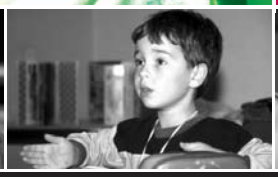
GIFTED AND TALENTED EDUCATION

PROFESSIONAL DEVELOPMENT PACKAGE FOR TEACHERS

Module 6

Early Childhood



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Australian Government
Department of Education, Science and Training

THE UNIVERSITY OF NEW SOUTH WALES

GERRIC
Gifted Education Research, Resource and Information Centre

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Welcome!

You are about to start a Professional Development Course which will help you identify the gifted and talented students in your class or your school, and differentiate the curriculum to respond to their individual learning needs. You'll also be able to decide which of your students may benefit from various forms of ability or interest grouping and which may possibly be candidates for one or more of the many forms of academic acceleration.

About the Package

The course consists of six Modules

Each Module consists of three levels: Core, Extension and Specialisation. The Core levels of the six Modules are the heart of this course. The Core Modules contain essential information and practical advice and strategies to assist you to identify and respond to your gifted and talented students.

We strongly suggest that you complete the Core level of each Module.

Pre-tests

We are aware that teachers and school administrators will enter this course with a wide range of existing knowledge of gifted and talented education. To accommodate this range of knowledge and experience, we have started each Core Module, from Module 2 onwards, with a pre-test. We encourage you to take these pre-tests and, if you 'test out' on any Module at Core level, simply move on to the next Module. For example, if you 'test out' of Core Module 2 you will pass over that Module and move on to Core Module 3.

Extension and Specialisation Levels

Extension and Specialisation levels for each Module. Material covered in the Extension and Specialisation levels builds on the knowledge you will have gained from the Core level in each Module. Key issues are examined in greater depth and participants explore a wider range of issues in the cognitive and social-emotional development of gifted students. New identification, curriculum differentiation and program development techniques are introduced.

The Extension and Specialisation levels require teachers, counsellors and administrators to undertake further reading and practical activities to reflect on classroom practice, school practice and policy. They encourage participants to focus on their specific role in the school and prepare a brief action plan to demonstrate application or mastery of outcomes.

Schools may decide that completion of the course at Specialisation level would be a useful prerequisite for becoming the school's Gifted Education Coordinator.

What will you learn in this course?

The course consists of six Modules:

Module One: Understanding Giftedness

Understanding the nature of giftedness and talent; what the terms mean; levels and types of giftedness. Cognitive and affective characteristics of gifted and talented students; ways in which these students may differ from their classmates - even if at first we don't observe this.

Module Two: The Identification of Gifted Students

A range of practical identification procedures, with particular attention to procedures which are effective in identifying gifted students from culturally diverse and disadvantaged groups. We'll be emphasising the use of a combination of approaches rather than a single measure such as IQ testing or teacher nomination used in isolation.

Module Three: Social and Emotional Development of Gifted Students

Understanding the social and emotional characteristics and needs of gifted students. Ways in which gifted students may differ somewhat from their classmates in their social and emotional development. Supporting gifted students and their parents. Teaching strategies and class structures which foster the development of positive social attitudes and supportive peer relationships in gifted students.

Module Four: Understanding Underachievement in Gifted Students

Understanding the causes of underachievement in gifted students. Identifying gifted underachievers and planning interventions designed to prevent and reverse cycles of underachievement.

Module Five: Curriculum Differentiation for Gifted Students

Teaching strategies and methods of curriculum differentiation which enhance the learning of gifted students in the regular classroom. Appropriate use of different enrichment models that international research has found to be effective with gifted and talented students. Practical applications of pre-testing, curriculum compacting and individualised programming.

Module Six: Developing Programs and Provisions for Gifted Students

Practical strategies for the establishment and monitoring of ability, achievement or interest grouping, and the many forms of accelerated progression. Particular attention will be paid to the effects of various strategies on students' academic and social development.

Using the package

Much of the material is suitable across teaching and learning contexts. This content is not specifically marked. However, content that may be applicable to your particular context is identified as follows:

Role	Classroom Teacher	Executive Staff	Principal
Location	Urban	Rural	
Mode	Self Study	Small Group	Whole Staff

Follow these symbols through the content to customise your learning path.

Each Module comes in two parts, each concluding with a practical exercise. We suggest that you complete the first and second parts a few days apart - unless this is not workable in your particular learning context. This will give you a chance to digest the information in Part 1 and work through the Reflective/Practical component.

Core Module 6: Developing Programs and Provisions for Gifted Students

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Module 6

Developing Programs and Provisions for Gifted Students

Welcome to the sixth, and final, Module for this Professional Development Course.

Pre-Test

1. Can you explain how various grouping practices (including acceleration) address the characteristics and needs of gifted students?

2. Can you cite the major research evidence on the academic and social consequences of the various grouping and acceleration options?

3. Can you explain (eg to a colleague or a parent) at least four types of acceleration?

4. Can you outline a detailed plan for deciding whether and how to accelerate a student?

No/Maybe:
If you are not confident about your ability to do each of these you should benefit from at least some of the information that follows in this Module.

Yes:
If your answers are 'yes' to all of these, you may not need to complete this Module, though we advise that you still skim-read it to check whether it offers you anything new. The Extension level of this Module provides further information on these and related issues for you to consider.

Outcomes

At the completion of this Module you will:

- understand the academic and social consequences of various grouping options
- be able to employ strategies for establishing and monitoring ability, achievement or interest groups
- be aware of practical issues to address when deciding whether and how to implement acceleration.

How grouping addresses student needs

The justification for using a particular grouping practice is to be found in how well it addresses student needs.

Gifted students have some characteristics which are not easily accommodated in totally mixed ability settings but which are better addressed through some form of ability grouping.

The pause that refreshes?

Before reading on, think about the characteristics of gifted and talented students which make them different from their age peers (eg those discussed in Modules 1 and 3).

What may be the implications of these differences for how you group students in your class and for how they are grouped in your school?

Gifted students' faster pace of learning

Brian Start (1989), of Melbourne University, reported that:

- in a mixed ability class the student who is fastest at memorising information can do so as much as 12 times faster than the slowest student can, and
- with more complex information processing, as in higher order thinking, the fastest student was found to be four times faster than the slowest student.

Their capacity to learn at a faster pace than other students is one of the most commonly cited characteristics of gifted students (as we explained in Module 1). This means that they have the capacity to learn the core curriculum more quickly than others, so some form of acceleration or ability grouping may be used to address this need (as may an independent learning contract of some kind).

Sport and music provide numerous examples of talented performers mixing successfully with older students, cooperatively and competitively. Their access to opportunities is determined not by age alone but also by their sporting or musical readiness for advanced practice and performance.

Sharpen wits, not resentment

Expecting gifted students to 'tread water' while others complete tasks is likely to dampen their enthusiasm for school, or to sharpen their resentment.

> The highly gifted Year 4 boy who stabbed his teacher in the buttocks with a pair of scissors provides a pointed warning to us all, for the ultimate cause of this unacceptable outburst was his school's failure to recognise his high potential, advanced knowledge base and faster pace of learning (Pears, 1991).

That student's frustration did not excuse his behaviour, but it does help us to understand it.

Another gifted 8-year-old, Iain, expressed his frustration with the inappropriate (for him) pace of learning via the following poem, written in the early 1990s (note his use of repetition to convey his feeling of what school seemed like) and pointedly titled 'School is as a Waiting Game':

School is as a waiting game,
waiting,
waiting for the time when the game has
gone for long enough
and I will play my own game
with no waiting, waiting,
except for waiting for
tomorrow, which will be filled
with excitement and decisions, ideas and
anything, anything except waiting, waiting
as there will be nothing to
wait for, as the waiting game will have
ended, and a new game begun, begun.

Gifted students' need for like-minded peers

Gifted students can also find it frustrating when their age peers do not understand their complex thoughts or do not appreciate their advanced knowledge and unusual connections. Having at least some time (preferably each day) to work in groups with others of similar ability will enhance their enjoyment of school, as well as their learning.

A concern is often expressed that other students will be disadvantaged if gifted students are not available as role models in mixed ability classes. However, it has been found (Schunk, 1987, cited by Benbow, 1998) that the most powerful role models are those who are similar to or just a little better than ourselves.

The 5-year-old who used his first 'news' session to tell his mixed-ability class about the periodic table from chemistry was neither an inspiration to the others nor welcomed by them as a result of his obvious difference. It is very difficult for teachers to meet the needs of such highly gifted students in mixed ability settings.

If you prefer research evidence, Kulik noted that students of lower and average ability tend to have higher self-concepts when ability grouped than in mixed ability classes, while the self-concepts of high-ability students seem to be lowered a little by ability grouping - 'perhaps an appropriate dose of humility' (Davis & Rimm, 2004, p. 13).

Interaction with others of similar high ability can help gifted students learn to work hard, and to cope with having to struggle sometimes. If they experience only mixed ability settings, gifted students often learn to coast along and to achieve success without much effort. This does not prepare them for coping positively with difficult problems or setbacks later in their education or their adult life (cf Betts and Neihart, 1988, p. 249, re their Type I gifted students).

Social skills

The grouping together of students with advanced abilities and interests can have a positive effect on their learning of social skills, for such students are less likely to reject them as 'oddballs' or to misunderstand their jokes and ideas.

Some form of ability grouping, whether full- or part-time, is often the 'least restrictive environment' for gifted students, both academically and socially.

Selecting students for placement in ability groups

This has already been covered in Module 2, on Identification, but some aspects warrant further mention here. A vexed issue is whether students should **earn** their place in special classes or groups.

While some ability groups will be chosen on the basis of student performance (ie talent, in Gagne´'s terms), student potential (ie Gagné's giftedness) should be the criterion in most cases, especially for academic domains. If chosen on performance, groups would, more accurately, be termed achievement groups.

As we explained in Module 4, on underachievers, there are students with high potential (ability) but much lower achievement, and ability grouping should try to identify and accommodate gifted underachievers, too.

In sport, high ability teams are usually selected on the basis of performance, though selectors will also consider less well performed candidates whom they think may have the potential to develop further with better opportunities.

For academic abilities, a better analogy than sporting selection is access to special education, where students are identified for special provision on the basis of their assessed needs, ie potential + circumstances. Students do not have to earn their access through their own efforts.

In general, this same principle should apply to access to gifted education provisions or programs, so that current underachievers are not further disadvantaged.

Students selected for special placement should be given whatever support and encouragement are needed to optimise their chances of success. Certainly, students should be expected to take responsibility for their own behaviour, and its consequences, so remaining in the group or program may be contingent on their effort and whether they are benefiting from it.

However, we should not be hasty to remove them from such opportunities, especially if their current circumstances or previous experiences have a negative impact on their attitude, self-belief and motivation.

What differences do the various forms of grouping make?

There is now available considerable research evidence on the effectiveness of the various forms of grouping.

Two researchers, James and Chen-Lin Kulik, have analysed a wide range of research studies on the effects of various forms of grouping. They found that:

- full-time ability grouping produces academic gains for gifted students that are positive and substantial;
- part-time ability grouping produces gains that are positive and moderate (Davis & Rimm, 2004).

However, for academic gains to be maximised you need to differentiate the curriculum (as discussed in Module 5) whichever of the grouping forms you use.

That is, it is what is done in the groups that produces the gains, as well as the grouping itself.

Note also that the Kuliks concluded that homogeneous (ability) grouping did not harm the achievement of lower ability students.

A study of nine Australian high schools which changed from ability-grouped to mixed-ability classes for science found that the quality of learning declined:

- the high ability students had fewer opportunities to use higher order thinking, while
- the lower ability students were more reluctant to join in and tended to be more disruptive (Rogers, 1993).

Teachers of full-time classes for the gifted regularly report that their students comment on 'being able to be themselves' in such classes. Among other things, the students mean that their ideas and jokes are appreciated by their intellectual peers, and they are less likely to feel the need to 'dumb down and partly camouflage their ability', as we discussed in Modules 1 and 3.

After analysing what the research evidence says, Karen Rogers (1993, p. 12) concluded that:

'[T]he removal of opportunities for these [gifted] students to learn at the pace and level of complexity with others like themselves may conceivably result in substantial declines in achievement and attitude toward the subjects being studied.'

Putting grouping options into practice

Full-time ability grouping

Some schools organise gifted students into classes that stay together for all subjects. It remains important to recognise that within such classes there will still be a range of ability levels (albeit a smaller one) for particular subjects. The Senate Committee (2001, p. 68) noted that having 'a selective high ability group within an otherwise comprehensive school' is an alternative where fully selective schools are unavailable or deemed less preferable.

Just as in sport the top 30 basketballers will not be exactly the same people as the top 30 swimmers, so in school subjects there will be some students who are gifted or talented in most but others whose high potential is only in one or two subjects. Hence, subject-based ability grouping makes sense, especially at secondary school level, and many schools organise gifted students into ability grouped top classes, sometimes called 'extension classes', on a subject by subject basis.

The use of subject-based ability grouping is in harmony with the 'inclusive classroom' philosophy, for it means that a greater number of students will participate in one or more of the extension classes. In their UK high school study Denton and Postlethwaite (1985) found that the top 10% of students for the four subjects they investigated (English, French, maths and science) involved about 25% of the schools' student body, for many were in the top 10% for only one or two subjects.

Concerns that lower streams may have detrimental effects on student confidence and performance may be allayed by adopting the practice of having a top streamed class (or two if the numbers in a large school warrant this) with parallel classes for all others in the Year.

Likewise, the recent Senate Committee Report (2001, p. 67) concluded that:

> 'It should be emphasised that ability grouping for the gifted is not the same as streaming the whole year group into A,B,C,D… classes. … The varieties of ability grouping for the gifted can be used without any suggestion that the whole year group ought to be streamed.'

Part-time grouping

The strategy of withdrawing from their regular class a group of students who share an interest or talent has been used throughout Australia.

This arrangement can enable gifted students to meet like-minded peers - from other schools, as in the PEAC (Primary Extension and Challenge) program in WA, or from other classes within their own school - whom they might not otherwise encounter.

For example, a school district brought together gifted students from Years 2 and 3 in seven separate schools, for a series of science and maths days. The participating schools took turns at hosting the day. Parents reported that new friendships were formed, as a result of meeting like-minded children from other schools or classes.

Pitfalls to avoid

Potential pitfalls to avoid or minimise with part-time withdrawal (or 'pull-out') programs include:

- **having gifted students 'make up' classwork they miss while attending the withdrawal group.**

  If you want to irk gifted students this is the way to do it! Wherever possible, attendance should reflect the students' ability to compact their curriculum (see Module 5). As always, the 'different, not extra' principle should apply.

- **having students miss something they enjoy in their regular classroom.**

  Arranging withdrawal groups during art or physical education time, for example, can undermine the students' motivation to attend.

- **having no connection between the core curriculum and the extension/enrichment activities undertaken in the withdrawal group.**

  You may be able to justify this, eg because your purpose for organising the withdrawal program is:

  ~ to address particular social-emotional issues, such as underachievement, social skill development, or perfectionism, or

  ~ to bring together students with a specific need, such as gifted learning disabled (GLD) students or members of culturally diverse groups, or

  ~ to have students engage in formal programs such as Future Problem Solving,

  but generally it is desirable that knowledge and skills learned in the withdrawal group are linked back into the regular classroom.

  Hence, clear and open communication between the class teacher and the withdrawal group teacher are highly desirable, if not essential.

- **seeing the part-time withdrawal as the gifted program, rather than merely as one component of it.**

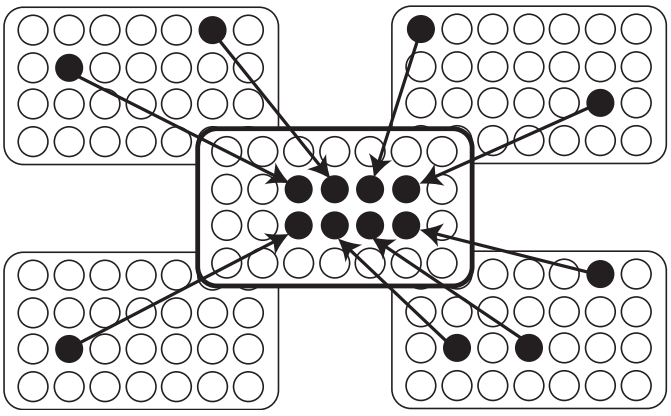
  The essence of any program for the gifted and talented is the differentiated curriculum that is provided day-to-day in the students' regular classroom. Your grouping choice(s) can facilitate (or impede) this and the well thought through extras you provide can enhance this, but the differentiated core is the necessary foundation.

  Gifted students are not gifted for just a few hours each week.

Cluster grouping

One form of grouping that enables us to have a bit of 'the best of both worlds' is cluster grouping, where a small group of gifted students (eg 5 to 10) is placed together within an otherwise mixed ability class.

This enables their teacher to plan tasks that will appropriately challenge the students in the gifted cluster and allows the gifted students to experience the benefits of mixing with like-minded peers, academically and socially, as well as mixing with age peers from the fuller cross-section of abilities and interests. Thus, it is fully in harmony with the principle of an inclusive classroom.



Cluster grouping can be used in any school, but it particularly suits those schools that do not have large numbers of gifted students to form a full-time gifted class.

The Kuliks found very strong, positive academic gains for cluster grouping:

> 'gifted students actually achieve approximately 60% more grade-equivalent knowledge and skills than equally gifted children who have not been clustered' (Rogers, 2002, p. 227).

Note, too, that it may be easier to move students into, or out of, cluster groups during the year, if necessary, than is the case with full-time ability grouped classes.

A class containing a cluster of gifted students should be taught by someone with interest and expertise in meeting the needs of the gifted. That is, it enables a school that currently has limited staff expertise in gifted education to make efficient use of that expertise.

Some teachers dislike the idea of giving one staff member a cluster of gifted students. They feel that teaching gifted students is an easy option that should be shared around the staff. However, when they realise that not all gifted students are 'teacher pleasers' and that some are neither compliant nor productive they may appreciate that a teacher with knowledge or expertise in teaching gifted students may be better placed to work with these young people.

Mentoring

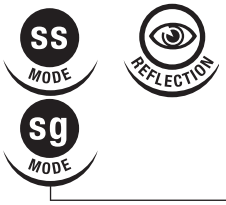
Mentoring involves having an older person, usually an adult but sometimes an older school student, work with the gifted student to extend his/her expertise in an area of shared interest and talent.

The mentor serves as a role model for the gifted student and provides access to advanced, specialised knowledge that a class teacher may not have. Often mentors can help gifted students acquire important prerequisite skills, which can enable them to pursue individual investigations or creative productions to a very high level of challenge and sophistication.

A good example of this is to be found on the 1985 Victorian video, *Meeting of minds*, where a gifted young writer,14- or 15-year-old Sonia Hartnett, was mentored by a professional author who gave her technical tips, eg about creating atmosphere or a sense of place, but also argued with her about the way she developed some of her fictional characters. That Sonia Hartnett has gone on to win prizes as a young adult writer and to have numerous books published attests largely to her own talent, but also to the appropriateness of her involvement in the Victorian mentoring program.

Generally, mentors are unwilling to give their time to work with students with whom they do not empathise or students who do not seem highly motivated to pursue their talent and interest.

However, Ken McCluskey (2000, 2003) and his colleagues in Canada have shown that mentoring can be used to turn around the lives of disaffected, anti-social young people, many of whom had dropped out of school despite their high potential. That is, gifted underachievers can also benefit from mentoring, as one part of a special program to address their particular needs.



Who in your school might respond well to being mentored?

What needs would mentoring address in her/his case?

Online mentoring

Mentoring is now often conducted via email, which means that geographic isolation can be overcome, while the timing of the mentor-mentee interactions can be more flexible (eg after working hours as well as during school).

Whatever form mentoring takes, it is essential that the interaction is monitored rigorously by a teacher at the student's school, in constant collaboration with the student's parent(s).

Is it worth the effort?

Most of the research evidence on mentoring involved high school students. It has been found that mentoring produces very large academic effects (about a half-year gain), with substantial improvement in socialisation and self-esteem (Rogers, 2002).

Group mentoring means that the mentor's expertise can be shared with a wider pool of students and that like-minded students, of different ages or from different locations, can interact together, as well as with the mentor.

It can also contribute to identification, as part of the screening process for specific interests/talents.

Other forms of grouping

Family, or multi-age, grouping can be used to bring together gifted students from several Years, either as a full-time ability group or as a cluster within a mixed ability setting. It can also allow students to experience acceleration (see Part 2 of this Module) in an informal way; eg teachers can observe how well a gifted student interacts with older students in the class, as part of their assessment of a student's readiness for a grade-skip.

However, gifted students (and their parents) often express less satisfaction with multi-age classes when the students are among the oldest in the class, usually because the students are by then ready to undertake more advanced work than their mixed-age peers.

Done well, **cooperative group learning** is a source of important life skills, for all students. There are potential pitfalls to avoid when using it with gifted students in mixed-ability settings and these will be addressed in the Extension level of this Module on Programs and Provisions.

At the end of this Module you will find an updated copy of Miraca Gross's paper on grouping, 'To group or not to group: Is that the question?' should you wish to read further on this issue.

Reflective/Practical Component

Consider which forms of grouping may best help gifted students cope positively with the forced-choice dilemma (described in Module 3).

Consider, and discuss with others, which forms of grouping may best help gifted students cope positively with the forced-choice dilemma (described in Module 3).

Types of acceleration and their effectiveness

Acceleration is a strategy that allows a student to progress through school at a faster than usual rate and/or younger than typical age. There are several forms of acceleration to consider for any individual student. The main ones used successfully in Australia are:

• **Subject acceleration,** where students are promoted to a higher Year for one or more of the subjects in which they excel (ie display talent, in Gagné's terms). A graphic example of this was the profoundlly gifted Terry Tao, now a successful and well-adjusted young man, who was doing high school maths at the age of 7, while still attending his South Australian primary school for other subjects.

Subject acceleration may be sufficient in itself for many gifted students, but it can also be seen as a form of trial for a possible full grade skip.

• **Grade skipping,** where students are promoted to a higher Year for all subjects, eg Jordan who was moved from Year 1 at the end of one school year into Year 3 at the beginning of the next, or Cassie who was skipped from Year 6 into Year 8.

If a highly gifted student needs more than one grade skip it is usual for only one grade to be skipped at a time, with a settling in and reassessment period before the second (or third) skip is effected.

• **Early entry,** which usually means that a gifted child who displays academic and social readiness begins school at a younger age than most other children do (eg at age 4 rather than at age 5). This is a form of grade skipping but has the added advantage of being the most unobtrusive/least disruptive form of acceleration.

• **Telescoping,** where a student, or a group of students, completes two years in one, or some similar rapid progression through material.

• **Radical acceleration,** where highly/profoundly gifted students skip several grades, and/or experience several forms of acceleration, during their school years. This will be discussed in the Extension level of this Module.

Isn't acceleration hot-housing and therefore stressful?

No. It is important to realise that acceleration does not mean that gifted students are being made to speed up and learn faster than they are already willing to, but rather that schools are allowing students to progress at something closer to their natural or preferred rate of learning.

Holding back gifted students is much more likely to be stressful for them, or harmful in other ways (such as teaching them to 'coast' along, which may deny them the opportunity to learn to cope with intellectual challenges).

Acceleration means we have taken off the brakes!

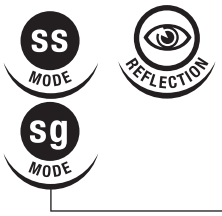
David Elkind, well-known for his book, *The hurried child*, makes this point when he states:

> 'Promotion of intellectually gifted children is simply another way of attempting to match the curriculum to the child's abilities, not to accelerate those abilities.
>
> What promotion does for intellectually gifted children is to make a **better fit** between the child's level of development and the curriculum.' (Elkind, in Smutny, Veenker & Veenker, 1989, p.105.)

That is, Elkind acknowledges the legitimacy of acceleration as a strategy for the gifted.

As was highlighted in Module 1, a characteristic of gifted students is their ability to 'reason at a level usually found in a student some years older', so acceleration is a logical way of addressing this.

What does the evidence tell us?



Before reading on, stop for a moment to consider the likely consequences of accelerating a gifted student.

The research evidence on the effectiveness of acceleration is very positive. For example, contrary to many people's expectation, the evidence shows that acceleration does **not** damage students socially or emotionally.

In fact, grade skipping has been found to aid social relations (as well as academic achievement), while concurrent enrolment has been found to enhance psychological adjustment.

Most forms of acceleration have been found to produce substantial academic benefits, too, as Karen Rogers (2002) reports:

- Gifted early entrants to school were found to be on average six months ahead in their achievement, compared to their age peers, while there were also slight gains in social skills and self-esteem.
- Studies of single-subject acceleration have found that it produced academic gains of about three-fifths of a year's growth. Telescoping was found to have similarly large positive effects.
- For concurrent enrolment the academic gains were small but positive.
- The research on grade skipping has produced very positive findings, with over one additional year's academic achievement resulting, 'and the students performed at least as well as their older-aged gifted peers in the new grade level'.

The Senate Committee (2001, p. xiv) concluded that:

> 'There is overwhelming research evidence that appropriate acceleration of gifted students who are socially and emotionally ready usually has highly advantageous outcomes.'

But doesn't it cause social adjustment problems?

On the contrary, the somewhat surprising finding (given teachers', and some parents', concerns about this matter) is that grade-skipping tends to produce a strong improvement in social adjustment (along with a small gain in self-esteem). As Rogers (2002, p. 168) comments:

> 'It is noteworthy that when these children do move to the higher grade, they are, in fact, **more** likely to make friends, perhaps because the older children may have similar interests or are slightly more socially mature.'

A testimonial from the large-scale Richardson study supports this positive conclusion:

> 'Our files are full of stories about youngsters, named or unnamed, happily studying two, three, even four years ahead of their age-mates. In general, the social adjustment of these precocious youngsters is **improved by placing them with their intellectual peers** rather than their age-mates' (Daniel, 1989, pp. 50-51).

However ....

While the research evidence shows that acceleration usually has positive consequences for gifted students, it is not a 'magic bullet' that cures all academic and social problems.

Acceleration alone may not be enough to eliminate a student's existing social difficulties (in the words of one student: 'Acceleration didn't make me a social misfit. I was one already!'), so social skills may need to be addressed separately.

Also, a single grade skip is unlikely to be sufficient to satisfy the academic needs of a highly-to-profoundly gifted student.

There are documented cases where acceleration did not produce the positive outcomes usually found, but in most of these a large part of the failure may be attributed to the inappropriate ways in which the acceleration process was managed. Hence:

> acceleration needs to be seen as an ongoing process, not just a placement decision, so one that requires careful planning and implementation.

Fortunately, very practical guidance is available to enable teachers to increase the likelihood of success.

Guidelines for deciding whether and how to accelerate

Well established guidelines exist to help teachers decide whether acceleration may be an appropriate way to meet the needs of any gifted student and, if so, how best to implement it.

Read: the International Guidelines on Suitability for Accelerated Progression (Appendix 1, below).

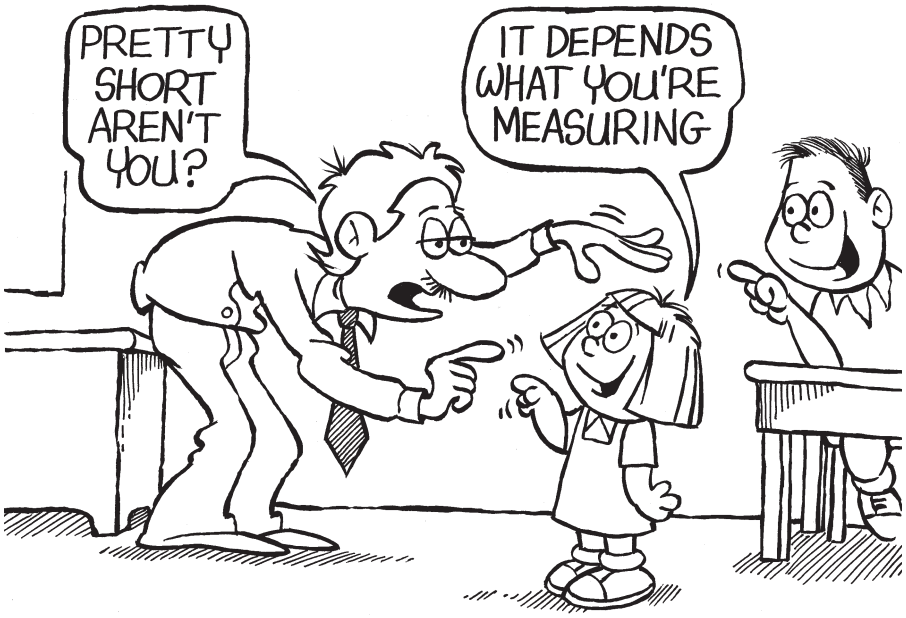
Then reflect/discuss: Which, if any, of these guidelines run counter to your previous ideas about when and how to use accelerated progression as a strategy for gifted students?

For later?

If your state/territory/system has adopted its own version of these guidelines what, if any, modifications have been made?

For example, Tasmania has changed #10, so that the final sentence reads: 'For such students further advancement may be advisable, either at that time or later in their schooling.'

- Note that these are guidelines, not imperatives. That is, they need not **all** be fully satisfied before you accelerate a student. For example, if a 'trained psychologist' (#1) is not readily accessible, as in some rural or isolated communities or where the cost is prohibitive, acceleration should still be considered, using the other evidence available. Your state or territory may have further specific guidelines on early entry to school.
- Every decision about whether and how to accelerate a particular student should be able to be justified by referring to the evidence upon which it is based. Hence, judgements about both academic and social-emotional readiness must involve the collection of hard evidence, from a variety of sources, not just the interpretation of a single class teacher, or member of the school executive, however well intentioned. This is also why the second point made in guideline #3 is very important.



A helpful resource

An instrument that has been created to help teachers (and parents) make more objective decisions about grade-skipping is the **Iowa Acceleration Scale** which now has an accompanying manual (Assouline, Colangelo, Lupkowski-Shoplik, & Lipscomb, 1999).

The Iowa Acceleration Scale is available in Australia from GERRIC, at the University of NSW.

Some other issues to consider

- **Do you accelerate a student who does not want to be accelerated?**

  Generally not, because there is a lower chance of success.

  However, you should ensure that the student is fully informed about the alternatives available and their likely consequences before making a final decision. Such students may be persuaded to participate in a trial period before making a final decision, unless remaining unobtrusive is their concern.

- **Do you accelerate a student if this will put him/her into the same Year as an older sibling?**

  Probably not, though Annette Heinbokel (1997) reported a case where an older sister helped to protect her accelerated brother from peer hostility at school.

- **Is gender an issue when making early entry decisions?**

  There seems to be a tendency for early childhood teachers to advise parents against early entry to school for boys, on the grounds of developmental differences. However, some gifted boys have become frustrated when held back so, as always, each case should be judged on its merits, rather than on generalised preconceptions.

Readiness is a multi-faceted judgement.

But wait, there is more ....

Increasing the likelihood of success

Since acceleration is best seen as a process, not merely a placement decision, its chances of success will be enhanced if the following issues are addressed:

Choice of receiving teacher is crucial.

The teacher into whose class the accelerated student will move (part-time or full-time) should be positive about the decision and willing to assess the trial period on its merits. Ideally, the receiving teacher will welcome the move, will be knowledgeable about gifted students and their needs, and will be part of the planning process prior to the change of placement.

Nevertheless, it is undesirable that an otherwise positive case for acceleration be thwarted by the lack of a willing receiving teacher, so Principals are encouraged to consider what professional development or other support they may provide to enable a potential receiving teacher to be confident about assuming the role.

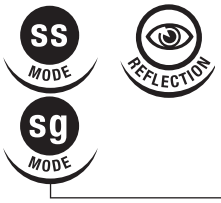
Note that the Tasmanian Department of Education's version of these guidelines changes #6 to state: 'The receiving teacher must have access to professional development, if needed, to maximise his/her capacity to provide appropriately for the student' (Department of Education, Tasmania, 2002, p. 3).

The student to be accelerated should be prepared for the change.

This may take the form of a trusted person at the school, possibly the student's current classroom teacher, explaining how the move will be implemented and inviting the student to discuss any queries and raise any worries - and then inviting the student to suggest how these might best be dealt with, a form of 'social rehearsal'. Consider the following example:

> Teacher: Can you think of anything that might worry you about the move?
>
> Student: What will I say when the other kids ask me why I have moved up a class?
>
> Teacher: What do you suggest?
>
> Student: I could say it is because the work I was doing was too easy for me.
>
> Teacher: Yes, that's a good response. Or you could just say that it was the teachers' idea - for students know that teachers do all sorts of 'strange' things, without explaining why.

If you are filling this pastoral care role note that the student may also be worried that the work in the higher grade will be too hard, or that the students in the new class won't be friendly, among other things.



Try to think of what you would want to know if you were the one about to be accelerated.

Diagnose and address any gaps in the student's knowledge or skills (academic or social).

It is best to do this before the acceleration placement begins, or as soon afterwards as possible - ie within the six-week trial period.

Examples of such gaps that have been found in Australian research on acceleration (Bailey, 1997) include:

- underdeveloped time management skills (especially when grade skipping from primary to secondary school),
- minor gaps in maths knowledge, and
- moving from print script to cursive writing.

Where appropriate (eg if the students involved deem it acceptable), peer tutoring may be organised as a means of addressing these, though with close teacher guidance.

Recognise that curriculum differentiation will also be required, as well as a change of placement.

The acceleration will only partly address the gifted student's faster pace of learning, so curriculum compacting should also be considered.

Further modifications will be desirable - to the content, process and product (as we discussed in Module 5) - to address other characteristics and needs of gifted students.

Provide ongoing support and monitoring.

It is important that the school provide ongoing support, to accelerated students and to any teacher involved with them, to ensure that issues that arise during and beyond the trial period are dealt with promptly and constructively.

For example, the Principal might allocate some time allowance to the receiving teacher and/or the school's G&T Coordinator, to ensure that they provide regular support as needed and keep written records of the accelerated student's progress.

Carefully planned acceleration works, for appropriately chosen students in well-prepared settings.

If these guidelines are followed you should find that you, and your students, experience the positive outcomes that many others have already had with acceleration.

It certainly should be seen as a highly appropriate

strategy for the gifted. We need to move beyond the less well-informed past when, according to Southern and Jones (1992, p. 35):

> 'All participants in the decisions seem to have reservations about acceleration. Like surgery, it is viewed as a treatment of last resort.'

Miraca Gross (1999) reports the words of a highly gifted 18-year-old, Elizabeth, who:

> 'is certain that if she had not been permitted to accelerate, she would have retreated into a secret place within herself, observing life being enacted, as it were, on a stage, but playing little part in it herself. Acceleration has given her friends, self-confidence and self-acceptance.'

If you are overly cautious about acceleration, because you worry that you might make the wrong decision, remember that failing to accelerate a gifted student (such as Elizabeth) may be the mistake to avoid.

Read the following case study,

then **consider your responses** to the two questions posed.

If possible, discuss your responses with other teachers.

How would you decide whether acceleration was appropriate for the following student?

What processes would you follow if your school decided to proceed with accelerating this student?

Vinoli, *who has just started school, aged 5, comes from a home which is full of books and she has been read to regularly from a very young age. Vinoli began to read some words herself around the time of her third birthday, and by four-and-a-half was a fluent reader of books from home or from the local town library. She enjoys reading, especially fiction, but was wary of showing off her skill in front of her age peers at preschool, since few of them could read and none of them was as fluent as she was.*

At home Vinoli loves making up stories which she tells to her parents and soon after her fourth birthday she began trying to write down some of these. She makes recognisable attempts at spelling but gets frustrated at times because her writing is so slow. Her fine and gross motor skills are about average for her age.

Vinoli isn't as interested in numbers but can do simple calculations in her head. She has a well-developed knowledge base for someone so young and is curious about how things work. She interacts confidently with adults but appears conscious of her difference when in the company of age peers who are not her family friends. She has one good friend at the school, Litia, who is six-and-a-half and in her second year at school. Vinoli and Litia often sit together in the playground and sometimes swap books to read. They are both described by their teachers as sensitive children.

Vinoli likes, and is liked by, her current teacher who encourages her reading and tries to answer her many questions. Her teacher, Ms Green, realises that Vinoli finds much of the standard classwork too easy and that Vinoli feels different from the other children in her class. Ms Green has never been involved in a case where a gifted student has been accelerated, nor has anyone else on the staff.

Some Thoughts on the Self Assessment Case Study

Vinoli is a very promising candidate for acceleration, based on the subjective evidence available. A standardised test would help to confirm this and, by indicating her level of giftedness, would provide further guidance about the type and extent of acceleration that would best suit her needs.

Her early signs of the forced-choice dilemma and her friendship with the older girl, Litia, suggest that a full grade skip may be appropriate - probably into the same class as Litia.

Vinoli may be more capable in maths than she currently appears to be. Her passion for reading and story telling means that English takes priority at present, perhaps because it is also encouraged more at home.

Her present level of motor development is not a cause for concern when making the acceleration decision, but the frustration it may cause Vinoli should be anticipated and addressed by the receiving teacher.

The fact that no one at her school has previous experience of accelerating a gifted student should not stand in the way of implementing it in Vinoli's case. A small group of staff members (eg the Principal or another member of the executive, Ms Green, the possible receiving teacher, and whoever has G&T expertise or responsibility in the school) should be formed to consider the matter and to make a decision, after following the guidelines discussed in this Module.

Given Vinoli's sensitivity, she will need to be prepared carefully for the move. Likewise, her progress will need to be monitored closely, especially for the first term after the move - eg to check that she is not worried by any gaps in her maths knowledge, and to ensure that she feels welcomed and secure in her new class.

[The girl on whom this case is based was successfully grade-skipped, by one Year level, at the end of her first term at school. When tested prior to her acceleration, her reading age was found to be 9 years and 5 months. Her success encouraged the school staff to accelerate two other young students the following year, one fully grade-skipped and the other subject-accelerated in maths.]

Resources

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Further Reading

Gross, M. U. M. (1997). To group or not to group: Is that the question? *Gifted*, 98, 25-29.

[Argues that grouping decisions have too often been based on administrative convenience 'or a concern for "equity" which confuses equal opportunity with equal outcomes' (p. 29) and analyses in detail the evidence on ability grouping.]

Merrotsy, P. (2003). Acceleration: Two case studies of access to tertiary courses while still at school. *TalentEd*, 21 (2), 10-24.

[Discusses the practicalities of, and the two students' views on, acceleration at 'a small, rural, relatively isolated high school in an economically depressed area'.]

Rogers, K. B. (2002). *Re-forming gifted education*. Scottsdale, AZ: Great Potential Press.

[See Chapter 7, on grouping, and Chapters 5 & 6, on acceleration.]

Rogers, K. R. (1994). What research tells us ... Ability grouping and gifted students. Kensington: University of NSW.

[A one-hour audiotape, providing a succinct summary of the evidence on the effects of ability grouping.]

Websites

A full copy of the NSW Board of Studies document on acceleration.

www.boardofstudies.nsw.edu.au/manuals/pdf_doc/accelerated_guide.pdf

A copy of Miraca Gross's keynote address, 'From "the saddest sound" to the D Major chord: The gift of accelerated progression', presented at the 3rd Biennial Australasian International Conference on the Education of Gifted Students, Melbourne, 1999, which includes many examples of Australian students who have been accelerated.

www.eddept.wa.edu.au/gifttal/EAGER/MiracaGross.html

Provides online access to several informative articles on particular forms of grouping.

www.hoagiesgifted.org/grouping.htm

A copy of the 2004 report on acceleration, A nation deceived: How schools hold back America's brightest students, which provides a detailed synthesis of the major research on acceleration.

www.nationdeceived.org

A copy of Pam Matters' 1998 AAEGT conference paper on mentoring, based on her practical experiences in Victoria.

www.tased.edu.au/tasonline/tag/aaegt7/matters.htm

International Guidelines on Suitability for Accelerated Progression

Some of the guidelines used internationally to assist school Principals in determining gifted students' suitability for accelerated progression include the following:

1. It is not necessary for every gifted student to be psychometrically tested. However, in the case of students who are being considered for accelerated progression, there should be a comprehensive psychological assessment of their intellectual functioning, academic skill levels and social-emotional adjustment by a trained psychologist.
2. Academically, the student should demonstrate skill levels above the average of the class they desire to enter.
3. Socially and emotionally, the student should be free of any serious adjustment problems. Principals should be aware, however, that in some gifted students social or emotional difficulties may have been caused by inappropriately low grade placement. In such cases the situation may be alleviated by accelerated progression.
4. The student should be in good physical health. The student's size, however, should be considered only to the extent that competitive sport may be viewed as important in later years.
5. It is important that the student should not feel unduly pressured by parents/guardians. The student themselves should be eager to move ahead.
6. The receiving teacher must have positive attitudes towards the grade advancement and must be willing to help the student adjust to the new situation.
7. Judgements about the student's social and emotional maturity should include input from the student's parents/carers and the psychologist. Gifted students are sometimes rejected by their classmates. It is important that teachers do not confuse the absence of close peer relationships with social immaturity.
8. Ideally, grade advancement should occur at natural transition points, such as the beginning of the school year. However, mid-year advancement may sometimes be desirable where the student's prior teacher and receiving teacher may more easily confer about how best to help the student make a smooth transition.
9. All cases of accelerated progression should be arranged on a trial basis of at least six weeks. The student should be aware that if the trial period is not a success, they will return to the original grade placement. It is important that in such a circumstance the student should not be made to feel that they have 'failed'.
10. Care should be exercised not to build up excessive expectations from grade advancement. A small minority of gifted students are so far advanced in their intellectual or academic development that one year of accelerated progression may still leave them bored at school. For such students further advancement may be advisable at a later period in their schooling.
11. Decisions regarding accelerated progression should be based on facts rather than myths.

The research literature on acceleration reveals that accelerated progression benefits the gifted student both academically and socially. Conversely, failure to advance a highly gifted student may result in poor study habits, apathy, lack of motivation and maladjustment.

Adapted from Feldhusen, J. F., Proctor, T. B. & Black, K. N. (1986). Guidelines for grade advancement of precocious children, Roeper Review, 9 (1), 25-27.

At: www.boardofstudies.nsw.edu.au/ manuals/pdf_doc/accelerated_guide.pdf (pp. 37-38]

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To Group or Not To Group:

Is *THAT* The Question?

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Earlier versions of this article appeared in *Images*, the journal of the Indiana Association for the Gifted and *Gifted*, the journal of the New South Wales Association for Gifted and Talented Children. The current version, incorporating additional, recently conducted, research, was completed in December 2004.

In the first few months of the school year, parents of gifted and talented children in a number of Australian states and territories and, of course, the children themselves, consider an important educational issue; should the children apply to be considered for entry to their state's ability grouped programs with other gifted and talented students or should they continue in the mixed ability setting of a regular primary school classroom or comprehensive high school.

For most parents of gifted children, the debate centres on two key issues. Will their children find friends, companionship and contentment in the new setting? And will the ability grouped class or school provide a more effective instructional setting in which their children's abilities can be fostered?

Effective instruction must be based on a recognition of three basic premises of learning.

(1) Learning is a sequential, developmental process. Attainment of skills, understanding in different domains of knowledge, and strategies for solving problems, are all acquired gradually, and in sequences that are more or less predictable (Robinson, 1983).

(2) There are substantial differences in learning status and learning rates among individuals of any given age. Individual differences characterise both the rate of development (i.e. general intelligence) and the acquisition of specific skills (e.g. reading), and even in the earliest years of school we can note a quite remarkable spread of achievement in reading or number among children in the same school class (Robinson, 1983).

(3) Effective teaching must involve a sensitive assessment of the individual student's status in the learning process, followed by the presentation of problems that ***slightly exceed*** *the level already mastered. (Tasks that are too easy produce boredom; tasks that are too difficult cannot be understood). Vygotsky (1976) calls this "target area" the zone of proximal development.*

If, as educators, we recognise and accept these three fundamental principles of effective learning and effective teaching, then we must ask ourselves this question:

If it is true that learning is a developmental and sequential process, that there are striking differences in developmental rate among individuals of the same age, and that effective teaching must be grounded where the learner is, then how do we justify an educational system that ignores competence (what the student is able to do) and achievement (what he or she has already mastered) and utilizes chronological age as the primary, or only, factor in student placement?

Grouping by chronological age is a relatively modern administrative procedure, introduced within the last 100 years. It was brought in to cope with large numbers of students from previously disenfranchised groups entering a school system which had previously catered to comparatively small numbers of children. Previous to this time, children had progressed through the school grades on the basis of their mastery of the work of the different grade levels. Accelerated progression was a common, and accepted, procedure for ensuring that academically gifted students were presented with work that was appropriate to their developmental needs.

In the United States, accelerated progression of the academically gifted was so common that when, in the early 1920s, Lewis Terman set out to find a cohort of highly able students who could subsquently be tested for possible inclusion in his seminal study of 1500 gifted children, he asked teachers to nominate not only the student whom they believed to be the brightest member of their class, but also the child who was the youngest member (Terman, 1925). The youngest child in the class was likely to be a gifted student who had been accelerated.

Grouping by chronological age

In today's schools, we group students by chronological age because it seems to be administratively convenient, because we have become accustomed to doing so, and because we wrongly assume that chronological age is an accurate index of academic development.

However, 60 years of empirical research on student development and learning has shown us that chronological age is not a reliable indicator of the level that a child can, and should, be working at.

Example (1):

In 1998 an Australian study surveying literacy in primary school children found "a learning gap" equivalent to at least five years of schooling between the top and bottom 10 per cent of children in each Year 3 class surveyed in the study (Coorey, 1998). Given that the reading achievement of only the "middle" 80% of the class was reported by Coorey, we can only speculate how wide the achievement span of the class would be if the reading ages of the lowet and highest 10% were taken into consideration. These children may not have been reported in the study but they were still in the classes!

Example (2):

If we accept the three premises that began this article, we will realise that the range of achievement found in any school class increases with age. While Coorey found that the span of reading achievement in a Year 3 class is *at least* 5 years, by Year 7 it has increased to

around 8 years. Because of the importance of reading as a learning tool, the range of achievement in virtually every subject area increases as a given cohort of students moves through school. A Year 8 class may include students who are reading, with full comprehension and enjoyment, adult science fiction or historical biography, and students who are struggling to read at Year 4 or 5 level.

Example (3):

Gagné (1986) reports a study conducted by Deslaurier in Montreal which graphically illustrates the management problems faced by a teacher who seeks to individualise the curriculum of the mixed-ability classroom. Deslaurier wanted to investigate the learning status, at the beginning of the school year, of students entering any particular year level. He was interested to find out what proportion of children already knew some of the work that was to be presented to them.

Accordingly, at the beginning of the school year, Deslaurier administered, to 96 randomly selected Year 5 students, the maths test and the French test that would normally be given at the end of the school year. (French is the first language of most students in Quebec.) The results were quite disturbing. Fully 3% of the children scored 85% or above on at least one of the tests, a further 3% scored between 80% and 84%, and 7% scored between 75% and 79%. In other words, fully 13% of the students - almost one-seventh of this Year 5 cohort - knew three-quarters of the Year 5 material in two key learning areas before the work of the year had started. Indeed, Deslaurier found that 45% of these Year 5 students knew more than 60% of the work.

Example 4:

In the United States, a professor of mathematics, Dr James Flanders (1987), analysed the content of three of the best-selling school mathematics textbook series to see how much new material was taught each year. A disturbing pattern emerged which is worthwhile examining in detail. Giving credit to a book for a "new page" if *any* new material appeared on that page, Flanders concluded that the average percentage of "new" pages for each grade were as follows:

K	100
1	75
2	40
3	60
4	45
5	50
6	38
7	35
8	30
9	90

I find this table quite startling – especially if one considers the "hidden" figures – the percentage of the year's work that was planned as revision! While only 25% of the maths work of Year 1 was review, students in Year 2 are required to revise fully 60% of the work covered in the two previous years! What happens to the students in the upper half of the class in terms of maths ability, who may be able to predict for themselves how the new work should be mastered? The skills involved in adding 325 and 491 are not so different to the skills in adding 32 and 49! Just how much are the abler students *learning*?

However, the situation worsens the further the child progresses through school. The "dumbing down" of the maths curriculum continues through the middle school years with fully 62% of work in Year 6 and 65% in Year 7 being material presented before. In Year 8, a disturbing 70% of the work is revision. Students who have mastered work in previous years are "marking time" in maths for two thirds of the week.

What can justify the relentless re-presentation, in Years 6, 7 and 8, of work which would surely have been mastered by the majority of the class? And if the authors of these texts are, mistakenly, working on the premise that this degree of revision *is* necessary for the average student, how on earth could they expect that students who learn only 30% of new

material in Year 8 could suddenly be expected to learn three times that amount the following year? There seems to be little logic in such curriculum design.

If students gifted in maths were held back to the pace and level of the students for whom these texts were apparently designed, how long would they retain their excitement for the maths presented at school? How long would it be before these children simply switched off and let the boring, repetitious instruction flow over them, barely touching the surface of their consciousness? As Professor Brian Start, formerly of the University of Melbourne, once phrased it: "How long can you anaesthetise a child before you send him into a coma?"

Example 5:

In 1993 Dr Sally Reis and colleagues at the American National Centre for Gifted Education published a startling study which showed that teachers could modify the curriculum for academically gifted students by *eliminating* approximately *40-50%* of the core curriculum in maths, language arts, science and social studies without the students suffering any ill effects (Reis, *et al*, 1993). This is the proportion of the year's work that is regularly revised from the previous year. Indeed, Reis commented wryly that gifted students might well start the school year in January rather than the previous September – and compact the year's work into six months!

What can the school do for these students who start the school year already knowing half, or indeed three-quarters, of the work they are to be "exposed to" that year? Firstly, the school has to acknowledge that the situation exists, and this is unlikely to happen if we continue to act on the flawed premise that chronological age is a reliable index of what students can, or do, achieve in our schools.

As things are, we put many of our most able students "on hold" for large periods of the school year. Here, a gifted 11-year-old boy tells us his feelings about the endless time he spends waiting in class to learn something he doesn't already know.

"All the time I just sat there,

sat there,

Waiting for something to happen.

My teachers should have ridden with Jesse James,

My teachers should have ridden with Jesse James

For all the time they stole from me"

(Delisle, 1984).

What does it feel like to be the parent of such a student, knowing that your child is getting little, or nothing, out of his or her time at school, and watching the growing disillusionment and demotivation? For the last 20 years I have been following the academic, emotional and social development of 60 of the most gifted young people in Australia – young people of IQ 160 and above. The study, which has followed these young people through childhood, adolescence and young adulthood – they are now in their early and mid-twenties - is reported in my book *Exceptionally Gifted Children: Second Edition* (Gross, 2004). Here the mother of Jade, then aged 7, describes her feelings about Jade's schooling:

> *"I feel very negative about Jade's school experience. We have seen her go from an extroverted, confident and happy 3-year-old whose abilities took our breath away, to a negative, often bitterly unhappy 7-year-old. She has lost her zest for learning and achievement. She is totally different from the child I would have predicted she would be. It seems incredible to me that the school should expect her to be excited about the curriculum they offer her, which is years and years below her level, and what makes it worse is that because she won't respond to the basic work, nothing in the way of acceleration or enrichment is being done for her. It's a vicious circle. I am so afraid that she will never feel fulfilled, and yet I feel powerless to do anything because I feel like I am fumbling around in the dark and I don't know where the switch is."*
>
> (Gross, 2004, p. 175).

For years, Jade had been presented only with work appropriate to her chronological age - work she had mastered years before. The only enrichment she was offered was "lateral enrichment", set at her chronological age level and therefore as inappropriate for her as the core work had been. She was locked into a system that would not respond to her educational

needs. When, eventually, she "switched off" and stopped working, the school responded by telling her that she could not have the enrichment work until she had finished the basic work. It was a pointless threat, as neither the basic work nor the "enrichment" gave Jade any pleasure or sense of achievement.

A second reason for grouping students by chronological age is that we assume that it is the best index of a child's social and emotional development - yet many years of research have shown this is not so.

The considerable majority of psychologists and educators working with intellectually disabled and intellectually gifted children now accept that children's emotional and social maturity is much more closely linked to their mental age (their developmental age in terms of their reasoning ability) than to chronological age (Tannenbaum, 1983; Janos and Robinson, 1985; Robinson, Reis, Neihart and Moon, 2002). Lehman and Erdwins (1981) measured the social and emotional adjustment of Year 3 and Year 6 students of average intellectual ability, and intellectually gifted Year 3 children, and found that the gifted Year 3 children scored significantly above their average ability age peers on all 12 areas of adjustment measured in the study. Furthermore, the gifted Year 3 children showed better social and emotional adjustment than the average Year 6 students on 11 of the 12 measures.

Gifted students prefer the company of children at their own stage of intellectual and emotional development - either other gifted children or children who are a few years older (O'Shea, 1960; Gross, 1992; Silverman, 1993; Gross, 2004). When such companionship is not available, they may either conceal their intellectual and emotional maturity in an attempt to be accepted by their classmates, or they may become isolates, preferring their own companionship to continual interaction with age-peers who are much less emotionally mature then they. If highly gifted children are retained full time in the mixed-ability classroom, with no access, or little access, to other gifted students, serious behavioural and emotional problems can result (Silverman, 1993; Gross, 2004).

Research-based advantages of grouping by ability

(1) Ability grouping allows gifted students to progress at their own pace with other students of similar ability.

(2) It permits teachers to offer gifted students methods and materials that are geared to their level of ability and achievement.

(3) It provides a realistic range of competition that challenges and stimulates students. (We recognise the value of realistic and friendly competition in training students who are gifted in sport, athletics and music; academically gifted students should likewise have the opportunity to "stretch themselves" in the company of others of similar ability.)

4) It enhances gifted students' self-esteem.

(5) Ability grouping leads to a significant drop in underachievement for peer acceptance.

(6) It makes teaching easier and more effective by reducing the range of achievement found in any class.

Let's look more specifically at some of these research-based findings.

- Overwhelmingly, research shows that gifted students who enter ability grouped settings perform significantly better on later measures of school achievement (measures of "value added") than do their ability-peers in comprehensive settings. Research consistently shows measurable academic gains for gifted students across all subject areas, particularly when the grouping is fulltime (Kulik, 1992) and particularly for high ability students from minority groups (Page and Keith, 1996).
- Meta-analyses of "value added" studies of the performance of gifted students in ability grouped classes where the curriculum is accelerated as well as enriched, have shown that these students gain in grade-level competencies at almost twice the rate of equally gifted students retained in the regular classroom (Kulik, 1992). The ability grouped students gain, on average, 10 months additional progress over the course of a year. Even students in ability grouped classes whose curriculum consists principally of enrichment were shown to progress at rates 50 per cent higher than ability peers in the mixed-ability classroom.

These studies found, furthermore, that gifted students improved significantly in attitude towards those school subjects in which they were ability grouped.

- A "value added" study of 1000 academically gifted students in a range of educational settings (Delcourt et al., 1994) found that gifted students in special programs perform consistently better than do equally gifted students educated entirely in the regular classroom. When students in different forms of ability grouping were compared it was found that gifted students in fulltime ability grouped settings (special schools for gifted students and fulltime self-contained classes) performed significantly better than did equally gifted students who were ability grouped for only part of the week.
- Rogers (1998) published an analysis of 14 "best-evidence" syntheses of studies on grouping conducted before 1991 and an additional 56 studies conducted since that date. She found that while homogeneous grouping was more beneficial than mixed-ability grouping for students at all levels of academic ability, it was much more beneficial for high-ability than for low-ability students. Both high-ability and low-ability students benefitted from more social interactions when grouped with like-ability peers.
- During 1989-1990 a team of researchers from the NSW Department of Education and three state universities surveyed 1100 students from 10 Selective High Schools to ascertain what expectations the students had had prior to entry to their schools and to what degree their expectations had been fulfilled (Adams et al, 1992). The students' expectations had been two-fold: firstly, that the work in the selective school would be harder and set at a more advanced level but that they would be able to keep up with that accelerated level of work; secondly, that they would make lots of new friends - an important consideration for gifted students who may have found it difficult to form friendships in the mixed-ability environment of primary school. For the considerable majority of the students, these expectations were fulfilled, and for some the satisfaction exceeded their expectations.
- A study which I conducted of self-esteem shifts in New South Wales students in both Selective High Schools and comprehensive high schools found that selective high school students had higher self-esteem scores than did the comprehensive students on all aspects

of self-esteem (academic, social, home/family, and general self-esteem) and at all times during the study (Gross, 1997). Both selective and comprehensive students displayed a dip in academic self-esteem over the course of their first year in high school (which is fully congruent with previous studies of adolescents moving from primary to secondary education). However, both at the beginning and close of the study the academic self-esteem of the Selective High School students was higher than that of their age-peers in comprehensive schools.

In this study, self-esteem was shown to be linked to motivational orientation, with students who are task-involved (motivated to learn for the love of learning) displaying consistently higher self-esteem than students who are ego-involved (motivated to learn in order to be better than one's classmates). The few students who did experience a disturbing decrease in academic self-esteem during the course of Year 7 (fewer than five per cent of the sample) tended to be highly ego-involved. The majority of Selective students in this study were shown to have a task-involved, rather than an ego-involved, orientation - contradicting the community perception that selective schools breed competitiveness. What Selective High Schools *do* encourage is self-referenced competition - the desire to perform better than one has performed before - which may be misinterpreted by observors as competitiveness against one's classmates.

- The study by Delcourt et al. (1994), for which the findings on student achievement were noted earlier, also examined socio-affective issues such as the students' attitudes towards learning, their motivational orientation and their academic self-perceptions. Gifted students in special schools had more positive attitudes towards learning than did ability peers in any other grouped or ungrouped setting. Similarly, they were more likely than their ability-peers in other grouped settings to report that they felt confident about their judgments on school and academic issues. Interestingly, gifted students in the regular classroom and in part-time grouping had higher perceptions of their own scholastic abilities than did equally gifted students in full time classes or special schools. This supports my own conclusions (Gross, 1997) and those of Kulik and Kulik (1997) that the dip in academic self-esteem noted when gifted students enter ability grouped settings is not deleterious but is rather a shift to a more realistic perception of their own abilities

when they are able (often for the first time) to compare themselves with other academically gifted students. This study suggests that it may be gifted students who are retained in the mixed-ability classroom who have inflated opinions of their own abilities, as they have little opportunity to measure themselves against a valid comparison group.

Reasons frequently given for not grouping by ability

It is noticeable, and disturbing, that the reasons most frequently given, by teachers and school administrators, for not grouping gifted and able students by ability, are not supported, and are in many cases contradicted, by empirical research.

(1) *"Ability grouping is elitist and adversely effects the self-esteem of those not in the top group".*

This is a very emotive argument, but it is not supported by research. Kennedy (1989) found that children of average and low ability enjoyed having the gifted students withdrawn from the classroom; they then had a chance to stand out. Fiedler, Lange and Winebrenner describe a primary school student's comments when the gifted students had left the classroom. "When Bill (the gifted student) was in class, it was like the sun shining on a bright, clear day. But when he went out to work with the other gifted kids, it was like when the sun goes over the horizon. The rest of us were like the moon and stars; that's when we finally got a change to shine" (1993, p. 7).

In any case, as Goldberg pointed out as far back as the early 1980s, Australian educators seem to have no qualms about identifying talent in sports, athletics, or music, and providing specialized programs for children excelling in these areas (Goldberg, 1981). In 1977, even while an Advisory Committee appointed by the then NSW Minister for Education was recommending the phasing out of New South Wales' Selective High Schools, it was simultaneously recommending the establishment of special centres for children talented in the performing arts (NSW Department of Education, 1977). In 2002 while the Vinson Inquiry, funded by the NSW Teachers Federation and the NSW Federation of Parents and Citizens, was recommending the disestablishment of half the state's Opportunity Classes (full time classes for academically gifted students) and all but seven of the state's 19

academically selective high schools, it was simultaneously endorsing the six selective or specialist schools for music and the performing arts.

(2) *"Life experiences do not occur in homogeneous settings, and high ability students must learn to work with a wide range of people".*

Certainly students of any level of ability must learn to work with a wide range of people, but ability grouping hardly denies them that opportunity. Incidentally, if we really examine our lives as adults, it will be seen that very many of our life experiences *do* occur in homogeneous groupings. People tend to socialise with other people with whom they have a certain commonality of interests. Most of us choose, as marriage partners and close friends, people with whom we have a certain degree of intellectual compatibility. This may not be "politically correct" but it is human nature.

This clustering of like minds and like interests in adulthood is possible only because adults are mobile and can develop their own social groupings. The gifted child who has her primary social group - her school class - selected *for her* by her school on the basis of chronological age, may be placed with a group with whom she has little compatibility either on the basis of intellect or interests. This may be administratively convenient for the school, but it is neither educationally nor psychologically defensible.

(3) *"Gifted students should be left in the regular classroom as models and mentors for students of lesser ability."*

Fiedler, Lange and Winebrenner (1993) point out this this idea is based on three false assumptions: firstly, that gifted students are consistently highly motivated achievers who will inspire others to similar accomplishments; secondly, that gifted students placed in mixed-ability classrooms will perform at their peak if they lack regular opportunities to interact with intellectual peers who can stimulate their thinking: and thirdly, that the less able or average students will be able to learn effectively from gifted students whose modes of thinking and working are so different from theirs. Schunk's (1987) research finds that children of average and low ability do not, in any case, model on high ability or gifted children; rather, they model on students of roughly similar ability to themselves who have succeeded in what they are trying to do. Gifted students are too far removed in ability from the average student

to be an appropriate role model for these children - and the average ability students recognise this, and model on students whose achievements they can more realistically hope to emulate.

(4) *"Ability grouping segregates students along ethnic and SES lines."*

When appropriate identification and selection procedures are employed, using objective as well as subjective measures, gifted students from low socio-economic backgrounds and from culturally diverse groups are much more likely to be selected for special programs than occurs when teacher nomination is used as the primary, or only, selection procedure (Baldwin, 1985). Enrolments in NSW selective high schools and Opportunity Classes reveal that the children come from a wide wide range of cultures and SES backgrounds (Gross, 2004).

(5) *"Ability grouping makes children conceited about their academic ability."*

As early as 1971, a nation-wide report commissioned by Sidney P. Marland, the U.S. Commissioner of Education, showed evidence to the contrary.

"The relatively few students who have had the advantage of special programs have shown remarkable improvements in self-understanding and in their ability to relate well to others, as well as in their academic and creative performance. The programs have not produced arrogant, selfish snobs; special programs have extended a sense of reality, wholesome humility, self-respect and respect for others. A good program for the gifted increases their involvement and interest in learning through the reduction of the irrelevant and redundant." (Marland, 1971, p. 51).

(6) *"Ability grouping damages gifted students' self-esteem".*

Kulik's (1991) meta-analysis of 40 years of studies on ability grouping found no evidence to support this assertion. Indeed, Gross's extensive study of shifts in self-esteem among students in NSW Selective High Schools, discussed earlier, found significant gains in student self-esteem among students enrolled in these schools (Gross, 1997).

Full time grouping structures

Let us now return to the title of this paper: *"To group or not to group: Is THAT the question?"*. There is such a wealth of empirical research on the academic and social benefits that accrue for gifted students when they are grouped, for at least part of the school day, with other students of similar abilities and interests, that perhaps we should not be asking *whether* we should group gifted students, but *how* such grouping may most effectively be undertaken.

There is no perfect grouping structure. Each form has its advantages and its disadvantages. In addition, schools have to work within certain constraints; for example, a school population may be too small to make feasible the development of a full-time class of gifted students, or a community may be too isolated to permit the establishment of a selective high school. However, there is a wide range of grouping options that school communities can consider, including ability grouping for specific subjects, cluster grouping and withdrawal programs. An excellent analysis of the strengths and weaknesses of a range of grouping programs is found in James Borland's 1989 text *Planning and implementing programs for the gifted*. The closing section of this article, however, will focus specifically on the advantages and disadvantages of full time ability grouped settings

ADVANTAGES:

* The level and pace of work in selective high schools and full time classes is able to be matched much more closely to the students' needs and ability. Like the young boy who wrote the poem quoted earlier, many gifted students become intensely frustrated, in the mixed-ability classroom, by having to spend lengthy periods of time waiting for the others to catch up. Gifted students learn more speedily, retain information more effectively, and require much less repetition of instruction, and the teacher of a class of gifted students can respond to this both in her teaching and in her lesson planning.

* Students experience a high level of peer support, both academically and socially. Children who enter full time ability grouped setttings generally do so because they are eager for a challenging and academically rigorous curriculum, and because they have been frustrated,

and often mocked, in the mixed-ability classroom, by other students who have little understanding of, or sympathy with, their love of learning. The ongoing contact with other children of similar abilities and interests assists gifted students to accept their own abilities and to feel less embarrassed or ashamed at being "different" in a peer culture which values, and rewards, conformity. The gifted students in Lehman and Erdwin's study, referred to earlier, who had much higher levels of social and emotional adjustment than both their age-peers, and students three years older, were in fulltime ability grouped settings.

* Gifted children in ability grouped settings are much less likely to underachieve deliberately, for peer acceptance. Selective High School and O.C. students interviewed by Gross report that they feel much less pressure to moderate their vocabularies, conceal interests that their classmates would not understand, and make deliberate errors in school work, than they were in previous years.

* There is a greater likelihood that teachers in special schools and classes will have had some form of inservice provision on identifying and teaching academically gifted children. It is becoming increasingly common for primary schools to select, as the special class teachers, staff members who have had post-graduate training in gifted education. By contrast, the considerable majority of teachers currently working in Australian schools have had little or no preservice training on how to identify and respond to gifted and talented students (Gross, 2004).

* As indicated earlier, research has found that students in NSW Selective High Schools have higher self-esteem than age-peers in comprehensive schools (Gross, 1997). Students in their first year of Selective High experience significant rises in self-esteem, particularly in social and general self-esteem. They report that they have been able to develop more, and closer, friendships than they did in the mixed ability setting, and have more positive perceptions of their own acceptability in the peer culture.

* There is more chance of the child having a teacher who is interested in (or at least tolerates!) gifted and talented students.

DISADVANTAGES

* Selective High Schools and fulltime ability grouped classes are not practicable options for small population centres.

* Students who do not have special schools or classes in their neighborhood may have to travel quite long distances to take up these opportunities. Some NSW Selective High School students spend more than two hours each day travelling between home and school.

* Local comprehensive high schools may have a negative attitude towards the establishment of Selectives in their area. In primary schools, friction may arise between special classes and regular classes if the staff and administration do not handle the situation sensitively.

* The successful operation of a special school or ability grouped class requires staff commitment and administrative support. A teacher who has strong ideological convictions against the provision of special programs for gifted students can cause difficulties and dissention among the staff and instil a negative or even hostile atmosphere in her classroom (Borland, 1989; Gross, 2004).

* Although there is a strong likelihood, there is no *guarantee* that teachers in special schools and ability grouped classes will adapt their curriculum and teaching style in response to the needs of their students.

Conclusion

Influenced by a considerable body of research on the positive effects of ability grouping on both the academic and social development of gifted students, virtually every recognised authority on the education and psychology of the gifted has recommended that intellectually gifted students should be grouped together for a significant proportion of their class time (Hollingworth, 1942; Kulik and Kulik 1982, 1997; Tannenbaum, 1983; Feldhusen, 1985; Borland, 1989; Kulik, 1991; Rogers, 1991, 1998). Even educators who express concern about the practice of grouping slow learning students by ability (e.g. Oakes, 1986;

Johnson and Johnson, 1989) report on the benefits that accrue to gifted students when they are grouped for fast-paced, accelerated work.

Two major research syntheses, by Karen Rogers (1991) and James Kulik (1991), undertaken on behalf of the American National Research Centre on the Gifted and Talented, conclude that gifted students, as well as average and slow learning students, derive considerable benefit from grouping programs that recognise the learning status and pace of learning of the different groups, and adjust the curriculum accordingly. Kulik and Rogers recommend that ability grouping be retained, and established, on these premises. Kulik also warns, however, that little benefit accrues from programs which group students by ability but then require the different groups to undertake a common curriculum in the same space of time.

In Australia, decisions regarding student placements have, all too often, been based not on educational and psychological principles, but on political expediency and administrative convenience, or on a concern for "equity" which confuses equal opportunity with equal outcomes. In special education, we seek to place the student with special needs in "the least restrictive environment". For the gifted student, the mixed-ability class may not be the least restrictive environment, while for the highly gifted it is arguably the most restrictive environment we could devise (Silverman, 1989; Gross, 2004). In planning class structures and student placements, we should remember that the client group which the education system is set up to serve is not the teaching body, the school administration, or even the parents, but the children themselves.

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