

Differentiation for Gifted and Talented Students: Principles and Practices

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The first step in educating our gifted and talented students in New Zealand is to acknowledge and cater to individual differences. No two students are the same. Each one has unique strengths, interests, abilities, qualities. As the Ministry of Education (2000) reminds us, students are calling out for recognition of their individuality.

A different way of learning is what kids are calling for. All of them are talking about how our one-size-fits-all delivery system – which mandates that everyone learn the same thing at the same time, no matter what their individual learning needs – has failed them (Sarason, 1993, cited in Tomlinson, 1999, p. 1).

Whether teaching at primary, intermediate, or secondary level, it should be the mission of every teacher to seek and support individual differences. For as Willis and Mann (2000) remind us, "without differentiated instruction, any child who varies from the norm will suffer". To do this requires getting to know each student.

David George (1997) of the United Kingdom provides us with a framework when considering individuals. We must take into account the following differences that each student brings to our classrooms:

- different learning styles,
- different rates of learning,
- different activities,
- different interests,
- different expectations,
- different motivation,
- different outcomes,
- different abilities,
- different resources,
- different reading skills,
- different tasks, and
- different levels of parental support (p. 106).

In New Zealand, it is essential we add to this list different cultures. Carol Ann Tomlinson (1999) reminds us that in regard to individual students, "teachers in healthy classrooms work continually to ... see who they really are, what makes them unique in the world" (p. 31). This appreciation of each child as an individual applies to *all* students, including our gifted and talented students.

Recognizing individual strengths, abilities, qualities, and interests in our gifted and talented students necessitates acknowledgment of physical, intellectual, cultural, and social emotional uniqueness. This also means that the regular curriculum might not fit. A mismatch will indeed occur for our gifted and talented students. Our goal in individualisation should be to seek and obtain a better fit or different style, size, design. The buzz word for this tailoring of the curriculum is differentiation.

George (1997) states that differentiation is a "relatively simple" (p. 104) concept. In his words, it is the "process of assessing individual needs and responding with appropriate learning experiences". Tomlinson reinforces this idea, stating that when differentiating, "teachers begin where students are" (p. 2). For gifted and talented students this requires recognition of the unique characteristics and behaviors they bring to the classroom, and as a consequence providing an education which Eddie Braggett describes as "different and appropriate" (1994, p. 21). So, differentiation requires teachers to:

- build on past achievements,
- provide opportunities for success, and
- remove barriers to learning (George, 1997).

These principles are supported by the Ministry of Education as it strives to "close the gaps"; thus, allowing each student in New Zealand to come one step closer to his or her potential.

Gathering momentum toward potential means students must have teachers who stride toward differentiation. Tomlinson (1995) states that differentiation "taps into" student readiness levels, interests, and learning profiles. She also presents a dichotomy of what differentiation "is" and "is not" as presented in the chart below.

Differentiation ...	
... is	... is not
provision of a variety of ways to explore curriculum content.	making all tasks the same, with adjustments consisting of merely varying difficulty level of questions.
provision of an array of processes for understanding and "owning" information.	marking some students harder than others.
provision of options for demonstrating or exhibiting what has been learnt.	letting those who finish early play games for "enrichment".
	giving students extra problems, extra reports, or "extension" assignments.

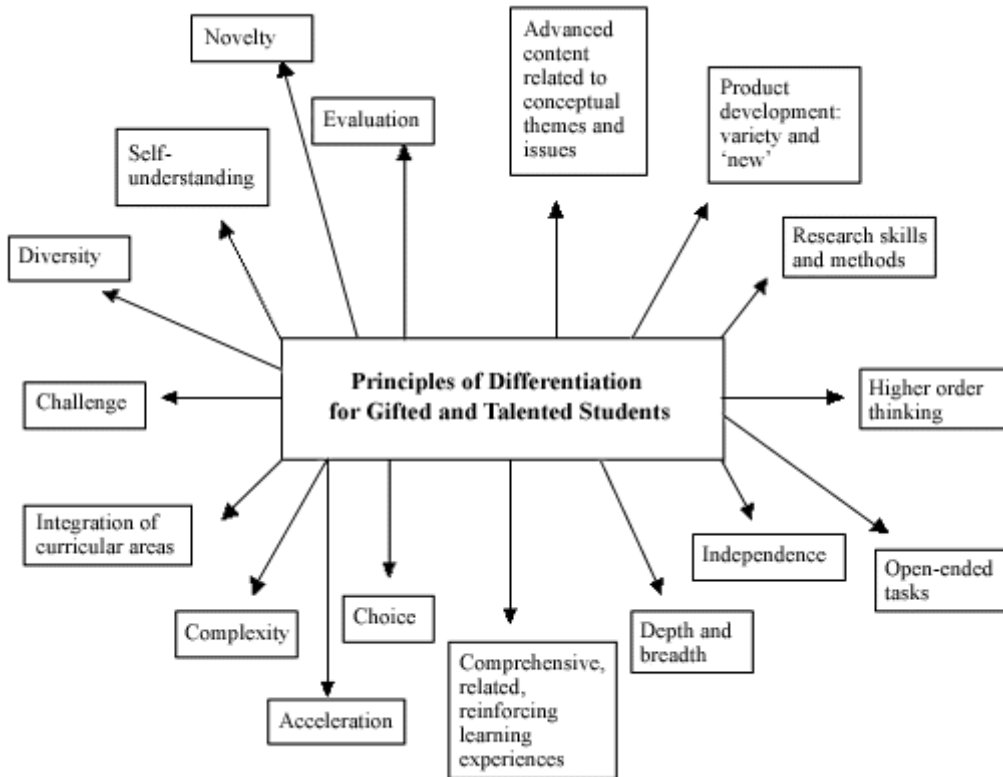
To read further about each of these, check out her article *Differentiating Instruction for Advanced Learners in the Mixed-ability Middle School Classroom* at http://www.kidsource.com/kidsource/content/diff_instruction.html

Ask yourself, as a teacher, if you practice the underlying principles of differentiation for *all* students, including the gifted and talented. Contemplate your answers to these questions, adapted from Tomlinson (1999, pp. 9–13):

- Do I focus on the essentials? Do my lessons highlight the essential concepts, principles, and skills of each area of the curriculum? Do my students find subjects of study meaningful and interesting?
- Do I celebrate individual differences? Do I unconditionally "accept students as they are and ... expect them to become all they can be?" (p. 10).
- Do I assess and instruct inseparably? Is assessment used as a tool for growth, rather than for pointing out mistakes?
- Do I modify content (what I teach), process (how I teach), and product (how I measure student learning), according to student readiness? Do I adapt these elements to suit individual student characteristics?
- Do my students engage in "respectful work" (p. 12)? Do I respect readiness, expect growth, match essential understandings to levels of skill, and provide tasks that are "equally interesting, equally important, and equally engaging" (p. 12)?
- Do I facilitate student learning? Do I collaborate with students in their learning? Is my classroom student-centred?
- Do I balance group and individual expectations? Do I allow and encourage each student to be the best he or she can possibly be?
- Do I work flexibly in my classroom? Am I flexible in grouping, outcomes, pacing, materials and resources?

If you answered "yes" to all of these questions, you are a teacher who is responsive to individual learners' needs. Principles of differentiation, like flexible grouping and ongoing assessment, guide your teaching. The content, processes and products of your teaching are determined according to individual readiness, interests, and abilities. And you might not need to read any further ...

But stop a minute and think. What do you provide for the student who completes her work quickly and accurately? The little boy who masters 18 of 20 on the pre-test for your social studies unit? The young girl who answers your questions *and* questions your answers? The talented youth whose cultural performances leave shivers down your spine? The student who masters tests of achievement well beyond the norm? The young man who writes his own novel, creates a web page, designs a flying machine? While the principles outlined above apply to *all* students, in *all* classrooms, as the Ministry of Education (2000) reminds us, "it is important to look at how to make this happen for gifted and talented students" (p. 35). This requires a close examination of our teaching principles and practices. In the education of gifted and talented students we must further consider the principles in the figure below. These are adapted from the work of Joyce VanTassel-Baska (1994), the United States Curriculum Council on the National Leadership Training Institute on the Gifted and Talented (1986), and Patterson (2000).



Patterson (2000) has written an article for parents in which she focuses upon four of these principles: novelty, complexity, acceleration, and depth. Though brief, it may serve as a useful information resource for parents – and teachers! Link to the article via this address <http://www.cagifted.org/>.

To incorporate these principles into our classrooms does not mean "more of the same" differentiation. It requires a qualitative shift in differentiation – not a quantitative shift. We must examine the following aspects of our day-to-day teaching:

- Content – what?
Concepts, ideas, facts
- Process – how?
Methods and strategies
- Product – why?
Outcomes

Renzulli adds two dimensions to this: the classroom and the teacher (Dinnocenti, 1998).

Roberts and Roberts (2001) state that to plan for differentiation we must:

- identify the core content (curriculum framework);
- assess student knowledge of that content (pre-assessment); and
- identify and plan core and complex content, basic and higher level processes, and a variety of products (differentiation for gifted students) (p. 230).

They sum up these steps in saying that for gifted and talented students "differentiated learning experiences use a variety of products that require the application of higher-level processes to complex content related to the topic and core content" (p. 231).

Additionally, for our gifted and talented students we must ensure the principles outlined by Maker and Nielson (1995) for each of these aspects of differentiation are adhered to. These principles for content, product, and process differentiation were devised based upon the following criteria:

- They are different from the regular curriculum.
- They are based upon the unique behaviours associated with giftedness.

Maker and Nielson caution that regardless of the existence of these criteria, "... the curriculum must be tailored to fit the needs of each child based upon assessment of that child's characteristics, needs and interests" (1995, p. 10). This checklist of Maker and Nielson's principles of differentiation may be useful:

Content	Process	Product
<ul style="list-style-type: none">• abstract• complex• varied• organised around concepts• study of gifted• study of methods of inquiry	<ul style="list-style-type: none">• discovery• open-endedness• metacognition• higher level thinking processes• choice• group interaction• pacing and variety	<ul style="list-style-type: none">• variety• self-selected• appropriately evaluated• results of real problem• addressed to real audience• represents transformation of knowledge via originality

Each of these indicators is further explained by David Farmer in the article, *Curriculum Differentiation: An Overview of the Research into the Curriculum Differentiation*, at this website <http://www.austega.com/gifted/provisions/curdifferent.htm>

Dinnocenti further explores these dimensions, alongside the teacher and classroom in her article, *Differentiation: Definition and Description for Gifted and Talented* at <http://www.sp.uconn.edu/~nrcgt/news/spring98/sprng985.html>

Willis and Mann's article, *Differentiating Instruction Finding Manageable Ways to Meet Individual Needs*, also explains these by giving some practical examples at <http://www.ascd.org/readingroom/cupdate/2000/1win.html>

Strategies for differentiation highlighted in Willis and Mann's article are further discussed on our website in articles related to teaching gifted students in regular classrooms (under construction).

If you use these principles in your classroom or programme for gifted and talented students please [send us](#) your ideas to incorporate into this website!

Essentially, differentiation for gifted and talented students only requires the asking and answering the following two questions for every lesson we teach – whether it's in the regular classroom, enrichment programme, holiday camp, or advanced classes:

- How do I ensure all students "know" it? How do I determine that the objectives have been met? How do I assess that the core knowledge, skills, and concepts are obtained by all students?
- What do I provide for those who already have this knowledge, skills, or concepts?
 - Do I move beyond the core content?
 - Do I allow a different path for learning?
 - Do I expect different outcomes of learning?

References, recommended readings, and websites

Berger, S. L. (1991). *Differentiating curriculum for gifted students*. ERIC Digest #E510. Available from the World Wide Web on: http://www.ed.gov/databases/ERIC_Digests/ed342175.html
(This article gives a quick overview of differentiation by examining the principles in relation to curriculum effectiveness. Though some of the references are rather dated, given it is a 1991 publication its foundation is solid and remains relevant today.)

Clark, C., & Callow, R. (1998). *Educating able children: Resource issues and processes for teachers*. London: David Fulton.

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Maker, C. J., & Nielson, A. B. (1995). *Teaching models in education of the gifted* (2nd ed.). Austin, TX: Pro-Ed.

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

Roberts, J. L., & Roberts, R. A. (2001). Writing units that remove the learning ceiling. In F. A. Karnes & S. M. Bean (Eds.), *Methods and materials for teaching the gifted* (pp. 213–252). Waco, TX: Prufrock Press.

Rossback, J. (1999, Fall). Inventive differentiation. *National Research Center/Gifted and Talented Fall '99 Newsletter*. Available from the World Wide Web on: <http://www.sp.uconn.edu/~nrcgt/news/fall99/fall993.html>
(This article applies the idea of differentiation to the study of inventions. Ideas are given for pre-assessment, as well as web-based resources.)

United States Curriculum Council of the National Leadership Training Institute on the Gifted and Talented. (1986). *Programs for the gifted and talented*.

VanTassel-Baska, J. (1994). *Comprehensive curriculum for gifted learners* (2nd ed.). Boston: Allyn & Bacon.