Gifted and Talented Education in New Zealand Schools

A summary of the research on the extent, nature, and effectiveness of planned approaches in New Zealand schools for identifying and providing for gifted and talented students.

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The full report is available at **www.minedu.govt.nz/goto/gifted**

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MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

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INTRODUCTION

Gifted and talented education in New Zealand differs from that of many other countries in several ways. First, New Zealand recognises that giftedness and talent can mean different things to different communities and cultures, and there is a range of appropriate approaches towards meeting the needs of all such students (Ministry of Education, 2002). Furthermore, it is considered essential, and this is perhaps unique to New Zealand, to provide differentiated learning experiences across a continuum of approaches, *beginning* in inclusive classrooms. And finally, there are distinctive cultural considerations to be taken into account in the planning and delivery of gifted education provisions.

There has been a series of initiatives over the past seven years to ensure an appropriate education is provided for young gifted and talented New Zealanders. These include the Ministry of Education's handbook, *Gifted and Talented Students: Meeting Their Needs in New Zealand Schools*, published in 2000; the Ministerial Working Party on Gifted Education, which reported in 2001; the Government's policy statement *Initiatives for Gifted and Talented Students* (2002); and, most recently, a change to the National Administration Guidelines which requires all state and integrated schools to demonstrate how they are meeting the needs of their gifted and talented learners.

Other initiatives include the development of a gifted and talented community on *Te Kete Ipurangi* (TKI), the Ministry of Education's online learning centre (see http://www.tki.org.nz/e/community/gifted/); professional development initiatives; more advisers on gifted and talented education led by a national coordination team; and a new funding pool to help with the set up costs of education programmes targeted at gifted and talented learners.

In 2003, the Ministry also commissioned research to investigate identification and provisions for gifted and talented students in New Zealand schools and this booklet summarises the results of that research. The research, entitled *The Extent, Nature, and Effectiveness of Planned Approaches in New Zealand Schools for Identifying and Providing for Gifted and Talented Students*, will assist schools in developing and implementing policies and practices required by the change to the National Administration Guidelines (NAGs). The education of gifted and talented students also needs to be informed by theory relevant to New Zealand, and the research summarised in this booklet contributes to that.

Page numbers linked to the full report are provided throughout the summary. The report is available at **www.minedu.govt.nz/goto/gifted**

Change to National Administration Guideline 1(iii)c

From Term 1 2005, all state and state-integrated schools must be able to show how they are meeting the needs of their gifted and talented learners. This new requirement matches the obligations already in place for schools to meet the needs of students who are not achieving, who are at risk of not achieving, and who have special needs.

NAG 1(iii) now reads:

1(iii)   on the basis of good quality assessment information, identify students and groups of students:
a.   who are not achieving
b.   who are at risk of not achieving
c.   who have special needs (including gifted and talented students), and
d.   aspects of the curriculum which require particular attention.

Core Principles

The research is based upon the core principles of gifted and talented education as outlined in 2002 in the Government's Initiatives for Gifted and Talented Learners (p. 3) (see http://www.tki.org.nz/r/gifted/initiatives_e.php to initiatives). These are:

- Schools should aim to provide all learners with an education matched to their individual learning needs.

- Gifted and talented learners are found in every group within society.

- Māori perspectives and values must be embodied in all aspects of the education of gifted learners.

- The school environment is a powerful catalyst for the demonstration and development of talent.

- Parents, caregivers, and whānau should be given opportunities to be involved in decision-making regarding their children's education.

- Programmes for gifted and talented students should be based upon sound practice, taking into account research and literature in the field.

- Gifted and talented students should be offered a curriculum rich in depth and breadth, and at a pace commensurate with their abilities.

- Schools should aim to meet the specific social and emotional needs of gifted and talented learners.

- Provision for gifted and talented students should be supported by ongoing high-quality teacher education.

The Research: Background, Aims and Process

The research, entitled *The Extent, Nature, and Effectiveness of Planned Approaches in New Zealand Schools for Identifying and Providing for Gifted and Talented Students*, was commissioned by the Ministry of Education and conducted by a team of Massey University researchers: Tracy Riley; Jill Bevan-Brown; Brenda Bicknell; Janis Carroll-Lind; and Alison Kearney. The research, conducted in 2003, was a preliminary investigation of current identification and provisions for gifted and talented students in New Zealand.

The commissioned research developed out of acknowledgement of a somewhat limited research base in New Zealand (Ministry of Education Working Party on Gifted Education, 2001). But it was driven by the need to identify strengths and gaps in provision (Ministry of Education, 2002), so that future directions in gifted and talented education may be informed by both theory and practice relevant to New Zealand. The outcomes should not only guide future initiatives in policy, practice, and research at a national level, but should also act as a reference point in the development and implementation of policies and programmes at a local level.

The research aimed to answer the following questions:

1. What does the literature say about identification methods and provisions that increase achievement and improve social outcomes and meet the cognitive, affective, creative and cultural needs of gifted and talented learners?

2. How common is policy or specific school-wide plans for provisions to meet the needs of gifted and talented learners in New Zealand schools?

3. What types of methods are stated in school-wide policies or plans as being used to identify gifted learners and their needs?

4. What types of approaches are used in schools to provide for the needs of gifted and talented learners?

5. Are there any patterns (i.e., differences between regions, between high and low decile schools, for different ethnic groups) in the provision of support for gifted and talented learners?

6. What can be learned from the provisions for gifted and talented learners in New Zealand schools that have characteristics associated with effectiveness identified in the literature?

To best determine the extent, nature and effectiveness of provision for gifted and talented students, and in doing so, ensuring accordance with the Government's core principles for gifted and talented education, this research comprised three key elements:

- **A review of the literature** which explained the theory and research informing effective practice in the identification of and provisions for gifted and talented learners from national and international perspectives. [Refer to pages 5–160 for the full literature review.]

- **A survey of New Zealand schools** which determined the extent and nature of planned policy, identification and provisions for gifted and talented students as reported by a representative sample of approximately half of all schools in New Zealand. [Refer to pages 161–198 to read more about the survey and results.]

- **Case studies** of ten schools which provided insight into the enablers and barriers for New Zealand schools in the development and implementation of gifted and talented education. [Refer to pages 199–268 for more details about the case study schools.]

While these could be seen as three separate aims, it is the *combination* of these three components which sheds light upon the effectiveness of identification and provisions for New Zealand's students, pointing the torch towards future initiatives and developments. This summary provides readers with an overview of the main findings of the research by combining these three key elements. For each section of the summary, page numbers of the report are provided for interested readers.

The findings of the research are discussed on pages 269–276 of the report, and conclusions are on pages 277–280. The report also includes an extensive list of more than 500 references that may be useful to school management and teachers (refer to pages 281–314).
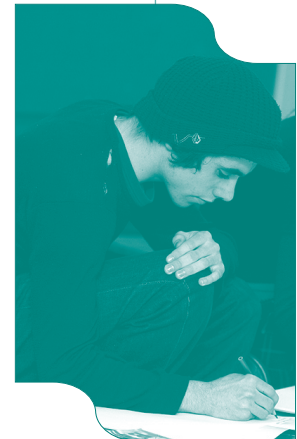
Defining Giftedness and Talent

What Does the Literature Say?

There are many theories and definitions which have developed as educators have grappled with the notion of giftedness and talent and there is no universally accepted definition. While all individuals have strengths and abilities, gifted and talented students have *exceptional* abilities. In 2002, the Ministry of Education stated that gifted and talented students "have certain learning characteristics that give them the potential to achieve outstanding performance" (p. 2). These learning characteristics are described by the Ministerial Working Party on Gifted Education (2001) as being cognitive, creative, and affective. Gifted and talented students may possess one or more of a 'wide range' of special abilities, including strengths, interests, and qualities in their general intellect, academics, culture, creativity, leadership, physical abilities, and visual and performing arts (Ministry of Education, 2000). Finally, there is acknowledgement that giftedness and talent may be understood, recognised and developed in different ways by different communities and cultures (Ministry of Education, 2002).

For the purposes of this research, the following areas of giftedness and talent were used:

- **Intellectual/Academic** refers to students with exceptional abilities in one or more of the essential learning areas (i.e., language and languages, mathematics, technology, health and physical education, social sciences, science, the arts).

- **Creativity** refers to students with general creative abilities as evidenced in their abilities to problem-find and problem-solve, and their innovative thinking and productivity.

- **Expression through the visual and performing arts** refers to music, dance, drama and visual arts.

- **Social/Leadership** refers to students with interpersonal and intrapersonal abilities and qualities which enable them to act in leadership roles.

- **Culture-specific abilities and qualities** refers to those valued by the student's cultural or ethnic group, including traditional arts and crafts, pride in cultural identity, language ability and service to the culture.

- **Expression through physical/sport** refers to students with excellent physical abilities and skills, as evidenced through sport and/or health and physical education programmes.

Within New Zealand, individual schools are encouraged to establish a school-based definition of giftedness and talent (Ministry of Education, 2000; 2002). "Schools need to develop multicategorical approaches to giftedness that are flexible enough to include the many characteristics that are typical of gifted and talented learners" (Ministry of Education, 2002, p. 2). The concept of giftedness and talent is dynamic, sensitive to time, place, and culture (McAlpine, 1996; Ministry of Education, 2000). What is valued in one community at a particular point in time and by a specific group of people will vary greatly from another community, time, and people. Giftedness and talent is a living, breathing, ever-changing concept, one which has been, and continues to be, according to Borland (1997), socially constructed.

Cultural values, beliefs, traditions and attitudes, as well as interpretations, underlie how we define giftedness and talent (Ministry of Education, 2000). For example, Bevan-Brown (1993, 1996) has investigated Māori perspectives of giftedness, raising awareness of the broad and wide-ranging special abilities valued within Māori society. These include special abilities, such as exceptionality in academics, general intelligence, the arts, leadership, and sport, but also acknowledge Māori knowledge and understanding, service to the Māori community, spiritual and emotional qualities, pride in Māori identity, and mana. Bevan-Brown's research also highlights the cultural value of service to others, sharing one's special abilities and qualities for the good of humanity, the community, or Māori culture. Within Māori culture there is also recognition that a group of people may be gifted and talented; in other words, the dynamics and interactions of a group of people are likely to result in gifted behaviours.

Schools should consider the following principles in creating, adapting, or adopting their definitions of giftedness and talent. A school-based definition needs to:

- Recognise both performance and potential;

- Acknowledge that gifted and talented students demonstrate exceptionality in relation to their peers of the same age, culture, or circumstances;

- Reflect a multicategorical approach which includes an array of special abilities;

- Recognise multicultural values, beliefs, attitudes, and customs;

- Provide for differentiated educational opportunities for gifted and talented students, including social and emotional support;

- Acknowledge that giftedness is evidenced in all societal groups, regardless of culture, ethnicity, socioeconomic status, gender, or disability (learning, physical, or behavioural); and

- Recognise that a student may be gifted in one or more areas.

More information about school-based definitions of giftedness is provided on pages 11–12 of the report.

What Do New Zealand Schools Do?

Less than half of the responding schools (47%) reported a school-based concept or definition for gifted and talented students. Factors such as school type, decile, and locality (rural/urban) seem to have some impact upon the existence of a school-based definition. Intermediate schools and higher decile schools (6–10) most frequently reported school-based concepts or definitions – in relation to other school types and deciles. Definitions are more often reported by urban schools than their rural counterparts. Overall coordination and written documentation to support gifted and talented education also increase the likelihood of schools having a concept/definition.

Many schools did not report a definition, but rather described identification procedures or behaviours associated with giftedness. The definitions which were reported were mostly multicategorical, acknowledging gifts and talents in one or more of a variety of areas. A small number of schools reported definitions which acknowledged not only multiple areas, but also recognised potential and performance, exceptionality, inclusiveness, and differentiated educational needs. An example of one school's definition encompasses many of the principles outlined in the literature:

We welcome and celebrate the fact that there are gifted and talented students in all areas of school life – academic, creative, sporting, and social. They come from all backgrounds and show above-average ability and/or commitment in one or more areas. They have particular personal and learning needs which we need to identify and nurture, in the same way that we respond to specific needs of other identified groups.

Another school uses this definition:

Gifted and talented students have significantly different learning needs from other students. Māori perspectives and values must be included when defining, identifying and providing programmes. Gifted and talented students may require emotional and social support to realise their potential. As teachers we must recognise potential as well as demonstrated ability and plan and implement programmes which provide rich and challenging experiences for these students.

One of the case study schools reported another broad definition:

Students showing extraordinary ability in one of more aspects of the total learning experience. Gifted and talented students have special needs and characteristics which will require differentiated learning programmes beyond that normally provided in a regular class.
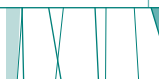
The case study schools reported multicategorical definitions of giftedness and talent, but a recognition of cultural, spiritual, and/or social-emotional gifts and talents was lacking in many of these schools. The case study schools confirmed the value of school-wide approaches to developing a definition of giftedness and talent in the sense that all of these schools had developed one. However, in some schools the reported definition in school policy documents, or understood by members of the coordinating team, was *not* shared by all teaching staff.

To overcome this, two schools stressed the importance of developing a school culture that recognised and affirmed gifted and talented students. To do so, one principal believed the most useful form of professional development was "a lot of talk, reflective talk, deep reflective talk, the dialogue that brings long-lasting change". One school advised that before engaging in any school-wide professional development, staff should be surveyed to find out their present attitudes. From this, professional development could target identified gaps. Similarly, one school suggested that schools should always start from where their staff was, respecting their present skills and beliefs.

Identification of Giftedness and Talent

What Does the Literature Say?

Identification is one of the most widely discussed and perplexing aspects of gifted and talented education. The Ministry of Education (2000) indicates that identification is often ranked 'number one' amongst critical issues in the field. It seems that the identification of the gifted and talented sometimes becomes a matter of 'getting the label right.' However, identification is not about the label itself, but as the Ministry of Education (2000) encourages, it should be seen as a means to an end. The purpose of identification is to collect a wide range of information about a gifted and talented student's learning, interests, qualities, abilities, strengths, and weaknesses in order to provide an appropriate differentiated educational programme. Identification should also reflect a school's definition of giftedness and talent. In this way, as the Ministry of Education (2000) points out, identification is the 'mediating link' between a school's concept or definition of giftedness and talent and its differentiated educational provisions.

The Ministry of Education (2000) outlines underlying principles of identifying gifted and talented students and each of these is described in the report on pages 13–19. In the identification of gifted and talented students, schools should be:

1. Embedding identification within a responsive classroom environment, ensuring it is an unobtrusive process;

2. Employing multiple methods of identification which are appropriate to different domains of giftedness and talent;

3. Remembering that identification is a means to an end, rather than an end in itself;

4. Undertaking early and ongoing identification of giftedness and talent;

5. Communicating openly with the school community (teachers, parents, students, Board of Trustees) about the identification of giftedness and talent;

6. Utilising a systematic, coordinated, school-wide team approach (including parents and whānau) to identification; and

7. Ensuring the identification of groups of students who may be under-represented or hidden: minority groups, underachievers, students with disabilities or students from lower socioeconomic groups.

The following methods of identification are described on pages 20–30 of the report, including their implementation and the strengths and weaknesses of each approach:

- Teacher observation and nomination;

- Rating scales;

- Standardised testing: tests of intelligence, achievement tests and other assessment measures;

- Portfolios, performances and auditions;

- Parent, caregiver and whánau nomination;

- Peer nomination; and

- Self-nomination.

For effective identification, schools should:

- Adopt a school-wide, clearly defined multicategorical concept of giftedness and talent;

- Use multiple methods of identification. Using many methods of identification allows the results to act as parts of the puzzle to understanding the gifted and talented student's abilities and qualities. This better enables educators to design educational programmes that develop and enhance individual gifts and talents;

- Ensure a careful match between identification methods and the many areas of giftedness and talent;

- Base identification upon the special needs of individual gifted and talented students, rather than pragmatic factors such as ease of implementation, resources, or teacher expertise;

- Identify gifted and talented students within the context of a culturally responsive, supportive environment;

- Ensure professional involvement, including in-service education, of all staff in the development and implementation of identification procedures;

- Embed identification processes in the cultural context of the school, ensuring that the methods used are appropriate for identifying students of diversity; and

- Constantly evaluate identification methods and procedures.
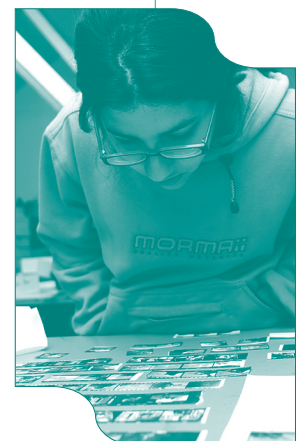
What Do New Zealand Schools Do?

The majority of responding schools (60%) reported formal identification of gifted and talented students. Formal identification was most commonly reported by intermediate schools, followed by secondary, primary, and 'other' schools respectively. As school decile rating increases, so too does the likelihood of formal identification. Schools employing a team approach to overall coordination and those in urban areas are more likely to formally identify gifted and talented students. Intellectual and academic abilities are most frequently identified; however, most schools reported identification across multiple areas. Students with culture-specific abilities and qualities are least often formally identified in schools.

Schools reported using the full range of identification methods, with the most commonly used method, across all areas, being teacher observation. The least frequently reported forms of identification were IQ testing and whānau nomination. The area of special ability, however, does have an impact upon the use of some identification methods. For example, whānau nomination is more readily used in the identification of culture-specific abilities and qualities; achievement tests in academic and intellectual areas; and auditions and performance in visual and performing arts.

The case study schools all indicated identification across a number of areas, but again, a major focus was the identification and development of intellectual and academic abilities. The case study schools also placed an important emphasis upon teacher identification of giftedness and talent, and some saw the lack of professional development in gifted and talented education as a potential barrier to its effectiveness. The review of the literature indicates that the effectiveness of teacher identification of giftedness is variable, and enhanced through professional knowledge and understandings of giftedness and talent, as well as through the use of teacher rating scales and checklists of behaviours. The case study schools discussed the value of professional communication and collaboration during the identification process, and acknowledged that coordinators played an active role in the identification of gifted and talented students.

Many of the case study schools used of a gifted and talented register, and a third of the surveyed schools that reported policies specific to gifted and talented students did the same. In the case study schools, these registers varied in their purposes, formats, and usage, but the overall goal was to document the areas of ability identified and provisions made for gifted and talented students within the school. The case study schools considered this a useful organisational strategy. One of the issues raised by case study participants, however, was concern about the transitions between levels of schooling (e.g., primary to intermediate, intermediate to secondary) and the facilitation of more continuous provisions for gifted and talented students. Schools should consider ways to collate and share information about the strengths, abilities, and qualities of gifted and talented students, and subsequent differentiated programmes.
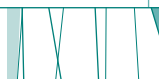
Provisions for Gifted and Talented Students

What Does the Literature Say?

The Ministry of Education (2000) recommends that schools provide a continuum of approaches to provisions in the education of gifted and talented students. These approaches should be qualitatively differentiated, enriched and accelerated, and always developed to match the individual learning needs of gifted and talented students.

Qualitative differentiation is a term used by educators to describe teaching and learning experiences tailored to individuals. This requires adaptations to the content, processes and products of teaching and learning. Content refers to 'what' students are taught and learn; processes refer to 'how' students are taught and learn; and products refer to the outcomes, or ways in which students demonstrate what they have learned. "As a natural result of differentiating each of these elements, the learning environment is also transformed" (Ministry of Education, 2000, p. 37). George (1990) poses three questions for determining if differentiation is appropriate for gifted and talented students:

1.   Would all children want to be involved in such learning experiences?

2.   Could all children participate in such learning experiences?

3.   Should all children be expected to succeed in such learning experiences?

If a school's response to these questions is 'yes' then it is unlikely that the differentiated learning experiences are appropriate for gifted and talented students.

Enrichment and acceleration are two common approaches to offering qualitatively differentiated learning opportunities for gifted and talented students. Enrichment generally refers to 'horizontal' extension of the curriculum, or "learning activities providing depth and breadth to regular teaching according to the child's abilities and needs" (Townsend, 1996, p. 362). On the other hand, acceleration is a 'vertical' extension of the curriculum, and refers to early introduction of content and skills or a quickening of the pace of delivery and exposure (Ministry of Education, 2000; Townsend, 1996). Both acceleration and enrichment have potential advantages and disadvantages, and it is now widely recognised that the two should be used in tandem, as complementary approaches to a qualitatively differentiated education.

Table 1 outlines the key changes to content, processes and products that should be considered for gifted and talented students.

Table 1. Qualitative Differentiation for Gifted and Talented Students

Content should be:

- Abstract, centred on broad-based themes, issues and problems
- Integrated, making multidisciplinary connections
- In-depth and with breadth
- Self-selected based upon student interests and strengths
- Planned, comprehensive, related and mutually reinforcing
- Culturally inclusive, appropriate and relevant
- Advanced in both complexity and sophistication
- Gender balanced and inclusive
- Enriched with variety, novelty and diversity
- Embedded within methods of inquiry, emulating the work of 'professionals'
- Inclusive of moral, ethical and personal dimensions
- Explored through the study of the lives of gifted people

Processes should be:

- Independent and self-directed, yet balanced with recognition of the value of group dynamics
- Inclusive of a 'service' component, or opportunity to share outcomes for the good of others, like the community or whānau
- Stimulating higher levels of thinking (analysis, synthesis and evaluation)
- Creative, with the chance to problem-find and problem-solve
- Accelerated in both pace and exposure
- An integration of basic skills and higher level skills
- Open-ended, using discovery or problem-based learning strategies
- 'Real' – mirroring the roles, skills and expertise of practitioners
- Designed to develop research skills, time management, organisational and planning abilities, decision-making processes and personal goal setting
- Metacognitive, allowing students to reflect upon their own ways of thinking and learning
- Created with the aim of developing self-understanding, specifically in relation to giftedness
- Facilitated by mentors, as well as teachers

Products should be:

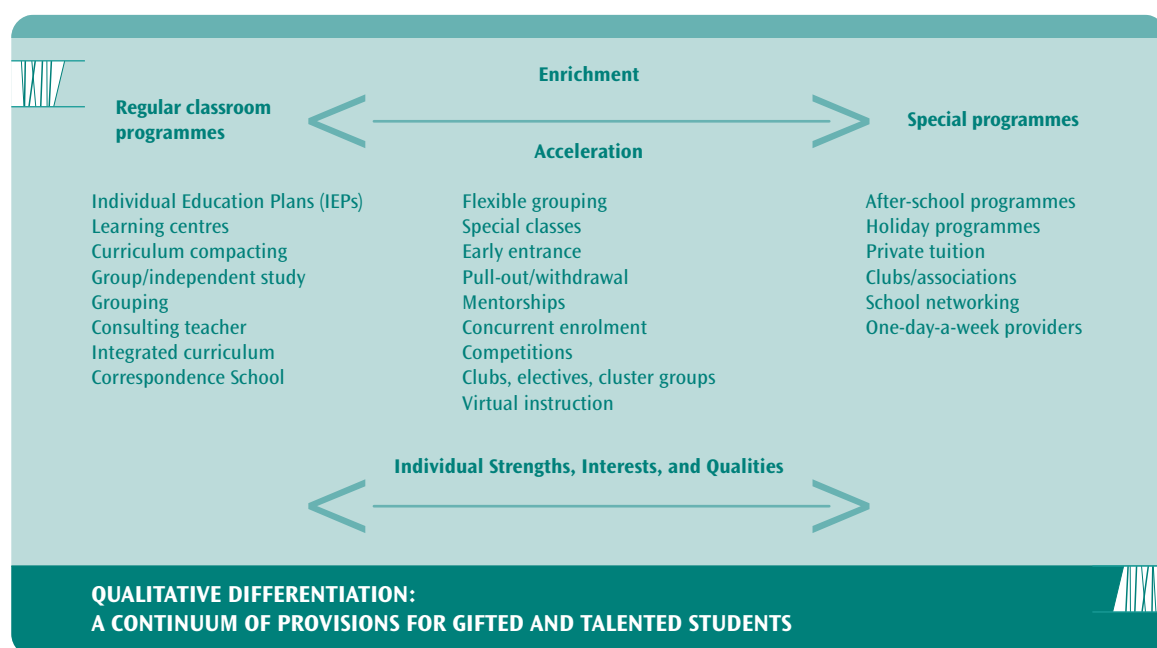- The result of 'real' problems, challenging existing ideas and creating new ones
- Developed using new and 'real' techniques, materials and ideas
- Evaluated appropriately and with specific criteria, including self-evaluation
- Self-selected
- Wide in variety
- Designed for an appropriate audience
- Transformations of ideas, shifting students from the role of 'consumers' to 'producers' of knowledge

There is no 'one-size-fits-all' solution to provisions for gifted and talented students, just as there are no two gifted and talented learners of the same cognitive, affective, or cultural 'size or shape'. Having a smorgasbord of opportunities allows for choice, flexibility, and variety in the ways schools decide to best meet the needs of gifted and talented students, enabling a close match between each individual student's abilities and their educational opportunities. However, such flexibility could result in inconsistent and scattered approaches or such a vast menu of approaches that difficulty arises in deciding just what to provide (Robinson, 1999). As with definitions and identification, these decisions must be made within each individual school and contextualised within the school culture.

The Ministry of Education (2000) recommends a continuum of provisions, from regular, or inclusive, classroom programmes to special programmes, as illustrated in Figure 1.

Enrichment

Regular classroom programmes ← → **Special programmes**

Acceleration

Regular classroom programmes	Acceleration	Special programmes
Individual Education Plans (IEPs)	Flexible grouping	After-school programmes
Learning centres	Special classes	Holiday programmes
Curriculum compacting	Early entrance	Private tuition
Group/independent study	Pull-out/withdrawal	Clubs/associations
Grouping	Mentorships	School networking
Consulting teacher	Concurrent enrolment	One-day-a-week providers
Integrated curriculum	Competitions	
Correspondence School	Clubs, electives, cluster groups	
	Virtual instruction	

Individual Strengths, Interests, and Qualities
← →

QUALITATIVE DIFFERENTIATION:
A CONTINUUM OF PROVISIONS FOR GIFTED AND TALENTED STUDENTS

Figure 1. A Continuum of Provisions for Gifted and Talented Students

The report examines each of these approaches on pages 31–125, starting with an explanation of qualitative differentiation, enrichment and acceleration. This is followed by an overview of regular classroom programmes, including recommended strategies, and discusses school-based provisions. For each strategy discussed, the national and international theory and research is used to provide an explanation, describe the cognitive and affective outcomes for gifted and talented students, outline the potential strengths and weaknesses, and make recommendations for effective implementation. A brief explanation for each of the provisions addressed within the report is given below.

Within-Class Provisions

Ability grouping is defined by Kulik (2003) in a broad sense, stating that it is any programme which assigns students to groups or classes based upon ability. Kulik (1991) contends that ability grouping "comes in a variety of forms and is done for a variety of reasons" (p. 67). Thus, ability grouping may be within-class or between classes, full-time or part-time.

Individual Education Plans/Individual Programme Plans (IEP/IPP) refer to individualised planning for gifted and talented students that involves a team of people assessing and planning differentiated provisions.

Curriculum compacting is a technique devised by Sally Reis and her colleagues from the National Research Center on the Gifted and Talented at the University of Connecticut (1993), where teachers identify what the students already know (through pre-assessment). Then, rather than asking students to engage in previously mastered learning, teachers provide replacement strategies that allow the students more meaningful and productive use of their time (e.g., enrichment and/or acceleration). It is a form of diagnostic-prescriptive teaching.

Small group or independent study is defined by the Ministry of Education (2000) as a strategy whereby individual students or small groups of students investigate curriculum-related or personal interest topics through their involvement in an investigation, research task, or project. The teacher guides students through (1) topic selection; (2) investigation planning; (3) goal setting; and (4) the presentation of their discoveries (Ministry of Education, 2000).

Learning centres have been described as extended activities, pegged at the level of the learner (VanTassel-Baska, 1994); a station or group of materials and resources that learners can use to study topics or practise and reinforce skills (Tomlinson, 2001); and places in a classroom for self-directed learning of differentiated content (Riley, in press b). Despite differences in explanation, most educators agree that learning centres are physical places, usually in a classroom, where learning activities are available for students to engage in. There is often some form of choice and self-management for students involved in a learning centre.

Integrated curriculum is defined by the Ministry of Education (2000) as the integration of multiple disciplines, adding that for gifted and talented students the different disciplines or content areas are pulled together by an overarching broad-based, conceptual theme. This type of study allows "learning across wide issues as opposed to narrow topics. For example, the themes of discovery, survival, or exploration may be umbrellas under which many disciplines and subtopics rest" (Ministry of Education, 2000, p. 43).

School-Based Provisions

Cluster grouping is an organisational strategy related to class placement of gifted and talented students. It involves clustering gifted and talented students in one classroom rather than dispersing them across several classrooms for their year level. The class would also include students across the range of ability levels.

Withdrawal or pull-out programmes are a provision whereby gifted and talented students leave their regular classroom, where the majority of their instruction occurs, to attend special classes with other identified gifted and talented students. These classes may vary from a few hours a week to a full day or a term to a year long. During this time students study topics which may build upon or extend beyond the 'regular' curriculum, and these vary widely.

Special Classes for gifted and talented students may be full-time or part-time options, with full-time special classes including all or most aspects of the curriculum, and part-time classes for specific curricular areas. The criteria for students enrolled in special classes are typically quite selective, and Winner (1996) believes that special classes should only be made available to highly gifted students.

Early entry refers to entry into primary, intermediate, secondary, or tertiary education at an earlier age than usual. The Ministry of Education (2000) recommends this as an option at intermediate and secondary school; however, the 1989 Education Act does not allow early entry to primary school in New Zealand.

Dual enrolment, or concurrent enrolment, refers to a student's simultaneous enrolment in two different levels of schooling. Although the most commonly discussed form of dual enrolment is that of secondary students enrolled in part-time tertiary study, it is also possible for students at primary level to attend an intermediate school or intermediate school students to attend secondary school on a part-time basis.

Competitions provide opportunities for gifted and talented students to compete or perform, exhibiting their special abilities and talents, and have long been a cornerstone of gifted education (Riley & Karnes, 1998/99; 1999). Gifted and talented students, amongst all other participants, can take part in competitions which maximise their abilities in academics, fine and performing arts, leadership, service-learning (Riley & Karnes, 1998/99; 1999), cultural arts, and sport.

Mentorships are described by the Ministry of Education (2000) as a partnership between a gifted and talented student and an experienced, older student or adult who shares similar interests and abilities. Mentoring helps a student acquire new knowledge and skills and nurtures social, emotional, and cultural aspects of giftedness and talent through 'empathetic companionship.'

Distance learning is defined as any educational situation in which the teacher and student are not face-to-face. The Northwestern University Center for Talent Development (2003) explains that this mode of study may include traditional by-mail correspondence courses; two-way, interactive audio and video classes; classes using the Internet; and CD-ROM-based courses. The Ministry of Education (2000) recommends distance learning as an educational option, and specifically includes the Correspondence School and 'virtual instruction'.

Successful, long-term educational programmes for gifted and talented students require well-planned, comprehensive, and coherent frameworks of differentiated goals and objectives. This can be achieved through careful curriculum design and implementation. The New Zealand Curriculum Framework (Ministry of Education, 1993) acknowledges gifted and talented students in the explanation of the essential skills: "The curriculum will challenge all students to succeed to the best of their *ability*. Individual students will develop the essential skills to *different degrees* and to *different rates*" (italics added, Ministry of Education, 1993, p. 17). They are also acknowledged in the national curriculum statements for each of the essential learning areas. These statements are outlined by the Ministry of Education on the *Te Kete Ipurangi The Online Learning Centre* gifted and talented community, and each one contains direct reference, or in some cases, implicit allusions, to meeting the needs of gifted and talented students. Additionally, there is a wide range of international curriculum frameworks designed specially for gifted and talented students. Educators may adapt or adopt a variety of models, taking an eclectic approach to curriculum development and implementation (Rawlinson, 1996; Riley, 1996).

The research literature recommends that provisions for gifted and talented students should:

• Be qualitatively differentiated;

• Allow for enriched and accelerated learning opportunities;

• Be developed based upon the individual needs of each student by using the information gathered during the identification process;

• Ensure that culturally diverse students are not placed in an environment that isolates them from their culture or uses culturally inappropriate or irrelevant teaching and learning strategies;

• Be supported by professional development opportunities, as well as appropriate physical, financial and human resources; and

• Be constantly evaluated to determine their effectiveness in relation to student outcomes.
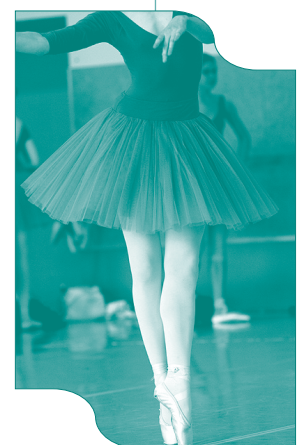
What Do New Zealand Schools Do?

The majority of schools (62%) indicated a preference for a combination of enrichment and acceleration approaches to provision. Schools that did not prefer a combination of the two favoured enrichment over acceleration. Classroom-based provisions were reported as more commonly utilised (82%) than school-based (64%) or community provisions (46%). Of the classroom-based provisions, ability grouping was the most frequently reported approach, and a consulting teacher and diagnostic-prescriptive teaching the least frequent. Classroom-based and community-based provisions were reported as being used more often by urban, high decile, primary, and intermediate schools. These community-based provisions include the Correspondence School and one-day-a-week programmes.

A small minority of schools reported a curriculum or programme model, and of those the Enrichment Triad Model is most commonly cited. However, almost two-thirds of schools reported school-based provisions, with these most likely in place for students with intellectual and academic gifts and talents. Of the six areas of ability, culture-specific abilities and qualities is the least frequently provided for. Most schools report provisions for two to four areas of ability. Withdrawal programmes were cited as the most frequent provision across all areas, with the exception of physical and sporting ability. Competitions are most readily used for students with physical and sporting abilities. Special classes and early entry are the least frequently reported provisions across all areas of giftedness and talent.

Each school's journey in gifted and talented education took different paths and routes; however, some common themes emerged:

1. All of the schools viewed the process as ongoing, and acknowledged that their identification and provisions were constantly evolving.

2. Each school was led by a strong advocate for gifted and talented students who had a professional and/or personal commitment.

3. Although schools reported a range of identification and provisions in their questionnaire, there was a strong focus on the development and implementation of programmes outside the regular classroom.

Refer to pages 201–230 for each school's profile and a description of their journey.

All of the case study schools reported using a combination of enrichment and acceleration, and a range of different organisational strategies is used to deliver differentiated programmes for gifted and talented students. However, particularly at primary level, the schools showed a clear preference for enrichment programmes, and these were perceived as well supported by principals, teachers, and community. Each of the case study schools approach acceleration in different ways. Although all of the schools indicated use of acceleration, this seemed to be managed more on a case-by-case basis in most schools, and preferred for older students (intermediate and secondary).

The case study schools were implementing a range of provisions for gifted and talented students and these included:

- **Withdrawal or pull-out programmes within the school or community.** Two of the primary schools were working in collaboration with other schools in their local area as a 'cluster'. Two of the primary schools had a 'partner' school: one at primary level for offering a range of enrichment-based programmes; and the other at secondary level for the provision of support and mentoring to Year 7–8 students. A range of exciting programmes was provided by the schools, and these were facilitated by teachers and outside experts from the community.

- **Special classes.** The intermediate school offered four full-time special classes for gifted and talented students, two at Year 7 and two at Year 8. These are full-time special classes for the academically gifted that cater for a wide range of students who may have learning and behavioural problems, as well as those who are already performing to their capabilities. One of the secondary schools provided 'accelerate classes' for some curriculum areas; for example, they had developed a class for 'gifted and talented', a sports academy, and high achiever classes for able students.

- **Individualised programmes.** One of the primary schools provided individual programmes throughout the school that were largely self-managed by the children, allowing them to progress at their own level and rate. Some other schools responded to gifted and talented students' particular learning needs as identified in Individual Education Plans. For example, one secondary school included specific skills such as time management or even spelling and handwriting in students' individualised programmes.

- **Clubs, electives, competitions.** All of the case study schools reported the use of local and national competitions as a means of meeting the needs of gifted and talented students. Some schools also reported school-based clubs and electives.

- **Flexible grouping.** Many of the case study schools, particularly at primary level, implemented cross-age grouping. Ability grouping within class was also readily used. Some of the schools implemented cluster grouping as an organisational strategy for class placements.

- **Liaison with universities and tertiary providers.** Support from university experts and tertiary providers was reported as valuable for both students and teachers in several schools (both primary and secondary). Students received an interesting and appropriate programme to challenge them and teachers then learned about the students' experiences through a sharing process back at school.

- **The Correspondence School.** Gifted and talented students are also provided for in several schools by Correspondence School programmes. For example, gifted and talented primary school students were studying subjects such as secondary level mathematics and advanced English.

- **Mentoring.** One of the secondary schools identified a mentoring programme that uses teachers and community members as mentors, as one of its more successful provisions. One of the primary schools was in the early stages of establishing a mentoring programme for their Year 7 and 8 students with a local secondary school, and they saw this as promising.

Cultural Issues

What Does the Literature Say?

The national and international literature and research show that students from ethnic minority groups are under-represented in many gifted and talented programmes and provisions. The problem stems primarily from lack of effective identification practices. However, problems are also reported for students who, once identified, receive culturally irrelevant or inappropriate provisions. The report includes a comprehensive discussion on pages 126–140 of the international and New Zealand research on these cultural issues.

There are many reasons for the under-representation of minority groups in gifted education. They are mainly related to discriminatory assessment practices, such as culturally-biased assessment measures and narrow selection criteria. Table 2 summarises the problems identified in the literature in relation to the identification of culturally diverse students.
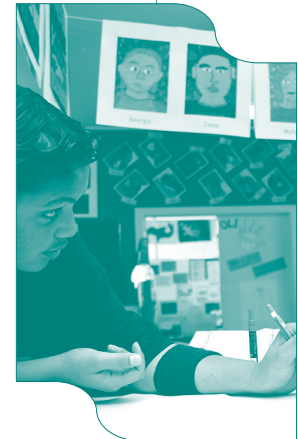
Table 2. Problems Associated with the Identification of Culturally Diverse Students

- Low teacher expectation
- Teacher bias
- Low teacher referral rate
- Inadequate teacher preparation in testing, assessment, multicultural and gifted education
- Cross-cultural misinterpretations and misunderstandings
- Inadequate home–school communication about gifted education opportunities
- Narrow concepts of giftedness
- Negative stereotyping of minority group children
- Characteristics associated with cultural diversity that may obscure giftedness
- Reluctance amongst parents of children from diverse minority cultures to identify their children as gifted and nominate them for gifted programmes
- Children unmotivated to perform in test situations
- Children inhibited by conditions of poverty or psychological stress
- Geographic isolation
- The pervasive deficit orientation in society and educational institutions

The literature discusses ineffective and inappropriate identification of gifted and talented Māori students. For example, Bevan-Brown (1993, 1996) raises concerns that gifted and talented Māori and other minority group children are missing out on identification because teachers identify giftedness from a majority culture perspective using methods that have a dominant cultural bias. Furthermore, Bevan-Brown (2000a) identified negative attitudes as a major barrier in the identification of gifted Māori students. In particular, she highlighted low teacher expectation which resulted in a number of negative outcomes, namely, under-identification, teaching practices and behaviours that disadvantaged gifted Māori students and students developing low self-esteem and performing 'down' to expectation.

The literature also indicates that culturally diverse students, once identified, may still not be adequately provided for. The main reasons are the cultural inappropriateness of existing gifted programmes and the inability of teachers in gifted education to provide for cultural diversity. Some concern is expressed in the literature about the appropriateness and effectiveness of placing gifted Māori students in accelerate classes and withdrawal enrichment groups. For example, Bevan-Brown (1993) came across a number of unsuccessful instances of gifted Māori students being placed in these classes and groups. In every case, the student concerned identified with their Māori culture, but was the only Māori in the class or group and the provision did not include any cultural content. Similarly, Niwa, (1998/99) notes that withdrawal programmes and streaming practices result in Māori students "being moved out of their own peer group and asked to display their gifts and talents with a group that they have no aroha-ki-te-tāngata ties with" (p. 5). However, Galu's (1998) research indicates that given more supportive circumstances placement in accelerate classes can work for gifted and talented Polynesian students.

The literature contains a number of recommendations for improving the education of gifted and talented minority students.

• **The provision of culturally appropriate programmes in a culturally supportive environment.** The provision of a supportive learning environment which reflects and values cultural diversity is a prerequisite for the successfully identifying gifted Māori and other ethnic minority students, for it is in such an environment that students' gifts and talents will emerge (Bevan-Brown, 1993, 1996). Similarly, being culturally responsive is advocated in the literature as an effective means of providing for gifted and talented minority students. For example, programmes that are described as successfully catering for gifted and talented Māori and other Polynesian students provide an environment where students' culture and values are acknowledged and celebrated, and a programme where the content and context of learning is culturally relevant and the teaching approaches are culturally appropriate.

- **Broad, inclusive concepts of giftedness and talent.** The literature advocates that broad, multicategorical approaches to giftedness and talent incorporate multicultural concepts and perspectives in general, and Māori concepts and perspectives in particular. Including Māori concepts and perspectives would mean recognising and providing for spiritual, emotional and group giftedness and incorporating a 'service component' in gifted provisions (Bevan-Brown, 1993, 1996, 2003). Māori content would not only include cultural knowledge, skills, practices, experiences, customs and traditions but also cultural values, beliefs, attitudes, behaviours, dispositions and qualities (Bevan-Brown, 2003).

- **Improved teacher education.** The call to better prepare teachers to both identify and provide for gifted and talented Māori students and those from minority cultures is repeated throughout the literature to include, amongst other things, the recognition of giftedness in diverse cultural settings. Speaking specifically of in-service provision, Cathcart (1994) suggests a whole-school approach: "Professional development time on an ongoing basis has to be put into working through concepts about cultural difference, sharing information, practising strategies and skills and building resources" (p. 189).

- **Multidimensional identification methods and procedures.** The literature advocates 'multidimensional and flexible' identification methods, although there is controversy over the appropriateness and effectiveness of various methods and measures used within the multidimensional approach.

- **Curriculum models and programmes.** A wide range of curriculum models and programmes are used internationally. In New Zealand, Renzulli's Enrichment Triad has proven successful with Polynesian students (Galu, 1998; Rawlinson, 1999). While not specifically designed for gifted education, the Curriculum Integration Model (proposed by Beane) has also proven successful in providing for gifted Māori students (Jenkins, 2002). Other models reported as successful are Treffinger's Model for Increasing Self Direction, Betts' Autonomous Learner Model and Feldhusen's Three Stage Enrichment Model (Rawlinson, 1996). These and other models are further discussed in the report on pages 52–58. Although not a programme or model, the use of mentors and role models is another approach that is recommended for gifted and talented Māori and Polynesian students (Bevan-Brown, 1993; 2003).

- **Greater parental, whānau and community involvement.** Bevan-Brown (1993, 1996) calls for greater involvement of parents, whānau and the Māori community in the education of gifted Māori children. Participants in her 1993 research suggested a number of ways this could be achieved including increased home-community-school consultation and involvement in relevant decision-making; parent/whānau/community nomination as a component of the identification process; involvement as resource people, advisers, volunteers, audiences, mentors and role models (preferably people gifted children could 'whakapapa into'); and as participants in programme evaluation. Bevan-Brown (2000b) found that in kura kaupapa Māori, parents, whānau and community members were regularly involved as resource people and mentors to extend children in their areas of particular strength.

- **Equity measures.** The literature contains a number of equity-related suggestions to ensure students from ethnic minority groups are provided for. For example, Galu (1998) recommends a quota system for these students to ensure their representation in gifted and talented programmes. Similarly, Doidge (1990) recommends that challenging behaviour should not serve as a barrier to participation in appropriate programmes. These practices are in line with Bevan-Brown's (1993, 1996) and Galu's (1998) recommendation to recognise potential as well as demonstrated performance.

In a six-year-long research study, Bevan-Brown (2002) consulted with hundreds of Māori parents, whānau and teachers as well as special education, disability and Māori organisations and service providers about how Māori children with special needs could have these needs met in a culturally appropriate, effective way. She also analysed relevant New Zealand literature to discover what elements contributed to successful programmes for Māori children with special needs. While this research focused on Māori children with special needs in general rather than gifted and talented Māori students in particular, its findings are relevant given that this latter group were considered by Māori participants to be children with special needs. The study concluded that:

> … programmes and services should be based on Māori perspectives of special needs [including Māori concepts of giftedness] and incorporate Māori concepts, knowledge, skills, attitudes, language, practices, customs, values and beliefs; focus on areas of importance, concern and benefit to Māori; involve and empower Māori parents, whānau and the Māori community and the learners themselves; be of a high quality; accessible; result in equitable outcomes for Māori learners; and be delivered by people with the required personal, professional and cultural expertise. (p. i)

What Do New Zealand Schools Do?

Reported definitions of giftedness and talent are broad and multifaceted; however, cultural, spiritual, and emotional giftedness are often overlooked. The definitions, identification practices, and provisions reported by many of the participating schools do not embody Māori perspectives and values. For example, less than half the schools with formal identification in place reported identifying culture-specific abilities and qualities. This demonstrates a lack of understanding and valuing of cultural differences.

The tools of identification which schools reported are predominately teacher observation and, to a lesser extent, standardised tests of achievement. The heavy reliance upon these is of concern, for as the literature review reports, teacher nomination and standardised tests can be biased. Parent, self, and peer nominations, all potentially appropriate measures of identification, were reported by less than half of the schools who formally identified gifted and talented students. Whānau nomination was even less often reported, by only about a fifth of the respondents. The methods of identification do vary dependent upon the area of giftedness and talent being identified; for example, schools reporting formal identification of culture-specific qualities and abilities involve whānau.

Specific provisions for students with culture-specific abilities and qualities were reported by less than half of these schools (36%). The reported heavy reliance upon withdrawal and pull-out programmes could be detrimental to culturally diverse students if they do not have peer support and if the programmes provided are not culturally responsive. Of schools reporting the use of a curriculum model, the most common was the Enrichment Triad Model, a potentially appropriate framework for students of diversity.

The case study schools described some strategies to overcome barriers to cultural under-representation and these can be categorised in five different ways:

1.   Taking a whole school approach in the incorporation of cultural input into the whole school programme and to supporting ethnic minorities in general;

2.   Ensuring parental and community involvement to inform and enhance gifted education programmes;

3.   Employing appropriate identification procedures to ensure gifted and talented students from under-represented groups do not 'slip between the cracks';

4.   Making provisions that include cultural strengths and opportunities for participation by students in bilingual classes; and

5.   Introducing strategies that address equity and accommodation issues.

The research concluded that there are barriers to effective identification and provisions for gifted and talented students from under-represented groups of society, especially Māori students and those of other ethnic minority groups. In many schools, these students were not being identified and culturally appropriate provisions were not being planned, implemented, or evaluated. Although some New Zealand schools recognised and acknowledged this as a problem and were genuinely concerned, they seemingly did not know what to do to improve the situation. Others perceived their identification and provisions as appropriate, but these assumptions were based upon stereotypes, biases, negative attitudes, and lack of knowledge. Still others did not view culture as an important factor to be considered in the development of identification and provisions for gifted and talented students.
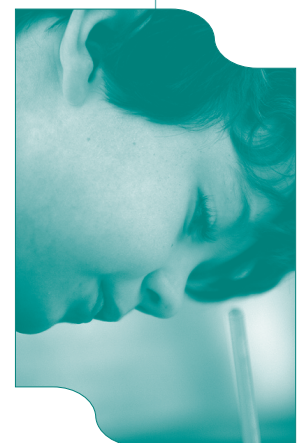
Overall Coordination of Gifted and Talented Education

▥ What Does the Literature Say?

The Ministry of Education (2000; 2001) strongly urges school-wide development of programmes for gifted and talented students involving the entire school community: administrative and teaching staff, Boards of Trustees, parents/whānau, other community members, and perhaps gifted students themselves. It is essential that the programme is 'owned' by the school community because gifted education should complement, rather than be in conflict with, the school culture and its ethos (Ministry of Education, 2000).

Often a school's gifted programme evolves from the work of an individual staff member; however, this may lead to resistance from other staff members to be involved, a short-term programme life, or even teacher burnout (Riley, 2000). To ensure longevity and support, each school should decide what individuals can and should contribute to orchestrating programme planning as members of a committee. Schools should think about administrative and teaching expertise, cultural considerations, and parental and community involvement. Committee members must demonstrate willingness and enthusiasm, interest, expertise, and leadership capabilities. The following stakeholders should be represented:

- Members of the administration and/or Board of Trustees;

- Teaching staff representative of various levels and/or curriculum areas;

- Parents, caregivers and whānau of gifted students;

- Community members with experience and/or interest in gifted students; and

- Gifted students, dependent upon age and experience (Riley, 2000).

Schools are also advised to ensure that someone is responsible for leading and managing gifted and talented education.

Moon and Rosselli (2000) describe the skills needed by coordinators as ability to manage change; planning skills; and programme design strategies. George (1997) outlines the possible responsibilities a coordinator:

- Initiation for the formulation and revision of the school's policy and procedures;

- Consultation with senior management and all staff;

- Coordination of identification;

- Maintenance of a high level of awareness of gifted education attitudes and information both nationally and internationally, disseminating this to teachers, parents, and so on, and advising staff of professional development opportunities;

- Coordination and oversight of provisions;

- Liaison with parents and the community;

- Initiation and maintenance of management systems; and

- Regular monitoring and follow-up of progressions and developments in school-wide programmes.

The roles and responsibilities of the coordinator will, of course, be dependent upon each school's programme and plans for gifted and talented education, as well as management structure.

One purpose for the committee should be to establish a working plan which sets the goals and objectives for the programme, who is responsible for what tasks, and a time line. Schools' approaches to programme development and implementation should be seen as long-term commitments, rather than quick fixes – and this is especially important in light of the obligations of the revised National Administration Guideline. A two to three year implementation plan with realistic, prioritised goals and objectives is recommended. Within the development of a plan, schools might consider the following steps, which are further discussed in the report on pages 141–156:

1. Needs or gap analysis;

2. Programme development;

3. Programme implementation; and

4. Evaluation and revision (Riley, 2000).

The Ministry of Education (2000) recommends that schools develop a policy for gifted and talented education. By putting some guidelines for the programme in writing, provisions may prove more comprehensive and enduring (Ministry of Education, 2000). Additionally, the process of policy development may help clarify a school's aims and rationale, while concurrently giving direction and guidance (Cathcart, 1996). Taylor (1996) describes the preparation of a policy as a 'thinking through process'. Taylor (2001) also suggests that some New Zealand schools develop both a policy and procedural documentation.

It is vitally important to remember that a policy does not guarantee appropriate identification and provision (Ministry of Education, 2000), but it does go some way toward showing a school's commitment to gifted and talented students (Cathcart, 1996). As Taylor (1996) points out, once a policy is written, the Board of Trustees is accountable for its implementation, and this increases the likelihood of the development of a coordinated approach to gifted education.

Several New Zealand writers describe the components of a school's written documentation for gifted and talented students (Cathcart, 1996; Riley, 2000; Taylor, 1996, 2001). In summary, these include:

- The rationale;

- The purposes; and

- The guidelines regarding the school-based definition of giftedness and talent, identification methods, programme design and structure, professional involvement and development, community and parental involvement, resourcing, and programme evaluation.

A checklist for schools, with questions to consider in developing these written procedures, is available on *Te Kete Ipurangi: The Online Learning Centre* in the gifted and talented community at http://www.tki.org.nz/r/gifted/curriculum/policy_checklist2_e.php.

What Do New Zealand Schools Do?

The majority of schools (73%) had appointed a person with responsibility for gifted and talented education. These are most commonly school administrators and senior teaching staff. Some schools (43%) reported having a committee for gifted and talented education. These committees comprise mainly administrators and teachers with little parental, whānau, community or student representation. In comparison to other school types, intermediate schools most frequently reported a team approach, whereas rural schools, possibly by their very nature, are unlikely to have a committee or coordinating team. The decile rating of a school may also influence overall coordination. High decile schools reported a team approach more often than lower decile schools.

A little over a quarter of schools (28%) reported a policy specific to gifted and talented students. These are sometimes complemented with implementation plans, procedures booklets or action plans. At the time of the survey, approximately 15% of schools were developing policies and plans for gifted and talented students. In written documentation schools place the greatest emphasis upon the rationale and goals or purposes for gifted education, and the identification procedures. Other areas included definitions of giftedness and talent, programmes, resources, and professional development. Curriculum or programme planning models were seldom mentioned. Issues related to funding, time, and resources were reported as common barriers to overall coordination of gifted and talented programmes; however, some schools are utilising gifted and talented advisory support in the development of gifted and talented education policies and procedures.

Nine of the ten case study schools had an appointed coordinator who held a position of responsibility within the school (e.g., deputy or associate principal, head of department, designated teacher of the gifted and talented, principal). Eight of the ten schools had a gifted and talented committee. In five schools, the principal was a member of the gifted and talented committee. One of the secondary schools had a network of support that included the guidance counsellor, careers adviser, and gifted and talented adviser working with the coordinator.

Each of the ten schools that participated in the case studies had a unique culture and philosophy; however, one common philosophy that emerged was the importance of considering giftedness from a wide perspective. One teacher described this as, "recognising and being more sort of open to children with talents of any sort and not just academic talents or thinking that they're intelligently bright and a philosophy of trying to meet their needs in some way".

Eight of the ten schools involved in the case studies had specific gifted and talented policies and one school was in the process of developing such a policy. For seven of these schools, the policy was comprehensive. Most of the policies included professional development, funding, and monitoring and evaluation procedures. The one school without a gifted and talented policy explained that its policy on gifted education was part of the overall school policy. It was described as a collaborative way of working where everyone contributes ideas and is involved in decision-making. Eight case study schools also had specific reference to gifted and talented learners written into other policies.

The overall coordination of gifted and talented education initiatives requires a long-term commitment of time, resources, and personnel. The case study schools, all of which were selected based in part upon their organisational strategies, were able to readily identify the enablers and barriers to effective programmes. Interestingly, in several instances, the factors which enabled comprehensive programmes were also perceived as barriers. These included professional development, funding, time, and resources. For example, school-wide professional development opportunities had pushed gifted education to the forefront of teachers' minds by increasing awareness and understandings; but conversely, coordinators expressed the need for more professional development to continue moving forward with initiatives. Other enablers included professional support, such as school advisers; parental and community support; open communication within and outside the school; and flexibility in programming and decision-making.

The case study schools were asked to share advice for the development and implementation of gifted and talented programmes. Their comments centred on the provision of professional development, with the aim of creating a shared philosophy and vision; the procurement of support from the school administration and Board of Trustees; the continued education of staff via research-related professional reading; and targeted school-based funding for gifted education initiatives.

Words of Wisdom from Coordinators of Gifted and Talented Programmes

Trial many different programmes, be prepared to move outside your comfort zone and seek out new and exciting initiatives.

Adequate resourcing is necessary. You need to budget for resources.

Get some theory under your belt. Do some reading and find out what you need to think about because you don't know what you don't know.

It simply isn't enough to expect that those children will be extended by the withdrawal groups. There's more children than what I can cater for and, you know, all our bright children from middle upwards need constant extending and it might be that I have to do more in the way, you know, I suppose teaching about differentiated learning from both ends of the scale.

Meet with parents to alleviate a lot of concerns that they have and to try and explain the direction that the children are going to be going in but also to point out some of the issues that they may have concerns about.

Teachers who don't teach these classes often don't see these kids as different, the perception that you've got there is that the … class is an easy run – which is simply not true.

I think it is something that's developing too. The awareness of gifted and talented education, the profile of it probably has risen over the last couple of years and it is something that as a staff and as a Board of Trustees our school's been quite aware of too. So while you've sort of known for a long time about gifted and talented, specific programmes and actually more research, professional reading, that kind of thing has become more apparent and more available. I think that over the last two or three years, it's been a bit of a Ministry push with the professional development contract available so I think that the awareness has been raised and it's something that we recognise that we've definitely got some children who fall into that category…

The school atmosphere is also important so that gifts and talents are celebrated and kids who achieve are accepted and recognised.

There has been good will which is one thing but you have to have the personnel, the resources, the organisation, the structure to go behind something to make it actually come to fruition

I'm happy where we're at now, at this stage…it's not the end, the journey's not finished!

Conclusions of the Research

The research provides baseline data which demonstrates progress in meeting the needs of gifted and talented students, but also indicates the need for continued growth and development in this area of education. In both research and practice, there are strengths in the identification and provisions, as well as areas that need continued development. These are outlined in the conclusions:

- There is a paucity of reported national or international research which evaluates the effectiveness of provisions for gifted and talented students in relation to social, cultural, emotional, creative, and intellectual outcomes. Although there is recent growth in New Zealand's literature and research base in gifted and talented education, its dissemination and availability to practitioners is limited.

- There is a growing awareness of the need to provide gifted and talented students in New Zealand schools with an individualised and appropriate education. Provisions are both supported and impeded by professional development, access to resources and support, funding, time, and cultural understandings.

- Reported definitions of giftedness and talent in New Zealand schools are broad and multicategorical; however, cultural, spiritual, and emotional giftedness are often overlooked. Additionally, many of the reported definitions, identification practices, and provisions do not embody Māori perspectives and values.

- Multiple approaches to identification of giftedness and talent are reported by New Zealand schools; however, there is heavy reliance upon teacher identification and standardised testing across all areas of ability.

- There is a reported preference in New Zealand schools for implementing a combined approach of enrichment and acceleration, but the implementation of these is rather limited, with partiality to within-class provisions and withdrawal or pull-out programmes.

- Gifted and talented students from under-represented groups, especially Māori students and those of other ethnic minority groups, are not being readily identified in New Zealand schools, and culturally appropriate provisions are not being planned, implemented or evaluated.

- There is awareness and recognition of the social and emotional needs of gifted and talented students; however, only isolated examples of provisions specific to these are reported by New Zealand schools. Additionally, some of the reported identification methods and provisions could have potential negative effects upon the social and emotional well-being of gifted and talented students.

- The reported involvement of parents, caregivers, and whānau in the overall organisation and coordination, identification, and provisions for gifted and talented students in New Zealand schools is minimal.

- Schools in New Zealand are cognisant of the need for ongoing school-wide professional development for all teachers and consider the lack of these opportunities a barrier to identification and provisions. Resources, funding, time and access are reported as barriers to professional development.

This research demonstrates that through coordinated school-wide approaches to development and implementation of gifted and talented education, New Zealand schools can – and do – make progress. But as many of the participants indicated, the journey has not yet come to an end. As one questionnaire respondent wrote, "It's a long journey and we ain't there yet!" This research has hopefully created a roadmap for future research and initiatives. It is also hoped that the summary of findings reported here can serve as a 'tour guide' for those educators who are embarking upon the first stages of developing and implementing programmes for gifted and talented students.

Recommended Resources and References

Recommended Resources

In addition to the references included in this summary and in the research report, the following Ministry of Education resources are recommended.

Ministry of Education. (2000). *Gifted and talented students: Meeting their needs in New Zealand schools.* Wellington: Learning Media.

Ministry of Education (2001). *Working Party on Gifted Education. Report to the Minister of Education.*
Available at http://www.executive.govt.nz/minister/mallard/gifted_education/index.html

Ministry of Education. (2002). *Initiatives in gifted and talented education.* Wellington: Ministry of Education.
Available at http://www.tki.org.nz/r/gifted/initiatives_e.php

Riley, T., Bevan-Brown, J., Bicknell, B., Carroll-Lind, J., & Kearney, A. (2004). *The extent, nature and effectiveness of planned approaches in New Zealand schools for identifying and providing for gifted and talented students.* Available at www.minedu.govt.nz/goto/gifted *Te Kete Ipurangi: The Online Learning Centre's Gifted and Talented Community* is available at http://www.tki.org.nz/e/community/gifted/

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