulate and frequently piggy back off each other. The explicit use of group interaction is believed to produce, “knowledge, ideas, story-telling, self-presentation, and linguistic exchanges within a given cultural context” (Barbour & Kitzinger, 1998, p.5). An advantage of a focus group interview over a one-

to-one interview situation is the interaction removes the emphasis on the adult-child relationship where children may respond in the way they feel the adult wants (Donaldson, 1984; Heary & Hennessey, 2002). Levine and Zimmerman (1996, cited in Heary & Hennessey, 2002) suggest that a further important advantage of using focus groups with children is that the method acknowledges the students as experts which allows them to respond more openly during the group session.

Limitations

A major limitation of focus group interviews relates to providing mainly qualitative data that is not necessarily representative of the population (Barbour & Kitzinger, 1998). It is advised that the results are best supplemented and validated by other data gathering techniques and not used as the sole empirical evidence of a study (Morgan, 1997).

The logistics of physically combining a group of people for interviewing may be difficult to assemble due to distance, timing and appropriate venue (Heary & Hennessey, 2002). Once in the interview situation there is a possibility that intimidation within the group setting may inhibit interaction (Lewis, 1992). The nature of discussion may limit involvement from those who do not feel articulate or those who are articulate and may dominate the discussion (Barbour & Kitzinger, 1998). The method of focus group discussion may alternatively discourage some people from trusting others with sensitive or personal information. Fern (2001) found that individuals who were interviewed on their own reported feeling more anonymous than individuals who participated in focus groups. Focus groups are not fully confidential or anonymous, because the material is shared with the others in the group.

Additional issues in focus group interviewing often centre around the experience of the moderator and how close they are to the topic, plus the questions being asked may be unclear or too closed or confusing (Krueger, 1988, 1993; Vaughn et al, 1996). During the discussion, it is also important to monitor the intensity and to discuss the meaning and need for confidentiality (Fern, 2001). Finally the data can be time consuming to transcribe and analyse (Barbour & Kitzinger, 1999).

Size

The optimum size for a focus group is thought to be between six and twelve people (Fern, 2001; Vaughn et al., 1996). If too large, it is too difficult for everyone to participate, too small, and it can be inhibiting for students. Research on the effect of focus group size with adults found that focus groups with four members produced fewer ideas than focus groups with eight members (Fern, 2001). Some researchers advocate a smaller group size for children than for adults to ensure students receive an opportunity to participate but not talk simultaneously or interrupt too frequently (Fern, 2001; Heary & Hennessey, 2002).

Duration of a Focus-Group Interview

Vaughn et al. (1996) recommend forty-five minutes for 6-10 year olds and sixty minutes for 10-14 year olds. Greenbaum (1998) recommends ninety minutes maximum for group discussion with children. In general, the length will depend on the time of day, questions being asked and the skill of the moderator (Heary & Hennessey, 2002).

Moderator

The moderator is responsible for the organisation of the interview and is expected to facilitate the discussion using guidelines supplied by the researcher (Barbour & Kitzinger, 1998; Fern, 2001). Unless facilitated effectively the interviews can be of little value. It is advised to use a moderator outside of the organisation to negate bias and to conduct more than one focus group to increase the range of input (Greenbaum, 2000). Brown (1999) states moderators need quality observational and facilitation skills to be able to engage students, promote interchange, modulate conflict, all whilst following the interview guide.

Practice

Students involved in the focus group interviews were self-selected. Based on the principle of easiest accessibility (Gillham, 2000c) all Wellington and Auckland based past pupils received a written invitation, included with the questionnaire information, to join a focus group. Auckland and Wellington are the only centres that operate more than

one GKP Unit and therefore had a higher past-pupil population. Students who responded were posted further details regarding the format of the focus group interviews and then requested to sign and return a consent form. All students who responded affirmatively to this request and were able to make the designated dates and venues participated in a focus group discussion.

All interviews undertaken for this research project were in focus group format. There were four focus group interviews in total with three students in the smallest group and eight in the largest with a total of twenty-five students participating overall. The size was determined by student self-selected response as the researcher was aiming for six to eight at each session. Auckland and Wellington held one full focus group interview lasting approximately 120 minutes each. Wellington held an additional two half hour mini-focus group sessions. This was due to additional students wishing to be part of the focus group and the initial group being too large to accommodate numbers.

The Wellington-based students were also self-grouped to assist with the theme of homogeneity (Morgan, 1993) which promotes conducive and productive discussion. Cohen et al. (1994) state that friendship-based focus groups operate more successfully as they are familiar with informally chatting with each other. This resulted in mixed grouping for the Wellington sessions, a female-only group of year nine students, a male group of year 9-13, then a mixed group of year 7-11, plus the Auckland session of year 9-10, as detailed in Table 9.

Table 9: Focus Group Interview Demographics

District	Session	Year Group							Male	Female
		7	8	9	10	11	12	13		
Wellington	Main Session A	1	2	1	3	1	-	-	2	6
	Mini Session C	-	-	6	-	-	-	-	-	6
	Mini Session D	-	-	2	2	2	1	1	8	-
Auckland	Main Session B	-	-	1	2	-	-	-	3	-

These interviews were structured via a series of set questions being shared in advance with the moderator and students. They were also semi-structured, as there was freedom for the moderator to expand and/or deviate from the research guide. The focus group interviews implemented for this research were used to supplement the individual questionnaire responses which allowed for verification of data interpretation from the online questionnaire and gave an additional source of interpretation of experiences (Merton & Kendall, 1946 cited in Vaughn et al., 1996). The discussions were used to assist with triangulation (Morgan, 1993) and to enable both expansion and support for themes that emerged from the questionnaires. The rationale for using focus-group interviews in combination with other research methods allowed for improved depth of understanding and for exploration of the degree of consensus on a given topic (Morgan & Kreuger, 1993).

In noting that the GKP caters primarily for lower decile communities where there are students who may not feel as comfortable in a one-to one interview setting, it was decided the focus group approach would enable better provision of a supportive environment for the students and enable a manageable but larger group of students than single interviews would allow. GKP is also a programme designed to put 'like-minds' together and therefore a focus group is reflective of the way the students operated within the programme.

Facilitating a focus group requires considerable group process skills in order to manage the participation of the group members (Krueger, 1993). Due to potential bias of the researcher, an outside moderator was employed to facilitate the focus group discussions. The moderator in this instance was a professional educational facilitator who had a prior awareness and understanding of gifted education and the Gifted Kids Programme but had not been involved recently with the programme or its students. She was approached to moderate due to her inherent ability to make students feel at ease and to connect with students, her familiarity with the general field of study, and her ability to facilitate an interview forum.

All interviews were recorded by digital recorder and their responses downloaded on to a computer in WAV files (Waveform, the Microsoft audio file format for storing audio on computer). These files were then transcribed for closer examination. Each focus group interview was approximately 90 minutes in length, semi-structured in order to maintain the flow but not restrict responses. The focus group interviews were held on Saturday afternoons to avoid conflict with school and sport and were situated in the staffrooms of GKP host schools, so that students were comfortable in the environment but not in a GKP room where the room itself may stimulate responses rather than the memories of the past pupils. A fifteen minute debriefing between the researcher and the focus group moderator occurred at the conclusion of each session.

4.5 Data Analysis

Theory

Miles and Huberman (1994) describe data analysis as three linked sub-processes, data reduction; including selection and condensation, data display; involving coding and themes, plus conclusion and verification drawing. As qualitative research by nature produces information, it is necessary to summarise findings to initially interpret the non self-interpreting data, such as questionnaire and interviews, and then to make connections between the data collected (Bouma, 2004). A common way of dealing with information collected is to employ techniques such as coding, classifying and constructing data themes (Bouma, 2004; Neuman, 2007). To assist with initial analysis a researcher may employ the use of pre-coding or selective coding (Cohen et al., 2000; Neuman, 2007). This means a response can be immediately converted into a category. Data analysis can be assisted through computer software programmes and online services however the benefits of this are mostly limited to storing and segregating rather than analysing (Miles & Huberman, 1994).

The application of codes speeds up analysis. Codes selected need to be precise and applied consistently as they will drive retrieval and organisation of data (Coffey & Atkinson, 1996; Cohen et al., 1994; Miles & Huberman, 1994). During the coding of

data, the researcher will refine parts of conceptual understanding they brought to the research, find the research becomes more meaningful and decipherable and finally recognise leads, themes, mysteries and possible contradictions (Miles & Huberman, 1994). It is likely some of these will fit within a coding structure and others will not. Once initial coding is completed, the data can be regrouped into emerging patterns or themes for easier analysis and a summary of results collated (Miles & Huberman, 1994; Neuman, 2007). An initial summary can assist the researcher to formulate a clearer sense of the research, determine whether data collected was useful and plan next steps of analysis (Coffey & Atkinson, 1996; Miles & Huberman, 1994).

Analysis by nature is a cyclic and reflective process (Coffey & Atkinson, 1996). Merriam (1998) states data collection and analysis tend to occur simultaneously as emerging insights inform and/or refine the next steps in the process. Coffey and Atkinson (1996) support this stating leaving data analysis to the completion of collecting can make the task more onerous. Coffey and Atkinson (1996) claim there is no one correct method of analysis, rather a method that works for the researcher. Qualitative data analysis is a process of interpretation through data gathering and collating with a goal of highlighting useful information.

Practice

The online questionnaire and focus groups generated a great deal of data. As all of it related to the research questions, all data was analysed. This process was undertaken towards the end of the research however initial trends from the questionnaire were used in the focus group interviews. The online questionnaire was cleaned and partially-completed surveys were deleted. Any strange patterns or discrepancies were examined to see if there were any problems or impossibilities with responses.

The questionnaire data was downloaded in an Adobe basic results report formatted by Survey Monkey, the survey host, in the format of graphs and percentages. This provided raw data in an accessible and quick-to-interpret format. The data was grouped by Survey Monkey by question and did not supply any level of analysis, however the program was

able to filter Likert responses for comparison if necessary. Resulting quantitative questionnaire data was analysed using descriptive statistics.

Data from the open-ended questions was analysed for patterns, regularities and discrepancies (Cohen et al., 1994) and validated through further exploration with the focus group data. Particular care was taken by the researcher to ensure no identifying information relating to the students of the research was disclosed.

Focus group data analysis was undertaken through debriefing of the moderator and transcribing of the WAV Files. The aid of a transcriber was used for typing of the focus group interviews. The transcriber was a colleague who entered in a transcriber's agreement. Fully transcribing the interviews allowed for ease in analysing and allowed immersion time to note themes and relate them back to the questionnaire. Related portions of the text were drawn together and linked with questionnaire themes then quotes were highlighted for later inclusion.

The resulting discussion and conclusions were grouped according to the GKP curriculum goals which aligned themselves to easily discussable themes. The broad categories made coding and cross referencing logical and recognisable. They also allowed for the generalisation and triangulated cross supporting quotes. A structure which allows reader familiarity increases understanding of the research (Stake, 1995).

4.6 Ethical Considerations

Theory

Qualitative research by its very nature is carried out in real-life situations and therefore involves open communication with all students involved. Ethical considerations are an essential part of all research, and it is the responsibility of the researcher to provide and ensure the confidentiality, security, privacy and informed consent of all students (Gurau, 2007; Sue & Ritter, 2007). The researcher in this study needed to show respect for

equality, truth and persons (Bassey, 1999) and to take necessary precautions to be aware of and minimise bias (Burns, 2000).

Ethics in online questionnaire

An online survey can be quite a public forum and completion of the survey by non-applicable students needs to be considered, however it must be noted this could also occur using the traditional post-out methodology. Cyberspace is typically considered public domain where privacy is not guaranteed and traditional ethical guidelines may be difficult to apply (Miller, 2003). A set of informal guidelines have been developed, entitled 'netiquette', to address these concerns (Smith & Leigh, 1997). Guidelines suggest informed consent through development of unique passwords, the inclusion of opportunities to skip questions or withdraw, non-capturing of any personal data, such as IP addresses which would allow tracing of respondents, and encrypting data flow for highly sensitive material.

Ensuring personal security on the internet is increasingly difficult, however the use of a professional web host enables the provision of filters, password entry, anonymous completion and confidentiality (Sue & Ritter, 2007). Students did not have to enter any personal identifiers and the questionnaire was formatted to not hold Internet Protocol (IP) addresses from respondents.

Ethics in focus groups

Ethical considerations for focus groups are the same as for most other methods of social research (Burns, 2000). When selecting and involving students, researchers must ensure that information about the purpose and use of students' contributions is given (Vaughn et al., 1996). At the outset, moderators need to clarify that each participant's contributions will be shared with the others in the group as well as with the moderator but that confidentiality must remain within the group. Students need to be encouraged to keep confidential what they hear during the meeting and researchers have the responsibility to anonymise data from the group (Barbour & Kitzinger, 1998).

Practice

As the researcher was employed by GCACT this necessitated careful examination of all ethical procedures to ensure both bias and conflict of interest were adequately addressed. This is not necessarily a disadvantage as Mohr (2001) states an advantage to being a teacher-researcher is that teacher-researchers see themselves as doubly bound to ethical behaviour through their dual roles. Due to the nature of this research however, a proposal went before the Massey University Human Ethics Committee (MUHEC), seeking their approval. The proposal was formulated following MUHEC Code of Ethical Conduct for Research, Teaching and Evaluations involving Human Students (2007). The initial proposal was provisionally approved with some minor clarification requested. Full approval was granted on 12 February 2008 (Approval number 07/62 by the MUHEC).

Initial research permission was also obtained from the GCACT Trust Board and Executive Principal. Permission was sought to not only undertake the research but to base it on the GKP curriculum goals and to have indirect access to the Alumni data-base. The Board was able to review the questionnaire and have any questions answered. Permission was obtained in written format and was part of the MUHEC requirements.

As part of MUHEC policies and procedures concerning a conflict of interest, all data posted to students was collated and sealed in stamped unaddressed envelopes, then given to the Gifted Kids Programme administrative staff that were responsible for addressing the envelopes and collating replies. The questionnaire (Appendix G) was posted out with covering letters to parents and to past-pupils (Appendices B and C). The researcher was unaware of each student's age, however, did know there would be a cohort younger than 16 years of age, thus interested respondents were asked to return a consent form. Upon receipt of the consent form, GKP administrative staff sent out a postcard detailing the URL to obtain the questionnaire and the date of commencement.

Students in Auckland and Wellington who indicated on their questionnaire form they would be interested in being part of a focus group interview were posted additional information and a focus group consent form. When consent forms were returned, the applicable students were posted information about date, venue and time of the meetings.

Additionally, students participating in a focus group interview signed confidentiality forms.

When conducting case studies, ethical dilemmas are most likely to emerge during data collection and in the reporting of findings (Merriam, 1998). Table 10 demonstrates how these were addressed in this research.

Table 10: Ethical Dilemmas and Measures to Overcome Them

<i>Ethical dilemma</i>	<i>Measure taken to minimise dilemma</i>
<i>Voluntary participation:</i> participation in research should never be compulsory and there must be opt-out options offered before and during the research (Merriam, 1988).	<i>The information letter for the questionnaire package stresses the fact that the respondent can choose not to be involved, can withdraw from the process at any time and can choose not to answer particular questions if they wish.</i>
<i>Informed consent:</i> researchers need to explain clearly the purpose of the research, how the respondent was selected for the study and what is required of them so that students can make an informed choice about whether to take part (Bassegy, 1992; Evans & Jabupec, 1996; Merriam, 1998).	<i>Information letters to parents/caregivers and GKPA detailed all relevant and necessary factors.</i>
<i>No harm to students:</i> information must not be revealed in a way that has an adverse effect on students, meaning they are not exposed to harm and that the benefits of inclusion far out weight any risk (Berg, 2004; Bogdan & Biklen, 2007; Merriam, 1998).	<i>The nature of the research was unlikely to pose harm to students; however they could choose not to participate or to not answer particular questions if desired.</i>

<p><i>Confidentiality:</i> maintaining this improves levels of participation and the quality and honesty of answers, while protecting students' privacy (Brown, 1999; Merriam, 1998).</p>	<p><i>The researcher did not have direct access to the alumni database, the questionnaires were not coded and URL contacts were not kept, names were not requested in the questionnaire, and pseudonyms were used in the focus groups.</i></p>
<p><i>Privacy:</i> this is an important element to ensure students respond. Respondents should be able to reply in their own time and own choice of location without interference from the researcher (Bassey, 1992; Brown, 1999; Merriam, 1998).</p>	<p><i>The information letter clearly states to parents and past pupils the objectives and process of the research project. Students had a month to complete the online questionnaire and were able to access it from a range of sources: home, school, library, a GKP Unit.</i></p>
<p><i>Deception:</i> full disclosure is relevant for trust and personal rights (Berg, 2004; Merriam, 1998).</p>	<p><i>See informed consent (Appendices E & F)</i></p>
<p><i>Feedback:</i> students have a right to view the data they contribute (Merriam, 1988).</p>	<p><i>The information letter also details how students may access findings of the research in due course via the GKP website.</i></p>

Additional confidentiality measures

All information collected and held by the researcher was treated in the following manner: no unnecessary information has been held or collected, access to data was restricted to the researcher and no individual students were identified in the final document. Where it was necessary to identify individual students for the purpose of

mailing out surveys and allowing demographic or ethical information to be matched the following steps were taken:

1. All data was enclosed in envelopes and sealed.
2. Stamped envelopes and postcards were given to the GKP Head Office.
3. The GKP administrative staff addressed the envelopes using the GKP data-base.
4. All forms were returned to the GKP Head Office.
5. GKP administrative staff collated the returns and sent out postcards and focus group information requested.
6. The GKP administrative staff posted the consent forms to the researcher at the end of research collection.

4.7 Reliability, Validity and Possible Limitations

Reliability and validity are important considerations in any research. For studies to be trusted and believed, researchers need to present findings that “ring true to readers, educators and other researchers” (Merriam, 1998, p. 199). As a methodology, research case study has had periods of criticism surrounding reliability and validity (Yin, 2002). Stake (1995) advocates the necessity of clear and prior stated boundaries to pre-empt possible conflicts. Inherent subjectivity in case study is referred to by Yin (2002). He explains, as the approach relies on a small group and personal interpretation, results may not be generalisable, are difficult to test for validity and therefore rarely offer an answer for others.

Reliability

Theory

Merriam (1998) raises issues surrounding reliability and reminds researchers that human behaviour is not static and therefore this will always be a contentious area. Reliability is tested by the ability of another investigator to conduct the same study, finding the same results and drawing the same conclusion (Yin, 2004), in other words, the extent to which the study can be replicated (Wiersma, 2000). Merriam (1998) discusses six basic

strategies to overcome the difficulties of reliability and validity: triangulation, member checks, long-term observation, peer examination, participatory research and clarification of researcher biases. In essence, reliability is about respect for truth (Bassey, 1999) and addresses the extent to which research can be replicated (Bassey, 1999; Merriam, 1998).

Triangulation refers to the overlap between data produced using different methods (Merrick, 1998). It is expected that different forms of data will support other forms allowing the researcher to make credible analysis. They may also expose divergent viewpoints which can be used to assist with later programme development.

Different forms of triangulation are used in completing research (Denzin, 1989). One type involves the convergence of multiple data sources, another uses multiples data collection sources, and the third is where multiples data researchers will be used.

Practice

Potential sources of triangulation in this study were focus group interviews and surveys. To maximise reliability in the study of GKP curriculum goals the researcher documented in reasonable detail in the body and appendix of the project all procedures associated with the study (Merriam, 1998). It is worth noting however, that although replicating the questionnaire with the GKPA group in the future would be possible, a) people's perceptions change over time and b) the GKP curriculum has already moved from the goals that are being discussed in this study so the relevance may alter.

In addition, the researcher has created a password-protected case study database of all collated data and has created a classification system that is easily understandable. This database will be stored for five years and includes:

- *Case Study Notes*: notes from interviews and the questionnaire; and
- *Case Study Documents*: from GKP which the researcher was allowed to retain.

The database recorded details of how and when evidence was collected and any surrounding circumstances. The database is also an integral part of the chain of evidence necessary to trace steps in either direction when checking findings or generalisations. It

is also proof that the case study report contains the same data as was collected (Yin, 1994).

Validity

Theory

According to Merriam (1998) there are two types of case study validity: internal and external. Yin (2002) advocated internal and external validity plus reliability as criteria pertinent to case study. Internal validity aims to increase objectivity and minimise the risk of subjectivity (Merriam, 1998). Objectivity is the ability of the researcher to clearly articulate what has been investigated and how this has been completed (Berg, 2004).

Practice

For the purposes of this study, internal validity was addressed by clarifying the purpose of the study and the research questions at the outset of the study and ensuring the data collection, analysis and recording methods could be justified as being suitable to achieve the purpose of the research. This process establishes a chain of evidence (Yin, 2002). The use of questionnaire and focus group interviews as varied data gathering techniques and sources of information were used to produce convergent lines of enquiry through data and method triangulation (Merriam, 1998). A draft case study report was available, via the Trust's Executive Principal, for review by the GKP Trust Board to ensure accuracy of reporting at the end of data collation and prior to a final report being presented.

External validity becomes important when attempting to generalise a study's findings beyond the immediate case study (Yin, 2002). Generalisability makes the research process transparent, allowing others to replicate the research, as this case study may provide insights into the behaviours or operations of similar case studies (Berg, 2004). The case study of the Gifted Kids Programme Alumni is a single-case study designed to gain a better understanding of the programme purely from a past-pupil perspective therefore any generalisations, will relate principally to this group only but could be used to compare to student perceptions in a similar programme.

Possible Limitations

It is important to realise there are limitations with all types of research. Limitations in this particular case study include:

- the GKP data-base has not updated addresses of past-pupils' contact details unless the students have been part of an established alumni group and provided the information;
- the exact sample size could not be determined prior to the research;
- the returned responses might not represent a proportional cross-section of GKPA students;
- the researcher is employed by the programme and therefore has some inherent bias;
- the research relies on the professional understanding of the researcher regarding gifted and talented education;
- students involved may wish to portray only the positive points and aspects they wish the researcher to report on, clouding bias; and
- the research may highlight other areas of concern which can not be dealt with in this study.

Additionally, the limitations of research methods, as previously outlined, may apply, although all measures available have been taken to avoid these.

4.8 Summary

In this chapter, the research design and methodology settings undertaken to collect qualitative data, describing the perceptions of students who had attended the Gifted Kids Programme, have been explained and justified. Students in this study participated in an online questionnaire which and some participated in a focus group interview. Subsequently, main issues of case study research design were highlighted and data collection strategies plus analysis methods and processes were explained. Furthermore, the case study research quality was justified through explanations of reliability, validity, generalisation, and ethical issues. Chapter Five presents the results of this research.

CHAPTER 5

RESULTS

5.1 Introduction

The previous chapter described the methodological design, analytical methods, instruments and measures utilised in examining the perceptions of participants involved in this case study. As stated in the Introduction, the main purpose of this research was to measure the effectiveness of The Gifted Kids Programme (GKP) through the eyes of its past pupils. In order to address this aim, two major research questions were formulated;

1. How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the GKP core goal areas:

- to identify and develop strengths and interests;
- to develop friendships with like-minded peers;
- to broaden and deepen their learning;
- to acknowledge and embrace new challenges; and
- to strive for personal excellence.

2. In retrospect, what recommendations would alumni students suggest to enhance or improve the GKP experience?

This chapter presents the results from data gathered in the April 2008 online questionnaire and the May 2008 focus-group interviews. The data is presented in table and chart format with accompanying quotes and comments. The initial section details the general demographics of the students and the second section reports on the major themes that have emerged from analysing the students' perspectives and experiences in relation to the GKP curriculum goals.

5.2 General Demographics

The online questionnaire was completed by 174 Gifted Kids Programme Alumni (GKPA) and 25 GKPA were involved in focus-group interviews. The following charts and graphs demonstrate the general demographics of this group. Although completion of

the questionnaire was voluntary, there was a satisfactory balance of respondents; for example, male and female responses, year groups, GKP Units represented and time spent at GKP. It is the cross-Unit, gender and age involvement that provides both triangulation and an ability to generalise the reported perceptions across the sample.

Results of this research represent 22% of the possible GKPA as of April 2008. The gender response resulted with 52% male and 48% female, as seen in Figure 1. The majority of students (72%) were between 14 and 17 years of age, indicating they were in years 10 to 13 at secondary school and finished GKP two to four years before participating in the study. All Units were represented with 40% of responses coming from the greater Wellington region, 16% from Rotorua and 44% from the Auckland and Northland regions.

Figure 1: Gender Representation-percentage of students

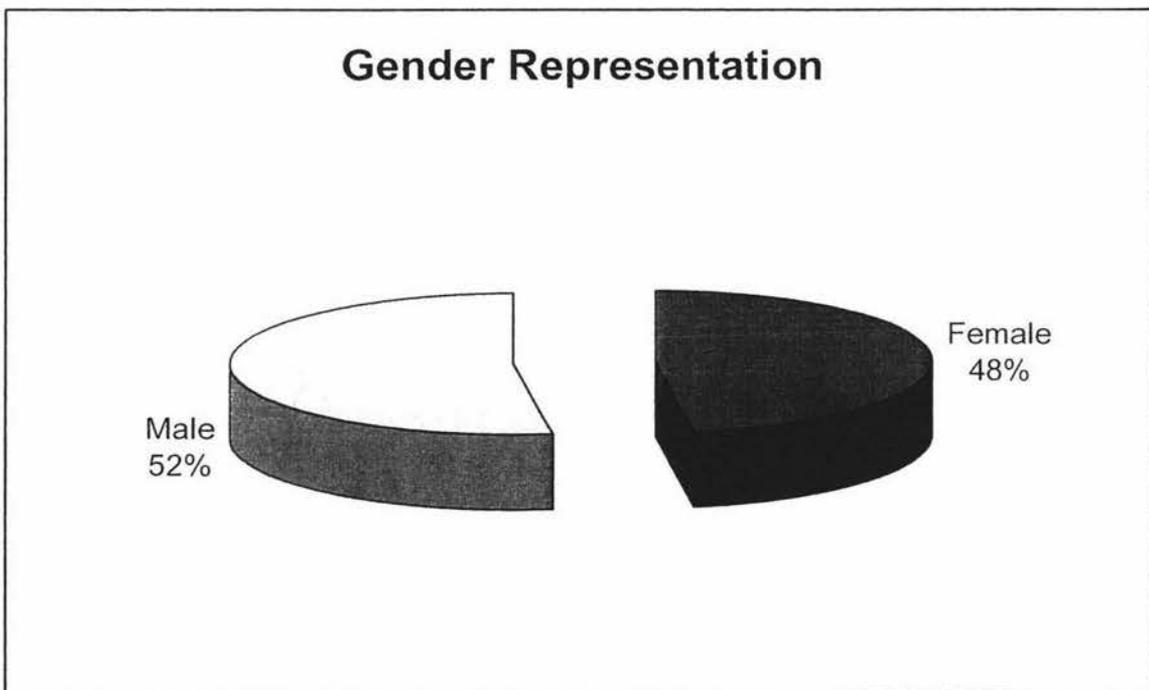


Figure 2 shows the percentage of GKPA as represented by the GKP Unit they attended. The Wainuiomata, Wilford, Naenae, Rata and Wellington Units are all based in the greater Wellington Region. Tamaki, Waikowhai and Hillary are in Auckland, and

Tikipunga is situated in Whangarei, Northland. As noted all GKP Units were represented although the highest percentage came from the Rata Unit which is where the researcher was based from 2002-2007. The lowest percentages were from the Wellington Unit, which had recently opened and at the time of the research had only one eligible past-pupil and Naenae, which was open only for a three year period when the Rata Unit overflowed. Some Naenae students may have indicated they were from the Rata Unit as these Units worked together.

Figure 2: GKP Unit Attended-percentage of students

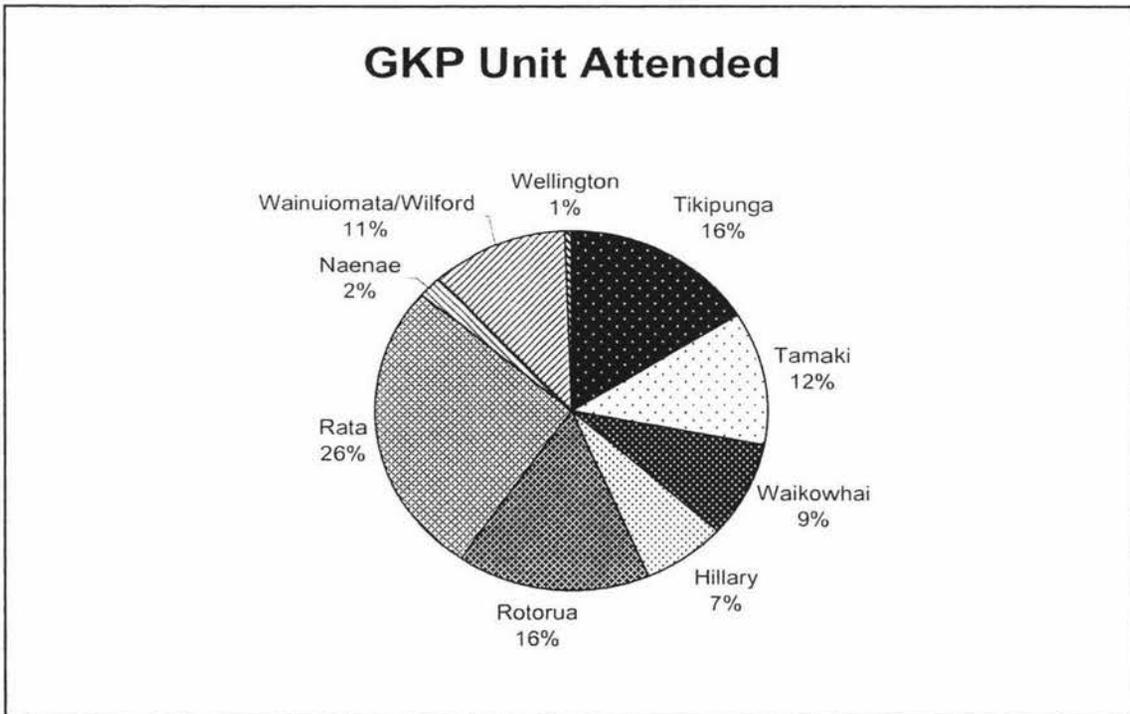
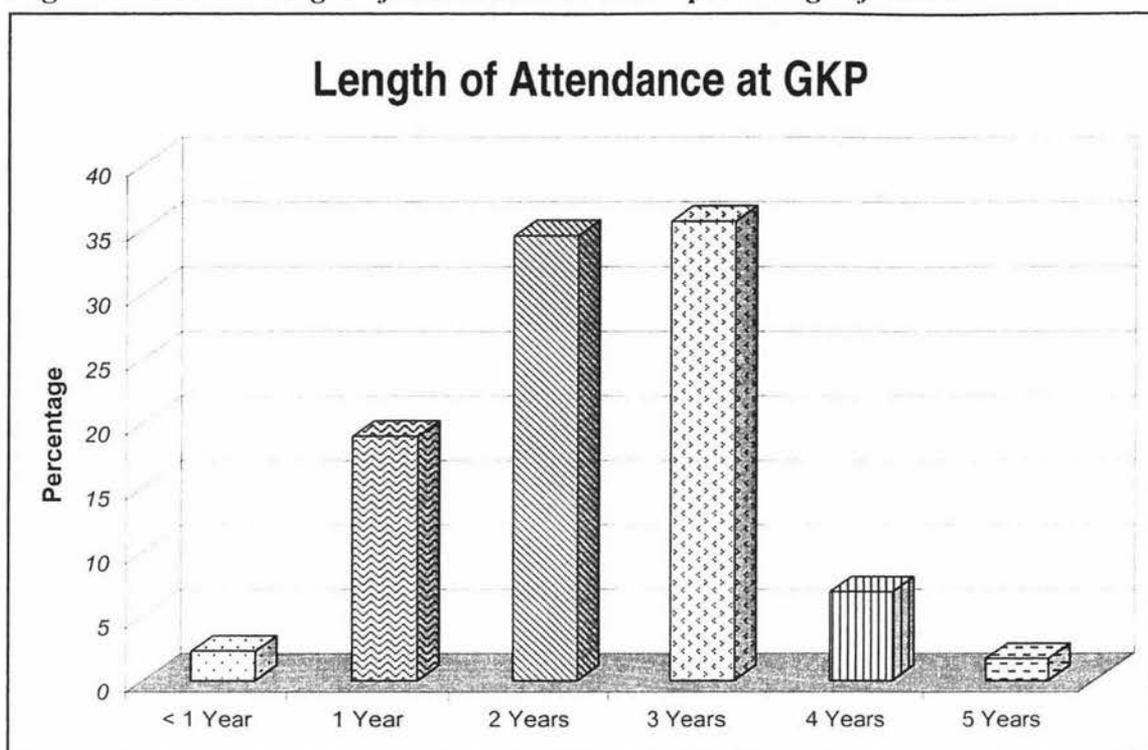


Figure 3 shows the number of years students attended a GKP unit. The majority of students participating in this research attended the programme for between two and three years. Two years is the minimum time advocated by the programme and three to four years the indicated average duration. The most common school years of attendance are between years 5-8, the later primary and intermediate years, although data shared from GKP indicates the trend is slowly lowering.

Figure 3: Student Length of Attendance at GKP – percentage of students



Questionnaire Organisation

The online questionnaire asked questions specifically related to the five major GKP curriculum goals. Each goal had a series of questions allowing for both multi-selection responses and general comments. The two main focus-group interviews followed the same question-goal format, however the two shorter focus-group sessions only focused on one or two goals each. Results of the goals are discussed with questionnaire and focus group responses included in each area.

5.3 Strengths and Talents

The first section on curriculum goals was titled: *Strengths and Talents: Identifying your strengths and talents*. Students were given the following introduction to assist them with understanding the section. *This section refers to the areas you either have/had an interest and/or passion in, or they are/were a talent area and you are/were good at them*. The major purpose of this section was to better understand the perceived advantages and/or disadvantages of working in areas of strength or talent. It also aimed

to observe if the students recognised the programme as having a focus on strengths and talents. Students were able to select multiple strength options relevant to the GKP TALENT curriculum employed at GKP and therefore had a strong focus on thinking skills as well as core subject areas.

This section was completed by all participating students. Strengths and talents were reported as frequently explored by 64% of the GKPA during their GKP day, whilst 34% said this occurred sometimes. This indicates nearly two thirds of the students saw talent development as a regular part of their GKP experience and 98% recognised talent development as part of the overall GKP programme. Specific strength areas were listed by 95% of students in an optional comment box where they were able to tick more than one box. The vast majority detailed several strength areas, mostly linked to the curriculum areas offered within the programme. Table 11 shows the collated options and orders the responses from the highest to lowest percentage indicated.

Table 11: Areas of Strength and/or Talent.

Answer Options	Response Percent	Response Count
Maths	54.6%	95
Creative thinking	52.9%	92
Computers	48.3%	84
Critical thinking	46.0%	80
Written language	41.4%	72
Science	40.8%	71
Art	36.8%	64
Oral language	32.2%	56
Technology	31.0%	54
Leadership	28.2%	49
Drama	24.7%	43
Music	24.7%	43
Culture	13.8%	24

More than half the students reported their strengths as mathematics (54%) and creative thinking (52%), and almost half (48%) stated computer, as shown in Figure 4. Critical thinking, written language and science were also common responses with just over a third of all students. Areas less frequently reported as strengths were the arts, leadership and culture.

Students frequently used the words *passion*, *strength* or *talent* during their focus group discussions and online comments relating to this goal. They appeared comfortable and articulate in sharing their thoughts in this area as evident by the following quotes:

"At my Unit we did passion time, which was when you chose something that you liked doing and you worked on it". Female, Waiarohia, 11 years, 1 year on programme (Focus Group)

"I discovered a passion for painting. I discovered a passion for maths as well. Male, Rata, 14 years, 5 years on programme (Questionnaire)

"Mathematics was my strength and GKP recognised this and extended my maths abilities. I also discovered creative thinking and drama which I was quite good at and GKP helped me to enjoy them and learn more at the same time." Female, Rata, 16 years, 4 years on programme (Questionnaire)

"At GKP we could try to work out a question we want answered during "passion time". We worked on this frequently which used most components of the brain such as creative thinking, critical thinking, written language, science etc as well as building on my passion interest." Female, Tikipunga, 14 years, 1 year on programme (Questionnaire)

"Talent time and passion time were great to help me in advancing in the things I love and the things that I could use. It helped me to focus on my strengths and taught me how to improve on the skills I have." Female, Hillary, 14 years, 3 years on programme (Questionnaire)

One third of the students shared additional questionnaire comments on strengths and talents. Recurring themes were that talent development was a new concept for many students, students discovered new strength areas and that being able to explore personal talents and strengths was a highlight of the GKP day for them.

Students described their experiences of different ways that talent development was offered at GKP, for example, two separate sessions a day or one session each day then sharing at the end. Most noted there was personal choice in what they chose to work on and challenge in the area of choice. They also noted a conflicting dilemma between wanting to spend more time on their talent areas, however, also wanting to try out different talent areas, as this student expresses. *"It was better having a mix because then you got to learn other things other than just the one thing of what you like doing."*

Female, Waikaiti, 12 years, 3 year on programme (Focus Group)

One limitation of participating in talent development only one day a week was highlighted in one focus group session, as detailed by this student. *"The fact that it was only one day a week, which I know kind of can't be helped, but you kind of lost continuity ... the flow. See, you would be working on something one week then you would lose it for the next week, sort of thing."*

Male, Bay, 14 years, 1 year on programme (Focus Group)

A few students noted that in their time at GKP they either did not participate in talent development or it was not called Talent or Passion Time. Further analysis of the data revealed the majority of students began the programme prior to 2005, when Talent Development was formally introduced into the GKP curriculum. These students understood this series of questions to be about working in strength areas, which many still indicated they had opportunity to do. Some however, stated they wished it had been at GKP when they were there, while a few were really not sure at all what it was about. Responses in this nature varied across the GKP Units in comparison to other curriculum responses which were similar across all sites.

Opportunities for Talent/Strength Development

Students were asked to indicate the talent and strength areas they felt they were given opportunities to develop during their GKP experience.

Table 12: Opportunity to Develop Strengths and/or Talents

Answer Options	Response Percent	Response Count
Creative thinking	78.7%	137
Critical thinking	78.7%	137
Computers	66.7%	116
Maths	64.9%	113
Technology	58.6%	102
Written language	58.0%	101
Art	55.0%	97
Science	52.3%	91
Oral language	51.7%	90
Leadership	40.2%	70
Drama	36.2%	63
Music	31.6%	55
Culture	19.5%	34

Rated by students at almost 80% each, creative and critical thinking were identified as major areas they received opportunities for further development. This was approximately 30% higher than students who had identified a thinking category as an area of strength.

The traditional subjects featured lower in the ratings than thinking skills, yet higher than in Table 11 (page 93) where strengths were initially identified. Opportunities for development were recognised in Maths, Science, Computers and Written Language by over 55% of students. Technology, Art and Oral Language also featured percentages over 50%. The majority of additional comments were quite individual as different

students identified different talents. Many students mentioned more than one area of talent or strength:

- *anything creative and written - the performing arts, leadership, heaps of stuff really, even things I was good at and didn't know until GKP;*
- *science and computers and technology, all of my strength area;*
- *computer, creative writing, maths;*
- *maths and computers, oral activities, lots of creative activities, drama, heaps of art and some music;*
- *maths, science and computers;*
- *maths, art, presentation; and*
- *creative and critical thinking, written and oral language, drama.*

The word passion for some became synonymous with talent. Students advocated the enjoyment they received from their talent areas, and also choice in their talent areas as explained by the following quotes; *"It was awesome when I finished with the first 'passion'. I looked at everyone else's and realised how many different passions I had and how exploring one made way for another ten passions to fulfill my time."* Female, *Likipunga, 14 years, 2 years on programme (Questionnaire)* and, *"I really enjoyed it because it was an opportunity to do the things I'm passionate about and it was a good chance for other people to comment and help me with it as well."* Female, *Rua, 14 years, 4 years on programme (Questionnaire)*

A comparison between Table 11, student identified talents and strengths areas, and Table 12, the amount of GKP time given to develop these areas, demonstrated the GKPA perceived opportunity for development was available at GKP in all their areas of strength.

The remaining questions in the strength and talent area asked students if they had continued to develop their talent areas after they had left GKP. Once again these questions were answered by all students. The data indicated thinking skills, which had

featured so strongly in the initial identification, dropped dramatically as an area of talent they felt they were able to further develop after they had left GKP.

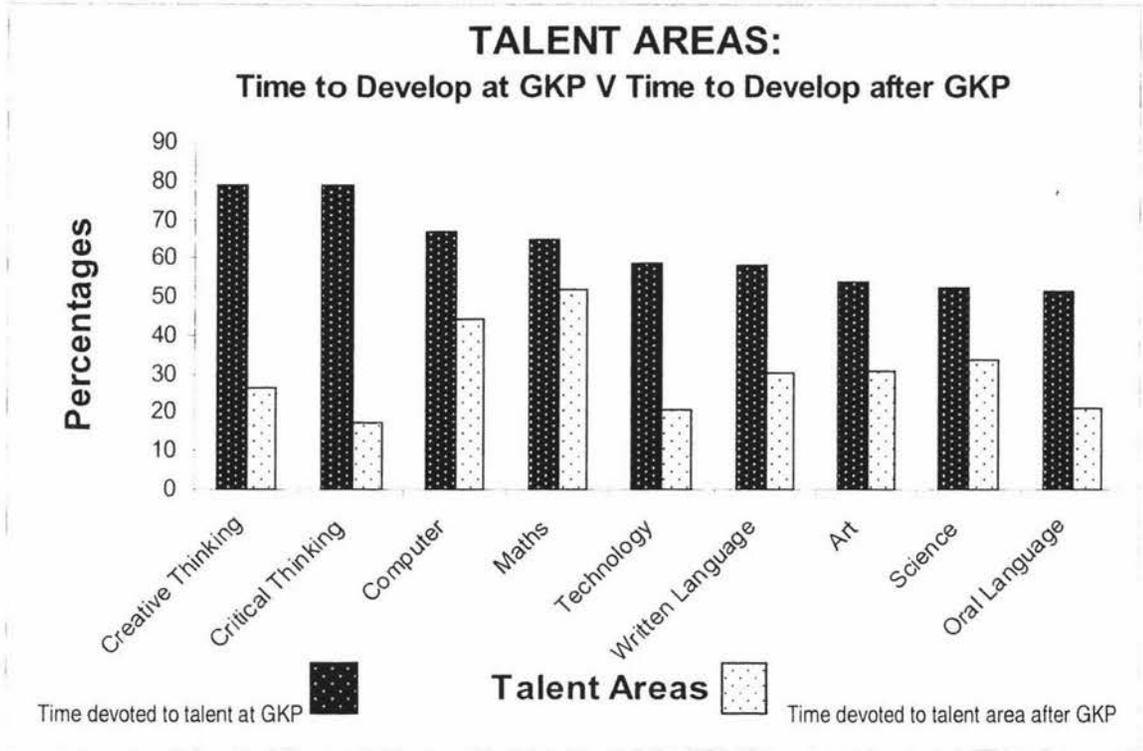
Creative and critical thinking, which were scored by approximately 50% of students as a strength area that had optimum opportunity for development at GKP, were identified by less than 25% of students as areas they had continued to develop once they had left GKP. Traditional subject areas featured dominantly, but only maths made it over the 50% mark. The only subject area that demonstrated greater opportunity to develop than Identified Talent, Table 11 (page 93) was Computer. This data is demonstrated in Table 13 and Figure 4 and by supporting participant comments.

Table 13: Areas of Continued Development post the GKP Experience

Answer Options	Response Percent	Response Count
Maths	52.0%	90
Computers	44.5%	77
Science	33.5%	58
Art	30.6%	53
Written language	30.1%	52
Creative thinking	26.6%	46
Music	22.5%	39
Oral language	21.4%	37
Technology	20.8%	36
Drama	19.1%	33
Leadership	18.5%	32
Critical thinking	17.3%	30
Culture	11.6%	20

A comparison between perceived time to develop talents at GKP and time to develop talents post the GKP experience indicates that students did not feel similar opportunity for talent development was available once they had left the programme.

Figure 4: A Comparison Graph between Time to Develop Talents at GKP and Time to Develop Talents after GKP.



Many stated talent time was an area they did not participate in at their home school. This is illustrated by the following student comments:

“The talent stuff didn't really apply in the same way. There is no time for depth at college really unless you do it in your own time.” Female, Tikipunga, 17 years, 3 years on programme (Questionnaire)

“It doesn't really fit. At school, you do what you have to. Male, Rata, 18 years, 3 years on programme (Questionnaire)

“We didn't really do the same stuff at school. If we did, it was basic versions like just the thinking hats, or maybe one term of a talent area, if you got in the group!” Male, Waimiomata, 16 years, 4 years on programme (Questionnaire)

“Now I’ve left I don’t always get much time in my passion and talent areas. I do that at home more now.” Female, Wellington, 11 years, 1 year on programme (Focus Group)

Summary

The majority of students perceived that the development of strengths and talents was an integral and valued part of their day at GKP. Talent related comments reinforced the appreciation of both the challenge and enjoyment of talent time opportunities. Students claimed they had few opportunities to participate in these areas back at their home schools. The following table summarises the strengths and limitations perceived by students based on focus group discussion and online comments.

Table 15: Strengths and Limitations of Talent Development at GKP

Strengths	Limitations
<ul style="list-style-type: none"> • <i>Enjoyable</i> • <i>Individual choice</i> • <i>Lots of options to choose from</i> • <i>Independently focused</i> • <i>Opportunities to develop new skills and strategies</i> • <i>Opportunity to discover and explore new areas of interest, passion, talent</i> 	<ul style="list-style-type: none"> • <i>Too many options to choose from</i> • <i>Not always enough time to complete tasks</i> • <i>Less opportunity to continue outside of GKP</i>

5.4 Peers and Friendships

The second series of questions related to the curriculum goal of *Peers and Friendships: Developing friendships with like-minded peers*. Students were given the following introduction to assist them with understanding this section. *This section refers to the way you related to and interacted with your classmates at GKP and the friendships that may have been formed.*

The major purpose of this section was to better understand the perceived impact of interacting in an education setting with other like minded individuals, to study the development of peer culture, to estimate the social and/or emotional support that was received and to be able to look at advantages and disadvantages from a student perspective. The questions aimed to find out if students found making friends difficult or if they felt it was important to have gifted friends. This was followed by questions about things they had in common with each other and what these friendships offered.

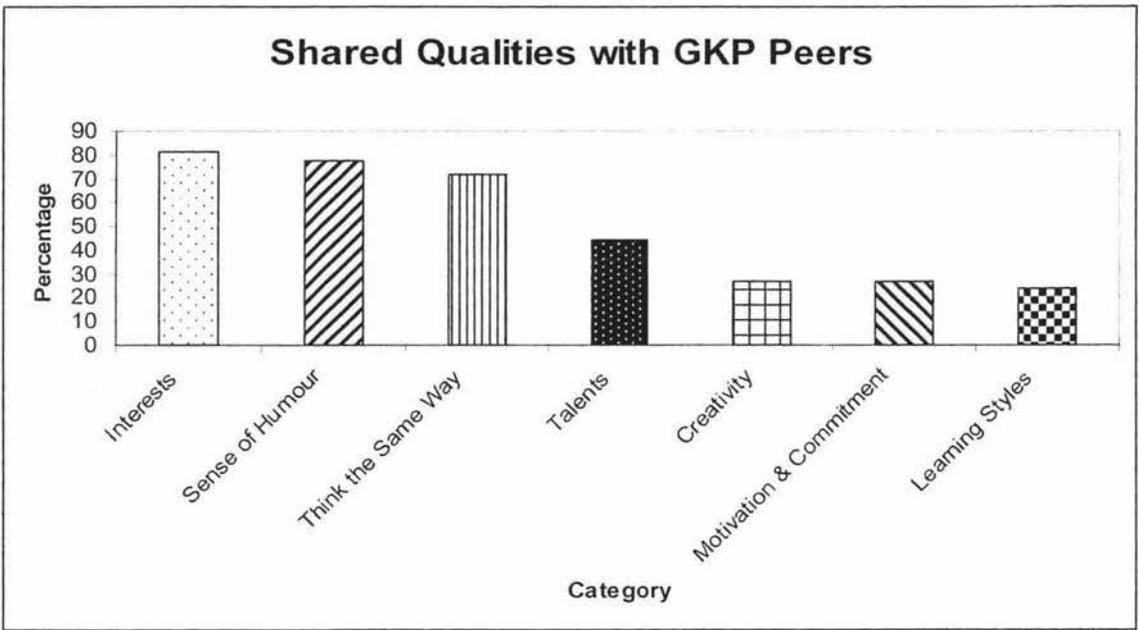
The online questions that pertained to this section were completed by 97% of students and one third wrote additional comments in the voluntary comment section. All focus-group interviews had discussions at length on this topic as, regardless of the particular question, the students often brought their peer interactions back into the discussion. There were two dominant themes that emerged in response to the peer friendship questions: making friends and feeling accepted by others.

Making Friends

Students were asked to state whether they thought friendships with other gifted students were of value to them. Results indicated that the establishment of like-minded friendships was important to 87% of students, yet 63% of students indicated they had difficulty making friends in any situation. Almost a quarter of students (21%) stated this difficulty was a frequent occurrence for them. New friends were made by 98% of students whilst attending GKP. Many students discussed the making of friendships for the 'first time' and the making of 'real' friends. *"I made my first best friend at GKP and we are still best friends now," Female, 13 years, Rotoma (Questionnaire)* and *"It was the first time I had ever made friends," Female, 17 years, Tikipunga (Questionnaire)* were frequent claims made by students of each gender and from all Units. *"These friends were my first true friends and I still have them. Female, 14 years, Tamaki (Questionnaire)* There appeared to be a level of surprise in responses relating to friendship as if students had not expected to develop friendships.

To explore this area in greater depth, students were asked to share what they had in common with their GKP friends (shown in Figure, 5). The highest scoring characteristic, by more than three-quarters (81%) of the students, was 'similar interests' to their GKP peers. 78% of students listed having a 'comparable sense of humour' as a common quality of friendship. This was closely followed by 72% feeling that their GKP peers 'thought in the same way as they did'. These findings were strongly reiterated with focus group observations and online open-ended comments.

Figure 5: Shared Qualities with GKP Peers



As one student commented: *"I think that the friends you make at GKP are different to your normal friends. They are more like you, which is good."* Male, Rata, 16 years, 2 years on programme (Questionnaire). This was reiterated by a student attending at a different time and GKP Unit. *"My friends at GKP were very funny and interesting people and we shared many of the same interests."* Male, Waikowhai 14 years, 2 years on programme (Questionnaire)

Students also commented on feeling understood with phrases such as, *"it's a lot easier to talk with them."* Female, Rata, 13 years, 3 years on programme (Focus Group).

"Everyone gets your jokes." Female, Rata, 13 years, 1 year on programme (Focus Group)
"They understand the same things." Male, Rata, 15 years, 2 years on programme (Focus Group)

Feeling Accepted

Feeling accepted was the second parallel theme in data collected within the peer/friendship category. All but 1% of respondents felt accepted by their peers in a GKP classroom. 90% stated this was a frequent occurrence for them and the remaining 9% felt it was a sometimes occurrence. In follow-up comments, 40% of students made statements referring to the methods of acceptance with words such as looking after, accepted and understood. Further discussion with focus groups revealed students related peer acceptance to fitting in, and not being seen as weird or different, as being important factors of feeling accepted. In addition they commented on the absence of negative peer interaction during their GKP day, making a particular note during both focus group interviews and questionnaire comments, about the benefits of less teasing.

Students openly shared feelings of inclusion as detailed here by these students, *"It was easy to fit in and feel part of things and to make friends, which was a novelty to me and not like this at regular school where I was not really like the others."* Female, 15 years, Rata, 3 years on programme (Questionnaire) and another, *"It was my best time at school ever, the only time I've ever felt I fitted in."* Female, 15 years, Tamaki, 2 years on programme (Questionnaire) and *"In a way GKP made me realise I didn't have to settle for friends that weren't like-minded in maturity and in ways of thinking, so I have less friends now but the friends I do have are good friends that I can relate to."* Female, 18 years, Rata, 3 years on programme (Focus Group)

Comments indicated that their experiences at their home school were quite different to those in the one-day-a-week setting and that GKP encouraged positive peer interaction for them. This came through in comments such as, *"The things you do or come up with are not thought of as weird."* (Female, Rata, 15 years, 2 years on programme (Focus Group) and, *"Everybody wanted to learn, and you were accepted for who you were. It*

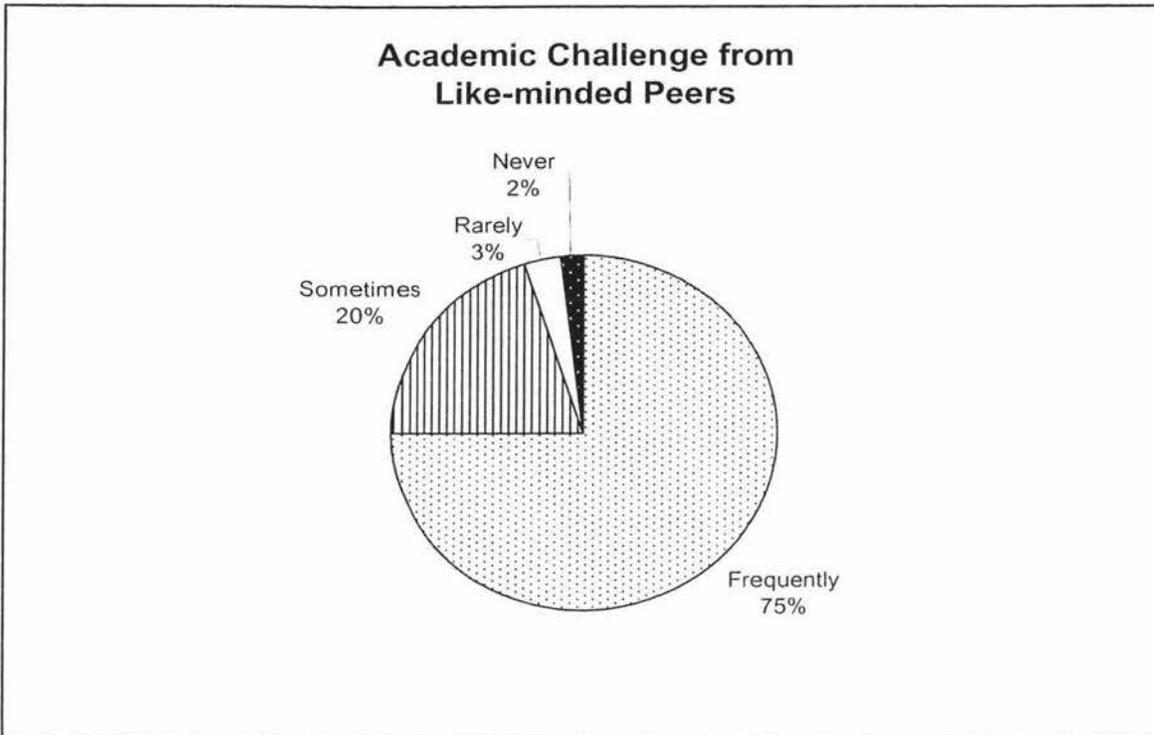
was also nice being surrounded by people who understood my intellect and didn't think I was like some weird brainiac. I also felt I could truly be myself, and not feel so self-conscious." Female, 14 years, Tikipunga, 2 years on programme (Questionnaire) and, *" I liked it quite a lot because when you were there you weren't afraid to show how much you knew because other people around you have the same web of knowledge."* Female, 16 years, Wainui, 3 years on programme (Focus group) lastly, *"I wasn't teased all the time because people there were just like me."* Male, 15 years, Rata, 3 years on programme (Focus Group)

Final questions in this section aimed to discover if there were any perceived advantages, outside of making friends and feeling accepted, if the GKP friendships had lasted and if these GKP-based friendships had any bearing on home-school friendships.

Results indicated students believed additional advantages of being with like-minded peers were i) their peers made them feel more confident and ii) they felt both accepting of challenge and wanting to challenge themselves more academically when with their GKP peers. Three-quarters (75%) of online recipients felt being with like-minded peers frequently provided them with academic challenge and an additional fifth (20%) felt this challenge was sometimes offered. The levels of challenge are shown in Figure 6 and supported with focus group and online comments.

The challenge and confidence was reiterated in comments from students who also indicated that they felt these two facets were linked together, as discussed by this participant, *"They (my peers) made me more confident to do harder things"*, Male, 15 years, Wainuiomata, 3 years on programme (Questionnaire), *"I'm not as afraid of challenge as I once was."* Female, 14 years, Rata, 3 years on programme (Focus Group)

Figure 6: Academic Challenge Perceived from Like-minded Peers.



Many students noted that challenge between like-minded peers also encompassed a level of competition. It was acknowledged that this was not deliberate and was also not necessarily a negative occurrence. This was noted across the GKP Units and by both male and female students in their questionnaire responses:

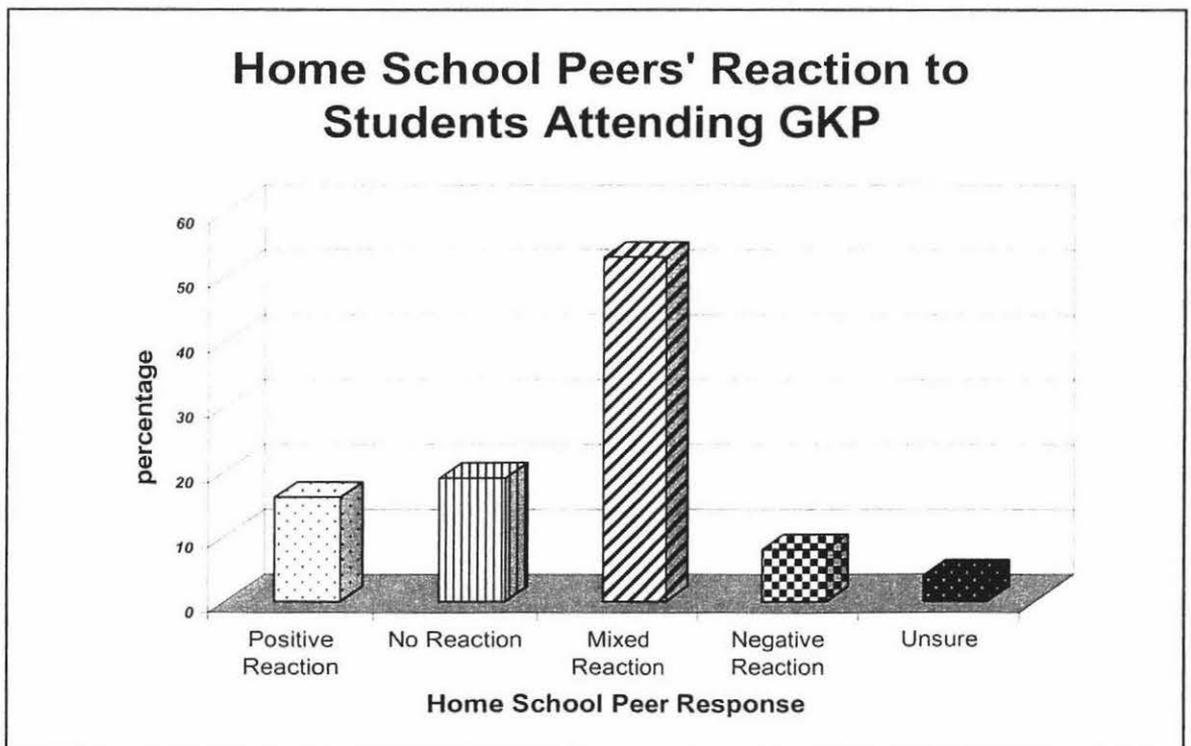
- *it was competitive but in your head;*
- *sometimes there was rivalry between student;*
- *I felt it was friendly competition;*
- *I just wanted to be as good as them;*
- *it made you want to beat them;*
- *it was harder to be the best all the time;*
- *it made it fun to not just compete against yourself;*
- *the stakes were raised as soon as you entered the room.*

Outside of the GKP environment

Three questions in this section related to GKP friendships outside of the GKP environment. The first asked how their home-school peers reacted to them attending GKP, the second queried whether GKP friendships made any difference to their friendships outside of GKP and the final questioned whether they had kept in touch with their GKP friends.

The majority of students selected a 'mixed response' as the reaction of their home school peers to their attendance at GKP as seen in Figure 7. However, over a third of the students had positive responses or a non-response, with only 8% opting for a negative response.

Figure 7: Home-school Peer Reaction to GKP attendance



Almost three quarters (73%) of students indicated they have remained in some contact with their GKP peers and the remaining 27% stated they had not stayed in touch after finishing GKP. Comments listed examples such as: losing contact; attending different

schools, moving away from the area, no active GKP Alumni in their area and not having enough in common outside of GKP as the main reasons they lost contact. These comments also stated the same college, Alumni meetings and outside of school clubs as ways GKPA were able remain in contact with each other. Some students noted that, although they were not in touch, they had remained friends, as demonstrated by this participant: *"The friends I made at GKP are friends for life. Even if I don't talk to them all the time, when we do talk it is as though nothing has changed and no time has passed. We instantly re-connect."* Female, 19 years, Beta, 2 years on the programme (Questionnaire 1)

Students believed there was little negative impact when asked if their GKP friendships made any impact on friendships outside the GKP environment. Almost half of the students (48%) felt their GKP experience made no difference to home-school friendships, as opposed to 52 % who felt it made a positive difference to friendships formed outside of GKP. The positive quotes centred on improvement in self concept and self esteem which enabled friendship building such as; *"My friends here gave me more confidence that people would want to be my friend outside of GKP."* Male, 19 years, Beta, 2 years on the programme (Questionnaire 1) and *"My friendships at GKP gave me confidence back at home school."* Female, 19 years, Beta, 2 years on the programme (Questionnaire 1)

Summary

For the GKP Alumni learning with like-minded peers came across as a positive point for the majority of students who participated in this research. The biggest advantage was finding friends who accepted them for who they were (99%) and consequently making (98%) and retaining (73%) friendships. Additional advantages to the like-minded aspect were increased self-esteem and academic challenge, which students felt to be a positive outcome. For some, their successful peer friendships in this environment also encouraged them to develop more positive friendships in their home school. A large number of students still remain in contact with each other, predominantly through attending the same college or at alumni meetings.

Students shared openly both strengths and limitations of their peer-friendships but the strength responses far outweighed any limitations. Personal comments relating to friendship feature in this specific section, but also in the ‘What do you remember the most about GKP?’ question and the general comments request. Many of the personal comments stated the absence of teasing made friendships possible but their day at GKP more enjoyable.

The following table summarises the strengths and limitations perceived by students in this area based on focus group discussion and online comments.

Table 15: Strengths and Limitations of Peer Relationships at GKP

Strengths	Limitations
<ul style="list-style-type: none"> • <i>New friendships formed</i> • <i>Real friends</i> • <i>Having a friend for the first time</i> • <i>Similar interests, sense of humour and thinking in the same way were common bonds between students</i> • <i>Feeling accepted for who they were</i> • <i>An absence of teasing</i> • <i>Increased self confidence</i> • <i>Increased academic challenge</i> 	<ul style="list-style-type: none"> • <i>Can be difficult to stay in touch after GKP</i> • <i>Mixed reactions occur from home-school friends regarding attending GKP</i>

5.5 Breadth and Depth of Learning

This section focused directly on the curriculum delivered during the GKP day, entitled *Learning: Breadth and depth in learning*. The section offered a brief overview (see Table 16) as a summary of the curriculum most students would have participated in.

Table 16: GKP Curriculum Areas

The Gifted Kids Programme delivers a curriculum encompassing three major components:

- **The Mental Edge:** complex thinking skill growth through the development and use of questioning, critical, creative and caring thinking plus metacognitive tools such as: habits of mind, six thinking hats, thinkers keys, shape thinking and CoRT thinking (ie: PMI, OPV)
- **Talent Development:** the targeted development of passions, interests and strengths through goal setting and in-class support to develop and enhance talent areas
- **Conceptual Curriculum:** looking at a concept through generalisations that cover a variety of contexts such as Survival - *animals, disaster*; Value - *money, land*; Change - *environment, revolution, heroes*

Students were given a selection of teaching and learning strategies then asked to identify which were used in each of the three major curriculum areas: thinking, talent development and conceptual curriculum. Students were allowed to tick more than one box. Table 17 lists the comparative results of questions in the depth and breadth of learning section.

Responses ranged from 86% down to 10% however all teaching and learning strategies were identified as being implemented to some degree which indicates a variety of styles and resources was employed to deliver the programme. Challenge featured across all three curriculum components. It was the only strategy that was identified by students to be frequently utilised across all curriculum areas. This is a positive outcome as one of the goals of the GKP curriculum is to ensure challenge is present within the daily curriculum.

Table 17: Learning and Teaching Strategies Implemented

	Thinking %	Talent %	Concept %
Challenge	84	86	84
Choice	42	71	61
Variety	47	55	60
Purposeful experiences	57	63	71
New knowledge	51	64	75
New skills	85	53	41
Different ways of using skills	78	33	33
Skills to use in other areas	75	28	30
High teacher expectations	54	59	63
Encouragement	54	50	58
Feedback	55	50	47
Pre-testing	34	16	55
Small group work	50	20	59
Time to explore	25	70	35
Goal setting	27	72	24
Reflective experiences	39	66	52
Specialist tuition	13	12	14
Visiting speakers	20	10	50
Class trips	29	11	74

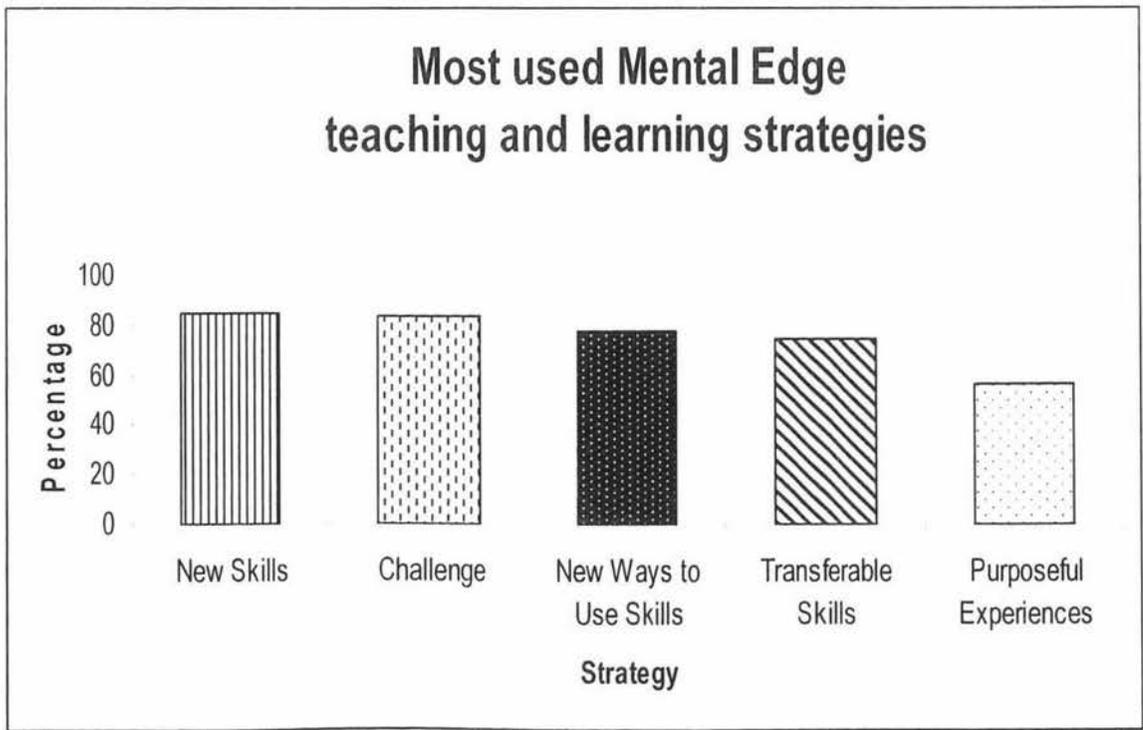
The final consistency was a low scoring strategy. Specialist tuition featured in fewer than 15%, across all three curriculum areas, and featured the lowest for Thinking Strategies and Conceptual Curriculum and third to lowest for Talent Development. As all three curriculum areas are quite different in design to each other the inconsistencies in teaching and learning strategies may not be particularly important. For example in the one-day-a-week GKP curriculum, goal-setting is a specific focus of the talent development cornerstone. Close to three-quarters of students (72%) indicated they set goals in this area, whereas less than one third indicated goal setting in thinking skills or

the conceptual cornerstone. This is a realistic outcome and one that indicates talent goals were set by the majority of students. In the same manner class trips are designed around the conceptual cornerstone, so the indication of strategy use in this area was much higher than the other areas where an education outside the classroom experience might not be relevant.

Mental Edge Thinking Skills

The highest scoring strategies identified by students as being used in Mental Edge thinking skills were new skills, challenge, different ways of using skills and skills to use in other areas. These all featured in above 75% of the responses. Between 50% and 75% reported purposeful experiences, high teacher expectations, teacher feedback, and teacher encouragement, plus small group work. Finally the lower scoring strategies (below 50% of perceived use) were choice and variety, specialist tuition, visiting speakers and trips, then pre-testing, time to explore, goal setting and reflective experiences. Figure 8 demonstrates the top five strategies students perceived were employed when involved in providing Mental Edge instruction.

Figure 8: Most Implemented Mental Edge Teaching and Learning Strategies



This quote explains a common student perception of Mental Edge: "A lot of the learning I have found useful is not what we learnt but the ways in which we learnt it: the (thinking) tools, and the (thinking) techniques were definitely a huge positive for me

Female, 16 years, Band 3, year 10 programme at the school.

Talent Development

Aside from challenge, the highest scoring strategies in Talent Development were choice, goal setting and time to explore which all featured in above 70% of the responses. The mid section of between 50% and 75% included variety, purposeful experiences, new knowledge, new skills, encouragement, high teacher expectations, teacher feedback and reflective experiences. At below 50% for this area were different ways of using skills and skills that can be used in other areas, plus pre-testing and small group work. The lowest section identified was class trips, tutors and specialist tuition. Figure 9 demonstrates the top five strategies students perceived were employed when involved in Talent Development instruction at GKP.

Figure 9: Most Implemented Talent Development Teaching and Learning Strategies

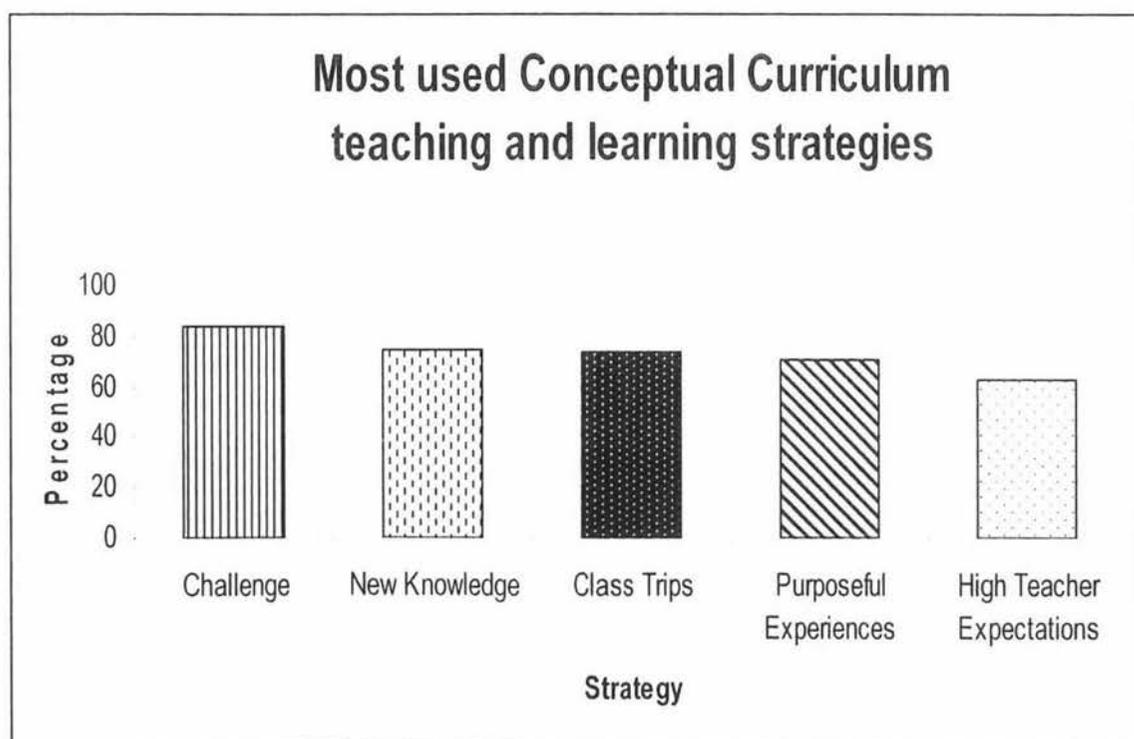


This quote explains a common student perception of Talent Development: *"This time was the biggest bonus of attending GKP."* *Math's the way! Honors/accelerated learning is the best of times, the best of times!*

Conceptual Curriculum

The highest scoring strategies in the Conceptual Curriculum section were challenge, purposeful experiences, new knowledge and class trips, all scoring above 70%. A mid section of between 50-70% included choice, variety, high teacher expectations, encouragement, pre-testing, small group work, reflective experiences and visiting speakers. At below 50% for this area were all three skill-based strategies, new skills, skills for other areas, and different ways of using tools, goal setting, time to explore and feedback. Specialist tuition was the lowest scoring at 14%. Figure 10 demonstrates the top five strategies students perceived were employed in Mental Edge.

Figure 10: *Most Implemented Conceptual Curriculum Teaching and Learning Strategies*



This quote explains a common student perception of the Conceptual Curriculum: *"I experienced lots of insight when I did my projects and especially when I did the Survival topic."* *Marie, 14 years, Kaiti 5 weeks in programme (Voluntary comment)*

The voluntary comments sections and focus-group interviews featured words such as new, interesting, different, harder and challenging when discussing learning at GKP. Students used these words when comparing their home-school learning to the GKP environment. Whilst some felt it wasn't like learning because it was enjoyable, others were stimulated by the challenge offered, for example:

- *different from school, harder and way more interesting;*
- *always new stuff;*
- *always interesting things to learn;*
- *interesting and different from school;*
- *lots of challenge and choice;*
- *fast paced;*
- *current;*
- *interesting, challenging, new and fun.*

The words *new*, *interesting*, and *different* were mentioned in 38% of the voluntary online comments relating specifically to depth and breadth of learning and *harder* and *more challenging* featured in 32% of the same response sections. The following quotes reiterate these findings, learning was:

"... always interesting, challenging and different from my home school but yet the same. It was faster and sometimes hard to keep up."

"... exciting, fast-paced with lots going on, always about things that were interesting, current and fun. It was hard but you wanted to get through and see what was next."

"... was different and challenging because of all the new skills and ideas. There was a big difference between GKP and normal class work."

"... very different to normal school, because of the challenges it provided and the new people with similar intellect I met."

A secondary theme emerged from the general comments placed after each online curriculum section. It related to students not feeling they had participated in the particular curriculum area (Mental Edge, Conceptual Curriculum, or Talent Development) during their education at GKP. This was most common for the Conceptual Curriculum with nine comments out of 17 (55%) stating they did not recognise this area of learning and nine similar comments out of 22 (38%) regarding Talent Development. There were no comments of this nature about Mental Edge.

Summary

The most consistent GKP curriculum area offering breadth and depth was perceived by the participants to be Mental Edge: Thinking Skills. This section of the curriculum was part of the initial programme delivered from 2000, so all students would have had opportunity to experience it. Challenge featured dominantly as a positive strategy to deliver breadth and depth during the GKP day. Other teaching and learning strategies varied, depending on the particular area of the curriculum being delivered and on the student completing the form. Students often compared their experiences at GKP to their home school and descriptions such as *different* and *challenging* emerged.

5.6 Challenge

The fourth section on curriculum goals was entitled: *Challenge: Acknowledging and embracing new challenges*. Students received the following instruction to assist with their responses. *This section refers to new experiences and levels of difficulty you*

experienced whilst at GKP. This section aimed to see whether taking risks, goal setting and positive participation were perceived by students to have been part of their GKP experience. Students were asked to reflect both socially and academically with regard to challenge perceived.

Socially

57% of the students believed they experienced no social challenge at GKP, however 41% found it was sometimes a social challenge and 2% of students felt GKP was frequently socially challenging for them. Social challenges tended to relate to co-operative group tasks, or coping with student self-selected roles within the GKP environment. The lack of social challenge was attributed to like-minded friendships as discussed in section 5.4. The following quote is an indication of how quickly students felt comfortable whilst attending the programme, *"I felt like I fitted in after the first day, I just felt comfortable."*

Academically

The programme was perceived by 69% of students to be frequently academically challenging and by 25% to be sometimes academically challenging. Only 5% of students felt GKP had not been a challenging experience for them. Students indicated in their responses that being challenged academically was an expectation of attending the programme. A majority of students (88%) perceived part of experiencing challenge as the opportunity to frequently try new things, as seen in the following responses: *"There was always something hard each week because of all the new opportunities but you got used to it and it was good to have in the end."* (quote 29 years, Domestic, 7 years at university at Birmingham) and, *"We were given a lot of opportunities to challenge ourselves and even if we didn't feel up to it (the challenge), it was often challenging because it was new to us or just hard to do."* (quote 15 years, Roma, 2 years on the programme at 60th Utopia)

Students were requested to indicate specific parts of the GKP curriculum where they felt challenged. They had the option of selecting from 18 choices that were a predominant

part of the programme or selecting the 'other' option. As indicated in Table 18, students perceived critical thinking (88%) and creative thinking (80%) skills and strategies as being the most common areas they received challenge during their GKP day. This was followed by maths at 72% and computers at 65%, then the final thinking skill, caring thinking at 63%. This indicates that at least 2/3rds of students felt challenged during instruction using the Mental Edge Thinking Skills curriculum component. Maths and computer both rated over 60% however other areas had varied results.

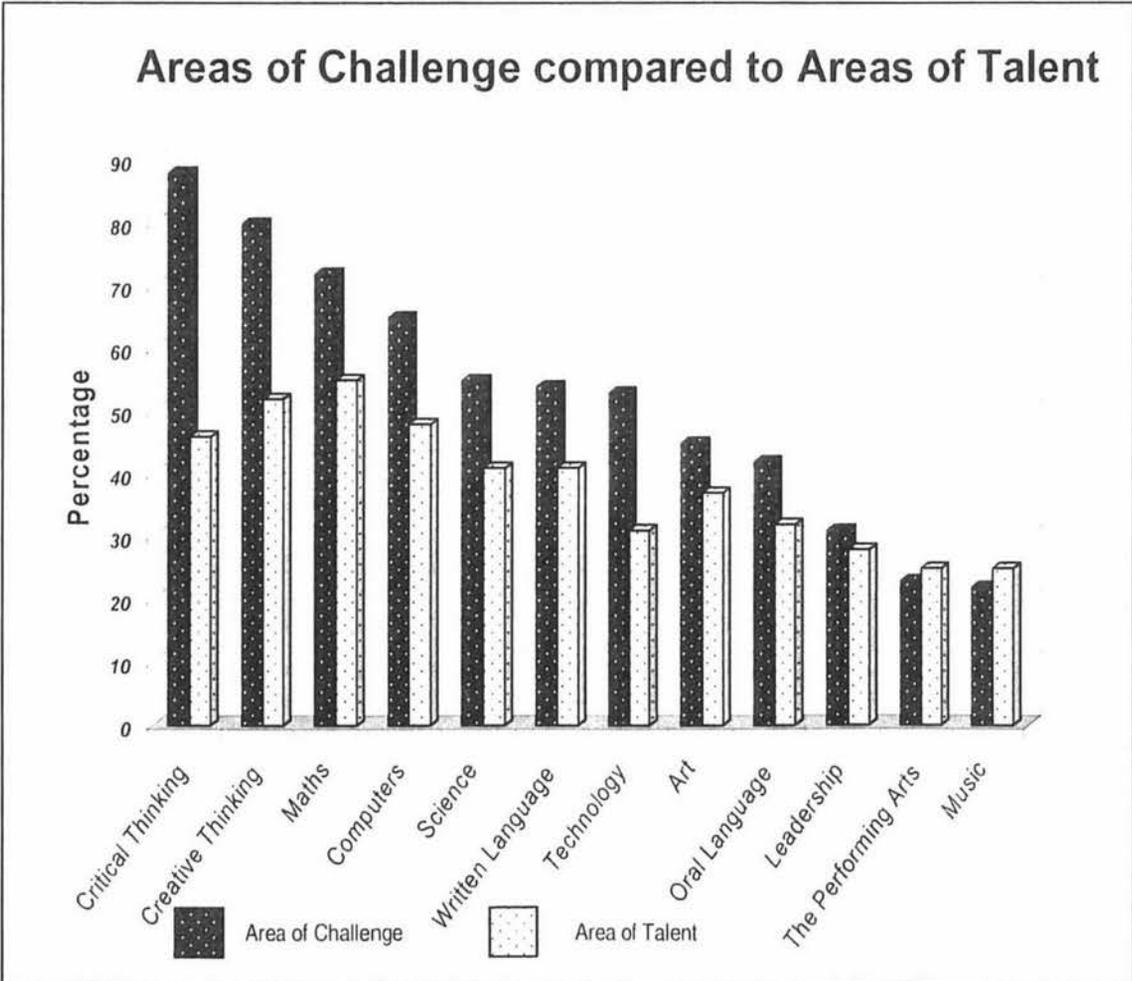
Table 18: Areas of Perceived Challenge

	Response Percent	Response Count
Critical thinking	88	151
Creative thinking	80	138
Maths	72	124
Computers	65	111
Caring thinking	63	109
Habits of mind	57	98
Co-operative skills	57	98
Science	55	95
Written language	54	93
Technology	53	91
Persistence	46	79
Independent skills	46	79
Art	45	78
Oral language	42	72
Leadership	31	53
Performing arts	23	40
Music	22	38
Sense of humour	12	21

In relation to their self-identified areas of talent (Table 11, p. 93), 94% of students believed they received challenge in their areas of strength or talent and 98% stated they were also challenged in their weaker areas. Figure 11 compares students' identified areas of talent with the areas students perceived they received challenge during their GKP day. Aside from the Performing Arts and Music, challenge was perceived to have been offered in all identified talent areas.

Thinking skills featured highly as an area students felt they received opportunity for challenge. Critical thinking was identified in this area by 86% of all students, followed closely by creative thinking at 79%, and caring thinking to a lesser extent at 64%.

Figure 11: Areas of Challenge compared to Areas of Talent



Students discussed challenge as a positive component but also as a challenge in itself, having to try harder to achieve and to learn to cope with not always being first, or the best. The following quotes highlight challenge as an enjoyable expectation at GKP.

"Challenge was what made it enjoyable, primary school was so limiting especially the last year at primary and the last year at intermediate, you felt like you had done everything and they weren't prepared to look for anything else, the GKP day was the only day I felt extended and that I was learning something."

"It was always challenging but in a good way, you were still interested and it was easy to accept the challenge in the end you just expected it, that was just part of GKP, that's why it was fun."

"It was great to be challenged and learn more, regular school wasn't challenging, the challenge made time at GKP much more interesting than regular school."

"Challenge was often experienced in areas I didn't expect, at times it was hard to overcome them as I wasn't used to challenge but we were encouraged and supported and the learning was worth it."

Summary

Challenge was perceived as an expectation by many of students attending GKP. They expected to be offered challenge and understood it was an expectation they needed to accept. Challenge also featured strongly in the Depth and Breadth of Learning section however students mentioned challenge was evident throughout their GKP experiences. Learning benefits appeared to focus on self-achievement through challenge, the challenge of new experiences and the challenge offered through either pacing or harder work.

5.7 Excellence

The final section on curriculum goals was titled: *Excellence: Striving for personal excellence*. Students were given the following introduction to assist them with understanding the section. *This section refers to whether you aimed and/or achieved your personal best at GKP*. This section was divided into three sections: potential, achievement and aiming for excellence.

Potential

Students were asked to state how often they believed they achieved their academic potential in their home school environment. Nearly half of the students (48%) reported they rarely felt they achieved their potential at their home school. Many students (63%) also reported that GKP frequently enhanced their achievement in school during the time of their attendance and an additional 30% believed GKP made a difference back in their home school some of the time. More than half of the students (55%) reported they believed GKP continued to contribute to their achievements after leaving the programme.

Achievement

Students were also asked to identify factors which assisted with individual academic achievement at GKP. As detailed in Table 19, the five most frequently selected factors were all chosen by at least three-quarters of the participating students and included level of challenge (90%), opportunities offered (84%), a safe environment (79%), teacher feedback (77%), and teacher expectations (76%). Lower factors are identified in Table 19.

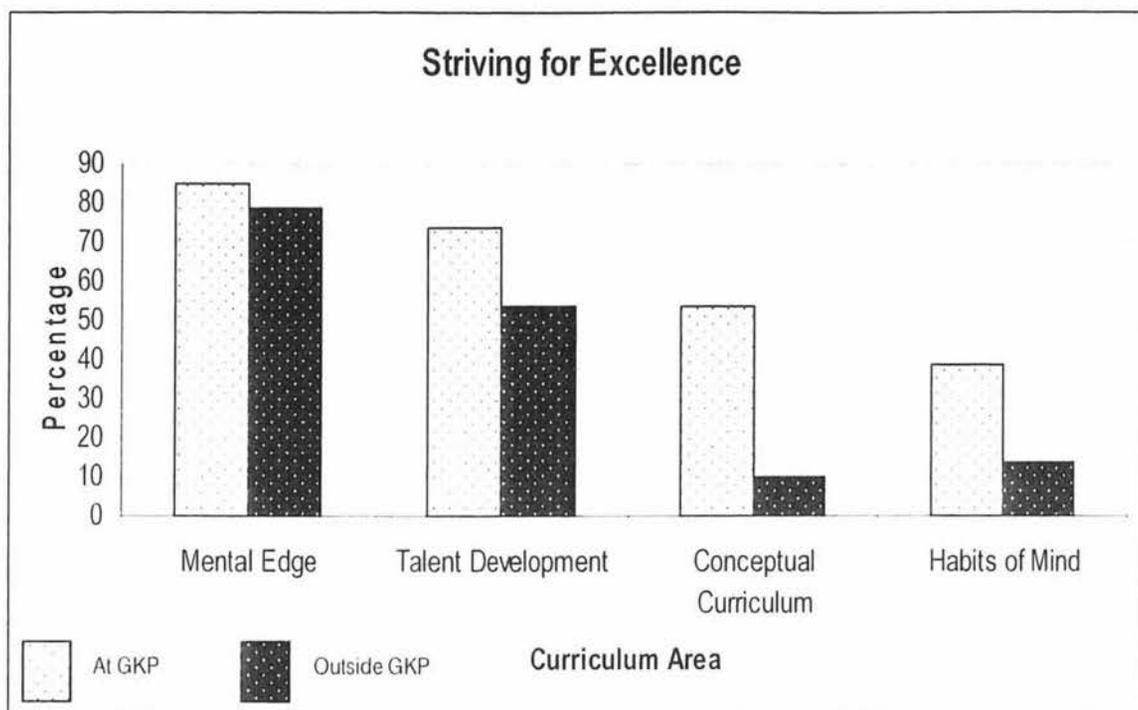
Table 19: Factors Contributing to Individual Achievement at GKP.

	Response Percent	Response Count
The level of challenge offered	90.1%	155
Opportunities offered	83.7%	144
The environment felt safe	79.1%	136
Teacher feedback	76.7%	132
Teacher expectations	75.6%	130
Teacher support	68.0%	117
Working in your talent area	67.4%	116
The amount of choice	65.7%	113
The resources	55.8%	96
The relevance of tasks	53.5%	92
Clear expectations	45.3%	78
Peer expectations	13.4%	23
Peer support	32.0%	55

The final set of questions in this section related to students' perceptions of achievement and aiming for excellence whilst they were participating in the GKP curriculum. Students were asked to select responses based on the three main GKP curriculum areas and the Habits of Mind behaviours which underpin the curriculum. Whilst participating in the programme, students indicated the Mental Edge Thinking Skills programme was the area they most strived for excellence (85%) followed by Talent Development identified by 74% of participating students. The Conceptual Curriculum was rated as an area to strive for excellence in by just over half the students, however the Habits of Mind registered only with 39% of all students.

Students were asked to compare their excellence based on applied potential and achievement between GKP and their home school. Figure 12 illustrates the outcome of this question.

Figure 12: Striving for Excellence



Students indicated striving for excellence occurred for them more often whilst at GKP than outside of the programme. When responding to the same question but in a home school capacity Mental Edge and Talent Development were selected more frequently by the students as areas they strived for excellence, however the percentage this applied to for Mental Edge dropped 6% to 79% and for Talent Development by 16% to 54%. The Conceptual Curriculum and Habits of Mind barely registered as areas students strove for excellence outside of the GKP environment. When asked to elaborate on this question, the majority of responses related to Talent Development and centred around two statements: "It didn't apply in the same way" noted by 10/33 students or "We didn't do this at school" noted by 26/33 students.

One focus-group described excellence as meaning, "*achievement through peer competition*", "*providing the impetus to strive for excellence*" or "*achievement through self-desire and/or expectation*", as seen below.

"Striving for excellence ... well, once again the competition, having a little bit of competition really encourages you to do your best." *Female, 17 years, Waltham, 2 years out of primary school*

"I think the people around you made you strive for excellence, like the competitive thing really." *Female, 17 years, Waltham, 2 years out of primary school*

Some online survey voluntary comments outlined their understanding of excellence as an expectation or a goal, such as in these examples. *"I learnt that excellence meant different things to different people and started to get an idea of what my own excellence expectation should be - that's hard to work out when you just hand in anything and get told it's brilliant without trying."* *Female, 15 years, Waltham, 2 years out of primary school* – and *"Excellence was another expectation, why else be there?"* *Female, 15 years, Waltham, 2 years out of primary school*

Other students strongly related aiming for excellence at GKP to teacher expectation and the development of positive learning habits. As these students demonstrate: *"I felt that the GKP teachers pushed me so far and enthused me also with whatever I was doing. I believe you need encouragement to go further."* *Female, 15 years, Waltham, 2 years out of primary school*

"GKP taught us to question questions and consider why we were doing what we were doing. When you arrive at a new school after GKP, you use the skills you have been taught, and teachers at future school do not appreciate your questioning attitude, thinking you're just being smart." *Male, 15 years, Waltham, 2 years out of primary school*

"I think it requires persistence. It's made me study much harder than I normally would have. GKP taught me the skills to strive for excellence." *Male, 15 years, Rava, 3 years out of primary school*

Summary

Only 15% of the students participating in this research felt they frequently reached their academic potential in their home school environment. The majority believed GKP made a difference to their academic achievement, both within the GKP setting and outside of GKP. Outside of the GKP environment, students either did not apply the same personal academic standards or felt they did not have the opportunity to transfer their GKP learning into their home school environment. The level of challenge, the teacher and a safe environment rated highly by three-quarters of students as factors that increased achievement with two-thirds of students adding working in a talent areas and being offered choice in their learning as being conducive to attainment.

5.8 Student Reflection

Curriculum Goals

The final questions in the online survey requested student opinions and views on their participation at GKP. This section aimed to gather information from the students that would support the previous questions and also provide information for the second research question pertaining to enhancing the programme for future students. The initial question required students to rank the effectiveness of GKP curriculum goals from highest to lowest on a Likert scale, based on their own personal GKP experiences. Table 20 details the responses in percentages under Likert scale options, with the final column stating the percentage of positive response as indicated by combining the agree and strongly agree columns. As the table shows, the overwhelming majority of participants agreed that GKP met its goals.

Table 20: Effectiveness of GKP Goals as Perceived by the GKPA

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree	Positive response percent
Acknowledge and embrace new challenges	0	1%	4%	22,5%	72%	94.5%
Develop friendships with like-minded peers	1%	2%	4%	30%	63%	93%
Broaden and deepen learning	0,5%	0,5%	5,5%	29,5%	63%	92.5%
Identify and develop strengths and talents	0,5%	0	8%	35,5%	56%	91.5%
Strive for personal excellence	2%	2%	7%	38%	51%	89%

Suggestions for Improvement

When asked what they thought could have improved their GKP experiences students' responses in this category were predominantly centred on two similar suggestions:

- i) staying longer on the programme (71%) and ii) more days a week at GKP (43%).
- Other options of increased Talent Time and harder activities were selected by less than 24% of participants. A different teacher, different location, or more links to home school and grouping by talent rather than age were selected by less than 10% of students.

Focus group comments indicated appreciation of the opportunity to attend whilst at Intermediate School. Negative comments in this section often referred to disappointment when a local intermediate did not support students attending the programme. A few students expressed a desire to have started the programme earlier, as explained by this participant, *“Possibly if I had started at a younger age... I enjoyed my Year 6 year particularly as I was in a group of mainly year 7 and year 8 students and their maturity*

and perspectives gave me people to look up to.” (Female, 17 years, 100% of 30 days of participation) (Quoted in Table 19)

Greatest Benefits

As seen in Table 19, when discussing greatest benefits students again reiterated the value of opportunity, challenge and friendship. Talent Development was perceived as the next highest benefit by the group (50%). The other major themes that came through all related to self-esteem and emotional security: well-being, confidence, achievement and motivation all scoring ratings worth noting. Additional comments expressed the teacher as an important factor and the environment as being a welcoming and special place for them.

Table 21: Greatest Benefits of attending the GKP Programme

	Response Percent	Response Count
Opportunities	84.2%	144
Challenge	82.5%	141
Friendships	81.9%	140
Growth in areas of talent	56.7%	97
Confidence	44.4%	76
Personal well-being	37.4%	64
Achievement	30.4%	52
Motivation	23.4%	40

In support of benefits, students were asked to state what they remembered most about attending GKP in a comment section, 96% of students commented in this section. Learning, including challenge, featured in 54% of replies followed closely at 44% by the events, trips and opportunities offered during learning. A third mentioned their friends and/or teachers as their most remembered feature and 20% stated feeling accepted and valued, plus having fun, as the stand-out factors.

Beyond GKP

When looking beyond the programme, just under 50% thought they would like to keep in touch with GKP once they had moved from the programme. 69% of students indicated they were aiming to continue into tertiary study once they left college with 57% of these stating University as an aim. 20% were unsure of where they were headed after college with only 9% thinking they would head into full-time employment. Focus group and general comments indicated that many students would be first-in-family University entrants.

The last question gave an option for any further general comments on any area relating to the programme. This was completed by approximately 50% of students. Most responses were detailed memories, almost all in support of the experiences they had encountered. Two themes stood out in this comment section:

1. One third of the comments spoke about GKP being life changing, a turning point in their education, or allowing them to better understand themselves in order to achieve success in their education.
2. An additional third spoke about the personal habits they had acquired such as persistence, self motivation, risk taking as been the enablers of the turning point or life change.

5.9 Summary

The majority of students who participated in this research were positive about their experiences at GKP. Themes emerging from their reflections included:

- forming friendships;
- a sense of belonging;
- increased self confidence; and
- raising of personal expectation through the challenge of peer interaction.

Experiences and opportunities made a difference in the long term (not just the short term) and the teacher was an important influence during their time at GKP. Negative themes related to the lack of transfer back to home school and one day being not enough for them, plus wishing for longer on the programme in general.

These responses combined with the breakdown of questions in each category support the findings that students who have attended GKP enjoyed participating in a curriculum which they perceived as matching the goals set by the programme and felt these goals were important to them both in a cognitive and affective manner.

CHAPTER 6

DISCUSSION

6.1 Introduction

VanTassel Baska (2005) suggests that schools need to recognise and accept they may not be able to cater for all the needs of their gifted students, necessitating access to out-of-school facilitators. Whilst one-day-a-week provisions for gifted students have been operating in an out-of-school capacity in New Zealand since 1996, there has been little research nationally into the effectiveness of these provisions. Approximately 120 New Zealand schools have utilised the provisions available through GKP, as one method of meeting the needs of their gifted students, and ensuring their staff have access to specialist educators and professional development opportunities. GKP can be classified as an out-of-school withdrawal provision for gifted students. As detailed in the literature review, research supports the use of ability grouping in gifted education and withdrawal or pull-out programmes are known to show significant academic gains in thinking skills and achievement and to support social and emotional needs.

To offer an effective programme, VanTassel-Baska (1994, 2003b, 2005) reminds educators that appropriate curriculum for gifted and talented learners must be responsive to the cognitive and affective characteristics of the students. According to VanTassel-Baska (2003a) there are a series of essential elements in curriculum for gifted students including acceleration, complexity, depth, challenge and creativity. GKP has developed a unique curriculum, specifically for gifted students in a one-day-a-week setting. This curriculum, through thinking skills, talent development and a conceptual component, identifies five core areas of need and targets programme delivery towards each of these: like-minds, strengths, breadth and depth of learning, challenge and excellence (GCACT, 2008a). VanTassel-Baska's elements are encompassed by the differentiated programme delivered within the curriculum goals:

- to identify and develop strengths and interests;
- to develop friendships with like-minded peers;
- to broaden and deepen their learning;

- to acknowledge and embrace new challenges; and
- to strive for personal excellence.

This chapter discusses the results of the study as they relate to the above curricular goals. It will identify relationships between the goals of the Gifted Kids Programme (GKP), the experiences and perceptions of the past pupils involved in the programme, and the theory and research related to effective curriculum for gifted students.

6.2 A Focus on Strengths and Talents

The traditional approach to giftedness as a fixed quotient leaves open the possibility of disregarding the specific strengths and developing potential of many gifted students (Feldhusen, 1998; Renzulli, 1986). Developments in gifted education in the latter part of the twentieth century have led to a diagnostic approach to giftedness, where talents and aptitudes, rather than intelligence alone, have become the focus for identification and provision (Feldhusen, 2001). Sternberg (1991) and Gardner (1993) proposed multidimensional understandings of intelligence, which many advocates have misinterpreted as being solely about giftedness (Henshon, 2006). Gagne's research (1985, 1993, 1995, 2000) prescribes a model with a focus on both gifts and talents, allowing for increased recognition of ability as well as a means of involving the child, home and school in the development of such talent (Feldhusen, 2001). Some researchers see the focus on developing gifts and talents as one of the turning points in gifted education (Reis, 2009).

GKP advocates their provision as a talent development programme that allows students to focus on their areas of interest, strength and talent, and work around deficit components that might be barriers to their learning (GCACT, 2008a). In responding to this research, students spoke positively about the value they perceived in being encouraged to work in their areas of strength and talent. They were comfortable responding to questions about talents and advocated the benefits of having opportunities

to work independently, extend relevant skills and have sustained period of time working in their area of strength and talents.

The ultimate goal of talent identification is student self-identified talent development, via appropriate programming (Feldhusen, 2001). Schools have a responsibility to supply academic, athletic and artistic provisions to allow for personal growth and the optimal development of all students (Feldhusen, 2001; Henderson, 2004). For students whose talents are at levels exceptionally higher than their chronological peers, provision commensurate to their needs is essential (Feldhusen, 1998, Feldhusen & Wood, 1997). As part of the GKP Entry Selection Process, contributing school teachers and families are asked to complete identification documentation that specifically seeks to find out about areas of interest, passion, strength and talent (GCACT, 2006). This information is then used as the beginning of each student's learning profile (GCACT, 2008a).

VanTassel-Baska and Reis (2004) identified regular involvement or practice, personal interest and quality instruction as essential elements for successful talent development. Students in this research perceived talent development to be an integral part of attending GKP and as such, increasingly expected to have opportunities for participation during each session. However, variability in the amount of time allocated for talent development in different GKP classes was evident. An allocation of an appropriate amount of time is reiterated by Rogers (2002) who claims that a gifted child needs to be able to work on a daily basis in their strength areas for learning in these areas to be most effective. In a one-day-a-week programme this is not possible.

For the earlier GKP students, those who started prior to 2005, talent development was not a prescribed part of the GKP curriculum (GCACT, 2007e). This was evident in their responses and although most felt they had been given opportunity to work in their strengths areas, they did not discuss it in the same terms as students who began the programme from 2005 onwards. These students talked about regular opportunities, goal setting, choice, depth and time, in their comments around talent development. They

discussed the value of long term inquiries, skill building and acquiring and demonstrated enjoyment in sharing their talents with others in their class and local community.

For many students involved in this research, the experience of talent development was new to them when they began to attend GKP. GKP advocates the sharing of strength focused goals and promotion of talent development through their professional interactions with contributing schools (GCACT, 2008a). Substantiation of this sharing did not consistently come through in student reflection as the majority felt talent development was not offered, not rigorous enough or not relevant outside of the GKP context.

Students claimed they had greater opportunity to develop in their strength areas at GKP than at their home school. They also stated they felt more challenged intellectually in their areas of strength at GKP as opposed to their home school. Factors that assisted this enjoyment and learning were the amount of personal choice within this context to not only explore new possible strengths but also to explore these areas at their own pace and in a way that suited their own learning styles. This is supported by research from Tolan (1985) who believes immersion in tasks is the most effective way for gifted students to learn. Immersion appeals to the obsessive nature of some who have an absolute desire to learn, know or understand their present passion.

Students were positive about their involvement during talent development at GKP. The greatest dilemmas identified in the GKP setting were over which talents to choose, wanting longer for immersion and more opportunities to continue development in strength areas at school. The lack of continuity into home school intensified for the majority of students once they moved into secondary school. Those who commented on the use of strength based opportunities felt that there was no longer a place for talent development or personal choice in the secondary setting. Those who did say they received opportunity outside of GKP felt it lacked the rigour and depth to truly challenge them. Many equated challenge in their talent areas with interest and a desire to learn.

Although these students are a small sample in the bigger picture of gifted education, they are representative of a number of different school communities across New Zealand. Their collective view of a lack opportunity to develop in talent areas is concerning, as talent development not only needs to be nurtured to ensure success (Bloom, 1985) but also teaches perseverance and provides personal motivation (Feldhusen, 2001).

Summary

Findings from this research suggest that over the past four years GKP has greatly strengthened its talent development curriculum component and acknowledgement of strengths and talents is built into the programme referral and identification process. Alumni students who began the GKP post-2004 indicated talent development was an integral and valued part of their GKP day. Talent options were broad and allowed for interest and passion development, and involved the elements of challenge, choice, self-management and time for depth of learning.

Of greatest concern was the perceived lack of opportunity to transfer talent development back into primary or intermediate school based programmes, whilst the students attended GKP. Students reported even fewer opportunities for talent development once in their secondary school environments. Over half of the participating students indicated a talent for critical and/or creative thinking, only a quarter of these students felt they had opportunities to develop these skills outside of GKP. This provides an opportunity for GKP to assist schools with further developing talent focused learning experiences in their own environments, and reminds both GKP and contributing schools that educating the child is a combined responsibility.

While this research portrays talent development at GKP in a positive light, it did not measure academic growth in student talent areas, which would be essential to generalising effectiveness, nor did it look specifically at the programme offered within the different talent provisions accessed at individual GKP Units

6.4 A Focus on Like-Minds Together

Friendship

Human beings by nature are social beings and as such they seek interaction with each other. Gifted students are no different; in fact Silverman (1993) claims friendship is one of the most common desires of gifted youth. Students, who are grouped together based on ability, frequently find themselves with like-minded peers. Within this type of grouping strategy are a range of programming options and numerous delivery alternatives.

A gifted student's ability to socialise and to make friends is often a major concern of parents and educators. Research suggests the more highly gifted a child is, the more likely they will suffer from social asynchrony, where they find it difficult to relate to their chronological peers (Gross, 2004). Students in this study overwhelmingly reported a desire to have friends, but also difficulty in making friends. Most claimed that within the provision of a like-minded environment, friendships became a reality. Participating students indicated being with like-minded peers allowed them to make friends and to feel accepted, and that this had benefits for them at both cognitive and affective levels. Research on like-minded grouping of gifted students as mentioned in the literature review, also states this. Rogers (2002) goes as far as to say gifted students should spend the majority of each school day with others of similar abilities and interests. Gagne (2009) states gifted students should be grouped "full-timely". Freeman (1991) stated a decade earlier that like-minded peer interaction was one of the greatest benefits of out-of-school gifted provision.

Gross (2002, 2004) found that when seeking friendships, gifted students were more likely to seek those of comparative mental age than chronological age. She also found that deeper, intense friendships were made at earlier ages by these students than their same-aged peers. Gross (2002) discusses five stages of friendship: the play partner, people to chat to, help and encouragement, intimacy and empathy and the sure shelter. This final stage indicates a safe haven. Many GKP Alumni pupils, when sharing their thoughts on like-minded friendships, were immersed in stages three and four, where help

and encouragement becomes reciprocal. For others, their standing would be between the last two stages, where they felt GKP provided them their first and only true friend.

Outside of friendship

Being educated with like-minded peers has additional benefits to purely friendship, such as increases in self-concept and self esteem, plus for some, academic gain. Feldhusen and Moon (1992) advocate working with like-minded peers. This allows students to be appropriately challenged but also assists with a realistic understanding of their own abilities. Gross (2004) found gifted students were less reluctant to work co-operatively with peers of similar ability. Adams-Byers, Whitsell and Moon (2004) found being understood by others was hugely affirming and allowed for growth in both self concept and self esteem. In this research, being understood was interpreted as finding someone who thought in similar way and sharing a similar sense of humour or similar interests. Students indicated these elements were not present in their home school friendships, yet enabled them to form firm friendships in the GKP environment. These friendships allowed them to feel 'normal' and for many gave them an opportunity to participate in some regular friendship activities which they had previously not accessed, such as playing at a friend's house.

In anecdotal comments students frequently mentioned that both the absence of teasing and support from peers increased their self-confidence both within the GKP setting and beyond it. Challenge and competition from peers in academic areas were seen as additional benefits to like-minded grouping and for some students this grouping became a factor of motivation.

Summary

The strongest Alumni messages in this research related to the benefits of being with like-minded peers. This matches research on grouping strategies within gifted education. Ninety-eight percent of all those involved in this research project made friends at GKP, this alone strongly indicates that participating students perceived the programme met its curriculum goal in this area. Comments relating to like-minded grouping permeated all

goals as students linked their peer-friendships positively with cognitive challenge, competition and growth, as well as encouraging affective development including self concept. In this instance, peer pressure can be viewed in a positive sense and the benefits of this need to be acknowledged within students' home schools.

The success of this goal affirms the value of like-minded placement during learning experiences and suggests grouping options, for gifted students, should be carefully explored outside of a one-day-a-week setting.

6.5 A Focus on Breadth, Depth and Challenge

The goals of breadth, depth and challenge have been discussed in combination during this section as the responses were frequently intertwined by students and seen as integral to each other.

In order to provide a programme tailored to meet the academic learning needs of gifted children, the curriculum delivered needs to have a series of differentiated components. Research strongly supports acceleration as one of these (Colangelo et al., 2004) combined with embedding multiple higher-order thinking models and skills within core content areas (VanTassel-Baska & Brown, 2007). Inquiry-based strategies that involve issue or problem based decision making that is relevant to the students' world, plus an emphasis on affective issues, are also integral to effectiveness (VanTassel-Baska & Brown, 2007). As stated in the literature review, if differentiated correctly, these components will provide the complexity, depth, challenge and creative opportunities necessary to meet the needs of gifted students (VanTassel-Baska, 2003b).

Providing Breadth and Depth

Questions in this category related to students' perceived exposure to breadth and depth within their GKP experience. The GKP 2008 TALENT Curriculum aims for breadth and depth in three major areas: talent development, thinking skills and a conceptual curriculum. During participation in the programme, students were given the opportunity

to access explicit instruction in each area as well as integrated learning opportunities (GC'ACT, 2008a). In reflecting on their experiences in these curriculum areas, the students overwhelmingly stated they felt learning was effective in the GKP environment and acknowledged two factors as major contributors: challenge and the teacher. Of the nineteen strategies available to highlight, fourteen directly related to the teacher providing the appropriate opportunity to allow learning to take place. The remaining three were related to provisions outside of the GKP environment. The major areas students perceived teachers encouraged breadth, depth and challenge were through expectation, encouragement and feedback.

Students expressed high interest in the concepts and contexts studied and claimed they were exposed to new learning on a regular basis. Enrichment is an essential part of providing stimulation (Gavin, 1994). Through providing material students felt was current, relevant and challenging students stated they were engaged and motivated. GKP is not an accelerated programme by nature, however students commented on acceleration provided via self-pacing, working in depth in talent areas and being recognised for prior knowledge through pre-testing.

Providing Challenge

This study supports research claiming many gifted students do not feel challenged in their regular day to day education (Gross, 2004; Winner, 1997). Kulik (1993) states gifted student achievement falls dramatically when programmes fail to offer appropriate challenge. Students in this research strongly claimed they experienced challenge throughout their GKP day, from both the content of the programme but also their like-minded peers. This challenge assisted in increasing levels of interest and engagement in the programme and was frequently equated with fun. It is this perception of enjoying whilst learning that promotes their intrinsic motivation and interest (Siegle & McCoach, 2005).

Challenge in gifted education can manifest in a variety different ways. The grouping of students can increase levels of challenge as students are more likely to not only motivate

each other, but also have more aptly planned material from their teachers (Tomlinson & McTighe, 2006). Variable pacing of instruction (Maker, 1982; Rogers 2002; Tomlinson & McTighe, 2006) can assist with the provision of challenge through allowing students to move quickly when they grasp concepts and skills, or building in additional time to gain greater depth or breadth. Accelerated or compacted curriculum delivery is another manifestation of pacing.

GKP has a philosophical commitment to meet the needs of gifted students in lower socio-economic communities (G'ACT, 2008b). Students in these areas are often underserved in gifted populations and educationally have not always had the same access to opportunities as some of their peers from other communities (Moltzen, 2004; VanTassel Baska; 2007). For many gifted students, especially those of underserved populations, challenge can come from exposure to both breadth as well as depth, and often breadth is needed before depth can be addressed (Olszewski-Kubilius, 2007; Worrell, 2007).

In this research, students were not asked to identify their home schools, however, it is evident from the responses that many students saw GKP as a place where they received opportunities to broaden their horizons. They discussed at length, the variety of contexts, the trips, the specialists and the access to equipment, notably computers, as being highly rewarding.

The concept of providing challenge was explored in this research in two areas, social challenge and academic challenge. Although a majority found few social challenges in the like-minded environment, one third did feel challenged socially at times at GKP. These challenges related to coping with peers who they perceived were academically more able, and learning how to work productively as part of a group. Some students also acknowledged, social challenge for them, included finding themselves holding different roles in the classroom setting.

Approximately fifty percent of students found their home schools lacked appropriate levels of academic challenge to stimulate them intellectually, however 95% stated GKP

provided this challenge for them. Students repeatedly shared a desire for challenge and stated they developed skills broader than purely subject related when they were involved in challenging experiences. Academic challenge for students came from all areas of their involvement in GKP, intellectual stimulation in thinking skills, acceleration or compacted material in talent or concept development, plus new knowledge, skills and opportunities. Of all three curricula areas breadth and depth in thinking skills were the most common areas of development, possibly as it has been part of the GKP curriculum since the programme began or partly as it is integrated into the other curriculum areas.

Summary

Schools access out-of-school specialist provisions to supplement the education of their gifted students, as they acknowledge these programmes can provide additional experiences rich in breadth and depth. These two concepts were commonly referred to by past pupils as challenge or something new. After friendship, challenge was the most commonly used response to the advantages of attending GKP. Past GKP students acknowledged that both breadth and depth were evident within all aspects of the one-day-a-week programme but did not necessarily believe these factors were equally evident in their home school environments. This opportunity particularly stood out in critical and creative thinking skills, where many students felt they received extended opportunity for development and application and also claimed they were able to utilise skills and strategies outside of the GKP day.

Findings in this section of the study highlight the importance and value of a specialist teacher in gifted education, as the strategies employed by the teacher and the interaction between the students and teacher were recognised by the students as having a positive impact on the programme they received. This research also suggests that students perceived the curriculum they received at GKP was appropriately differentiated to enable them to receive educational opportunities commensurate with their abilities and needs, and which were not provided, generally, in their home school.

6.6 A Focus on Excellence

Excellence within this research was studied via student viewpoints of potential and identification of techniques or strategies that assisted personal achievement. Excellence is advocated by GKP as working to personal potential. The programme aims to empower students to set high standards, develop personal goals that actualise their talents, and self-advocate for challenge (GC'ACT, 2008a). One aim of gifted education is to raise the 'ceiling' for students (MOE, 2000) to not only enable but also encourage them to not accept mediocrity.

This study indicated at least half of the students (48%) felt they were regularly achieving below their potential in their talent areas in their home schools. Students generally attributed this to a lack of challenge. Many believed attending GKP helped to raise their own standards and expectations, but only some thought this transferred back to their home school. Students did not appear overly concerned they were not reaching their potential, or levels of excellence, and rather seemed to feel when they needed to, they would. Riley (2000b) cautions that some students in this situation will 'give up', deny their abilities or even look at other methods of fulfilling their potential.

Students indicated they felt regularly exposed to a huge range of teaching and learning strategies. The questionnaire responses showed that students perceived as challenge and opportunity, followed closely by the teacher, to be of greatest benefits to their learning. The focus groups expanded on this, adding the importance of a safe learning environment.

Providing quality teaching in gifted education

The importance of the GKP teacher in the success of the programme was evident in many comments and ratings. Alumni pupils who stated GKP had been a turning point in their education, or had changed their lives, also stated their teachers had been a strong influence in their achievement. They expanded on this by claiming teacher expectations and feedback were highly influential factors. The students added that the teacher knowing them as an individual and feeling valued by the teacher were additional

strengths. Hattie (2003), in his work on what makes a difference in learning, is a strong advocate of teacher influence in many aspects of education. Both quality instruction and feedback rate highly on his scales of influence, regarding making a difference to student learning, teacher expectation, however, does not feature in Hattie's work (2003), which contrasts with three-quarters of the Alumni ranking this as critical to supporting their academic achievement.

GKP teachers are specialists in their field, they receive ongoing professional development in gifted education and their focus is on delivering a curriculum designed specifically for their one-day-a week gifted programme (GCACT, 2007b). According to students' perceptions, this targeted resourcing is effective in their learning. Adopting a best practice curriculum is of no value without best practice instruction (Tomlinson & McTighe, 2006), and best-practice instruction is difficult to deliver without appropriate professional development (Roberts, 2008b). Whilst there has been little research into the qualities of effective teachers of gifted (Vialle & Quigley, 2002), Hansen and Feldhusen (1994), in a comparative study between trained and untrained teachers of gifted, concluded teachers who had completed professional development in gifted education were more effective than teachers who had not. Whilst this study did not attempt to examine the characteristics and strategies of the GKP teaching staff, the comments shared by students indicated the teacher's role as pivotal in their GKP experience.

Providing environment

It is essential gifted students feel they can trust their environment and expect to succeed in it (Siegle & McCoach, 2005). A responsive environment is the present name given to an educational setting that strives to match the learning needs of its learners (Clark, 2008; Riley 2004b; Tomlinson & McTighe, 2006). Clark (2008) states a series of key ingredients necessary to meet the needs of gifted students, of these the environment was number one. Feedback in this study related as much to the physical environment as the social and emotional environment that had been created. Alumni students stated flexible timetables, groupings, and the resources as elements they appreciated. Many students reflected on the atmosphere in the room and a feeling of shared ownership. The majority

of students responding (80%) believed the environment was a major factor in being able to achieve at GKP. It scored above talent development and choice, but just below overall opportunities, and was surpassed by the teacher, challenge and friendships.

Summary

Alumni students clearly stated GKP gave them both opportunity and support to raise their personal standards. They perceived their teachers to be a vital ingredient in this development and stated once again the value of challenge in learning. Specialist programmes for gifted naturally raise the standards required as their cohort is different. This creates a flow on effect to the students, who inherently aim higher within these purpose-developed environments. Whilst the GKP Alumni claimed they had opportunities to work to their potential, further work needs to be undertaken in assisting students to ensure this happens.

6.6 Contribution to current body of literature

Withdrawal programmes are a popular provision in gifted education, both nationally and internationally. They tend to be predominately enrichment-based, and occasionally acceleration focused (Catheart, 2005; Keen 2004; Riley et al., 2004). Due to the lack of published research on programme effectiveness (Riley et al., 2004) educators remain wary about the value of these programmes as a method of provision. This unenthusiastic view often results in opposition to programmes rather than looking at the original purpose and need (Davis & Rimm, 2004). As stated in the literature review, there is much research about the complications and possible negative impacts of withdrawal and pullout programmes, however, there is also an equal amount of research on positive aspects. Hoogeveen, van Hell and Verhoeven (2005) suggest that teachers who are comprehensively informed about gifted programmes are more inclined to look for and report on positive social and academic outcomes for students.

The findings of this research indicate a withdrawal programme can contribute successfully to the education of gifted children, but without efforts to communicate with

the child's in-class teacher, the effectiveness has the potential to be limited to the withdrawal programme only. As the Gifted Kids Programme is an out-of-school provider, this study also demonstrates the benefits possible of schools collaborating with specialists to provide appropriate services.

6.7 Future Implications and Recommendations

This research indicates, from a student perspective, that the GKP TALENT curriculum was meeting its goals. However, the goals of this programme are also relevant to each participating students' education, back in their home school. Therefore, a greater understanding of GKP is necessary to enable home school teachers to access and transfer successful elements of the GKP curriculum back into their own environments. GKP does not advocate they are the only solution to gifted education, nor that they wish to work in isolation (GCACT, 2008c).

This research provides participant insights into the effectiveness of the Gifted Kids Programme, and offers comment for both improvement and celebration across the intended outcomes. In order to increase the value of this research within the Gifted Kids Programme, the stakeholder base needs to be broadened from a present pupil basis to the past-pupil basis in a more structured format. In addition, the Alumni group could be used to form the basis of a longitudinal study.

This study looked at the initial 'wave' of students through GKP. Follow-up research as the programme evolves, centred on the amended curriculum goals, will be of benefit to the programme and interested parties as a comparative study as well as an effectiveness investigation.

The majority of students involved in this research did not feel they met their academic potential in their home school environment. Many students expressed a desire for the programme to be extended to more than one-day-a-week and/or for the curriculum to be implemented in some format within their home-school setting. This indicates that more

research is needed, not just into what opportunities are offered to gifted students in withdrawal settings, but into the nature of possible inclusive classroom practices and their effectiveness of meeting the needs of gifted students.

From the perspective of those looking to utilise GKP as an out-of-school provider for their gifted students, it clearly indicates students felt their experiences were of value. For those wishing to develop their own withdrawal programmes, or already operating a withdrawal style programme, it would be highly informative if similar studies were completed, which in turn, would assist in gathering a greater picture of the strengths and limitations of a one-day-a week model within a New Zealand context.

6.8 Limitations

As with all research, there are limitations to the interpretation of these results. Five key areas of limitation exist with regard to this research.

1. The sample used was convenient rather than random, as it relied purely on who responded to the invitation to participate. All efforts were made to achieve a high response rate, however, the researcher was unsure until the questionnaire was completed as to the exact nature of the sample. This was due to the GKP past-pupil data-base being out-of-date, as many students had moved and not informed GKP of their new address. The number of students that participated was still an acceptable sample size and a balanced representation of GKP communities, gender and age.

2. As all results of this research come from students who voluntarily wished to participate, there is a possibility that those with a greater positive experience of the programme were more likely to participate than those whom may have had a less positive experience. This indicates a need to be cautious with the interpretation of the data.

3. Although all aspects of conflict of interest were dealt with in line with Massey Human Ethics Committee guidance and request, the researcher still has a vested interest in the programme and the outcome of the research. This bias has been discussed by Slavin (1987, 1990) who claims an increased bias in favour of gifted education is becoming evident in research. Ogdan and Goldberg (2002) caution researchers to investigate the extent of this bias before discounting research data.

4. This research is reflective of one stakeholder in the Gifted Kids Programme – alumni students. To get a broader perspective, additional studies would need to be completed inclusive of present pupils, staff, schools, families and sponsors.

5. Finally the information collected in the study was of a self-report nature which, depending on the subject areas being queried, may be prone to some inaccuracy as a result of participant less than accurate recall, lack of information, or discomfort with self-disclosure.

6.9 Summary

This research clearly demonstrates that students who attended GKP perceived positive social and academic impacts. Responses received demonstrated students were satisfied with the nature of the curriculum and instruction offered in this out-of-school provision. This was reinforced by recommendations stating the only way to improve their experiences on the programme would have been to have had increased access to it. This access was suggested as either starting earlier in their education or attending more than one day a week.

Students were enthusiastic about being involved in the research and responded at length to all question areas. Voluntary comment areas were completed by at least a quarter of students in all instances and up to three-quarters in others. Focus group interviews ran longer than anticipated. Students comprehensively rated their experiences highly, in

particular the opportunities for challenge, talent development and social interaction with other gifted students.

There is little research on the effectiveness of withdrawal/pullout programmes and critics frequently state limitations of such programmes (Clark, 2008; Cox & Daniel, 1985; VanTassel Baska, 1987). This research highlights a number of encouraging factors perceived by students as necessary to the success of a one-day-a-week withdrawal programme:

- a safe environment where students can interact with like-minds;
- a planned curriculum with opportunity for genuine challenge and talent development;
- a specialist teacher who is aware of the needs of gifted students and effective teaching practices; and
- fostered links between their withdrawal provision and their home class to ensure learning opportunities and developing skills can be utilised across learning environments.

It also highlights a number of interesting findings, some of which do not support previous research. It might be expected on the basis of previous research (Herzog, 2003; Wright & Leroux, 1997) that children would experience difficulties with classmates at their home school or feelings of isolation as a result of attending the programme. However, this was generally the reverse; students perceived GKP to be empowering in a social and academic sense. In addition, teacher expectation, missing from Hattie's (2003) research, was perceived by students to be a vital factor in success and achievement.

"True research does not end. Instead it points the way for yet another search", (Glesne, 2006, p.220). Undertaking comparative research on the Gifted Kids Programme with other stakeholders such as parents and schools would now seem essential to complete a more comprehensive picture of the complete value of this programme.

The value of GKP to students, as perceived and stated by the students themselves, can not be underestimated. One hundred and seventy-four students in this research believed they benefited from a programme specifically designed to meet the needs of academically and creatively gifted students. They also stated a strong desire to be offered increased learning opportunities in this manner. Student perspective is often overlooked and underestimated as an evaluative tool, yet those experiencing a programme can share an informative and honest point of view that can be invaluable to those delivering a programme. Those implementing programmes, however, need to remember the true power of student voice comes from listening to it.

CHAPTER 8

CONCLUSION

Providing a range of learning opportunities is essential to meet the needs of any student. However, providing a range of appropriate learning opportunities for gifted students is frequently complicated by a lack of understanding, a lack of teacher training and a lack of resourcing. Out-of-school provisions provide support for schools to meet the needs of their gifted students, as part of the continuum of approaches. One-day-a-week withdrawal programmes have been operating in New Zealand since 1996 and have become one provision of gifted education opportunities available to many gifted students nationwide.

This thesis offered an original contribution to research in New Zealand education. The main focus of the research was to explore the experiences of past GKP students and examine their perceptions of how these experiences met the goals promoted by the one-day-a-week, out-of-school provision. The research highlights a number of interesting findings such as a majority of students experiencing ongoing academic challenge for the first time, feeling accepted and building friendships for the first time, and advocating the advantages of being able to learn in a strength-based environment where time was given for the development of gifts and talents. All of these were perceived by students as pivoting on opportunity, challenge and teacher expectations.

From a national viewpoint, this research is part of a bigger picture in gifted education as it assists in explaining one previously unexplored view, that of one-day-a-week programme effectiveness from a student perspective. From a global viewpoint, this study supports the relevance of student voice when evaluating the effectiveness of a programme. Whilst schools play a crucial role in the education of all of their students, this research also demonstrates that out-of-school providers of gifted education can offer a valuable educational experience that schools may not be able to offer, resource and maintain. These learning environments, created by out-of-school providers, are unique and have the potential to not only complement the school environment, but for some

students to provide a 'safe haven' outside of it (Tolan, 1990). The research also reinforced the importance of ensuring links between home-school and out-of-school provisions to foster continuity of achievement, as students repeatedly mentioned they felt there was little chance to transfer learning once out of the withdrawal setting.

Meeting the needs of gifted students remains a major issue in New Zealand education (ERO, 2008). Failure to do so can potentially result in underachievement through talent loss (Hong & Milgram, 2008) and in gifted students failing to understand what it means to be gifted and therefore failing to utilise their true potential (Silverman, 1993). These issues can result in negative consequences not solely for the gifted individual, but also for their families, schools, communities and ultimately the countries they live in.

The vast majority of students consulted for this research strongly stated that attending the GKP was a personally rewarding and positive experience. They responded fluently, consistently and positively across all five core GKP programme goals: like-minds, talents and strengths, depth and breadth of learning, challenge and excellence. Students commented repeatedly about differences between their home school and GKP and how at GKP the feeling of being accepted, increased opportunities, developing thinking skills, choice, and working in strength areas promoted their learning. They frequently stated the over-riding strength of the programme was the opportunity to be involved in challenge and fun, with other students who think like they do. This like-minded interaction clearly provided an important influence in the development of cognitive and affective abilities which enabled students to explore and understand their own sense of identity and to better value their individual gifts and talents.

Negative perceptions of the withdrawal programme centred around one-day-a-week not being sufficient. Research participants were asked to make recommendations for the programme. All of the recommendations for future students focused on increased time on the programme, or a continuance of the GKP curriculum in their own home school environment, complete with timetabling suggestions of how that could happen.

The research indicates that students who attended the programme for a longer duration received the greatest benefit. Students were articulate about their gifts and talents, they credited GKP with tools and strategies that they have been able to employ in their subsequent education and they felt confident and comfortable with themselves as gifted individuals heading towards new arenas of education. Many stated the experience changed their lives.

This study has not evaluated the curriculum offered by GKP nor the quality of the delivery of the curriculum. Rather it has listened to the voice of past-students in relation to programme effectiveness. Overwhelmingly, the students who responded to this research valued their experience at GKP and could relate these benefits to the goals set by the programme. In addition, it has not contested the value of withdrawal programmes as a means of educating gifted students, rather discussed the value of one provision, from the perspective of a specific group of students.

This research suggests New Zealand teachers need to be questioned about pedagogical decisions, challenged to examine those decisions and encouraged to investigate the value of a variety of provisions for gifted students. They need to ask themselves, "What is the responsibility of mainstream education towards gifted education?" and then explore what they can achieve or need to realistically achieve. From there, the relationships across a continuum of opportunities, including withdrawal programmes, both in and out of school, can be solidified. It is important that such opportunities are connected and continuous to maximise the benefits for the students involved.

Whilst educators are comfortable with accepting that 'one size does not fit all', and understand therefore that different provisions and programmes are required for students, they need to further explore the possibilities of a continuum to ensure these provisions meet the needs of the students. Educators need to better understand the place of withdrawal and of out-of-school provision, ensure that these programmes are not in isolation and are enduring, however they also need to ensure these programme options are available for their gifted students. Connections and transitions are valued not only by

the teacher but by the students as they seek some continuity between their provision and their additional opportunities. Alternative provisions are essential for achievement and whilst there is no single method that can cater for the needs of all gifted students, this research suggests a one-day-a-week provision can be one successful alternative.

Truly understanding the essence of such programmes however, can really only come about from experiencing the programme oneself or listening to its students. As one student commented:

"... I never knew I was gifted until I went to GKP I just thought I was different, I didn't really fit in at school but I did at home, I guess my parents are gifted!!! Anyway going to GKP was relief because I kind of found a niche. I was there for 3 years and it not only helped my academic achievement but also my confidence hugely. Feeling confident also made it easier to learn, as I was more relaxed. I learnt to laugh, and at myself too. I made friends, some I still have, which is pretty incredible and something when I was young I didn't think I would have. GKP also taught me to strive harder, not take the easy out which I had got into doing and still do a little sometimes. GKP I think also helped my regular school because my teachers found out more about how to teach kids like me, also I got other GKP kids put in my class. Being able to attend GKP was a positive thing in my life. I hope other kids get the chance to go there too."

Young Gifted and Black (2004)

Any intervention in a child's educational journey is just one factor that contributes towards their individual success as a learner. Gifted students' needs are diverse. They are not a homogeneous group. To best meet these needs, a range of complementary learning experiences is required. As participating students stated with enthusiasm and appreciation, GKP offers one such opportunity.

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APPENDIX A:
LETTER FOR PERMISSION FROM GKP BOARD
Perceptions from the GKP Alumni

28 January 2008

Dear Chairperson and Gifted Children's Advancement Charitable Trust Board,

Re: Master Thesis Research:

Perceptions from the Gifted Kids Programme Alumni

I am writing to seek approval from the Gifted Children's Advancement Charitable Trust (GKP) to undertake research on past GKP pupils, the GKP Alumni, and to gain indirect access to the GKP data base for this purpose.

I am presently undertaking my Master of Education within the College of Education at Massey University focusing on the experiences of past Gifted Kids Programme (GKP) pupils. The main objectives of my masterate research are to describe the experiences from a student perspective and to identify areas that were successful or unsuccessful for our students. My interest in this topic has arisen from working in gifted education for the past five years, within a one-day programme environment, a personal conviction in the belief of the programmes operated and a resulting need to know if this belief is justified.

The research is being undertaken using two formats; an online questionnaire, and two focus group interviews, held in Wellington and Auckland respectively. I have received provisional approval on December 18th 2007 from the Massey Human Ethics Committee of the College of Education, Massey University. My chief supervisor is Dr Tracy Riley, Senior Lecturer, Department of Learning and Teaching.

This questionnaire will be posted online for all Alumni, past-students, of the Gifted Kids Programme as of March 1st 2008. For the purpose of this research an Alumni member is a student who is year 7 or above who no longer attends the Gifted Kids Programme. The data from completed questionnaires will be used to ascertain answers to the following research questions;

How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the following areas;

- To develop friendships with like-minded peers,
- To strive for personal excellence,
- To identify and develop strengths and interests,
- To acknowledge and embrace new challenges,
- To broaden and deepen their learning.

In retrospect, what recommendations would alumni students suggest to GKP?

All past GKP students who attended GKP prior to January 2007 and have now left the programme and are year 7 or above will be invited to participate in the study. A written invitation and request for consent to students and their parents will be the first contact this group will have regarding this study.

It is necessary to contact students by accessing the GKP database. To avoid a conflict of interest this data base will only be accessed by GKP office staff. I will provide GKP head office with stamped envelopes each time a mail out is needed and GKP staff will need to address and mail out requested data.

The correspondence will include an information sheet which includes an overview of the study and an invitation to participate in the online questionnaire, plus information regarding the opportunity to opt into a focus group interview if they live in the Auckland or Wellington regions. The mail out will also include a consent form to be signed by all participating students and the parents of students under 16 years of age.

The questionnaire will be conducted using online using 'Survey Monkey' as established online data collection provider. Students will be able to access the internet at home, if they have online facilities, at school or at local libraries. In addition I propose that the GKP Units be available from 8:30am-4:00pm to past pupils over the two week questionnaire collation, to ensure access for those who may find an internet access cost prohibitive.

The focus group interviews will be run by Robyn McLeod who is familiar with the GKP programme and with gifted education, yet outside the GKP organisation to ensure objectivity and meet ethics committee requirements. The focus group interviews will be taped and held in neutral venues, on a Saturday, to be decided upon closer to the date.

All participants in this study will have their rights explained and at any stage be able to;

- decline to participate,
- decline to answer a particular question,
- withdraw from the focus group interview up until May 1st 2008,
- ask questions about the study,
- provide information on the understanding their name will not be used,
- be given access to a summary of the project when it is concluded,

I have attached a copy of the online questionnaire and the focus group interview schedule using the general categories that will be explored in the focus group interviews however some of the questions for these interviews will come from trends exposed in the online questionnaire. I have also attached copies of the information letters to past students and their parents or caregivers, and the corresponding consent forms.

The data collected will only be used for the purpose of this research and any other publication or presentation that may eventuate due to its findings.

All data gathered for this research will be stored by the supervising lecturer and retained for 5 years. Data will be collated and presented to Massey University in standard required thesis format.

I believe this study will be of particular significance to GKP students and their families and to the GKP management and staff as they reflect on the GKP programme and make changes to programme effectiveness. It will also be of interest to schools which send students to GKP, and to the programme sponsors including the Ministry of Education. It is also expected that this data will be of interest nationally and internationally as few studies of this nature have been undertaken.

The bulk of student involvement in this study will take place between February and June of 2008 and the final document will be submitted mid November 2008.

Should you wish to discuss this request in further detail, please do not hesitate to contact me on telephone (XX XXXXXXXXX) or email on XXXXXXXXXXXX. Alternatively my chief supervisor is Dr Tracy Riley, Senior Lecturer , the School of Curriculum and Pedagogy, Massey University, can be contacted on T.L.Riley@massey.ac.nz or 06 351 3300, extension 8625.

Thank you for considering this request I look forward to receiving your response,

Yours sincerely,

Deborah Clark

(Higher Diploma Teaching, BEd (teaching), PGDipEd (gifted education),)

**APPENDIX B:
INFORMATION SHEET: Caregivers**

**Perceptions from the GKP Alumni
INFORMATION SHEET
Caregivers**

Dear Parents and Caregivers of GKP past-pupils, the GKP Alumni,

My name is Deborah Clark and I am completing my Masters of Education. As a requirement to completing my Masters degree I am undertaking research through the College of Education at Massey University focusing on the experiences of past Gifted Kids Programme (GKP) pupils whilst they attended a GKP Unit.

I would be grateful if your child would consider participating in my research. The research has the full support of the Gifted Children’s Advancement Charitable Trust (GCACT) Board.

The proposed research will be undertaken by Deborah Clark under the supervision of Dr. Tracy Riley and Alison Kearney.

Researcher	Supervisor 1	Supervisor 2
Deborah Clark c/- Thesis Supervisor Dr Tracy Riley The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph XXXXXXXXX	Dr. Tracy Riley The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph 06 351 3300 x 8625 T.L.Riley@massey.ac.nz	Alison Kearney The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph 06 351 3300 x 8704 A.C.Kearney@massey.ac.nz

This research is the thesis component of a Masters in Education degree.

Objectives

The objectives of this research are to explore the following questions:

- | |
|---|
| <p>1. How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the GKP core goal areas;</p> <ul style="list-style-type: none"> - To develop friendships with like-minded peers, - To strive for personal excellence, - To identify and develop strengths and interests, - To acknowledge and embrace new challenges, - To broaden and deepen their learning. <p>2. In retrospect, what recommendations would alumni students suggest to enhance or improve the GKP experience?</p> |
|---|

Why?

Gifted students have the potential to be New Zealand's highest achievers and to make significant contributions to society. A continuum of educational learning experiences is advocated for these students whilst within our primary and secondary institutes. The Gifted Kids Programme is one provision utilised by some schools. There is little research in New Zealand and internationally regarding the effectiveness of withdrawal programmes, and this study will provide retrospective data from a student viewpoint about an established nationally out of school provision.

It is hoped that the findings of this research will provide direction for further research into the issue of withdrawal or pull out programmes in gifted education and lead to an increased understanding of how to best provide for gifted students.

What will it involve?

Participation will involve completing an online questionnaire either at home, or school or a local library. In addition, during the survey period all GKP Units will provide free internet access between 8:00am and 4pm each day they are open. The questionnaire is based on the major goals advocated by the Gifted Kids Programme. All information provided will be anonymous. If a student was to provide any information that could identify him or her in any way, this information would not be used in any part of this study.

Auckland and Wellington students will also be offered the opportunity of being involved in a focus group discussion. (see below for more details)

How will students be selected?

Inclusion criteria for participation will consist of the following:

- (1) An Alumni student must have attended The Gifted Kids Programme (GKP) prior to 2007, be year 7 or above and no longer be attending a GKP Unit.
- (2) Any Alumni member under the age of 16 must have parental consent to participate in the questionnaire and focus group interview.
 - o All past pupils will be invited to participate with a potential sample size of approximately 400 students.
 - o Student data will be accessed by GKP staff through the GKP database with the approval of the Gifted Children's Advancement Charitable Trust Board.
 - o Each focus group will have maximum of 10 participants.

What will happen?

You must firstly give consent for your child to participate.

Participating students will be invited to complete one online questionnaire. The questionnaires are expected to take between 20-30 minutes to complete and are solely about their individual experiences whilst attending the Gifted Kids Programme. **These questionnaires will be anonymous.**

Wellington and Auckland students will also be asked on the questionnaire consent form if they wish to participate in a focus group interview. This group will comprise of 8-10 students in Auckland and another 8-10 students in Wellington. Students will be selected

by GKP staff to ensure a balance of Unit attended, gender and age. The group interview will last approximately 60-90 minutes in length. A semi-structured interview will be administered, focusing on experiences whilst at GKP and recommendations to enhance or improve experiences. The interview schedule is attached.

The online questionnaire and focus group interviews will be held approximately a month apart. This will give the researcher time to collate data and select the most appropriate questions to be used in the focus group interview.

The focus group interviews will be conducted by an educator outside of the Gifted Kids Programme to ensure objectivity and correct ethical procedures are upheld. The focus group interviews will be taped to ensure the research receives an accurate transcript of responses. Focus group members will only be identified through self selected pseudonyms.

The research will be conducted between February 2008 and July 2008.

Procedures for handling information and materials produced in the course of the research

All data, including tapes, will be confidential to the researcher and will be kept locked in a filing cabinet in the supervising lecturer's office. This cabinet is not utilised by other individuals. Upon completion of the study, all data used for published research will be stored for five years.

As the questionnaire and focus group interview will be completed anonymously neither the participants nor their parents will have access to student response data.

Focus group participants will be asked to choose a pseudonym for their interview. Tapes of interviews will be identified by pseudonym only. Tapes will be transcribed by the researcher. Once the tapes are transcribed they will be wiped clean. Transcripts will be retained for only as long as required by the research and any subsequent publishing, after which time they will be destroyed.

Ethical Issues

1. Access to participants

I will not have access to the student database. GKP will complete all mail outs on my behalf.

2. Informed consent

The GKP Trust Board is required to give formal consent for the research to be undertaken and for the researcher to have indirect access to databases for the purpose of the research. The researcher will provide the Board with regular updates and copies of the questionnaire and focus group questions prior to use with the participants. The GCACT Trustees will have the opportunity to read the final thesis before submission and a summary report will be made available at the completion of the thesis. Should any publication or presentation

opportunities arise as a result of this research the researcher will seek the approval of the GCACT trustees.

3. Confidentiality and Anonymity

All efforts will be made to protect the identity of participants and all identifying information will be omitted. The questionnaire will be completed anonymously online.

Focus group participants will adopt a pseudonym, if a name needs to be used, and in the event that a participant reveals information that may identify them it will be left out of the report.

The Gifted Kids Programme (GKP) will be named in the research report through a general description of the programme including details such as Unit locations, generalisations about age and gender as well as an outline of the GKP philosophy, aims, methods of identification and their curriculum.

4. Students rights.

Students are able to,

- decline to participate,
- refuse to answer any question in the questionnaire or the focus group interview,
- withdraw from the focus group interview up until May 1st 2008,
- provide information on the understanding that their name will not be used,
- be given access to a summary of the findings of the research upon completion.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 07/62. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz.

If you have any questions about the research or questions regarding the students' rights as participants please do not hesitate to contact either myself or my supervisors on the details provided.

Thank you for considering this request,

Deborah Clark
Researcher

APPENDIX C: INFORMATION SHEET: Questionnaire Participants

Perceptions from the GKP Alumni INFORMATION SHEET Participants

Dear GKP Alumni Student (past pupil),

My name is Deborah Clark and I am completing my Masters of Education. To complete this qualification I am undertaking research through the College of Education at Massey University. This research will focus on the experiences of past Gifted Kids Programme (GKP) pupils, the Alumni.

This is where you come in. As an Alumni student I would be grateful if you would consider participating in my research. The research has the full support of the Gifted Children's Advancement Charitable Trust (GKP) Board, approval from Massey University and will be supervised by my tutors Dr. Tracey Riley and Alison Kearney.

What is this research all about?

Finding out what it was like to attend GKP as a student.

Who does this research involve?

Any student who has attended GKP and is now year 7 or above.

Objective of this research

To explore the goals that GKP aims to achieve.

1. How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the GKP core goal areas;

- To develop friendships with like-minded peers,
- To strive for personal excellence,
- To identify and develop strengths and interests,
- To acknowledge and embrace new challenges,
- To broaden and deepen their learning.

2. In retrospect, what recommendations would alumni students suggest to enhance or improve the GKP experience?

How is it being completed?

In two parts:

- a) an online survey and,
- b) two focus group interviews, one in Wellington/Hutt Valley and the other in Auckland.

What will you have to do?

Talk to your parents. Decide if this is something you want to do. If your answer is yes, then fill in the consent form and return it in the envelope supplied. If you are under 16 you will also need your parents to sign the consent form. **If you do not want to participate, then do not reply to this letter.**

If you live in Wellington or Auckland and would like to part of a focus group interview, then tick the box on your consent form. Not everyone can be part of these interviews however if you are chosen you will be posted more information.

The questionnaire will be online in March 2008 and the focus group interviews are to be held in May 2008.

Who will know I am involved?

GKP Office staff will know your name and address so they can post out all necessary information. The online questionnaire is anonymous. If you are part of the focus group and we need to identify you, you can choose a name that you wish to be known by this is called a pseudonym.

What will happen?

If you return the form saying you will complete the online questionnaire you will be sent the web address and the date the questionnaire opens. This will happen at least one week prior to the questionnaire opening. It will take about 20-30 minutes to answer the questions. ***The questionnaires will be anonymous, you will NOT be asked for your name.***

You will have a two week timeframe to complete the questionnaire; you can do this at any online location ie: your home, school or local library. You can also go into your local GKP Unit between 8:00am-4pm and complete it on a GKP computer.

If you return the form saying you would like to be part of a focus group interview your name will be put on the selection list. 8-10 students will be selected by GKP staff to participate in each interview. The selection will be based ensuring a balance of Unit attended, gender and age. The group interview will last approximately 60-90 minutes in length and be held on a Saturday.

More information on the focus group interview can be found in the Focus Group Interview Information Sheet.

What happens to the data?

All data, including tapes, will be confidential and will be kept locked in a filing cabinet in the supervising lecturer's office. When the study is finished, all data used for published research will be stored for five years.

I will transcribe the tapes made in the focus group interviews and then the tapes will be wiped clean.

What are your rights?

You can:

- o decline to participate,
- o refuse to answer any question,
- o ask questions about the research at any time during participation,
- o the right to withdraw from the focus group up until May 1st 2008 when data analysis begins,
- o provide information on the understanding that your name will not be used unless you give permission to the researcher,
- o be given access to a summary of the findings of the research upon completion.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 07/62. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicsouthb@massey.ac.nz.

If you have any questions about the research, please do not hesitate to contact either myself or one of my supervisors.

Contact details

Researcher	Supervisor 1	Supervisor 2
Deborah Clark c/- Thesis Supervisor Dr Tracy Riley The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph xxxxxxxxxxxx	Dr. Tracy Riley The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph 06 351 3300 x 8625 T.L.Riley@massey.ac.nz	Alison Kearney The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph 06 351 3300 x 8704 A.C.Kearney@massey.ac.nz

Thank you,

Deborah Clark
Researcher

APPENDIX D: INFORMATION SHEET: Focus Group

Perceptions from the GKP Alumni INFORMATION SHEET Focus Group Interview

Dear GKP Alumni Student (past pupil),

My name is Deborah Clark and I am completing my Masters of Education. To complete this qualification I am undertaking research through the College of Education at Massey University. This research will focus on the experiences of past Gifted Kids Programme (GKP) pupils, the Alumni.

This is where you come in. As an Alumni student I would be grateful if you would consider participating in my research. The research has the full support of the Gifted Children's Advancement Charitable Trust (GKP) Board, approval from Massey University and will be supervised by my tutors Dr. Tracy Riley and Alison Kearney.

The research will be completed in two parts:

- c) an online questionnaire for all past pupils to complete and,
- d) two focus group interviews, one in Wellington/Hutt Valley and the other in Auckland, for two groups of 8-10 students to participate in.

This information sheet relates to the focus group interviews.

What are focus group interviews?

A group discussion about the main questions and findings of the online questionnaire.

Who does this interview involve?

8-10 Alumni students in Wellington and 8-10 Alumni students in Auckland plus a facilitator who is not employed by GKP but is an educator.

Objectives of the research

To explore the goals of the GKP curriculum:

1. How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the GKP core goal areas;

- To develop friendships with like-minded peers,
- To strive for personal excellence,
- To identify and develop strengths and interests,
- To acknowledge and embrace new challenges,
- To broaden and deepen their learning.

2. In retrospect, what recommendations would alumni students suggest to enhance or improve the GKP experience?

What is the purpose of a group interview?

To provide more detailed information about the main ideas of the research.

When will it happen?

After the online survey data has been collated and summarised. At this stage the time frame is for May 2008.

How long will it last?

60-90 minutes, depending on the sharing of the participants.

Who will run the interview?

As I am employed by GKP both interviews will be run by Robyn McLeod (MEd Hons Gifted and Talent Education, BSc, Dip. Special Education).

Robyn is a teacher and consultant in the field of gifted education. She is familiar with the Gifted Kids Programme, with educational research and is highly respected in her field.

How will you know you have been chosen?

When questionnaire consent forms are returned, GKP office staff will tally a list of students who ticked the box saying they wished to be included in the focus group interviews.

Selection of participation will be made by the researcher to ensure there as much of a balance of gender, age, and of Unit attended as is possible.

If you are selected for the focus group interview you will be informed of all necessary details by post well in advance of the interview date. If you are not chosen for the focus group interview you will also be informed by mail.

How will it be recorded?

The interview sessions will be recorded on audio tape, then transcribed into print. Following this the tapes will be destroyed.

What will you have to do?

You, and your parents if you are under 16 years of age, will be asked to read the information supplied and return the consent form if you are interested in being involved.

Who will know you are involved?

The Gifted Kids Programme has agreed to post out all information necessary to the participants based on their present student database. The researcher will know of your expression of interest to enable selection of students. The interviewer will just know the name you choose to be called on the day of the focus group interviews. The research document will not mention you by name without your permission. Participation will be anonymous, you will be asked to select a pseudonym if you wish.

What are your rights?

You can:

- decline to participate,
- refuse to answer any question,
- withdraw from the focus group interview at any time up until May 1st 2008,
- ask questions about the research at any time during participation,
- provide information on the understanding that your name will not be used unless you give permission to the researcher,
- be given access to a summary of the findings of the research upon completion.

This project has been reviewed and approved by the Massey University Human Ethics Committee: Southern B, Application 07/62. If you have any concerns about the conduct of this research, please contact Dr Karl Pajo, Chair, Massey University Human Ethics Committee: Southern B, telephone 04 801 5799 x 6929, email humanethicssouthb@massey.ac.nz

If you have any questions about the research or if you have any questions about the research please do not hesitate to contact either the researcher or the supervisors.

Researcher	Supervisor 1	Supervisor 2
Deborah Clark c/- Thesis Supervisor Dr Tracy Riley The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph xxxxxxxxx	Dr. Tracy Riley The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph 06 351 3300 x 8625 T.L.Riley@massey.ac.nz	Alison Kearney The School of Curriculum and Pedagogy Massey University Private Bag 11-222 Palmerston North Ph 06 351 3300 x 8704 A.C.Kearney@massey.ac.nz

If you live in Auckland or Wellington/Hutt Valley and would like to take part in a focus group interview, please complete the consent form and return it to the Gifted Kids Programme in the envelope provided.

Deb Clark
 Researcher

**APPENDIX E:
PARTICIPANT QUESTIONNAIRE CONSENT**

Perceptions from the Gifted Kids Programme Alumni 2000-2007

**PARTICIPANT CONSENT FORM
Online Questionnaire**

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 to participate in the online questionnaire under the conditions set out in the Information Sheet.

Student

- I AGREE to participate in this online questionnaire under the conditions set out in the information sheet.
- I live in Wellington/Auckland and wish to be considered for a focus group interview session.
- I am 16 or older so do not need parental permission to complete this questionnaire.

Signature: _____ **Date:** _____

Full Name - printed

Parent /Caregiver (if student is under 16)

I AGREE that my child can participate in this online questionnaire under the conditions of the information sheet.

Signature: _____ **Date:** _____

Full Name - printed

*Please use the provided self-addressed envelope to return this form to;
The Gifted Kids Programme.
All consenting participants will be posted details on how to access the site.*

**APPENDIX F:
PARTICIPANT FOCUS GROUP CONSENT**

Perceptions from the Gifted Kids Programme Alumni 2000-2007

**PARTICIPANT CONSENT FORM
Focus Group Interview**

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 understand I have the right to withdraw from the study up until May 2008, and to decline to answer any particular questions.
- I understand the focus group will be a group of 8-10 past GKP pupils.
- I agree to the interview being audio-taped.
- I agree to provide information to the researcher on the understanding that my name will not be used without my permission.
- I agree to participate in this focus group interview.

I would like to express my interest in being involved in the focus group interview in

WELLINGTON AUCKLAND

Student

I AGREE to participate in the focus group interview under the conditions set out in the information sheet.

Signature:

Date:

Full Name - printed

Parent /Caregiver (if student is under 16)

I AGREE that my child can participate in this focus group interview under the conditions of the information sheet.

Signature:

Date:

Full Name - printed

Please use the provided self-addressed envelope to return this form
to;

The Gifted Kids Programme. Participants will be selected by GKP staff to provide a balance of Unit attended, age and gender. Participants will be informed of their selection by post in March 2008.

**APPENDIX G:
QUESTIONNAIRE**

**MASSEY RESEARCH
Questionnaire**

**Perceptions from the Gifted Kids Programme Alumni
2000-2007**

This questionnaire has been placed online and is available to all Alumni, past-pupils, of the Gifted Kids Programme as of February 1st 2008. For the purpose of this research an Alumni member is a student who is year 7 or higher who no longer attends the Gifted Kids Programme. The data from completed questionnaires will be used to ascertain answers to the following research questions;

How, both when attending the programme and after graduation, has attendance at GKP assisted alumni students in the following areas;

- To develop friendships with like-minded peers,
- To strive for personal excellence,
- To identify and develop strengths and interests,
- To acknowledge and embrace new challenges,
- To broaden and deepen their learning?

In retrospect, what recommendations would alumni students suggest to GKP?

In this survey The Gifted Kids Programme will be referred to as GKP.

SECTION A: General Information

1. Gender: Female Male

2. Date of Birth

3. What district you presently live in?

Northland, Auckland, Bay of Plenty, Gisborne, Waikato, Taranaki, Manuwatu-Wanganui, Hawkes Bay, Wellington, South Island, Outside of New Zealand

4. What year/s did you attend the Gifted Kids Programme programme?

2000 2001 2002 2003 2004 2005 2006 2007

5. Which GKP Unit did you attended?

Tikipunga Tamaki Waikowhai Hillary Rotorua Rata Naenae Wainuiomata Wilford Wellington

6. How many GKP teachers did you have whilst attending GKP?

1-2 3-4 5 or more unsure

B: Strengths & Talents: Identifying and developing strengths.

This section refers to the areas you either have/had an interest and/or passion in or they are/were a talent area and you are/were good at them.

7. What are your areas of strength and/or talent?

Creative Thinking Critical Thinking Written Language Oral Language Maths Science
Technology Computers Drama Art Music Leadership Creativity in all areas Culture
Other:

8. Which of these were you able to develop at GKP?

Creative Thinking Critical Thinking Written Language Oral Language Maths Science
Technology Computers Drama Art Music Leadership Creativity in all areas Culture
Other:

9. Did you discover and explore new passions, interests or talents at GKP?

Many Some Few None

What were these? _____

10. Which of your areas of talent have you continued to focus on since you left GKP?

Creative Thinking Critical Thinking Written Language Oral Language Maths Science
Technology Computers Drama Art Music Leadership Creativity in all areas
Culture Other:

11. Please add any comments you wish to make about 'Talent Time' or 'Passion Time' at GKP.

SECTION C: Peers: Developing friendships with like-minded peers.

This section refers to the way you related and interacted with your classmates at GKP and the friendships that may have been formed.

12. Do you think being gifted makes it difficult for you to make friends?

Often Frequently Sometimes Never

13. Is it important for you to have friends who are also gifted?

Yes Sometimes No

14. How did your home school peers react to you going to GKP?

Positive Reaction No Reaction Mixed Reaction Negative Reaction Unsure

15. Did you feel accepted by your peers at GKP?

Often Frequently Sometimes Never Unsure

16. Did you make new friends at GKP?

Yes No

17. Have you remained in touch with any of your peers from GKP?

Yes No If Yes, why? _____

18. What did you have in common with your friends at GKP eg: interests, talents, learning styles, sense humour, creativity, motivation/commitment, on the same wave length?

19. Did participating in a class of like-abilities at GKP make you feel more academically challenged?

Often	Sometimes	Never
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20. Did attending GKP have any affect on how you made friendships outside of GKP?

Negative affect	No affect	Positive affect
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21. Please add any comments you wish to make about your peer friendships at GKP.

The Gifted Kids Programme delivers a curriculum encompassing three major components;

- **The Mental Edge:** complex thinking skill development through the development and use of questioning; critical, creative and caring thinking plus metacognitive tools such as; habits of mind, six thinking hats, thinkers keys, shape thinking and CoRT thinking (ie: PMI, OPV).
- **Talent Development:** the targeted development of passions, interests and strengths through goal setting and in class support to develop and enhance talent areas.
- **A Concept Curriculum:** looking at a 'big' idea through generalisation that covers a variety of contexts such as; Survival; *animal, disaster*, Value; *money, land*, Change; *environment, revolution, heroes*.

The following survey sections relate to this curriculum.

SECTION D: Learning: Breadth and depth in learning

This section refers to the above curriculum explanation.

22. Which of the following did you experience during Mental Edge: Thinking Skills instruction at GKP?

pre-testing encouragement to question small group work feedback on your learning purposeful experiences challenge time to explore new knowledge new skills specialist tuition high teacher expectations choice goal setting opportunities reflective experiences new skills different ways of using skills skills that you could use in other learning visiting speaker class trip other: _____

23. Which of the following did you experience during Talent Development or Passion Time at GKP?

pre-testing encouragement to question small group work feedback on your learning purposeful experiences challenge time to explore new knowledge new skills specialist tuition high teacher expectations choice goal setting opportunities reflective experiences new skills different ways of using skills skills that you could use in other learning visiting speaker class trip other: _____

24. Which of the following did you experience during Conceptual inquiry at GKP?

pre-testing encouragement to question small group work feedback on your learning purposeful experiences challenge time to explore new knowledge new skills specialist tuition high teacher expectations choice goal setting opportunities reflective experiences new skills different ways of using skills skills that you could use in other learning visiting speaker class trip other: _____

25. Please add any comments you wish to make about your learning at GKP.

SECTION E: Challenge: Acknowledging and embracing new challenges.

This section refers to new experiences and levels of difficulty you experienced whilst at GKP.

26. Did you find GKP socially challenging?

Frequently Sometimes Never Unsure

27. Did you find GKP academically challenging?

Frequently Sometimes Never Unsure

28. Did you get opportunities to try new things at GKP?

Frequently Sometimes Never Unsure

29. In which of these areas do you believe you were challenged?

Creative Thinking Critical Thinking Written Language Oral Language Maths Science
Technology Computers Drama Art Music Leadership Other:

30. Did you experience challenge in your areas of strength?

Frequently Sometimes Never Unsure

31. Did you experience challenge in your areas of weakness?

Frequently Sometimes Never Unsure

32. Please add any comment you wish to make about 'challenge' in regard to your time at GKP.

SECTION F: Excellence, Striving for personal excellence.

This section refers to whether you aimed and/or achieved your personal best at GKP.

33. Do you think you achieved your potential in your regular school environment?

Yes Sometimes No

34. Do you think GKP helped you to improve your academic achievement?

Yes Sometimes No

35. Which of the following helped you to achieve at GKP?

clear expectations, teacher expectations, teacher feedback, teacher support, peer encouragement, peer expectations, working in your talent area, the level of challenge offered, environment felt safe, opportunities offered, the amount of choice, the relevance of the tasks, the resources, other

36. In which part/s of the programme did you strive for excellence *at GKP?*

Habits of Mind Thinking Skills Talent Development Concept Curriculum None Other:

37. In which part/s of the programme did you to strive for excellence *outside of GKP?* (eg: at your home school, community activities, church etc..)

Habits of Mind Thinking Skills Talent Development Concept Curriculum None Other:

38. Please add any comment you wish to make about 'striving for excellence' in regard to your time at GKP.

SECTION 6: Other (comment section)

This section is asking for your general opinions and thoughts about GKP.

39. Rate the following from 1-5 according to how well you believe GKP achieved these goals for you, whilst you attended the programme, you may use each number more than once)

1. Strongly disagree
2. Disagree
3. Neither agree nor disagree
4. Agree
5. Strongly agree

"GKP helped me to":

- develop friendships with like minded peers.
- strive for personal excellence.
- identify and develop strengths and talents.
- acknowledge and embrace new challenges.
- broaden and deepen learning.

40. What do you think would have improved your experience at GKP eg: staying on the programme longer, grouping classes by talent not age, more talent time, more days at GKP, different location, different teacher, more links to home school other?

41. What has been the greatest benefit of GKP for you, eg: opportunities challenge, confidence, friendships, achievement, motivation, growth in areas of talent, other?

42. Do you intend to be part of the GKP Alumni and meet once or twice a year with past pupils at organised events ?

Yes No Unsure

43. What are your plans after college/high school?

Gap Year Full time employment University Polytechnic Private Provider Course
Other: _____

44: Do you have any other comments you would like to make about the Gifted Kids Programme?

Thank you for taking the time to complete this survey.

If you are a Wellington or Auckland Alumni student please don't forget to express your interest in participating in a focus group interview sessions. See your initial letter for details.

☺
D. Clark
Massey University.

APPENDIX H: FOCUS GROUP INTERVIEW QUESTIONS

<p style="text-align: center;">MASSEY RESEARCH QUESTIONNAIRE Interview Schedule</p>
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Perceptions from the Gifted Kids Programme Alumni 2000-2007

The focus group sessions will be used to explore in further depth each research question and any other relevant data that arises from the initial summarizing of the online questionnaire.

1. General Introduction including;

- Information about the research
- An opportunity for questions
- Explanation of the focus group process and procedures
- Pseudonyms

2. What opportunities were you given to explore your talents and passions?

3. How important was it to be with like minded people?

4. In what ways do you feel you had opportunity to broaden and or deepen your learning?

5. In what ways do you believe you were challenged at GKP?

6. In what ways did GKP encourage you to strive for excellence?

7. What suggestions do you have that would have improved your time at GKP?

APPENDIX I:

CONFIDENTIALITY AGREEMENT

Perceptions from the GKP Alumni, 2000-2007

CONFIDENTIALITY AGREEMENT

I _____

agree to keep confidential all information concerning the project **Perceptions from the GKP Alumni, 2000-2007**.

I will not retain or copy any information involving the project.

Signature:

.....

Date:

.....