Sabbatical Report
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Title

How are schools catering for the needs of gifted and talented students from minority ethnic groups within the 21st century classroom?

Author Details

I am in my tenth year in the role of principal and have had the privilege of leading Good Shepherd School for nearly five of those years. Good Shepherd School is a small Catholic integrated school in central Auckland with a diverse community. Our vision for our students is that they live and experience the values of Jesus, the Good Shepherd, and that they become critical and creative thinkers who are positive in their own identities and who contribute to the global community. Like most schools in New Zealand, we are exploring innovative learning approaches and flexible learning environments in order to develop students' skills in digital fluency and complex problem solving. We have also recently reviewed the provision for gifted and talented students at our school.

Acknowledgements

Ministry of Education and NZEI for making these sabbaticals available to principals. It was an invaluable opportunity to engage in an area of professional learning and to take time for reflection and rejuvenation.

The Good Shepherd School Board of Trustees for supporting my application for a principal's sabbatical.

The staff of Good Shepherd School, and in particular the leadership team, who willingly took on extra duties in order that I could take this sabbatical.

The school principals who participated in this study. They took time out of their busy work schedules to discuss their gifted and talented programmes with me and to complete the survey.

Executive Summary

This small-scale study looked at what is considered good practice in the area of gifted and talented education (GATE), with a particular focus on ensuring equity for minority ethnicities and the use of technology to support the engagement and extension of gifted students. This report contains a literature review which summarizes research and resources from both New Zealand and overseas. Six case study schools were identified from this research, from a search of school websites and through word of mouth. A survey was completed by the principals or, in one case, by the gifted and talented co-ordinator. The results of the survey confirmed the emerging themes from the literature review in that there are examples of good practice in providing for gifted and talented students in our schools, although most schools would benefit from a review of their provision. A flurry of activity in GATE in the first part of this century produced some excellent resources from the Ministry of Education and the Education Review Office that could be useful in such a review.

Literature Review

Introduction

The first part of this literature review explores the relevance of gifted and talented education, particularly within the New Zealand context. Attention is given to what the research tells us is effective provision for gifted and talented learners, to the current state of provision in New Zealand and to the possible barriers preventing schools from providing effectively for this group of students. The next section explores in more detail literature on the concept of gifted and talented, characteristics of these learners and effective identification procedures. This is followed by a discussion of how best to accommodate the strengths and needs of gifted students, with a special emphasis on inclusive practices, and finally a brief look at research on the use of technology to provide effective programmes for gifted and talented learners from diverse backgrounds.

The importance of gifted and talented education

Any rationale for further study of gifted and talented education must start with The New Zealand Curriculum (2007), the document that states what is important in education and guides schools in how to provide 'young people with the most effective and engaging teaching possible and (support) them to achieve the highest of standards' (p. 4). Perhaps the most explicit reference to meeting the needs of gifted and talented students can be found under the *Principles* section which puts the student at the centre of teaching and learning and requires schools to provide a curriculum that engages and challenges learners. The *Inclusion* principle in particular calls for a curriculum that 'is non-sexist, non-racist, and non-discriminatory; it ensures that students' identities, languages, abilities, and talents are recognized and affirmed and that their learning needs are addressed' (p. 9).

Following its release of research on the identification and provision for gifted and talented students in New Zealand (Riley, Bevan-Brown, Bicknell, Carroll-Lind, & Kearney, 2004), the Ministry of Education changed the National Administration Guidelines to include gifted and talented students in the special needs group (NAG 1 (c) iii). From 2005, schools were required to identify these students and develop teaching and learning strategies to meet their needs. The fact that gifted learners are found amongst all priority learner groups and are present in every school is recognized in literature from a range of countries (see Ministry of

Education, 2008; Department for Children, Schools and Families, 2008; Department of Education, Training and Employment, 2017) and provides another imperative for research in this area.

Effective provision for gifted and talented learners

New Zealand schools are well-served by research into effective provision for gifted and talented learners, although most of this research is ten years or more old. Perhaps one of the most accessible and relevant documents is the Education Review Office (ERO)'s evaluation and description of good practice, published in 2008. ERO found that schools that were effective in promoting positive outcomes for gifted and talented students were characterized by leadership knowledgeable and supportive of gifted and talented education (GATE), school-wide professional development in this area, well-developed policies and procedures in defining and identifying gifted and talented learners, good communication and collaboration with the school community, responsive and appropriate programmes, and effective self-review processes.

In the United Kingdom, a similar case study approach (Wallace, Fitton, Leyden, Montgomery, Pomerantz & Winstanley, 2007) highlighted successful and practical strategies that transformed student potential into high achievement. Like the ERO evaluation, this study also identified an energetic and devolved leadership model, including the important role of the Gifted and Talented Co-ordinator, and an inclusive and varied approach to defining and identifying gifted and talented learners as important characteristics of effective provision. In addition, the authors found transition between phases of schooling, an emphasis on the Assessment for Learning approach in programmes, a commitment to listening to student voice, and access to mentors to be integral to effective GATE provision. They report that out of hours or extra-curricula learning was a characteristic of their successful case study schools.

Building on the work done by ERO in their review and reports on effective provision for gifted and talented learners, the Ministry of Education updated their publication Gifted and Talented Students: Meeting their needs in New Zealand schools in 2012. This resource is designed to support schools in developing an effective, school-wide approach to catering for the strengths and needs of their gifted and talented students and is organized around five key components of effective support: the concept of giftedness and talent, the characteristics of gifted and talented students, identification processes, programmes for these students, and ongoing self-review.

Although our New Zealand Curriculum states that all schools must be responsive to their own communities and develop programmes that fit with those communities, that is it recognizes that 'one size does not fit all', it is clear that there is a depth of evidence-based research on effective practice in providing for gifted and talented learners available to schools. The next section of the literature review will focus on what is happening in schools in this area at the moment, and what constraints schools face in implementing effective provision.

Current situation of GATE in New Zealand schools

The most recent comprehensive picture of what is currently happening in New Zealand schools in gifted and talented education again comes from ERO's 2008 evaluation report:

> In 2008, the Education Review Office (ERO) published an evaluation report into how 315 schools provided for the needs of their gifted and talented students (Education Review Office, 2008a). ERO found that only 17 percent of schools had good provision across all five of the key evaluative areas and that these tended to be high-decile schools in urban areas. Thirty-five percent of the schools did not have good provision for gifted and talented students in any of the evaluative areas, and 46 percent had good provision in some areas, but not others.
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> Ministry of Education, 2012, p. 12

In their research conducted in 2013, Gifted and Talented Education in New Zealand Schools: A Decade Later, Riley and Bicknell found some evidence of growth in gifted and talented education since the 2004 research (Riley et al, 2004). The authors describe these improvements as 'snapshots of promise' in an ongoing journey towards effective provision for our most able students. For instance, although it appears that more schools are developing school-based definitions of giftedness and talent, they found that there is still confusion between definitions, characteristics and identification processes. Furthermore, students from Māori and other minority ethnic groups continue to be underrepresented in GATE programmes in New Zealand schools (Bevan-Brown, 2005; Riley & Bicknell, 2013). International research confirms that gifted students from minority cultures are being under-identified and ineffectively provided for (see, for example, Grissom & Redding, 2016).

Constraints on effective provision for gifted and talented students

It is apparent from the discussion above that there is a mismatch between what is put forward as effective practice in the provision for gifted and talented students and what is currently happening in many schools. A number of reasons why schools are finding it difficult to implement effective GATE programmes are found in the research. Limited resourcing is put forward as one important factor. ERO (2008a) found resourcing was a constant challenge for the schools providing effective programmes for their gifted and talented learners. Teachers needed ongoing professional learning and development, especially in the area of differentiated teaching in the classroom.   In the previous section, energetic and knowledgeable leadership was described as a characteristic of the schools providing effective gifted and talented programmes, but sustaining momentum in GATE in the face of experienced leaders leaving schools can be a challenge (ERO, 2008a).

At a policy level, Riley and Bicknell (2013) describe the important initiatives funded by the New Zealand Ministry of Education since 2004 to support schools in identifying and catering for their gifted and talented learners. Unfortunately this support has declined since 2009 and 'as a distinct group their needs are not explicitly addressed' (p. 2) within any of the recent Ministry of Education initiatives, including National Standards, Communities of Learning, Ka Hikitia and Success for All: Every School, Every Child. In addition, although gifted education comes within Special Education (now called 'Learning Support') under the National Administration Guidelines (Ministry of Education, 2017), this group of learners is consistently left out from resourcing and support (New Zealand Centre for Gifted Education Limited, giftEDnz & New Zealand Association for Gifted Children, 2016).

Considering the importance placed on school self-review processes on ensuring effective practice in GATE, it is not surprising that lack of capability in this area is identified as a barrier in a number of schools. Riley et al (2004) and ERO (2008a) both report the difficulty schools face in providing responsive and appropriate programmes for their gifted and talented learners if they do not have a culture of effective self-review. Riley and Moltzen (2010) advance a number of theories, drawn from overseas research, about why this lack of effective self-review exists, including weakness in evaluation skills and lack of funding.

Because of their relevance to the original focus of this study, the next three sections will look briefly at current research in the areas of definition and identification processes in GATE, how

diverse cultures are integrated into GATE programmes, and how technology is used to cater for the learning needs of gifted and talented students.

Defining GATE and identifying gifted and talented learners

Educators' beliefs about gifted and talented education impact on decisions they make about GATE programmes and ultimately on the wellbeing of these learners. Historically and internationally, the emphasis has been on academic ability, although popular recognition of exceptional ability in sport and music is often celebrated in the media (Delaune & Tapper, 2015). Knudson (2006) (cited in Delaune & Tapper, 2015) asserts that our history of egalitarianism in New Zealand has impacted on our society's views on gifted and talented, putting up barriers to programmes that will advantage one person over another even into the 21st century.

Over the past few decades definitions of gifted and talented have generally become much broader to include multiple criteria (McClain & Pfeiffer, 2012). They often now include abilities associated with leadership, creativity and the arts - the multiple criteria approach advocated in literature in this area (see, for example, ERO, 2008a; Ministry of Education, 2012). Because giftedness is a social construct and is culturally defined (Delaune & Tapper, 2015; Bevan-Brown, 2005) it is very important that a school's definition reflects the perspectives of all cultures represented in the student body. Faaea-Semeatu (2011) outlines ten cultural identifiers for identifying gifted and talented Pasifika students, collated from the response of Pasifika parents in a specific school community. These incorporate aspects of Pasifika students' lives outside of the school context, such as 'Memory (e.g. Cites formal Pasifika customs, familial and village links)' (p.118). For Māori, giftedness is more than the possession of exceptional abilities; emphasis is also placed on outstanding personal qualities, service to others, and group giftedness (Cathcart, 2011; Bevan-Brown, 2005). Considering the 2008 ERO report on the state of gifted and talented education in New Zealand schools, which found that most schools made no reference to Māori in their definitions of giftedness, consultation with parents, whānau and iwi is an imperative for schools.

Once a school has worked with its community to develop a definition of gifted and talented that encompasses multiple criteria and is inclusive, it must then ensure that its identification processes are similarly inclusive, fluid and contain a repertoire of both quantitative and

qualitative strategies (Wallace et al, 2007). Again the ERO (2008a) report provides a good summary of indicators of good identification practices:

- the school's identification process:
    - was multi-categorical;
    - included Māori theories and knowledge;
    - included multi-culturally appropriate methods;
    - included both informal and formal identification;
    - included triangulation;
    - was early and timely;
    - was ongoing, covered transition points and ensured continuity; and
    - included potential and actual/demonstrated performance

<div align="right">p. 17</div>

Matthews and Dai (2014) put forward a strong argument that identification of giftedness should be seen as reflecting current learning needs, and therefore educators need to consult a range of information sources on a frequent and ongoing basis. The gifted and talented register should be kept open and flexible and the emphasis on equal opportunity and racial equality maintained by close monitoring of the balance of the register across ethnicity, gender and the categories outlined in the school's definition.

Another theme coming through strongly in the research is the importance of involving parents and students in the identification process. (ERO, 2008b; Bevan-Brown, 2005). In their guidelines for educators, the Ministry of Education (2012) outlines the principles for effective identification of gifted and talented learners, including open communication about 'identification processes between parents/caregivers, whānau, students, teachers, the principal, and the Board of Trustees' (p. 43).

The final word in this look at the research around defining GATE and identifying gifted and talented learners lies again with the Ministry of Education (2012) guidelines on meeting the needs of these students. This concerns the importance of aligning the school's definition with identification processes and subsequent programmes, providing the coherence that is one of the foundations of curriculum decision-making demanded by *The New Zealand Curriculum* (2007). This is a particularly important point considering Riley and Bicknell's (2013) finding

that there is still much confusion in New Zealand schools between definitions, characteristics of gifted and talented, and programmes provided for these students.

Good Quality Provision for GATE

There are a number of recurring themes emerging from the research, both in New Zealand and overseas, when discussing effective programmes for gifted and talented learners. These include

- personalized or differentiated learning
- incorporating assessment for learning principles, including students taking control of their learning
- incorporating thinking and questioning skills and inquiry learning
- providing choice and multiple opportunities for learning
- flexible grouping, including both ability and mixed ability
- using a combination of acceleration and enrichment approaches
- providing both classroom-based and extra-curricular programmes
- involving parents and students in the planning and evaluation of programmes
- regular monitoring of GATE programmes to ensure they are meeting the needs of the students
- providing a culturally-responsive environment

The above characteristics ensure that teaching and learning programmes are meeting the needs of diverse learners and are not exclusive to effective gifted and talented education. Indeed, they have much in common with the ten characteristics outlined in Alton-Lee's (2003) *Quality Teaching for Diverse Students in Schooling: Best Evidence Synthesis Iteration (BES)*.

Good quality learning programmes are personalized or differentiated for each learner or group of learners, and they are differentiated for content, process and product (ERO, 2008a; Department of Education, Training & Employment, 2017).   Content is adjusted to empower gifted and talented students to follow their passions and the learning process modified to increase the pace of learning. Providing students with opportunities to demonstrate learning in imaginative and innovative ways is an example of differentiated product of learning. Differentiated instruction also ensures that they have the opportunity to develop 21st century skills like critical thinking, inquiry skills, problem solving and questioning skills (ERO, 2008b; Periathiruvadi & Rinn, 2012).

Because good practice for gifted and talented is also good practice for all students (Wallace et al, 2007) a strong emphasis should be placed on assessment for learning. This is closely linked to many other aspects of effective practice, including high priority placed on students managing their own learning, a responsive curriculum that is flexible enough to incorporate ongoing formative assessment of learning, sharing assessment information with students, and students setting their own learning goals and being involved in monitoring their progress towards these goals (Wallace et al, 2007).

Gifted and talented students benefit from flexible grouping, enabling them to work collaboratively with children of similar abilities, in mixed-ability groups and independently (ERO, 2008b).

Another theme emerging from research on gifted and talented education is the place of acceleration of learning versus enrichment of learning experiences. Acceleration is vertical extension, such as promotion to the next class, whereas enrichment involves horizontal extension by broadening the students' experiences within their cohort. Advice to schools is that these two approaches are not mutually exclusive and by offering a combination of the two schools can achieve a good balance of provision for gifted and talented students (Ministry of Education, 2012).

The strategies that provide effective learning experiences for gifted and talented students described above are all situated within classroom programmes. Research tells us, however, that special programmes outside the regular classroom are also important in meeting these students' needs (Wallace et al, 2007; ERO, 2008a). These could be extra-curricular activities such as clubs, holiday or after-school programmes or one-day-a-week programmes. In their case study of schools with effective GATE provision, Wallace and her colleagues (2007) found schools offering an impressive range of activities, including a wide variety of music groups, performing arts, art clubs, sport and fitness opportunities and subject-specific activities such as reading and computing.

Much research in this area urges schools to involve parents, whānau and students in developing and reviewing GATE programmes, just as they did with developing a definition and establishing identification processes. Bevan-Brown (2005) advises educators to be welcoming of input from parents, family, whānau and community as this approach will lead to

more culturally appropriate and effective provision. Similarly, Cathcart (2011) states that we must create more culturally responsive learning environments and using kaumatua (elders) and kuia (female elders) as resources to inform gifted and talented programmes will help us to achieve this. Well performing schools in GATE also involve students in developing, monitoring and evaluating learning programmes (Wallace et al, 2007; ERO, 2008a).

A learning environment that caters for the diverse needs of its students is a culturally responsive environment. This environment is 'relevant, meaningful, affirming and effective for students from many different cultures' (Bevan-Brown, 2005, p. 3). It incorporates Māori values, tikanga and pedagogy (ERO, 2008a) and programmes should include an element of service to others, a priority in GATE for Māori (Bevan-Brown, 2009).

As with all aspects of effective provision for gifted and talented learners, programmes should be monitored and evaluated regularly and feedback should be sought from parents, whānau and students themselves (Wallace et al, 2007; Ministry of Education, 2012).

Use of technology in GATE

Technology has the potential to transform the way we provide for our gifted and talented students, and has become so ubiquitous in schools that it must be considered in a discussion about effective programmes for these learners. Few would argue that it is very important that education keeps up with advancements in technology; in fact *The New Zealand Curriculum* (2007) requires schools to

> … explore not only how ICT can supplement traditional ways of teaching but also how it can open up new and different ways of learning.
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> p. 36

From the learner's point of view, integrating a range of technologies can provide motivation and encourage engagement. Periathiruvadi and Rinn (2012) found that gifted high school students believed using technology was very relevant to their learning. These researchers also report that gifted boys scored similar to gifted girls when using computers to write essays, while the girls scored better than the boys if they were handwritten.

Technology also facilitates interaction between gifted and talented learners and their peers and they can benefit from engaging in learning tasks at any time and in both home and school environments. Online courses and discussion forms, for instance, can provide more opportunities to engage in higher order thinking and deep problem solving (Wallace et al, 2007; Periathiruvadi & Rinn, 2012). The flexibility of online learning also helps to bridge the gap between the acceleration and enrichment approaches to GATE (Barbeck, 2013).

Technology is also a useful tool from the teacher's perspective. It enables better differentiation of learning experiences and, with the increasing number of software and hardware tools available, provides access to a range of rich learning experiences. These applications can encourage 21st century skills such as creativity, problem solving and critical thinking, offering so much more than the drills and practice it is commonly used for (Periathiruvadi & Rinn, 2012).

Digital devices also provide easy access to a range of ways to record and share student learning, facilitating assessment processes and enabling more immediate feedback to learners, their parents and teachers. E-portfolios, for instance, can help with assessing ongoing progress (Periathiruvadi & Rinn, 2012) and are readily available to all partners in the learning process.

As with any aspect of education programmes, the role of the teacher is all-important in ensuring that technology is used in a way that leads to better outcomes for gifted and talented learners. In itself, it is only a tool and its impact on student learning depends on how well teachers integrate it into the curriculum (Periathiruvadi & Rinn, 2012; Hook, 2004). As with all aspects of GATE, professional learning and development for teachers and leaders is imperative.

Conclusion

The purpose of this literature review is to build up a comprehensive picture of what current New Zealand and overseas research says about effective practice in providing for gifted and talented learners, and to reflect on what is actually happening in our schools. New Zealand educators have a number of seminal documents to support them in developing a clear picture of what gifted and talented means in their particular setting, and identifying students who exhibit the characteristics outlined in their definition. Also available is a number of good

resources and research to aid schools in setting up responsive and inclusive programmes for gifted and talented learners. Because of its potential to transform teaching and learning, and to meet many of the characteristics of effective GATE programmes, the place of technology has been discussed. In light of the increasing ethnic diversity of our schools, and the documented under-representation of indigenous and minority groups in gifted and talented programmes both in New Zealand and overseas, special attention has been given to meeting the needs of these groups of students in the context of gifted and talented education.

Methodology

This investigation into how schools cater for the needs of gifted and talented students from minority ethnic groups within the 21st century classroom initially involved further research into provision for these students in both New Zealand and overseas. The literature review provided structure for the survey that became the main data-gathering tool for the project. It was also intended to help identify schools that provide effective programmes for gifted and talented students, particularly those from diverse backgrounds and with an emphasis on technology. In the end, it was difficult to identify case study schools from the research because most of the New Zealand literature was out of date.

In the final analysis, case study schools were identified through a combination of methods, including identification through the research, from school websites that made specific mention of gifted and talented programmes, and through collegial networks.

The survey consisted of open-ended questions asking participants to comment on how they define, identify and cater for the needs of their gifted and talented students. It also asked for comments on review processes and involvement of students, parents and whānau in their programmes. Finally, it requested information on how schools ensure equity and the place of technology in their GATE programmes.

Six completed surveys were returned. The qualitative data collected through the surveys was analysed for emerging themes that have informed the next section.

Results

Six surveys were returned, five completed by principals and one by the school's designated Gifted and Talented Co-ordinator. On review of the school websites, four of the six participant schools make no mention of gifted and talented education and two have a detailed page on their websites. The picture that is built up from these case study schools is presented under the following headings, derived from the literature review of effective provision for gifted and talented learners: definition and identification procedures, equity in GATE programmes, technology in GATE programmes, involvement of students, parents and whānau in GATE, professional learning and development in GATE, and review of GATE programmes.

Definition and identification procedures

Three schools mention having a formal definition of gifted and talented students. Four respondents use the words 'exceptional ability' or their equivalent and two refer to giftedness being inherited. Two schools infer that all students have potential and it appears from their responses to all survey questions that there are no specific programmes in their schools for gifted and talented learners other than differentiated learning in classrooms. Two schools assign the word 'gifted' to cognitive ability and 'talent' to high performance in other areas such as sport and the arts. Two schools also mention 'potential' either explicitly or implied, and two respondents make reference to 'culture', although no mention is made to Māori values, tikanga or pedagogy.

All six respondents refer to teacher observation and nomination in identifying gifted and talented learners. Four mention parent nomination or recommendation and two also include student self-referrals in their description of identification procedures. Two respondents refer to school indicators or criteria against which students are assessed and two other schools mention test results.

Equity in GATE programmes

When asked how they ensure equity across ethnicity in the students selected for inclusion in gifted and talented programmes, three schools replied that they do not specifically take action to do this. Two respondents referred to their identification procedures using a wide range of

domains and areas of strength, including cultural attributes, as a means of ensuring representation of different cultures in GATE programmes.

A similar picture emerged when asked about cultural responsiveness in GATE programmes: two schools specifically mentioned topics related to the ethnicity of the students in the group being the focus of GATE programmes and the provision of a range of performance groups reflecting ethnic minorities (including Kapa Haka). Four respondents made more general statements about all the school's teaching and learning programmes being driven by the children.

Technology in GATE programmes

All participant schools are using technology extensively in their general programmes, with five making specific reference to using a range of software and digital devices. One respondent spoke about particular GATE programmes in which technology is important, e.g. Future Problem Solving and Lego League.

Involvement of students, parents and whānau in GATE

As mentioned in previous paragraphs, four schools refer to parents nominating their children for GATE programmes and two spoke of student self-nomination. To add to this picture, respondents were asked 'How do you/have you involved your students, parents and whānau in your GATE programmes?' In response to this question, two schools mentioned communicating what they were doing for gifted and talented learners to their parent community, three respondents talked about involving parents in the development or facilitation of GATE programmes, although all used qualifiers such as 'some' or 'may', and one school talked about GATE programmes being tied to the specific interest of the child.

Professional learning and development (PLD) in GATE

Two of the six respondents did not answer the survey question 'What professional learning and development for GATE have you had in your school in the last five years?' One school mentions a specific GATE PLD contract delivered over one year and two schools mention other external PLD that is more general and not specifically targeting the needs of gifted and talented learners. Four respondents refer to internal PLD, e.g. professional learning groups, teacher only day coverage, appraisal process, all of which focus on general pedagogy such as

differentiated learning. Two schools describe internal PLD as being led by their Gifted and Talented Co-ordinator.

Review of GATE programmes

Two questions in the survey, 'How do you know that the needs of your gifted and talented learners are being met?' and 'How do you review/evaluate GATE in your school?', gave respondents the opportunity to comment on their review processes. The first question elicited a range of responses: two schools were not sure or did not answer, one described using general organizational structures such as appraisal, one answered that the GATE co-ordinator monitored all programmes and one described surveying GATE learners to evaluate provision. The final school asserted that their needs are not being met because of lack of funding or interest in GATE from the Ministry of Education and Education Review Office.

A similar response came from the second review question: one school did not answer, one mentioned that they have no specific GATE programme, one reviewed GATE as part of the appraisal process and one commented that review took place as part of their regular review cycle. One respondent commented specifically on the review of GATE, which took place every two years and looked at programmes and student progress and invited feedback from parents and students.

Overall Conclusions, Limitations, and Implications

Limitations

The purpose of the study was to investigate how schools are effectively meeting the needs of their gifted and talented learners, especially students from Māori, Pasifika and other minority ethnic groups. The study also sought to investigate how schools are using technology to support these learners. Although some conclusions and recommendations about GATE programmes in primary schools can be drawn from this literature review and survey, there are a number of limitations that must be kept in mind.

The first limitation concerns the sample schools. It was not easy to identify schools with good practice in this area as there has been a paucity of New Zealand research on gifted and talented education over the last ten years. Participant schools were therefore identified by a

combination of reference to out of date research, school websites and word of mouth. The size of the sample (six schools) is small and this also limits conclusions that can be drawn from the study.

A further limitation is the methodology used in the study. Although the literature review provided a broad picture of effective practice in GATE and the current state of provision for these learners in our schools, the survey was almost exclusively completed by principals (one was completed by the GATE co-ordinator) and time did not allow the triangulation of these surveys with data from teachers or in-school observations.

Despite these limitations, there are some conclusions that can be drawn from the literature review and surveys, and some recommendations for schools.

Conclusions

The rationale for schools giving attention to gifted and talented education is provided by *The New Zealand Curriculum* (2007) and the requirement in NAG 1 (c)iii that all schools identify their gifted and talented learners and develop programmes to meet their needs.   The literature review above has provided clear guidelines on effective practice in meeting this requirement, although many of the publications date back ten years or more.

Effective GATE programmes as described in the literature can be summarized in the following table:

Dimension of good practice	Indicators
Committed leadership	• Principal knowledgeable about and supportive of GATE • Assigned Gifted and Talented Co-ordinator
Clear policies/procedures for defining and identifying gifted and talented learners	• Multiple criteria • Definition reflects perspectives of all cultures in the school community • Consistency between the definition and identification processes • Parents/whānau and students involved in process

Responsive and appropriate GATE programmes	• Differentiation for content, process and product
	• Enrichment and acceleration used as appropriate
	• Effective use of technology to engage and extend gifted learners
	• In-class and out of the classroom programmes
	• Programmes reflect cultures of participants
Good communication and collaboration with the community	• Community involved in development of definition and identification procedures
	• Parents/whānau and students involved in identification process
	• Community resources accessed for programmes
	• Detailed GATE information available on school website
Effective self-review processes	• On-going monitoring of programmes
	• Parents/whānau and students involved in review
	• Regular reports to the board of trustees
	• Equity across ethnicity and gender in programme reviewed regularly

New Zealand schools have a number of resources available to them to support them in developing effective GATE programmes. These include the ERO (2008b) report on the good practice they had observed in a number of case study schools, and the Ministry of Education (2012) publication on meeting the needs of gifted and talented learners.

The surveys confirmed some of the more recent research into the current state of gifted and talented education in our schools. The overall picture presented by these responses is that most schools are catering for their gifted and talented learners within their general differentiated programmes. They are using technology with their gifted and talented learners as part of their general teaching and learning programmes and are reviewing GATE as part of their overall review process. Very little professional learning and development has been undertaken in gifted and talented education in these schools, with a more general focus for recent PLD.

This lack of specific focus on gifted and talented education in schools follows a governmental policy shift away from research and resourcing in this area. Schools are having great difficulty in catering for the needs of increasingly diverse student populations, with limited resources available to support both provision of programmes and professional development for teachers. The picture presented by the survey results is one in which school leaders would like to do more for their gifted and talented learners but are constrained by this lack of resourcing and the difficulty of sustaining momentum with the changeover of staff in schools. The 'snapshots of promise' observed by Riley and her colleagues (2004) are still there in schools but the ongoing journey towards effective provision for gifted and talented students continues.

Implications

Despite the limitations of this study, there are some worthwhile conclusions that can be drawn from the discussion above which may be helpful to school leaders and policy makers. At a time when gifted and talented education appears to have a low profile it would be worthwhile for schools to re-visit the resources available to them to review provision in their own settings. The *Self-review Questions and Indicators for your School* in ERO's 2008 report on good practice are still very relevant and are a useful summary of the findings found in the literature review above. Similarly, the Ministry of Education resource *Gifted and talented students: Meeting their needs in New Zealand schools* produced four years later is an excellent resource to review provision for these students.

With our increasingly diverse student population, ensuring equity across ethnicity in GATE programmes must be a priority for schools. As part of a regular review process school leaders would check representation from different cultures in their GATE programmes and investigate any biases that emerged. The cultural content of programmes would also need to be monitored so that they reflected the backgrounds of participating students. Schools could consider how they involve families and whānau, especially those from ethnic minorities, in defining giftedness and in developing culturally inclusive programmes to cater for these students.

Technology is ubiquitous in schools and provides many opportunities for engagement and extension of gifted and talented students. Although it is clear that there needs to be more

research in the use of technology in this area, schools can continue to explore ways to use digital tools to differentiate teaching and learning content, process and product to better meet the needs of gifted students.

Because there is little professional learning and development provided specifically for GATE at the moment, schools need to ensure a focus on these students when undertaking more general curriculum or pedagogy based PLD.

Schools are currently focused on engaging with recent Ministry of Education initiatives such as National Standards and Communities of Learning that do not have a specific focus on our more able students. Although individual schools are doing very good work in this area, in the complexity of the demands placed on them it is easy to give less attention to gifted and talented education. Our focus has been on lifting student achievement, particularly those students who are below expectation, but we also need to explicitly monitor and develop our programmes for gifted students.

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