Extension Level

Introduction

Welcome to the Advanced Training Program of the Australian Government Professional Development Package for Teachers in Gifted and Talented Education.

As with the Core Package which you have completed previously, we want to individualise the Program as much as possible to optimise its relevance and usefulness to you.

Initially you will select from Early childhood, Primary or Secondary school context. For the purpose of this course we are defining early childhood as all pre-school or school years up to and including Year 2.

Additionally there is content differentiated by:

<table>
<thead>
<tr>
<th>Role</th>
<th>Classroom Teacher</th>
<th>Executive Staff</th>
<th>Principal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>![ct role]</td>
<td>![es role]</td>
<td>![p role]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>![u locality]</td>
<td>![r locality]</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mode</th>
<th>Self Study</th>
<th>Small Group</th>
<th>Whole Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>![ss mode]</td>
<td>![sg mode]</td>
<td>![ws mode]</td>
<td></td>
</tr>
</tbody>
</table>

While using the package, you will be able to select content that is applicable to your context.

Thank you! You're now ready to proceed.
You have already completed the six Core Modules which looked at a wide range of issues. Let’s briefly review the areas you covered.

**Module 1: Understanding Giftedness**

We discussed the difference between gifts and strengths and examined Gagné’s Differentiated Model of Giftedness and Talent and the many ways in which a student can be gifted. We explored the impact of personalogical and environmental characteristics on the translation of gifts (high potential) into talents (high performance). We looked at some of the ways in which gifted children and adolescents may differ from their age-peers in both their cognitive and their socio-affective development.

**Module 2: The Identification of Gifted Students**

We looked at the principles of effective identification in early childhood, in the primary school years and in adolescence. We discussed how using multiple criteria - a range of objective and subjective measures, rather than one test or checklist on its own - can provide a ‘safety net’ which will catch as many as possible of the gifted or talented students in your school. We looked at teacher and parent nomination and the use of IQ, aptitude and achievement testing, off-level testing and the use of dynamic testing to identify students from disadvantaged and culturally diverse populations. Finally we looked at ‘putting it all together’ to provide a coherent and cohesive identification matrix.

**Module 3: Social and Emotional Development of Gifted Students**

This module focussed on ways in which intellectually or academically gifted children may differ from age-peers in their emotional maturity, and how the ‘forced-choice dilemma’ may lead to them ‘dumbing down’ or moderating their achievements for peer acceptance. We also explored the five forms of ‘over-excitability’ and noted that students who react more intensely than their classmates to intellectual, emotional or physical stimuli can sometimes be misdiagnosed as having Attention Deficit Disorder (ADD) or Attention Deficit Hyperactivity Disorder (ADHD).

**Module 4: Understanding Underachievement in Gifted Students**

We explored some of the causes of underachievement among gifted students - reasons why highly able young people may perform significantly below their potential. Low academic self-efficacy, boredom, learning disabilities, low teacher expectations and dysfunctional perfectionism were explored. Betts and Neihart’s Profiles of the Gifted and Talented were introduced as a useful framework to identify and understand underachievement. Dynamic Testing was proposed as an effective means of identifying ‘invisible underachievers’ from culturally diverse and low socio-economic groups.

**Module 5: Curriculum Differentiation for Gifted Students**

This module introduced some procedures which teachers can use to differentiate the level, pace and complexity of curriculum delivery for gifted learners through modifying content, process, product and learning environment. Pre-testing to assess what students already know allows us to minimise unnecessary revision by compacting the curriculum. Bloom’s Taxonomy and the Williams model of curriculum development provide useful structures through which teachers can develop an enriched and challenging curriculum for gifted students, while the Kaplan model provides an excellent scaffold for developing theme-based independent study or research projects.
Module 6: Developing Programs and Provisions for Gifted Students

This module explored some of the mythologies which have grown up around ability grouping and acceleration and introduced some of the research-based findings that support the use of these procedures for gifted and talented learners. Several forms of grouping and acceleration were described and practical hints were provided to maximise their effectiveness. The international guidelines on acceleration were introduced to enable teachers and parents to evaluate both a student's readiness for acceleration and which forms of acceleration might be most suitable.

The Extension Level of the Professional Development Package builds on, and expands from, the Core Package.
Welcome to Extension Module 6: Further Issues in Developing Programs and Provisions for Gifted Students - the final Extension Module for this Professional Development Course.

In this Module we will present some concerns and advice about using cooperative group learning with gifted students, and explain how to interpret research findings reported in terms of ‘effect size’.

The planning and management of individual education programs will be discussed, as will the use of online learning (including mentoring) as another form of ability grouping for the gifted.

Further case studies of acceleration will be analysed, to extend your appreciation of issues to consider when implementing acceleration.

Stan Bailey
**Extension Module 6:**
Early Childhood

**Further Issues in Developing Programs and Provisions for Gifted Students**

## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Test</td>
<td>7</td>
</tr>
<tr>
<td>Pre-Test Answers</td>
<td>8</td>
</tr>
<tr>
<td>Outcomes</td>
<td>9</td>
</tr>
<tr>
<td><strong>Extension Module 6: Part 1</strong></td>
<td>10</td>
</tr>
<tr>
<td>Is cooperative group learning good for the gifted?</td>
<td>10</td>
</tr>
<tr>
<td>A fuller look at evidence on the consequences of various grouping options</td>
<td>15</td>
</tr>
<tr>
<td>The management of individual education programs</td>
<td>16</td>
</tr>
<tr>
<td>Online and group mentoring</td>
<td>19</td>
</tr>
<tr>
<td><strong>Reflective/Practical Component</strong></td>
<td>21</td>
</tr>
<tr>
<td><strong>Extension Module 6: Part 2</strong></td>
<td>22</td>
</tr>
<tr>
<td>Online learning as another means of grouping</td>
<td>22</td>
</tr>
<tr>
<td>What can we learn from case studies of acceleration?</td>
<td>26</td>
</tr>
<tr>
<td><strong>Self-Assessment</strong></td>
<td>31</td>
</tr>
<tr>
<td><strong>References and Further Reading</strong></td>
<td>32</td>
</tr>
</tbody>
</table>
Pre-Test

1. Can you explain why cooperative group learning may not necessarily meet the needs of gifted students, and how best to use it with the gifted?

2. Can you interpret the significance of research evidence on the various grouping and acceleration options when findings are reported in terms of ‘effect size’?

3. Can you plan and manage an individual education program (IEP) for a gifted student?

4. Can you explain the benefits for gifted students of online mentoring and other forms of online learning, and how best to implement these?

5. Are you aware of case studies of well- and poorly-managed acceleration? What lessons can be learned from these?
No / Maybe: If you are not confident that you can say ‘yes’ to each of these you should benefit from at least some of the information that follows in this Extension Module.

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

At the completion of this Module you will:

- be aware of some concerns about involving gifted students in mixed-ability cooperative group learning.
- be able to interpret the academic and affective consequences of various grouping and acceleration strategies in terms of effect size findings.
- be aware of guidelines for the planning and implementation of individual education programs (IEPs) for gifted students.
- have a fuller understanding of a range of issues to consider when deciding whether and how to implement acceleration.
Is cooperative group learning good for the gifted?

Some caveats

It is now widely accepted that all students should develop the knowledge and skills that will enable them to function productively in group settings, both in school and beyond. Proposed lists of ‘life skills’ include ‘ability to work cooperatively’, ‘communication and teamwork’ or some similar form of wording.

However, some learning characteristics of the gifted, which we discussed in Extension Module 1, suggest that not all forms of cooperative learning in mixed ability groups will benefit gifted students. Among these characteristics of the gifted are their:

- rapid pace of learning
- dislike of slow-paced work
- reasoning at a level more usually found in older students
- tendency to prefer independent work.

In addition, gifted students’ sense of fairness is often offended when they find that they contribute more than their share of the work when engaged in cooperative group activities. For example:

Six-year-old Astrid lamented to her mother that she was always expected to be the ‘writer’ for her table group when they worked on cooperative group tasks, because she was by far the best reader and writer, so she did not get to have turns as the ‘listener’, ‘gopher’ or other roles. She was sometimes frustrated when her ideas were rejected (possibly because they were not understood by her peers) and she had to write down things that she felt were not the best answers.
So, while there is value in cooperative group work it can be detrimental for gifted students if overused or used without regard to their particular characteristics and needs.

Ann Robinson (1990b) offers the following advice about cooperative learning and gifted students:

- Examine the amount of time in the school day during which the gifted student engages in cross-ability cooperative learning groups.

- Suggest that the gifted student engage in cooperative learning in his/her area of relative weakness rather than area of strength. In this way, the gifted student also has the opportunity to learn something new.

- Speak plainly on the issue of cooperative learning as therapy for socially maladjusted, talented students. The assumption that gifted children are more likely than others to have a variety of personal and social problems is not supported in the literature. Thus, the pill of cooperative learning may be prescribed for a perfectly healthy patient.
Robert Slavin, a strong advocate of cooperative learning, argues that group rewards are desirable but group assessment (ie giving all group members the same mark/grade for a shared product or performance) is not. Walters (2000) quotes him as saying:

‘A lot of the opposition to cooperative learning has been because an A student comes home with a C. When the parents ask what happened, the kids say there’s another student in their group who keeps making trouble. The parents go ballistic, as they, frankly, should.’

‘The grading system should be completely based on your own personal performance, whereas the group recognition or rewards can be parallel to that.’

**Learning social skills**

It is often asserted that gifted students will learn (a) social skills and (b) to appreciate others less academically able than themselves, if given the responsibilities of group leader and/or peer tutor during cooperative learning tasks.

Roger and David Johnson (1994), who are major advocates of cooperative learning, ask rhetorically:

‘... don’t we want all students to be comfortable with and accepting of individual differences (their own and others)? Don’t we want all students to have sophisticated social skills that will enable them to work with people they perceive as “different” or even “difficult”?’

We agree that these are desirable outcomes but we contend that their achievement should not be at the expense of gifted students’ opportunities to learn other, personally appropriate skills and to acquire new (advanced) knowledge. What is optimal for the gifted may not be what is optimal for other students. To get this balance wrong may result in gifted students becoming disaffected underachievers.

The professional judgements that the well-informed teacher must make are, as Karen Rogers (2002, p. 240) states:

‘do the social benefits outweigh the bright student’s need for academic challenge, and if so, how much of their time should be spent on this type of socialization in school?’

Presumably, curriculum compacting should be applied to gifted students’ learning of cooperative skills, just as to other curriculum content.
An example of an assessment rubric to guide your assessment of students’ levels of cooperative group skills is available online at:

http://www.hpedsb.on.ca/telesat/ge/Advertising/Cooperative_group_skills_rubric.htm

**Cooperative learning within ability groups**

The acquisition of cooperative group skills is just as possible, and probably more effectively learned, in homogeneous groups. These may be selective classes or cluster groups of gifted students within mixed ability classes, or may involve part-time withdrawal groups of like-minded students, as in competitions that require teamwork, such as Tournament of Minds or Future Problem Solving.

The cooperative learning strategy, ‘jigsaw’ (see: http://www.jigsaw.org/overview.htm, or http://esol.sbmc.org/esol60/strategies.htm, for an explanation) is one that provides opportunities for some homogeneous grouping, in that either the ‘home’ group or more probably the ‘expert’ group can be formed on a like-ability basis, ie clustering the gifted within one (or two, if there are many gifted students in the class) of the expert groups.

Even Johnson and Johnson (cited in Missouri Department of Elementary and Secondary Education, 1997) concede that ‘there are times when the gifted should be grouped together for fast-paced, accelerated work’.

An example of a cooperative group task for gifted students, from an Advanced Placement English class in the USA, may be seen at: http://www.coe.uga.edu/epltt/LessonPlans/tanis.html

**Gifted students as teachers’ aides**

Another aspect of some cooperative group learning that gifted students (and their parents) object to is the use, or perhaps overuse, of the gifted as ‘teachers’ or tutors of their less able peers. If done sparingly and with well-matched age peers this may develop empathy, both in and for the gifted student, but the law of diminishing returns will soon be evident for the gifted student in such circumstances and frustration can result.

For example, Corinne, a highly gifted 12-year-old in 8th Grade in the USA, described her experience with, and views on, cooperative learning in the following words:

‘The ... method that is unsatisfactory is the cooperative learning program in my social studies class .... I understand that this is a controversial issue and I believe that the students’ point of view is the most important. We are the ones who are being taught so we should know what works for us and what doesn’t. In cooperative learning groups the person with the strongest personality and highest academic ability usually takes control of the group immediately. Teachers tend to put the faster learners with the slower ones to help them along. That is the exact purpose and problem with cooperative learning. The faster kids are suddenly responsible for everyone else .... Sure, on paper cooperative learning looks wonderful because not as many people fail. I believe that the advanced students are being slowed down drastically.'
by this learning method. Not all kids want to learn, and I feel that cooperative learning puts the responsibility of making those people learn on advanced students.

I understand that school systems try not to put students in homogeneous groups for social reasons, but there are many other places and times for gifted and talented students to socialize with these people. Our important education should not be compromised for social reasons....' (Kearney, 1990)

A related disadvantage is that the emphasis on gifted students as tutors encourages teachers to take a utilitarian view of them - ie, we may come to value them only for their achievements and their usefulness to others, as academic coaches and motivators for their age peers (Robinson, 1990a).

To sum up

• When using cooperative group learning teachers should be able to justify that the strategy is being used in ways that address the needs of all students involved, including the gifted.

• Like-ability cooperative groups offer most of the learning opportunities associated with mixed-ability cooperative groups and may be preferred by many gifted students, because more attuned to their pace and depth of learning.

• Furthermore, the research evidence on these two forms (reported in the following section of this Module) shows that like-ability cooperative grouping is the more effective method for gifted students.
A fuller look at evidence on the consequences of various grouping options

One of the ways of combining findings from various research studies (e.g. to obtain an overall, ‘big picture’ of the evidence on a particular strategy, such as full-time ability grouping, grade skipping or mentoring) or of communicating the extent to which the findings constitute compelling evidence, is through the use of ‘effect size’. It provides a concise and relatively easy to understand summary of findings, so one that should make research more accessible for teachers. It may also help you to explain and justify your evidence-based teaching to parents.

The general guidelines are that:

- an effect size of .20 is considered small
- an effect size of .50 is considered moderate
- an effect size of .80 is considered large.

Note that an effect size of .00 would mean that the strategy has no effect - positive or negative - on student learning. Negative effect sizes are possible, i.e. a strategy may have a negative or deleterious effect on student learning.

Karen Rogers (1999) provides another explanation of how to interpret effect size findings, namely ‘how much effect a particular adaptation has in terms of the time required to complete the curriculum for that year’. She writes:

‘For example, an effect size (ES) of .38 for non-graded classrooms (i.e. multiple grade/age) means if only the effect of non-graded classroom is studied, gifted children in a non-graded classroom would gain .38 of a school year through use of this adaptation alone as compared with their gifted peers in a regular classroom. Thus in slightly less than 3 years a student would have completed more than 4 years of work based on this adaptation alone. Effect sizes of .30 or higher have a substantial impact on a student’s learning levels as three years down the road the student will be one full year ahead of a regular class.’

Through the use of ES we can compare the relative influences on learning of different strategies - e.g. comparing the effectiveness of mixed-ability cooperative grouping (ES = 0), like-ability cooperative grouping (ES = .28) and cluster grouping of gifted students (ES = .62).

See Rogers (1999) for a detailed set of these comparisons. You may be surprised by some of the findings.

Note that Rogers is careful to point out the limitations of some sets of evidence, highlighting the fact that you need to know more than just the effect size figure if you are to interpret and communicate research evidence accurately.
The management of individual education programs

What is an IEP?

Following the United States Congress’s passing in 1975 of the ‘Education of All Handicapped Children Act’ the term ‘individualised education program’, or IEP, has gained wide usage within special education as one means of addressing the special support needs of individual students whose educational opportunities may be limited by a handicapping condition.

More recently this term has been adopted also by educators in the gifted education field, building on the notion of individual investigations of ‘real life problems’ in areas of gifted students’ strengths and interests, as advocated by Renzulli and Maker among others.

If implemented in the spirit that applies in special education, an IEP for a gifted student will involve a written commitment of resources and support, for a specified time and purpose.

It is usually a long-term plan, with broad annual goal(s) as well as short-term outcomes that will contribute to the attainment of the overall goal(s). The plan may be thought of as a map that shows where the student is going and how you will know when, or whether, she has arrived (ie achieved the specified outcomes).

The planning process

Silverman (1998) states that an IEP should result from the collaborative planning of school executive, parents, teachers, the school counsellor and the gifted student. She recommends that a teacher interview the gifted student prior to the development of the plan, since highly gifted students often have the best insights about what their learning needs are.

The Louisiana Department of Education (2002) lists as IEP participants the special (ie gifted) education teacher, the regular education (ie class) teacher, the student and the students’ parents. Its management form requires details of:

- meeting dates
- the student’s ‘primary exceptionality’ and ‘secondary exceptionality’
- general student information + educational needs (academic and/or social-emotional)
- specific current performance + method of measurement
- an annual goal with differentiated objectives/benchmarks (‘The student will ...’) and the date achieved.
Advice from Kansas on ‘making the most of your IEP’ (Sheets, 2005) suggests the inclusion in a plan of:

- present level of performance
- goals and benchmarks/objectives
  (‘What are the specific activities that the student will engage in, and what are the steps that will help them reach the goal? How do they relate to the general education classroom and content?’)
- program modifications
  (‘What parts of the general program will be modified and how? What support will be needed for the classroom teacher or others providing services?’)

Other sources

The Association for Bright Children of Ontario (2004) provides a clear description of what an IEP’s content and process might comprise - written as guidance for parents but useful for teachers, too. It is available online at: http://www.abcontario.ca/magazine/spri04.htm

Some general guidelines for planning the content of an individual program are available at the Center for Gifted Education, College of William and Mary’s website, ‘Individual instruction plan menu for the gifted child’ (reprinted from VanTassel-Baska, 1998, pp.175-179), at: http://cfge.wm.edu/documents/IndivInstructionMenu.htm

This source lists suggestions for ‘language arts’ (reading, writing, verbal expression), ‘maths’, ‘science’, ‘social studies’, ‘creativity/aesthetics’ and ‘leadership/social skills’.

An Australian example

A comprehensive Australian example of an IEP planning and tracking form is to be found on the South Australian Curriculum Standards and Accountability website, at: http://www.sacsa.sa.edu.au/index_fsric.asp?t=ECCP&ID=E6.2.1E We recommend that you visit this site yourself, but some of its features are summarised below.

- It states that:
  ‘An Individual Education Plan (IEP) is required for highly gifted students needing specific provision beyond that which is currently offered within the classroom. These students will be working at significantly higher levels than their age peers.’
  ‘It is recommended that an IEP is negotiated and updated at least once a year and a copy included in The Pupil Record Folder’ (to ensure continuity of provision by subsequent teachers). (Note that we consider it preferable to review and update at least once per term.)
- It devotes two pages to an 'Information profile', comprising a mix of quantitative and qualitative data - from tests, nomination forms and competitions - as well as academic, behavioural and special interests/extracurricular involvement summaries for the student.

- It includes a one-page overview of the curriculum differentiation to be provided within the specified time period. This covers 'curriculum area', 'goals', and 'strategies' - which range from 'in-class provision(s) to 'school-wide provision(s), 'community option(s)' and 'other provision(s)'.

- There follow lists of possible differentiation strategies for each of these four categories.

- Finally, a one-page 'Individual contract' is provided, inviting planners to match identified learning needs with instructional and management strategies to meet these needs.

Note that your state, territory or system may have developed its own guidelines and forms for the use of IEPs - and/or its own term for them - so check locally before you begin your plan.

Who needs one?

Any gifted student who also has a learning disability or impairment should be considered for some form of individualised program or IEP, as should any gifted student who is significantly underachieving or at risk of becoming a chronic underachiever.

Gifted students whose level of giftedness is beyond the 'moderate' range should also be considered for such provisions, as the case studies in Part 2 of this Extension Module demonstrate.
Online and group mentoring

We discussed online mentoring briefly in Core Module 3. Online mentoring overcomes the tyranny of distance, especially for those in rural areas. Gifted students may experience isolation in the midst of a large city, if they have no immediate peers with whom to share their advanced interests, but this sense of isolation can be greatly heightened for those living in a small rural community.

Not only can online mentoring provide gifted students with access to those with expertise or specialist knowledge but also it allows these mentors to share their special interests with a group of fellow enthusiasts. Lynne Kelly (1998, p. 24) makes this point well:

‘A student who is keen to know more about the hard core of computing or the abstractions of existentialism is not going to find those experts around the corner. Technology allows us to link them - to link like minds.

A teacher who has a passion for fractals or artificial intelligence is not going to find a lot of students mad keen to join in their passion in a single school. The technology allows them to share that passion with students who are keen to learn it.’

Class teachers know all too well the sense of inadequacy that can result from discovering among their students one whose advanced knowledge seems already superior to their own and whose passion to explore further seems insatiable. Online mentoring enables you to link such students with adults who possess similar enthusiasm but also the extra knowledge to extend and challenge the gifted child.

Gifted students benefit from mentoring when they acquire knowledge and skills faster than their age peers. In fact, the curriculum compacting that this allows can provide in-school time for gifted students to communicate with their mentor or to engage in extension tasks suggested by the mentor.

Whether gifted students see curriculum compacting as desirable will be determined by the way the ‘spare’ time they achieve through it is spent. It is highly likely that allowing such time to be devoted to working with a mentor - individually or with a group of gifted peers - will be seen by those involved as desirable.

Online mentoring means that small group mentoring is more possible since the participating students need not be from the same class (or school) and need not be available at the same times, or even on the same days. That is, asynchronous online discussions and communication provide a degree of flexibility that may make it easier for you to find a willing mentor while also avoiding timetable difficulties re access to school computers. Online mentoring allows you to draw upon a far greater pool of potential mentors than is practical with local, face-to-face mentoring.
Siegle (2003) identifies three types of online mentoring:

- mentor experts who agree to respond to students’ questions (eg various ‘ask an expert’ sites, such as the MadSci Network, at: http://www.madsci.org/)
- mentors who are paired with a single student
- mentors who work in partnerships.

Siegle (2003) observes that online mentoring is most successful when it involves a three-way partnership among students, their teachers and the mentor(s) - the teacher’s role being that of a local manager and encourager, providing support when needed and ensuring that technical or other problems that arise are quickly resolved. The teacher will also be responsible for child safety and protection aspects of the mentorship (eg by monitoring archived communication through email or online forums).

For this and other reasons, it is highly desirable that the school provides its mentor(s) with some form of ‘training’, especially if they have not acted as a mentor previously. This can take the form of written guidelines and/or a short online discussion led by the teacher overseeing the mentorship.

The student should also be prepared for the mentorship, to ensure that he understands its purpose, its scope and limitations, and the rights and responsibilities that are inherent in it.

**Which students benefit from online mentoring?**

It is suggested that children with well defined interests are the best candidates for online mentoring, especially if they also have independent work habits and advanced mastery of subject matter, as well as a wish to be mentored.

This may seem to eliminate gifted underachievers from this option but such a conclusion is unwise, for mentoring may be the very strategy to spark the development of their hidden potential. Examples of this will be discussed in Specialisation Module 6.

The *unobtrusive* nature of online communication is an advantage for gifted students who may prefer to maintain a low profile in mixed ability classes, often because of their awareness of the forced-choice dilemma. With online mentors students can discuss ideas at an advanced level of complexity or abstractness without affecting, or being affected by, other students in the class.

**Research evidence on mentoring**

Rogers (1999) reports that mentorships among gifted students result in very worthwhile socialisation effects (ES = .47) and self-esteem effects (ES = .42), as well as academic effects (ES = .57).

The specific effects of online mentoring have yet to be fully determined.

> It is important to keep in mind that the **optimum** form of provision is likely to be a mix of *face-to-face* and *online contact* (with mentor and like-minded gifted peers), rather than online alone.
Reflective/Practical Component

Given their specific characteristics and needs, how do you best develop gifted students’ cooperative group skills in school settings?

Consider:

(a) how you might use like-ability and mixed-ability groupings to achieve an optimum mix of the two.

(b) how you could assess gifted students’ mastery of these skills.

Discuss your ideas with at least one ‘critical friend’ (eg a trusted colleague whose opinions you respect), to help you refine and justify your approach.
Online learning as another means of grouping

The Internet may be seen as a teaching aid that gives schools the potential to realise the often-stated goal of individualising learning. It can help gifted students to pursue individualised investigations or creative products but it can also be another, unobtrusive, means of ability grouping, bringing together like-minded students regardless of their location.

Advantages of online grouping of the gifted

- The Internet provides gifted children with access to expertise and advanced or specialist knowledge, which they often crave, and at a pace which they determine.

- As stated above, group members need not be from the same class or school, nor from the same district, state or country.
Computers and the Internet can make it easier to link like-minded and like ability students, especially those who are highly to profoundly gifted and are likely to be relatively isolated across a wide geographic spread of communities.

- Likewise, group members need not be of the same age but may be grouped according to readiness for whatever content and processes are to be addressed.

Perhaps the Internet’s greatest advantage for gifted students is that it allows them access to ideas and information on the basis of readiness and interest, rather than age. The problem of gifted children’s advanced knowledge base not being accepted at face value is a common one and often a source of great frustration for them, and often for their parents.

As one mother of a highly gifted seven-year-old observed about some adults’ reactions to her highly advanced son:

‘It was not taking him seriously, because he’s a kid. I mean he was three at the time. But if they had said it to me they wouldn’t have laughed but because he was a kid they did laugh and that’s not fair. That’s lack of respect for another person’s abilities or knowledge or skill. But again it’s this age-ism thing.’ (Personal communication, 1998)

One of the most enthusiastic, knowledgeable and productive children to enrol in an online enrichment maths course offered through the University of New England in 1999, and targeted at 10- to 15-year-olds, was an eight-year-old (who lived in Tasmania). His responses were often more thoughtful and interesting than those of other, much older students in the online class.

A significant benefit of online provision is the relative anonymity of participation, where gifted students are judged on their responses and contributions rather than their age, gender, culture, appearance or disability (in the case of gifted learning disabled students). Hence, stereotyping and the forced-choice dilemma are less likely to be inhibiting factors.

Indeed, some gifted children may feel more comfortable about stating their thoughts on the computer whereas they may feel inhibited in front of (mixed-ability) classmates. Furthermore, students may be more comfortable questioning or disputing information offered through a computer than face-to-face by a class teacher (and their teacher may feel less threatened by such challenges!).
Risk taking is of a far more private nature online, so participants (students and teachers) may be more willing to engage in it.

You may wish to consider how you can test this assumption in your own school.

- An advantage for all students of online courses based on asynchronous communication is the convenience of fitting in the learning around other commitments.

For gifted students this may mean that acceleration in one or more subjects is available with less concern about timetable clashes or small classes that are deemed not to be viable. A school district (or several districts in collaboration) can arrange to have a teacher plan and teach such a course to an online ‘class’ of accelerated students from across all schools in the district(s).

This opportunity for asynchronous communication is a major strength of online enrichment or extension courses, for gifted students from vastly separated and remote rural locations are able to maintain a regular and ongoing stream of interaction with their course leader and among themselves, regardless of differences in time zone, or of their having other, non-coursework commitments.

It allows for flexibility in the time and place of participation: (a) at home as well as, or instead of, at school; (b) on weekends as well as during the school week; and (c) at times that fit in with the students’ sporting, social or family work commitments.

As a parent of one highly gifted student put it, ‘asynchronous interaction allows students to respond when they feel ready, to reflect without pressure and to continue contributions from home (in contrast to the artificial time constraints at school).’ (Personal communication)

- There may be an advantage in gifted students gaining early experience of distance education since this may encourage and facilitate their subsequent enrolment in university courses offered by this means, if they experience accelerated progression during their schooling.

That is, the possibility of dual enrolment in secondary school and university may be facilitated as tertiary courses increasingly become available via online teaching.

- The Internet provides access to real world problem solving, which Maker advocates (as we outlined in Extension Module 5) and which allows those gifted students with an advanced sense of social justice to act upon it. Then the products of such endeavours may easily be transmitted to an outside (‘real’) audience, to invite feedback or critical analysis, or to have their effectiveness tested in authentic settings.

It could be argued that the Internet exposes students to more blatant and pervasive commercial and political bias than they will encounter in textbooks, so is more representative of the real world, and provides different opportunities for students to develop skills in critical analysis and perceptive judgement.
• Ready made enrichment and extension activities are available online, though you need to have a clear, defensible rationale for choosing and using any of these. One Australian example is ‘The Brain Rummager’ (at: http://www.alphalink.com.au/~umbidas/), while another that is widely used with upper primary / junior secondary gifted students is the Jason Project / Jason Expedition.

WebQuests, for example, are becoming more widely used by teachers but many of those available on the Internet require little more than lower level thinking, while very few include differentiation for the gifted.

An example of a WebQuest that seems suitably demanding for gifted students is one on cloning, titled ‘Ewe 2’, (at: http://powayusd.sdcoe.k12.ca.us/projects/ewe2/).

Skill development

Gifted children often have a well-developed knowledge base and may appear to be confident and competent users of the Internet but before allowing them to engage in individual or small group investigations it is wise to diagnose just how knowledgeable they are about conducting purposeful online searches and evaluating the accuracy and validity of web site content.

Our experience has been that gifted children are often not expert in these matters and will benefit from direct teaching, or at least some scaffolding, to develop their online research skills and knowledge.

Fortunately there exist online sources to help you and your students in the acquisition of such expertise, eg:

• Bare Bones 101, at: http://www.sc.edu/beaufort/library/pages/bones/bones.shtml
• Michael’s Internet Finding Tips, at: http://www.botos.com/train/searchit3a.html
• A section of Kathy Schrock’s site, at: http://school.discovery.com/schrockguide/eval.html

What about social skills?

Online learning is often criticised as being inimical to the development of social skills. While it is true that online interaction does not provide opportunities for learning to read the nonverbal cues that are often critical to understanding the subtleties of social interaction, there are social skills that can be practised and reflected upon via online group activities.

While online, students can learn, for example, to: offer help to classmates; express sympathy to peers about problems or difficulties; compliment others; display tolerance for others who are different from them; apologise when their actions have affected others badly; use a ‘tone of voice’ that is appropriate to the situation; and give simple directions to a peer.

You may be able to think of further examples like these.
There are also anecdotal reports that introverts may find online discussions more compatible with their learning style. Palloff and Pratt (2001, p. 109) cited several examples of this, with one student saying:

‘I am much more “outspoken” through the written word than through speaking. In part, I think this has to do with my more reflective nature.

Written communication provides me with the opportunity to reflect, collect my thoughts and respond before the topic has changed like it often does in face-to-face communications.’

What can we learn from case studies of acceleration?

‘Bespoke’ programs

It is very encouraging to find examples of thoughtfully implemented, individually tailored acceleration plans. One such case in the UK, reported by Tom Marjoram, involved a 15-year-old gifted girl who had lived with her family in Europe, mainly in Germany, before returning to a school in Oxfordshire. At that school she was studying German with the equivalent of our Year 12, French with Year 11 and English, history, geography, science and home economics with her Year 10 contemporaries.

However, she was not timetabled for mathematics at all, this being her greatest strength, moreso than her evident flair for modern languages. Her maths talent had been spotted by a university don who coached her outside school and the university had virtually promised her a place to continue the subject at tertiary level when she was ready. She had occasional tutorials with the Head of Maths at her school but it was generally accepted that she was better off working on her own than plodding through all the normal senior high school work. As Marjoram (1988, p.49) observed:

‘This apparently odd program was entirely suited to her needs and the willingness of the school to produce “bespoke” programs not only for her but for several others was an example of sensitive flexibility which is seen too seldom.’
An example from a rural school

One Australian equivalent of such an individualised program occurred in rural NSW and involved ‘Charles’ who was in Year 4 at the time we learned of it. That the school covered the full K-12 range on adjoining campuses made it easier for staff to provide this flexibility.

After assessing Charles’s readiness, mid-year, it was decided that he should be accelerated to Year 8 for maths (and subsequently he was deemed ready to progress into Year 9 from the beginning of the following school year). He was also allowed individual access to the Secondary Computer Room, on the conditions that it was staffed at the times he was there, there was a free computer and he did not disrupt other students.

He had individual programs in reading, English, research, HSIE (SOSE), and science and technology, these being undertaken predominantly in the Year 4 classroom but with access to the library and Special Needs Room. In HSIE and science Charles worked on the same topics as the other Year 4 students but was set differentiated tasks that required higher levels of thinking.

Creative arts, sport/PE and assembly were taken with his Year 4 age peers, so that each afternoon he had the opportunity to participate and interact with the Year 4 group with which he was familiar, eg to practise his speaking and listening skills, among other things. It was decided that Charles did not need formal teaching in spelling and handwriting at that stage so those were eliminated from his program (a form of curriculum compacting).

Not only was this school willing to address the particular needs of its most highly gifted student but also it employed a collaborative management plan to ensure that the burden of implementing such flexibility did not fall too heavily on the student’s class teacher.

Four teachers assumed shared responsibility for Charles’s education and well-being:

- his Year 4 teacher managed his HSIE, science and technology, and reading/English programs, as well as his afternoon activities with Year 4. She also oversaw his movement around the school and was his parents’ contact person;
- the school’s (half-time) G&T coordinator planned his HSIE, science and technology and reading/English programs, provided help and incidental counselling to Charles when required, and acted as contact person for secondary staff;
- the head of the junior (primary) school provided support as marker/assessor of Charles’s reading/English, research, HSIE and science and technology work - Charles was accountable to him for the quality and quantity of his work - and also provided some counselling and parent contact support.
- the Year 8 maths teacher was computer supervisor for Charles, in addition to having responsibility for his progress in maths.
This sharing of responsibility meant that considerable curriculum differentiation was achievable.

It seems reasonable to suggest that **planning, implementing and evaluating appropriate provision for highly to profoundly gifted students should be seen as a whole-school concern**, not just that of the teacher(s) in whose class(es) the student is placed.

We recommend that Principals consider how best to provide such support in their school.

It is highly desirable that the availability and extent of such support, and how it is to be managed, are affirmed and detailed in the school’s ongoing policy and practices for addressing the needs of gifted and talented children.

Include in your deliberations how your school might plan, implement, evaluate and support:

- appropriate provision for highly to profoundly gifted students
- individual education plans
- acceleration in its various forms.

It is important also to consider the professional development implications for members of your staff.

**Was this flexibility worth the effort?**

Yes. Charles’s mother reported that he ‘has regained his love of learning’, ‘is happy to go to school each day because each day brings a new challenge now that he has been accelerated’ and ‘is now feeling like he belongs’.

His maths teacher cited two instances as indicative of Charles’s exceptional maths ability (and his readiness for the acceleration):

- ‘First, Charles had not studied Pythagoras’s Theorem before. I asked him to read through the explanations and examples in the Year 8 textbook, do some questions, and ask me about anything that didn’t make sense. He had no questions for me. I gave him a test and he scored 100%, setting out his solutions clearly and correctly.’
• ‘Secondly, Charles and I spent two hours working through the chapter on Percentages to ensure he had covered the Year 8 curriculum. The unit normally takes about two weeks in class, but after two hours Charles showed a very sound understanding of the whole topic.’

These two positive examples provide models of what can be done to match provision with the specific needs of gifted children. In the first case placement of the student was adjusted, though probably with little curriculum differentiation other than in maths. In the second case the school endeavoured to provide differentiated content in several learning areas, as well as accelerated placement in others.

A negative example

Important lessons can also be learned from negative examples. One former student (Anonymous, 1991) described her experience as follows:

‘I was grade skipped in 1958, in a primary school in [an Australian state]. I had started the school year in Grade 4 (a combined Grade 3/4 classroom) and in term two, aged nine years, I was moved into Grade 5 (a combined Grade 5/6 classroom). I was neither consulted nor prepared for the move which ultimately proved unsuccessful.

The problem, as I now see it, was that the teachers were unaware of my full potential, making them also unaware that I was grossly underachieving and had been all my school life. The effects of years of stagnation and isolation had taken their toll and rather than challenging me, the advanced curriculum broke me.

Rigid timetabling and restricted playing areas based upon grade levels isolated me from my former classmates. While they were not good friends, they were my only form of company in school. Sporting teams and PE groups in my new classroom were already struck and the teams to which I was assigned felt handicapped, for I was physically smaller than my classmates.

The class teacher also felt put upon and gave vent to her irritation in the form of negative comments to the class, thus further compounding my isolation.

It is my belief that for grade skipping to work effectively with the underachieving gifted student, an integration strategy has to be devised which includes testing for strengths and weaknesses then providing a bridging course for the student. Student and teachers may need counselling and the school structure needs to be flexible.’
This occurred many years ago when teachers had little information about acceleration to guide their decisions but it reminds us of the need to follow the guidelines discussed in Core Module 6, for this negative example is not evidence that acceleration is inappropriate or risky. Rather, it is a graphic illustration of how not to implement grade skipping.

You might profitably pause here a moment to reflect on:

(a) what mistakes the school made in this girl’s case, and
(b) what could have been done to increase the likelihood of her acceleration being successful.

If possible, discuss your thoughts with a colleague or friend.

Lessons from these and other case studies of acceleration

Teaching is a continual problem solving activity. Furthermore, an effective solution to one teaching problem may not be best in another situation, despite evident similarities. Therefore, we are often better served by principles to guide our professional decision making rather than trying to resort to ‘recipes’ or preconceived solutions - though we can learn from others’ successes and failures. Some principles that emerge from documented cases of acceleration in practice include:

• Each case really must be considered on its individual merits.

• Acceleration is a process as much as a placement decision, so needs to be planned, implemented and evaluated in light of the best available evidence - about the student and about the process of acceleration.

• The effort expended in preparing a student for acceleration will be well invested, in that it should diminish the need for time consuming ‘remediation’ later.

• Acceleration should be seen as a whole-school concern, to ensure its ongoing success and to avoid its becoming a stressful process for the student’s current class teacher.

• Gifted underachievers should not necessarily be excluded from acceleration just because they are not currently performing well in class.

• Acceleration is not a ‘magic bullet’ - especially if those using it are not well informed about it - and should not be seen as a substitute for a more comprehensive approach to differentiation and pastoral care.
Prepare a plan for how your school can best deal with gifted students who may benefit from acceleration. Include details of the process and of who will be responsible for the various components of this process.

Prepare a plan for how your school can best deal with gifted students who may benefit from acceleration. Include details of the process and of who will be responsible for the various components of this process. Discuss your plan with other teachers and refine it in light of their comments and ideas.
Resources

References and Further Reading

Hastings and Prince Edward District School Board. Cooperative group skills rubric. GE Telesat Project (Gifted Enrichment Program). Accessed 10/2/05, at: http://www.hpedsb.on.ca/telesat/ge/Advertising/Cooperative_group_skills_rubric.htm

Websites

http://www.nationdeceived.org/
[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.]
Module 6

Stan Bailey
Welcome to Extension Module 6: Further Issues in Developing Programs and Provisions for Gifted Students - the final Extension Module for this Professional Development Course.

In this Module we will present some concerns and advice about using cooperative group learning with gifted students, and explain how to interpret research findings reported in terms of ‘effect size’.

The planning and management of individual education programs will be discussed, as will the use of online learning (including mentoring) as another form of ability grouping for the gifted.

Further case studies of acceleration will be analysed, to extend your appreciation of issues to consider when implementing acceleration.

Stan Bailey
## Contents

Pre-Test 7
Pre-Test Answers 8
Outcomes 9

Extension Module 6: Part 1 10
Is cooperative group learning good for the gifted? 10
A fuller look at evidence on the consequences of various grouping options 15
The management of individual education programs 16
Online and group mentoring 19

Reflective/Practical Component 21

Extension Module 6: Part 2 22
Online learning as another means of grouping 22
What can we learn from case studies of acceleration? 26

Self-Assessment 31

References and Further Reading 32
1. Can you explain why cooperative group learning may not necessarily meet the needs of gifted students, and how best to use it with the gifted?

2. Can you interpret the significance of research evidence on the various grouping and acceleration options when findings are reported in terms of ‘effect size’?

3. Can you plan and manage an individual education program (IEP) for a gifted student?

4. Can you explain the benefits for gifted students of online mentoring and other forms of online learning, and how best to implement these?

5. Are you aware of case studies of well- and poorly-managed acceleration? What lessons can be learned from these?
No / Maybe: If you are not confident that you can say ‘yes’ to each of these you should benefit from at least some of the information that follows in this Extension Module.

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

At the completion of this Module you will:

• be aware of some concerns about involving gifted students in mixed-ability cooperative group learning.

• be able to interpret the academic and affective consequences of various grouping and acceleration strategies in terms of effect size findings.

• be aware of guidelines for the planning and implementation of individual education programs (IEPs) for gifted students.

• have a fuller understanding of a range of issues to consider when deciding whether and how to implement acceleration.
Part 1

Is cooperative group learning good for the gifted?

Some caveats

It is now widely accepted that all students should develop the knowledge and skills that will enable them to function productively in group settings, both in school and beyond. Proposed lists of ‘life skills’ include ‘ability to work cooperatively’, ‘communication and teamwork’ or some similar form of wording.

However, some learning characteristics of the gifted, which we discussed in Extension Module 1, suggest that not all forms of cooperative learning in mixed ability groups will benefit gifted students. Among these characteristics of the gifted are their:

- rapid pace of learning
- dislike of slow-paced work
- reasoning at a level more usually found in older students
- tendency to prefer independent work.

In addition, gifted students’ sense of fairness is often offended when they find that they contribute more than their share of the work when engaged in cooperative group activities. For example:

Ten-year-old Lin sometimes became frustrated during cooperative group work when her peers rejected her ideas (possibly because they did not understand them) in favour of other, less complex ones. She also disliked the fact that two other members of her group did not contribute very much to the final products, so that she had to do more than her share of the research and writing. She began to ask her teacher if she could work alone, or with her (similar ability) friend, Mai.
So, while there is value in cooperative group work it can be detrimental for gifted students if overused or used without regard to their particular characteristics and needs.

Ann Robinson (1990b) offers the following advice about cooperative learning and gifted students:

- Examine the amount of time in the school day during which the gifted student engages in cross-ability cooperative learning groups.

- Suggest that the gifted student engage in cooperative learning in his/her area of relative weakness rather than area of strength. In this way, the gifted student also has the opportunity to learn something new.

- Speak plainly on the issue of cooperative learning as therapy for socially maladjusted, talented students. The assumption that gifted children are more likely than others to have a variety of personal and social problems is not supported in the literature. Thus, the pill of cooperative learning may be prescribed for a perfectly healthy patient.
Robert Slavin, a strong advocate of cooperative learning, argues that group rewards are desirable but group assessment (i.e., giving all group members the same mark/grade for a shared product or performance) is not. Walters (2000) quotes him as saying:

‘A lot of the opposition to cooperative learning has been because an A student comes home with a C. When the parents ask what happened, the kids say there’s another student in their group who keeps making trouble. The parents go ballistic, as they, frankly, should.’

‘The grading system should be completely based on your own personal performance, whereas the group recognition or rewards can be parallel to that.’

**Learning social skills**

It is often asserted that gifted students will learn (a) social skills and (b) to appreciate others less academically able than themselves, if given the responsibilities of group leader and/or peer tutor during cooperative learning tasks.

Roger and David Johnson (1994), who are major advocates of cooperative learning, ask rhetorically:

‘... don’t we want all students to be comfortable with and accepting of individual differences (their own and others)? Don’t we want all students to have sophisticated social skills that will enable them to work with people they perceive as “different” or even “difficult”?’

We agree that these are desirable outcomes but we contend that their achievement should not be at the expense of gifted students’ opportunities to learn other, personally appropriate skills and to acquire new (advanced) knowledge. What is optimal for the gifted may not be what is optimal for other students. To get this balance wrong may result in gifted students becoming disaffected underachievers.

The professional judgements that the well-informed teacher must make are, as Karen Rogers (2002, p. 240) states:

‘do the social benefits outweigh the bright student’s need for academic challenge, and if so, how much of their time should be spent on this type of socialization in school?’

Presumably, curriculum compacting should be applied to gifted students’ learning of cooperative skills, just as to other curriculum content.
An example of an assessment rubric to guide your assessment of students’ levels of cooperative group skills is available online at:

http://www.hpedsb.on.ca/telesat/ge/Advertising/Cooperative_group_skills_rubric.htm

**Cooperative learning within ability groups**

The acquisition of cooperative group skills is just as possible, and probably more effectively learned, in homogeneous groups. These may be selective classes or cluster groups of gifted students within mixed ability classes, or may involve part-time withdrawal groups of like-minded students, as in competitions that require teamwork, such as Tournament of Minds or Future Problem Solving.

The cooperative learning strategy, ‘jigsaw’ (see: http://www.jigsaw.org/overview.htm, or http://esol.sbmc.org/eso60/strategies.htm, for an explanation) is one that provides opportunities for some homogeneous grouping, in that either the ‘home’ group or more probably the ‘expert’ group can be formed on a like-ability basis, ie clustering the gifted within one (or two, if there are many gifted students in the class) of the expert groups.

Even Johnson and Johnson (cited in Missouri Department of Elementary and Secondary Education, 1997) concede that ‘there are times when the gifted should be grouped together for fast-paced, accelerated work’.

An example of a cooperative group task for gifted students, from an Advanced Placement English class in the USA, may be seen at: http://www.coe.uga.edu/epltt/LessonPlans/tanis.html

**Gifted students as teachers’ aides**

Another aspect of some cooperative group learning that gifted students (and their parents) object to is the use, or perhaps overuse, of the gifted as ‘teachers’ or tutors of their less able peers. If done sparingly and with well-matched age peers this may develop empathy, both in and for the gifted student, but the law of diminishing returns will soon be evident for the gifted student in such circumstances and frustration can result.

For example, Corinne, a highly gifted 12-year-old in 8th Grade in the USA, described her experience with, and views on, cooperative learning in the following words:

‘The ... method that is unsatisfactory is the cooperative learning program in my social studies class .... I understand that this is a controversial issue and I believe that the students’ point of view is the most important. We are the ones who are being taught so we should know what works for us and what doesn’t. In cooperative learning groups the person with the strongest personality and highest academic ability usually takes control of the group immediately. Teachers tend to put the faster learners with the slower ones to help them along. That is the exact purpose and problem with cooperative learning. The faster kids are suddenly responsible for everyone else .... Sure, on paper cooperative learning looks wonderful because not as many people fail. I believe that the advanced students are being slowed down drastically
by this learning method. Not all kids want to learn, and I feel that cooperative learning puts the responsibility of making those people learn on advanced students.

I understand that school systems try not to put students in homogeneous groups for social reasons, but there are many other places and times for gifted and talented students to socialize with these people. Our important education should not be compromised for social reasons ....' (Kearney, 1990)

Kathi Kearney goes on to argue that a teacher’s use of cooperative learning should not be at the expense of a gifted student’s opportunities to work with intellectual peers. She points out that: ‘This can be a particularly problematic situation for highly gifted girls, whose tendency to hide their abilities and to “disappear” ... may only receive more encouragement in such an environment.’

A related disadvantage is that the emphasis on gifted students as tutors encourages teachers to take a utilitarian view of them - ie, we may come to value them only for their achievements and their usefulness to others, as academic coaches and motivators for their age peers (Robinson, 1990a).

To sum up

• When using cooperative group learning teachers should be able to justify that the strategy is being used in ways that address the needs of all students involved, including the gifted.

• Like-ability cooperative groups offer most of the learning opportunities associated with mixed-ability cooperative groups and may be preferred by many gifted students, because more attuned to their pace and depth of learning.

• Furthermore, the research evidence on these two forms (reported in the following section of this Module) shows that like-ability cooperative grouping is the more effective method for gifted students.
A fuller look at evidence on the consequences of various grouping options

One of the ways of combining findings from various research studies (eg to obtain an overall, ‘big picture’ of the evidence on a particular strategy, such as full-time ability grouping, grade skipping or mentoring) or of communicating the extent to which the findings constitute compelling evidence, is through the use of ‘effect size’. It provides a concise and relatively easy to understand summary of findings, so one that should make research more accessible for teachers. It may also help you to explain and justify your evidence-based teaching to parents.

The general guidelines are that:

- an effect size of .20 is considered small
- an effect size of .50 is considered moderate
- an effect size of .80 is considered large.

Note that an effect size of .00 would mean that the strategy has no effect - positive or negative - on student learning. Negative effect sizes are possible, ie a strategy may have a negative or deleterious effect on student learning.

Karen Rogers (1999) provides another explanation of how to interpret effect size findings, namely ‘how much effect a particular adaptation has in terms of the time required to complete the curriculum for that year’. She writes:

‘For example, an effect size (ES) of .38 for non-graded classrooms (ie multiple grade/age) means if only the effect of non-graded classroom is studied, gifted children in a non-graded classroom would gain .38 of a school year through use of this adaptation alone as compared with their gifted peers in a regular classroom. Thus in slightly less than 3 years a student would have completed more than 4 years of work based on this adaptation alone. Effect sizes of .30 or higher have a substantial impact on a student’s learning levels as three years down the road the student will be one full year ahead of a regular class.’

Through the use of ES we can compare the relative influences on learning of different strategies - eg comparing the effectiveness of mixed-ability cooperative grouping (ES = 0), like-ability cooperative grouping (ES = .28) and cluster grouping of gifted students (ES = .62).

See Rogers (1999) for a detailed set of these comparisons. You may be surprised by some of the findings.

Note that Rogers is careful to point out the limitations of some sets of evidence, highlighting the fact that you need to know more than just the effect size figure if you are to interpret and communicate research evidence accurately.
The management of individual education programs

What is an IEP?

Following the United States Congress's passing in 1975 of the 'Education of All Handicapped Children Act' the term 'individualised education program', or IEP, has gained wide usage within special education as one means of addressing the special support needs of individual students whose educational opportunities may be limited by a handicapping condition.

More recently this term has been adopted also by educators in the gifted education field, building on the notion of individual investigations of 'real life problems' in areas of gifted students' strengths and interests, as advocated by Renzulli and Maker among others.

If implemented in the spirit that applies in special education, an IEP for a gifted student will involve a written commitment of resources and support, for a specified time and purpose.

It is usually a long-term plan, with broad annual goal(s) as well as short-term outcomes that will contribute to the attainment of the overall goal(s). The plan may be thought of as a map that shows where the student is going and how you will know when, or whether, she has arrived (ie achieved the specified outcomes).

The planning process

Silverman (1998) states that an IEP should result from the collaborative planning of school executive, parents, teachers, the school counsellor and the gifted student. She recommends that a teacher interview the gifted student prior to the development of the plan, since highly gifted students often have the best insights about what their learning needs are.

The Louisiana Department of Education (2002) lists as IEP participants the special (ie gifted) education teacher, the regular education (ie class) teacher, the student and the students' parents. Its management form requires details of:

- meeting dates
- the student's ‘primary exceptionality’ and ‘secondary exceptionality’
- general student information + educational needs (academic and/or social-emotional)
- specific current performance + method of measurement
- an annual goal with differentiated objectives/ benchmarks ('The student will ...') and the date achieved.
Advice from Kansas on ‘making the most of your IEP’ (Sheets, 2005) suggests the inclusion in a plan of:

- present level of performance
- goals and benchmarks/objectives
  
  (‘What are the specific activities that the student will engage in, and what are the steps that will help them reach the goal? How do they relate to the general education classroom and content?’)
- program modifications
  
  (‘What parts of the general program will be modified and how? What support will be needed for the classroom teacher or others providing services?’)

For secondary school students there is also:

- transition
  
  (‘How will we help the student as they make the transition from high school to the next school/work setting?’)

Other sources

The Association for Bright Children of Ontario (2004) provides a clear description of what an IEP’s content and process might comprise - written as guidance for parents but useful for teachers, too. It is available online at: http://www.abcontario.ca/magazine/spri04.htm

Some general guidelines for planning the content of an individual program are available at the Center for Gifted Education, College of William and Mary’s website, ‘Individual instruction plan menu for the gifted child’ (reprinted from VanTassel-Baska, 1998, pp.175-179), at: http://cfge.wm.edu/documents/IndivInstructionMenu.htm

This source lists suggestions for ‘language arts’ (reading, writing, verbal expression), ‘maths’, ‘science’, ‘social studies’, ‘creativity/aesthetics’ and ‘leadership/social skills’.

An Australian example

A comprehensive Australian example of an IEP planning and tracking form is to be found on the South Australian Curriculum Standards and Accountability website, at: http://www.sacsa.sa.edu.au/index_fsrc.asp?t=ECCP&ID=E6.2.1E We recommend that you visit this site yourself, but some of its features are summarised below.

- It states that:

  ‘An Individual Education Plan (IEP) is required for highly gifted students needing specific provision beyond that which is currently offered within the classroom. These students will be working at significantly higher levels than their age peers.’
It is recommended that an IEP is negotiated and updated at least once a year and a copy included in The Pupil Record Folder (to ensure continuity of provision by subsequent teachers). (Note that we consider it preferable to review and update at least once per term.)

- It devotes two pages to an ‘Information profile’, comprising a mix of quantitative and qualitative data - from tests, nomination forms and competitions - as well as academic, behavioural and special interests/extracurricular involvement summaries for the student.
- It includes a one-page overview of the curriculum differentiation to be provided within the specified time period. This covers ‘curriculum area’, ‘goals’, and ‘strategies’ - which range from ‘in-class provision(s) to ‘school-wide provision(s), ‘community option(s)’ and ‘other provision(s)’.
- There follow lists of possible differentiation strategies for each of these four categories.
- Finally, a one-page ‘Individual contract’ is provided, inviting planners to match identified learning needs with instructional and management strategies to meet these needs.

Note that your state, territory or system may have developed its own guidelines and forms for the use of IEPs - and/or its own term for them - so check locally before you begin your plan.

Who needs one?

Any gifted student who also has a learning disability or impairment should be considered for some form of individualised program or IEP, as should any gifted student who is significantly underachieving or at risk of becoming a chronic underachiever.

Gifted students whose level of giftedness is beyond the ‘moderate’ range should also be considered for such provisions, as the case studies in Part 2 of this Extension Module demonstrate.
Online and group mentoring

We discussed online mentoring briefly in Core Module 3. Online mentoring overcomes the tyranny of distance, especially for those in rural areas. Gifted students may experience isolation in the midst of a large city, if they have no immediate peers with whom to share their advanced interests, but this sense of isolation can be greatly heightened for those living in a small rural community.

Not only can online mentoring provide gifted students with access to those with expertise or specialist knowledge but also it allows these mentors to share their special interests with a group of fellow enthusiasts. Lynne Kelly (1998, p. 24) makes this point well:

‘A student who is keen to know more about the hard core of computing or the abstractions of existentialism is not going to find those experts around the corner. Technology allows us to link them - to link like minds.

A teacher who has a passion for fractals or artificial intelligence is not going to find a lot of students mad keen to join in their passion in a single school. The technology allows them to share that passion with students who are keen to learn it.’

Class teachers know all too well the sense of inadequacy that can result from discovering among their students one whose advanced knowledge seems already superior to their own and whose passion to explore further seems insatiable. Online mentoring enables you to link such students with adults who possess similar enthusiasm but also the extra knowledge to extend and challenge the gifted child.

Gifted students benefit from mentoring when they acquire knowledge and skills faster than their age peers. In fact, the curriculum compacting that this allows can provide in-school time for gifted students to communicate with their mentor or to engage in extension tasks suggested by the mentor.

Whether gifted students see curriculum compacting as desirable will be determined by the way the ‘spare’ time they achieve through it is spent. It is highly likely that allowing such time to be devoted to working with a mentor - individually or with a group of gifted peers - will be seen by those involved as desirable.

Online mentoring means that small group mentoring is more possible since the participating students need not be from the same class (or school) and need not be available at the same times, or even on the same days. That is, asynchronous online discussions and communication provide a degree of flexibility that may make it easier for you to find a willing mentor while also avoiding timetable difficulties re access to school computers. Online mentoring allows you to draw upon a far greater pool of potential mentors than is practical with local, face-to-face mentoring.
Siegle (2003) identifies three types of online mentoring:

- mentor experts who agree to respond to students’ questions (e.g., various ‘ask an expert’ sites, such as the MadSci Network, at: http://www.madsci.org/)

- mentors who are paired with a single student

- mentors who work in partnerships.

Siegle (2003) observes that online mentoring is most successful when it involves a three-way partnership among students, their teachers, and the mentor(s) - the teacher’s role being that of a local manager and encourager, providing support when needed and ensuring that technical or other problems that arise are quickly resolved. The teacher will also be responsible for child safety and protection aspects of the mentorship (e.g., by monitoring archived communication through email or online forums).

For this and other reasons, it is highly desirable that the school provides its mentor(s) with some form of ‘training’, especially if they have not acted as a mentor previously. This can take the form of written guidelines and/or a short online discussion led by the teacher overseeing the mentorship.

The student should also be prepared for the mentorship, to ensure that he understands its purpose, its scope and limitations, and the rights and responsibilities that are inherent in it.

**Which students benefit from online mentoring?**

It is suggested that children with well-defined interests are the best candidates for online mentoring, especially if they also have independent work habits and advanced mastery of subject matter, as well as a wish to be mentored.

This may seem to eliminate gifted underachievers from this option but such a conclusion is unwise, for mentoring may be the very strategy to spark the development of their hidden potential. Examples of this will be discussed in Specialisation Module 6.

The unobtrusive nature of online communication is an advantage for gifted students who may prefer to maintain a low profile in mixed ability classes, often because of their awareness of the forced-choice dilemma. With online mentors, students can discuss ideas at an advanced level of complexity or abstractness without affecting, or being affected by, other students in the class.

**Research evidence on mentoring**

Rogers (1999) reports that mentorships among gifted students result in very worthwhile socialisation effects (ES = .47) and self-esteem effects (ES = .42), as well as academic effects (ES = .57).

The specific effects of online mentoring have yet to be fully determined.

---

It is important to keep in mind that the optimum form of provision is likely to be a mix of **face-to-face and online contact** (with mentor and like-minded gifted peers), rather than online alone.
Reflective/Practical Component

Given their specific characteristics and needs, how do you best develop gifted students’ cooperative group skills in school settings?

Consider:

(a) how you might use like-ability and mixed-ability groupings to achieve an optimum mix of the two.

(b) how you could assess gifted students’ mastery of these skills.

Discuss your ideas with at least one ‘critical friend’ (eg a trusted colleague whose opinions you respect), to help you refine and justify your approach.
Online learning as another means of grouping

The Internet may be seen as a teaching aid that gives schools the potential to realise the often-stated goal of individualising learning. It can help gifted students to pursue individualised investigations or creative products but it can also be another, unobtrusive, means of ability grouping, bringing together like-minded students regardless of their location.

Advantages of online grouping of the gifted

- The Internet provides gifted children with access to expertise and advanced or specialist knowledge, which they often crave, and at a pace which they determine.
- As stated above, group members need not be from the same class or school, nor from the same district, state or country.
Computers and the Internet can make it easier to link like-minded and like ability students, especially those who are highly to profoundly gifted and are likely to be relatively isolated across a wide geographic spread of communities.

- Likewise, group members need not be of the same age but may be grouped according to readiness for whatever content and processes are to be addressed.

Perhaps the Internet’s greatest advantage for gifted students is that it allows them access to ideas and information on the basis of readiness and interest, rather than age. The problem of gifted children’s advanced knowledge base not being accepted at face value is a common one and often a source of great frustration for them, and often for their parents.

As one mother of a highly gifted seven-year-old observed about some adults’ reactions to her highly advanced son:

‘It was not taking him seriously, because he’s a kid. I mean he was three at the time. But if they had said it to me they wouldn’t have laughed but because he was a kid they did laugh and that’s not fair. That’s lack of respect for another person’s abilities or knowledge or skill. But again it’s this age-ism thing.’ (Personal communication, 1998)

One of the most enthusiastic, knowledgeable and productive children to enrol in an online enrichment maths course offered through the University of New England in 1999, and targeted at 10- to 15-year-olds, was an eight-year-old (who lived in Tasmania). His responses were often more thoughtful and interesting than those of other, much older students in the online class.

A significant benefit of online provision is the relative anonymity of participation, where gifted students are judged on their responses and contributions rather than their age, gender, culture, appearance or disability (in the case of gifted learning disabled students). Hence, stereotyping and the forced-choice dilemma are less likely to be inhibiting factors.

Indeed, some gifted children may feel more comfortable about stating their thoughts on the computer whereas they may feel inhibited in front of (mixed-ability) classmates. Furthermore, students may be more comfortable questioning or disputing information offered through a computer than face-to-face by a class teacher (and their teacher may feel less threatened by such challenges!).
Risk taking is of a far more private nature online, so participants (students and teachers) may be more willing to engage in it.

You may wish to consider how you can test this assumption in your own school.

• An advantage for all students of online courses based on asynchronous communication is the **convenience** of fitting in the learning around other commitments.

For gifted students this may mean that acceleration in one or more subjects is available with less concern about timetable clashes or small classes that are deemed not to be viable. A school district (or several districts in collaboration) can arrange to have a teacher plan and teach such a course to an online ‘class’ of accelerated students from across all schools in the district(s).

This opportunity for asynchronous communication is a major strength of online enrichment or extension courses, for gifted students from vastly separated and remote rural locations are able to maintain a regular and ongoing stream of interaction with their course leader and among themselves, regardless of differences in time zone, or of their having other, non-coursework commitments.

It allows for flexibility in the time and place of participation: (a) at home as well as, or instead of, at school; (b) on weekends as well as during the school week; and (c) at times that fit in with the students’ sporting, social or family work commitments.

As a parent of one highly gifted student put it, ‘asynchronous interaction allows students to respond when they feel ready, to reflect without pressure and to continue contributions from home (in contrast to the artificial time constraints at school).’ (Personal communication)

• There may be an advantage in gifted students gaining **early experience of distance education** since this may encourage and facilitate their subsequent enrolment in university courses offered by this means, if they experience accelerated progression during their schooling.

That is, the possibility of dual enrolment in secondary school and university may be facilitated as tertiary courses increasingly become available via online teaching.

• The Internet provides access to **real world problem solving**, which Maker advocates (as we outlined in Extension Module 5) and which allows those gifted students with an advanced sense of social justice to act upon it. Then the products of such endeavours may easily be transmitted to an outside (‘real’) audience, to invite feedback or critical analysis, or to have their effectiveness tested in authentic settings.

It could be argued that the Internet exposes students to more blatant and pervasive commercial and political bias than they will encounter in textbooks, so is more representative of the real world, and provides different opportunities for students to develop skills in critical analysis and perceptive judgement.
- Ready made enrichment and extension activities are available online, though you need to have a clear, defensible rationale for choosing and using any of these. One Australian example is ‘The Brain Rummager’ (at: http://www.alphalink.com.au/~umbidas/), while another that is widely used with upper primary / junior secondary gifted students is the Jason Project / Jason Expedition.

WebQuests, for example, are becoming more widely used by teachers but many of those available on the Internet require little more than lower level thinking, while very few include differentiation for the gifted.

An example of a WebQuest that seems suitably demanding for gifted students is one on cloning, titled ‘Ewe 2’, (at: http://powayusd.sdcoe.k12.ca.us/projects/ewe2/).

Skill development

Gifted children often have a well-developed knowledge base and may appear to be confident and competent users of the Internet but before allowing them to engage in individual or small group investigations it is wise to diagnose just how knowledgeable they are about conducting purposeful online searches and evaluating the accuracy and validity of web site content.

Our experience has been that gifted children are often not expert in these matters and will benefit from direct teaching, or at least some scaffolding, to develop their online research skills and knowledge.

Fortunately there exist online sources to help you and your students in the acquisition of such expertise, eg:

- Bare Bones 101, at: http://www.sc.edu/beaufort/library/pages/bones/bones.shtml
- A section of Kathy Schrock’s site, at: http://school.discovery.com/schrockguide/eval.html

What about social skills?

Online learning is often criticised as being inimical to the development of social skills. While it is true that online interaction does not provide opportunities for learning to read the nonverbal cues that are often critical to understanding the subtleties of social interaction, there are social skills that can be practised and reflected upon via online group activities.

While online, students can learn, for example, to: offer help to classmates; express sympathy to peers about problems or difficulties; compliment others; display tolerance for others who are different from them; apologise when their actions have affected others badly; use a ‘tone of voice’ that is appropriate to the situation; and give simple directions to a peer.

You may be able to think of further examples like these.
There are also anecdotal reports that introverts may find online discussions more compatible with their learning style. Palloff and Pratt (2001, p. 109) cited several examples of this, with one student saying:

‘I am much more “outspoken” through the written word than through speaking. In part, I think this has to do with my more reflective nature.

Written communication provides me with the opportunity to reflect, collect my thoughts and respond before the topic has changed like it often does in face-to-face communications.’

What can we learn from case studies of acceleration?

‘Bespoke’ programs

It is very encouraging to find examples of thoughtfully implemented, individually tailored acceleration plans. One such case in the UK, reported by Tom Marjoram, involved a 15-year-old gifted girl who had lived with her family in Europe, mainly in Germany, before returning to a school in Oxfordshire. At that school she was studying German with the equivalent of our Year 12, French with Year 11 and English, history, geography, science and home economics with her Year 10 contemporaries.

However, she was not timetabled for mathematics at all, this being her greatest strength, moreso than her evident flair for modern languages. Her maths talent had been spotted by a university don who coached her outside school and the university had virtually promised her a place to continue the subject at tertiary level when she was ready. She had occasional tutorials with the Head of Maths at her school but it was generally accepted that she was better off working on her own than plodding through all the normal senior high school work. As Marjoram (1988, p.49) observed:

‘This apparently odd program was entirely suited to her needs and the willingness of the school to produce “bespoke” programs not only for her but for several others was an example of sensitive flexibility which is seen too seldom.’
An example from a rural school

One Australian equivalent of such an individualised program occurred in rural NSW and involved ‘Charles’ who was in Year 4 at the time we learned of it. That the school covered the full K-12 range on adjoining campuses made it easier for staff to provide this flexibility.

After assessing Charles’s readiness, mid-year, it was decided that he should be accelerated to Year 8 for maths (and subsequently he was deemed ready to progress into Year 9 from the beginning of the following school year). He was also allowed individual access to the Secondary Computer Room, on the conditions that it was staffed at the times he was there, there was a free computer and he did not disrupt other students.

He had **individual programs** in reading, English, research, HSIE (SOSE), and science and technology, these being undertaken predominantly in the Year 4 classroom but with access to the library and Special Needs Room. In HSIE and science Charles worked on the same topics as the other Year 4 students but was set **differentiated tasks** that required higher levels of thinking.

Creative arts, sport/PE and assembly were taken with his Year 4 age peers, so that each afternoon he had the opportunity to participate and interact with the Year 4 group with which he was familiar, eg to practise his speaking and listening skills, among other things. It was decided that Charles did not need formal teaching in spelling and handwriting at that stage so those were eliminated from his program (a form of **curriculum compacting**).

Not only was this school willing to address the particular needs of its most highly gifted student but also it employed a **collaborative management plan** to ensure that the burden of implementing such flexibility did not fall too heavily on the student’s class teacher.

Four teachers assumed shared responsibility for Charles’s education and well-being:

- his Year 4 teacher managed his HSIE, science and technology, and reading/English programs, as well as his afternoon activities with Year 4. She also oversaw his movement around the school and was his parents’ contact person;
- the school’s (half-time) G&T coordinator planned his HSIE, science and technology and reading/English programs, provided help and incidental counselling to Charles when required, and acted as contact person for secondary staff;
- the head of the junior (primary) school provided support as marker/assessor of Charles’s reading/English, research, HSIE and science and technology work - Charles was accountable to him for the quality and quantity of his work - and also provided some counselling and parent contact support;
- the Year 8 maths teacher was computer supervisor for Charles, in addition to having responsibility for his progress in maths.
This sharing of responsibility meant that considerable curriculum differentiation was achievable.

It seems reasonable to suggest that planning, implementing and evaluating appropriate provision for highly to profoundly gifted students should be seen as a whole-school concern, not just that of the teacher(s) in whose class(es) the student is placed.

We recommend that Principals consider how best to provide such support in their school.

It is highly desirable that the availability and extent of such support, and how it is to be managed, are affirmed and detailed in the school’s ongoing policy and practices for addressing the needs of gifted and talented children.

Include in your deliberations how your school might plan, implement, evaluate and support:

- appropriate provision for highly to profoundly gifted students
- individual education plans
- acceleration in its various forms.

It is important also to consider the professional development implications for members of your staff.

Was this flexibility worth the effort?

Yes. Charles’s mother reported that he ‘has regained his love of learning’, ‘is happy to go to school each day because each day brings a new challenge now that he has been accelerated’ and ‘is now feeling like he belongs’.

His maths teacher cited two instances as indicative of Charles’s exceptional maths ability (and his readiness for the acceleration):

- ‘First, Charles had not studied Pythagoras’s Theorem before. I asked him to read through the explanations and examples in the Year 8 textbook, do some questions, and ask me about anything that didn’t make sense. He had no questions for me. I gave him a test and he scored 100%, setting out his solutions clearly and correctly.’
• ‘Secondly, Charles and I spent two hours working through the chapter on Percentages to ensure he had covered the Year 8 curriculum. The unit normally takes about two weeks in class, but after two hours Charles showed a very sound understanding of the whole topic.’

These two positive examples provide models of what can be done to match provision with the specific needs of gifted children. In the first case placement of the student was adjusted, though probably with little curriculum differentiation other than in maths. In the second case the school endeavoured to provide differentiated content in several learning areas, as well as accelerated placement in others.

A negative example

Important lessons can also be learned from negative examples. One former student (Anonymous, 1991) described her experience as follows:

‘I was grade skipped in 1958, in a primary school in [an Australian state]. I had started the school year in Grade 4 (a combined Grade 3/4 classroom) and in term two, aged nine years, I was moved into Grade 5 (a combined Grade 5/6 classroom). I was neither consulted nor prepared for the move which ultimately proved unsuccessful.

The problem, as I now see it, was that the teachers were unaware of my full potential, making them also unaware that I was grossly underachieving and had been all my school life. The effects of years of stagnation and isolation had taken their toll and rather than challenging me, the advanced curriculum broke me.

Rigid timetabling and restricted playing areas based upon grade levels isolated me from my former classmates. While they were not good friends, they were my only form of company in school. Sporting teams and PE groups in my new classroom were already struck and the teams to which I was assigned felt handicapped, for I was physically smaller than my classmates.

The class teacher also felt put upon and gave vent to her irritation in the form of negative comments to the class, thus further compounding my isolation.

It is my belief that for grade skipping to work effectively with the underachieving gifted student, an integration strategy has to be devised which includes testing for strengths and weaknesses then providing a bridging course for the student. Student and teachers may need counselling and the school structure needs to be flexible.’
This occurred many years ago when teachers had little information about acceleration to guide their decisions but it reminds us of the need to follow the guidelines discussed in Core Module 6, for this negative example is not evidence that acceleration is inappropriate or risky. Rather, it is a graphic illustration of how not to implement grade skipping.

You might profitably pause here a moment to reflect on:

(a) what mistakes the school made in this girl’s case, and
(b) what could have been done to increase the likelihood of her acceleration being successful.

If possible, discuss your thoughts with a colleague or friend.

**Lessons from these and other case studies of acceleration**

Teaching is a continual problem solving activity. Furthermore, an effective solution to one teaching problem may not be best in another situation, despite evident similarities. Therefore, we are often better served by **principles** to guide our professional decision making rather than trying to resort to ‘recipes’ or preconceived solutions - though we can learn from others’ successes and failures.

Some principles that emerge from documented cases of acceleration in practice include:

- Each case really must be considered on its **individual merits**.
- Acceleration is **a process as much as a placement decision**, so needs to be planned, implemented and evaluated in light of the best available evidence - about the student and about the process of acceleration.
- The effort expended in **preparing a student for acceleration** will be well invested, in that it should diminish the need for time consuming ‘remediation’ later.
- Acceleration should be seen as **a whole-school concern**, to ensure its ongoing success and to avoid its becoming a stressful process for the student’s current class teacher.
- **Gifted underachievers** should not necessarily be excluded from acceleration just because they are not currently performing well in class.
- **Acceleration is not a ‘magic bullet’** - especially if those using it are not well informed about it - and should not be seen as a substitute for a more comprehensive approach to differentiation and pastoral care.
Prepare a plan for how your school can best deal with gifted students who may benefit from acceleration. Include details of the process and of who will be responsible for the various components of this process.

Discuss your plan with other teachers and refine it in light of their comments and ideas.
Resources

References and Further Reading

Hastings and Prince Edward District School Board. Cooperative group skills rubric. GE Telesat Project (Gifted Enrichment Program). Accessed 10/2/05, at: http://www.hpedsb.on.ca/telesat/ge/Advertising/cooperative_group_skills_rubric.htm

Websites

http://www.nationdeceived.org/

[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.]
Module 6

Stan Bailey
Welcome to Extension Module 6: Further Issues in Developing Programs and Provisions for Gifted Students - the final Extension Module for this Professional Development Course.

In this Module we will present some concerns and advice about using cooperative group learning with gifted students, and explain how to interpret research findings reported in terms of ‘effect size’.

The planning and management of individual education programs will be discussed, as will the use of online learning (including mentoring) as another form of ability grouping for the gifted.

Further case studies of acceleration will be analysed, to extend your appreciation of issues to consider when implementing acceleration.

Stan Bailey
Further Issues in Developing Programs and Provisions for Gifted Students

Contents

Pre-Test 7
Pre-Test Answers 8
Outcomes 9
Extension Module 6: Part 1 10
Is cooperative group learning good for the gifted? 10
A fuller look at evidence on the consequences of various grouping options 15
The management of individual education programs 16
Online and group mentoring 19
Reflective/Practical Component 21
Extension Module 6: Part 2 22
Online learning as another means of grouping 22
What can we learn from case studies of acceleration? 26
Self-Assessment 32
References and Further Reading 33
1. Can you explain why cooperative group learning may not necessarily meet the needs of gifted students, and how best to use it with the gifted?

2. Can you interpret the significance of research evidence on the various grouping and acceleration options when findings are reported in terms of ‘effect size’?

3. Can you plan and manage an individual education program (IEP) for a gifted student?

4. Can you explain the benefits for gifted students of online mentoring and other forms of online learning, and how best to implement these?

5. Are you aware of case studies of well- and poorly-managed acceleration? What lessons can be learned from these?
No / Maybe: If you are not confident that you can say ‘yes’ to each of these you should benefit from at least some of the information that follows in this Extension Module.

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

At the completion of this Module you will:

- be aware of some concerns about involving gifted students in mixed-ability cooperative group learning.

- be able to interpret the academic and affective consequences of various grouping and acceleration strategies in terms of effect size findings.

- be aware of guidelines for the planning and implementation of individual education programs (IEPs) for gifted students.

- have a fuller understanding of a range of issues to consider when deciding whether and how to implement acceleration.
Is cooperative group learning good for the gifted?

Some caveats

It is now widely accepted that all students should develop the knowledge and skills that will enable them to function productively in group settings, both in school and beyond. Proposed lists of ‘life skills’ include ‘ability to work cooperatively’, ‘communication and teamwork’ or some similar form of wording.

However, some learning characteristics of the gifted, which we discussed in Extension Module 1, suggest that not all forms of cooperative learning in mixed ability groups will benefit gifted students. Among these characteristics of the gifted are their:

- rapid pace of learning
- dislike of slow-paced work
- reasoning at a level more usually found in older students
- tendency to prefer independent work.

In addition, gifted students’ sense of fairness is often offended when they find that they contribute more than their share of the work when engaged in cooperative group activities. For example:

*During the third week of second term 14-year-old Sophia told one of her teachers that she thought it unfair that she would again receive the same mark as the other members of her cooperative learning group since, as had happened the previous term, she was having to do much more of the research and writing than anyone else in her group. She also stated that some of her group peers did not understand answers she had contributed but were getting marks for them as part of the group assessment process. She asked if she could work on some tasks alone or if next time she could work as a pair with her (similar ability) friend, Andrena.*
So, while there is value in cooperative group work it can be detrimental for gifted students if overused or used without regard to their particular characteristics and needs.

Ann Robinson (1990b) offers the following advice about cooperative learning and gifted students:

- Examine the amount of time in the school day during which the gifted student engages in cross-ability cooperative learning groups.

- Suggest that the gifted student engage in cooperative learning in his/her area of relative weakness rather than area of strength. In this way, the gifted student also has the opportunity to learn something new.

- Speak plainly on the issue of cooperative learning as therapy for socially maladjusted, talented students. The assumption that gifted children are more likely than others to have a variety of personal and social problems is not supported in the literature. Thus, the pill of cooperative learning may be prescribed for a perfectly healthy patient.
Robert Slavin, a strong advocate of cooperative learning, argues that group rewards are desirable but group assessment (ie giving all group members the same mark/grade for a shared product or performance) is not. Walters (2000) quotes him as saying:

‘A lot of the opposition to cooperative learning has been because an A student comes home with a C. When the parents ask what happened, the kids say there’s another student in their group who keeps making trouble. The parents go ballistic, as they, frankly, should.’

‘The grading system should be completely based on your own personal performance, whereas the group recognition or rewards can be parallel to that.’

**Learning social skills**

It is often asserted that gifted students will learn (a) social skills and (b) to appreciate others less academically able than themselves, if given the responsibilities of group leader and/or peer tutor during cooperative learning tasks.

Roger and David Johnson (1994), who are major advocates of cooperative learning, ask rhetorically:

‘... don’t we want all students to be comfortable with and accepting of individual differences (their own and others)? Don’t we want all students to have sophisticated social skills that will enable them to work with people they perceive as “different” or even “difficult”?’

We agree that these are desirable outcomes but we contend that their achievement should not be at the expense of gifted students’ opportunities to learn other, personally appropriate skills and to acquire new (advanced) knowledge. What is optimal for the gifted may not be what is optimal for other students. To get this balance wrong may result in gifted students becoming disaffected underachievers.

The professional judgements that the well-informed teacher must make are, as Karen Rogers (2002, p. 240) states:

‘do the social benefits outweigh the bright student’s need for academic challenge, and if so, how much of their time should be spent on this type of socialization in school?’

Presumably, curriculum compacting should be applied to gifted students’ learning of cooperative skills, just as to other curriculum content.
An example of an assessment rubric to guide your assessment of students’ levels of cooperative group skills is available online at:

http://www.hpedsb.on.ca/telesat/ge/Advertising/Cooperative_group_skills_rubric.htm

Cooperative learning within ability groups

The acquisition of cooperative group skills is just as possible, and probably more effectively learned, in homogeneous groups. These may be selective classes or cluster groups of gifted students within mixed ability classes, or may involve part-time withdrawal groups of like-minded students, as in competitions that require teamwork, such as Tournament of Minds or Future Problem Solving.

The cooperative learning strategy, ‘jigsaw’ (see: http://www.jigsaw.org/overview.htm, or http://esol.sbmc.org/esol60/strategies.htm, for an explanation) is one that provides opportunities for some homogeneous grouping, in that either the ‘home’ group or more probably the ‘expert’ group can be formed on a like-ability basis, ie clustering the gifted within one (or two, if there are many gifted students in the class) of the expert groups.

Even Johnson and Johnson (cited in Missouri Department of Elementary and Secondary Education, 1997) concede that ‘there are times when the gifted should be grouped together for fast-paced, accelerated work’.

An example of a cooperative group task for gifted students, from an Advanced Placement English class in the USA, may be seen at: http://www.coe.uga.edu/epltt/LessonPlans/tanis.html

Gifted students as teachers’ aides

Another aspect of some cooperative group learning that gifted students (and their parents) object to is the use, or perhaps overuse, of the gifted as ‘teachers’ or tutors of their less able peers. If done sparingly and with well-matched age peers this may develop empathy, both in and for the gifted student, but the law of diminishing returns will soon be evident for the gifted student in such circumstances and frustration can result.

For example, Corinne, a highly gifted 12-year-old in 8th Grade in the USA, described her experience with, and views on, cooperative learning in the following words:

‘The ... method that is unsatisfactory is the cooperative learning program in my social studies class .... I understand that this is a controversial issue and I believe that the students’ point of view is the most important. We are the ones who are being taught so we should know what works for us and what doesn’t. In cooperative learning groups the person with the strongest personality and highest academic ability usually takes control of the group immediately. Teachers tend to put the faster learners with the slower ones to help them along. That is the exact purpose and problem with cooperative learning. The faster kids are suddenly responsible for everyone else .... Sure, on paper cooperative learning looks wonderful because not as many people fail. I believe that the advanced students are being slowed down drastically
by this learning method. Not all kids want to learn, and I feel that cooperative learning puts the responsibility of making those people learn on advanced students.

I understand that school systems try not to put students in homogeneous groups for social reasons, but there are many other places and times for gifted and talented students to socialize with these people. Our important education should not be compromised for social reasons....'

(Kearney, 1990)

Kathi Kearney goes on to argue that a teacher’s use of cooperative learning should not be at the expense of a gifted student’s opportunities to work with intellectual peers. She points out that: ‘This can be a particularly problematic situation for highly gifted girls, whose tendency to hide their abilities and to “disappear” ... may only receive more encouragement in such an environment.’

A related disadvantage is that the emphasis on gifted students as tutors encourages teachers to take a utilitarian view of them - ie, we may come to value them only for their achievements and their usefulness to others, as academic coaches and motivators for their age peers (Robinson, 1990a).

To sum up

- When using cooperative group learning teachers should be able to justify that the strategy is being used in ways that address the needs of all students involved, including the gifted.
- Like-ability cooperative groups offer most of the learning opportunities associated with mixed-ability cooperative groups and may be preferred by many gifted students, because more attuned to their pace and depth of learning.
- Furthermore, the research evidence on these two forms (reported in the following section of this Module) shows that like-ability cooperative grouping is the more effective method for gifted students.
A fuller look at evidence on the consequences of various grouping options

One of the ways of combining findings from various research studies (eg to obtain an overall, ‘big picture’ of the evidence on a particular strategy, such as full-time ability grouping, grade skipping or mentoring) or of communicating the extent to which the findings constitute compelling evidence, is through the use of ‘effect size’. It provides a concise and relatively easy to understand summary of findings, so one that should make research more accessible for teachers. It may also help you to explain and justify your evidence-based teaching to parents.

The general guidelines are that:

- an effect size of .20 is considered small
- an effect size of .50 is considered moderate
- an effect size of .80 is considered large.

Note that an effect size of .00 would mean that the strategy has no effect - positive or negative - on student learning. Negative effect sizes are possible, ie a strategy may have a negative or deleterious effect on student learning.

Karen Rogers (1999) provides another explanation of how to interpret effect size findings, namely ‘how much effect a particular adaptation has in terms of the time required to complete the curriculum for that year’. She writes:

‘For example, an effect size (ES) of .38 for non-graded classrooms (ie multiple grade/age) means if only the effect of non-graded classroom is studied, gifted children in a non-graded classroom would gain .38 of a school year through use of this adaptation alone as compared with their gifted peers in a regular classroom. Thus in slightly less than 3 years a student would have completed more than 4 years of work based on this adaptation alone. Effect sizes of .30 or higher have a substantial impact on a student’s learning levels as three years down the road the student will be one full year ahead of a regular class.’

Through the use of ES we can compare the relative influences on learning of different strategies - eg comparing the effectiveness of mixed-ability cooperative grouping (ES = 0), like-ability cooperative grouping (ES = .28) and cluster grouping of gifted students (ES = .62).

See Rogers (1999) for a detailed set of these comparisons. You may be surprised by some of the findings.

Note that Rogers is careful to point out the limitations of some sets of evidence, highlighting the fact that you need to know more than just the effect size figure if you are to interpret and communicate research evidence accurately.
The management of individual education programs

What is an IEP?
Following the United States Congress’s passing in 1975 of the ‘Education of All Handicapped Children Act’ the term ‘individualised education program’, or IEP, has gained wide usage within special education as one means of addressing the special support needs of individual students whose educational opportunities may be limited by a handicapping condition.

More recently this term has been adopted also by educators in the gifted education field, building on the notion of individual investigations of ‘real life problems’ in areas of gifted students’ strengths and interests, as advocated by Renzulli and Maker among others.

If implemented in the spirit that applies in special education, an IEP for a gifted student will involve a written commitment of resources and support, for a specified time and purpose.

It is usually a long-term plan, with broad annual goal(s) as well as short-term outcomes that will contribute to the attainment of the overall goal(s). The plan may be thought of as a map that shows where the student is going and how you will know when, or whether, she has arrived (ie achieved the specified outcomes).

The planning process
Silverman (1998) states that an IEP should result from the collaborative planning of school executive, parents, teachers, the school counsellor and the gifted student. She recommends that a teacher interview the gifted student prior to the development of the plan, since highly gifted students often have the best insights about what their learning needs are.

The Louisiana Department of Education (2002) lists as IEP participants the special (ie gifted) education teacher, the regular education (ie class) teacher, the student and the students’ parents. Its management form requires details of:

• meeting dates
• the student’s ‘primary exceptionality’ and ‘secondary exceptionality’
• general student information + educational needs (academic and/or social-emotional)
• specific current performance + method of measurement
• an annual goal with differentiated objectives/ benchmarks (‘The student will ...’) and the date achieved.
Advice from Kansas on ‘making the most of your IEP’ (Sheets, 2005) suggests the inclusion in a plan of:

- present level of performance
- goals and benchmarks/objectives
  
  (‘What are the specific activities that the student will engage in, and what are the steps that will help them reach the goal? How do they relate to the general education classroom and content?’)
- program modifications
  
  (‘What parts of the general program will be modified and how? What support will be needed for the classroom teacher or others providing services?’)

For secondary school students there is also:

- transition
  
  (‘How will we help the student as they make the transition from high school to the next school/work setting?’)

Other sources

The Association for Bright Children of Ontario (2004) provides a clear description of what an IEP’s content and process might comprise – written as guidance for parents but useful for teachers, too. It is available online at: http://www.abcontario.ca/magazine/spr04.htm

Some general guidelines for planning the content of an individual program are available at the Center for Gifted Education, College of William and Mary’s website, ‘Individual instruction plan menu for the gifted child’ (reprinted from VanTassel-Baska, 1998, pp.175-179), at: http://cfge.wm.edu/documents/IndivInstructionMenu.htm

This source lists suggestions for ‘language arts’ (reading, writing, verbal expression), ‘maths’, ‘science’, ‘social studies’, ‘creativity/aesthetics’ and ‘leadership/social skills’.

An Australian example

A comprehensive Australian example of an IEP planning and tracking form is to be found on the South Australian Curriculum Standards and Accountability website, at: http://www.sacs.sa.edu.au/index_fsrc.asp?t=ECCP&ID=E6.2.1E We recommend that you visit this site yourself, but some of its features are summarised below.

- It states that:
  
  ‘An Individual Education Plan (IEP) is required for highly gifted students needing specific provision beyond that which is currently offered within the classroom. These students will be working at significantly higher levels than their age peers.’
‘It is recommended that an IEP is negotiated and updated at least once a year and a copy included in The Pupil Record Folder’ (to ensure continuity of provision by subsequent teachers). (Note that we consider it preferable to review and update at least once per term.)

- It devotes two pages to an ‘Information profile’, comprising a mix of quantitative and qualitative data - from tests, nomination forms and competitions - as well as academic, behavioural and special interests/extracurricular involvement summaries for the student.
- It includes a one-page overview of the curriculum differentiation to be provided within the specified time period. This covers ‘curriculum area’, ‘goals’, and ‘strategies’ - which range from ‘in-class provision(s)’ to ‘school-wide provision(s), ‘community option(s)’ and ‘other provision(s)’.
- There follow lists of possible differentiation strategies for each of these four categories.
- Finally, a one-page ‘Individual contract’ is provided, inviting planners to match identified learning needs with instructional and management strategies to meet these needs.

Note that your state, territory or system may have developed its own guidelines and forms for the use of IEPs - and/or its own term for them - so check locally before you begin your plan.

Who needs one?

Any gifted student who also has a learning disability or impairment should be considered for some form of individualised program or IEP, as should any gifted student who is significantly underachieving or at risk of becoming a chronic underachiever.

Gifted students whose level of giftedness is beyond the ‘moderate’ range should also be considered for such provisions, as the case studies in Part 2 of this Extension Module demonstrate.
Online and group mentoring

We discussed online mentoring briefly in Core Module 3. Online mentoring overcomes the tyranny of distance, especially for those in rural areas. Gifted students may experience isolation in the midst of a large city, if they have no immediate peers with whom to share their advanced interests, but this sense of isolation can be greatly heightened for those living in a small rural community.

Not only can online mentoring provide gifted students with access to those with expertise or specialist knowledge but also it allows these mentors to share their special interests with a group of fellow enthusiasts. Lynne Kelly (1998, p. 24) makes this point well:

‘A student who is keen to know more about the hard core of computing or the abstractions of existentialism is not going to find those experts around the corner. Technology allows us to link them - to link like minds.

A teacher who has a passion for fractals or artificial intelligence is not going to find a lot of students mad keen to join in their passion in a single school. The technology allows them to share that passion with students who are keen to learn it.’

Class teachers know all too well the sense of inadequacy that can result from discovering among their students one whose advanced knowledge seems already superior to their own and whose passion to explore further seems insatiable. Online mentoring enables you to link such students with adults who possess similar enthusiasm but also the extra knowledge to extend and challenge the gifted child.

Gifted students benefit from mentoring when they acquire knowledge and skills faster than their age peers. In fact, the curriculum compacting that this allows can provide in-school time for gifted students to communicate with their mentor or to engage in extension tasks suggested by the mentor.

Whether gifted students see curriculum compacting as desirable will be determined by the way the ‘spare’ time they achieve through it is spent. It is highly likely that allowing such time to be devoted to working with a mentor - individually or with a group of gifted peers - will be seen by those involved as desirable.

Online mentoring means that small group mentoring is more possible since the participating students need not be from the same class (or school) and need not be available at the same times, or even on the same days. That is, asynchronous online discussions and communication provide a degree of flexibility that may make it easier for you to find a willing mentor while also avoiding timetable difficulties re access to school computers. Online mentoring allows you to draw upon a far greater pool of potential mentors than is practical with local, face-to-face mentoring.
Siegle (2003) identifies three types of online mentoring:

- mentor experts who agree to respond to students’ questions (eg various ‘ask an expert’ sites, such as the MadSci Network, at: http://www.madsci.org/)
- mentors who are paired with a single student
- mentors who work in partnerships.

Siegle (2003) observes that online mentoring is most successful when it involves a three-way partnership among students, their teachers and the mentor(s) - the teacher’s role being that of a local manager and encourager, providing support when needed and ensuring that technical or other problems that arise are quickly resolved. The teacher will also be responsible for child safety and protection aspects of the mentorship (eg by monitoring archived communication through email or online forums).

For this and other reasons, it is highly desirable that the school provides its mentor(s) with some form of ‘training’, especially if they have not acted as a mentor previously. This can take the form of written guidelines and/or a short online discussion led by the teacher overseeing the mentorship.

The student should also be prepared for the mentorship, to ensure that he understands its purpose, its scope and limitations, and the rights and responsibilities that are inherent in it.

**Which students benefit from online mentoring?**

It is suggested that children with well defined interests are the best candidates for online mentoring, especially if they also have independent work habits and advanced mastery of subject matter, as well as a wish to be mentored.

This may seem to eliminate gifted underachievers from this option but such a conclusion is unwise, for mentoring may be the very strategy to spark the development of their hidden potential. Examples of this will be discussed in Specialisation Module 6.

The unobtrusive nature of online communication is an advantage for gifted students who may prefer to maintain a low profile in mixed ability classes, often because of their awareness of the forced-choice dilemma. With online mentors students can discuss ideas at an advanced level of complexity or abstractness without affecting, or being affected by, other students in the class.

**Research evidence on mentoring**

Rogers (1999) reports that mentorships among gifted students result in very worthwhile socialisation effects (ES = .47) and self-esteem effects (ES = .42), as well as academic effects (ES = .57).

The specific effects of online mentoring have yet to be fully determined.

It is important to keep in mind that the optimum form of provision is likely to be a mix of face-to-face and online contact (with mentor and like-minded gifted peers), rather than online alone.
Reflective/Practical Component

Given their specific characteristics and needs, how do you best develop gifted students’ cooperative group skills in school settings?

Consider:

(a) how you might use like-ability and mixed-ability groupings to achieve an optimum mix of the two.

(b) how you could assess gifted students’ mastery of these skills.

Discuss your ideas with at least one ‘critical friend’ (eg a trusted colleague whose opinions you respect), to help you refine and justify your approach.
Online learning as another means of grouping

The Internet may be seen as a teaching aid that gives schools the potential to realise the often-stated goal of individualising learning. It can help gifted students to pursue individualised investigations or creative products but it can also be another, unobtrusive, means of ability grouping, bringing together like-minded students regardless of their location.

Advantages of online grouping of the gifted

- The Internet provides gifted children with access to expertise and advanced or specialist knowledge, which they often crave, and at a pace which they determine.
- As stated above, group members need not be from the same class or school, nor from the same district, state or country.
Computers and the Internet can make it easier to link like-minded and like ability students, especially those who are highly to profoundly gifted and are likely to be relatively isolated across a wide geographic spread of communities.

- Likewise, group members need not be of the same age but may be grouped according to readiness for whatever content and processes are to be addressed.

Perhaps the Internet’s greatest advantage for gifted students is that it allows them access to ideas and information on the basis of readiness and interest, rather than age. The problem of gifted children’s advanced knowledge base not being accepted at face value is a common one and often a source of great frustration for them, and often for their parents.

An instance of this problem is found in the case of Michael Ventris and the cracking of the language code known as Linear B. As Everly (1992, p. 108) explains:

‘Linear B was a mysterious script found at Knossos on Crete and at Pylos on the Greek mainland. Only seventy–three symbols of the script were available to aid linguists in their efforts to break the code of the script, and nobody even knew what language the symbols represented. For many years the key to deciphering this script eluded professionals, but it was found by a young British architect named Michael Ventris.

Ventris adopted Linear B as a hobby when he was still a young teenager and began to learn everything he could about decipherment and Linear B on his own. He made original contributions to the decipherment when he was still a teenager, but he had to conceal his age to get his work published in professional journals. After all, everybody knows that kids can’t do original research!’

One of the most enthusiastic, knowledgeable and productive children to enrol in an online enrichment maths course offered through the University of New England in 1999, and targeted at 10- to 15-year-olds, was an eight-year-old (who lived in Tasmania). His responses were often more thoughtful and interesting than those of other, much older students in the online class.

A significant benefit of online provision is the relative anonymity of participation, where gifted students are judged on their responses and contributions rather than their age, gender, culture, appearance or disability (in the case of gifted learning disabled students). Hence, stereotyping and the forced-choice dilemma are less likely to be inhibiting factors.
Indeed, some gifted children may feel more comfortable about stating their thoughts on the computer whereas they may feel inhibited in front of (mixed-ability) classmates. Furthermore, students may be more comfortable questioning or disputing information offered through a computer than face-to-face by a class teacher (and their teacher may feel less threatened by such challenges!)

Risk taking is of a far more private nature online, so participants (students and teachers) may be more willing to engage in it.

You may wish to consider how you can test this assumption in your own school.

- An advantage for all students of online courses based on asynchronous communication is the **convenience** of fitting in the learning around other commitments.

For gifted students this may mean that acceleration in one or more subjects is available with less concern about timetable clashes or small classes that are deemed not to be viable. A school district (or several districts in collaboration) can arrange to have a teacher plan and teach such a course to an online ‘class’ of accelerated students from across all schools in the district(s).

This opportunity for asynchronous communication is a major strength of online enrichment or extension courses, for gifted students from vastly separated and remote rural locations are able to maintain a regular and ongoing stream of interaction with their course leader and among themselves, regardless of differences in time zone, or of their having other, non-coursework commitments.

It allows for flexibility in the time and place of participation: (a) at home as well as, or instead of, at school; (b) on weekends as well as during the school week; and (c) at times that fit in with the students' sporting, social or family work commitments.

As a parent of one highly gifted student put it, ‘asynchronous interaction allows students to respond when they feel ready, to reflect without pressure and to continue contributions from home (in contrast to the artificial time constraints at school).’ (Personal communication)

- There may be an advantage in gifted students gaining **early experience of distance education** since this may encourage and facilitate their subsequent enrolment in university courses offered by this means, if they experience accelerated progression during their schooling.

That is, the possibility of dual enrolment in secondary school and university may be facilitated as tertiary courses increasingly become available via online teaching.

- The Internet provides access to **real world problem solving**, which Maker advocates (as we outlined in Extension Module 5) and which allows those gifted students with an advanced sense of social justice to act upon it. Then the products of such endeavours may easily be transmitted to an outside (‘real’) audience, to invite feedback or critical analysis, or to have their effectiveness tested in authentic settings.
It could be argued that the Internet exposes students to more blatant and pervasive commercial and political bias than they will encounter in textbooks, so is more representative of the real world, and provides different opportunities for students to develop skills in critical analysis and perceptive judgement.

- Ready made enrichment and extension activities are available online, though you need to have a clear, defensible rationale for choosing and using any of these. One Australian example is ‘The Brain Rummager’ (at: http://www.alphalink.com.au/~umbidas/), while another that is widely used with upper primary / junior secondary gifted students is the Jason Project / Jason Expedition.

WebQuests, for example, are becoming more widely used by teachers but many of those available on the Internet require little more than lower level thinking, while very few include differentiation for the gifted.

An example of a WebQuest that seems suitably demanding for gifted students is one on cloning, titled ‘Ewe 2’, (at: http://powayusd.sdcoe.k12.ca.us/projects/ewe2/).

Skill development

Gifted children often have a well-developed knowledge base and may appear to be confident and competent users of the Internet but before allowing them to engage in individual or small group investigations it is wise to diagnose just how knowledgeable they are about conducting purposeful online searches and evaluating the accuracy and validity of web site content.

Our experience has been that gifted children are often not expert in these matters and will benefit from direct teaching, or at least some scaffolding, to develop their online research skills and knowledge.

Fortunately there exist online sources to help you and your students in the acquisition of such expertise, eg:

- Bare Bones 101, at: http://www.sc.edu/beaufort/library/pages/bones/bones.shtml


- A section of Kathy Schrock's site, at: http://school.discovery.com/schrockguide/eval.html
What about social skills?

Online learning is often criticised as being inimical to the development of social skills. While it is true that online interaction does not provide opportunities for learning to read the nonverbal cues that are often critical to understanding the subtleties of social interaction, there are social skills that can be practised and reflected upon via online group activities.

While online, students can learn, for example, to: offer help to classmates; express sympathy to peers about problems or difficulties; compliment others; display tolerance for others who are different from them; apologise when their actions have affected others badly; use a ‘tone of voice’ that is appropriate to the situation; and give simple directions to a peer.

You may be able to think of further examples like these.

There are also anecdotal reports that introverts may find online discussions more compatible with their learning style. Palloff and Pratt (2001, p. 109) cited several examples of this, with one student saying:

‘I am much more “outspoken” through the written word than through speaking. In part, I think this has to do with my more reflective nature.

Written communication provides me with the opportunity to reflect, collect my thoughts and respond before the topic has changed like it often does in face-to-face communications.’

What can we learn from case studies of acceleration?

‘Bespoke’ programs

It is very encouraging to find examples of thoughtfully implemented, individually tailored acceleration plans. One such case in the UK, reported by Tom Marjoram, involved a 15-year-old gifted girl who had lived with her family in Europe, mainly in Germany, before returning to a school in Oxfordshire. At that school she was studying German with the equivalent of our Year 12, French with Year 11 and English, history, geography, science and home economics with her Year 10 contemporaries.

However, she was not timetabled for mathematics at all, this being her greatest strength, moreso than her evident flair for modern languages. Her maths talent had been spotted by a university don who coached her outside school and the university had virtually promised her a place to continue the subject at tertiary level when she was ready. She had occasional tutorials with the Head of Maths at her school but it was generally accepted that she was better off working on her own than plodding through all the normal senior high school work. As Marjoram (1988, p.49) observed:
‘This apparently odd program was entirely suited to her needs and the willingness of the school to produce “bespoke” programs not only for her but for several others was an example of sensitive flexibility which is seen too seldom.’

An example from a rural school

One Australian equivalent of such an individualised program occurred in rural NSW and involved ‘Charles’ who was in Year 4 at the time we learned of it. That the school covered the full K-12 range on adjoining campuses made it easier for staff to provide this flexibility.

After assessing Charles's readiness, mid-year, it was decided that he should be accelerated to Year 8 for maths (and subsequently he was deemed ready to progress into Year 9 from the beginning of the following school year). He was also allowed individual access to the Secondary Computer Room, on the conditions that it was staffed at the times he was there, there was a free computer and he did not disrupt other students.

He had individual programs in reading, English, research, HSIE (SOSE), and science and technology, these being undertaken predominantly in the Year 4 classroom but with access to the library and Special Needs Room. In HSIE and science Charles worked on the same topics as the other Year 4 students but was set differentiated tasks that required higher levels of thinking.

Creative arts, sport/PE and assembly were taken with his Year 4 age peers, so that each afternoon he had the opportunity to participate and interact with the Year 4 group with which he was familiar, eg to practise his speaking and listening skills, among other things. It was decided that Charles did not need formal teaching in spelling and handwriting at that stage so those were eliminated from his program (a form of curriculum compacting).

Not only was this school willing to address the particular needs of its most highly gifted student but also it employed a collaborative management plan to ensure that the burden of implementing such flexibility did not fall too heavily on the student's class teacher.

Four teachers assumed shared responsibility for Charles's education and well-being:

- his Year 4 teacher managed his HSIE, science and technology, and reading/English programs, as well as his afternoon activities with Year 4. She also oversaw his movement around the school and was his parents' contact person;

- the school's (half-time) G&T coordinator planned his HSIE, science and technology and reading/English programs, provided help and incidental counselling to Charles when required, and acted as contact person for secondary staff;
• the head of the junior (primary) school provided support as marker/assessor of Charles’s reading/English, research, HSIE and science and technology work - Charles was accountable to him for the quality and quantity of his work - and also provided some counselling and parent contact support.

• the Year 8 maths teacher was computer supervisor for Charles, in addition to having responsibility for his progress in maths.

This sharing of responsibility meant that considerable curriculum differentiation was achievable.

It seems reasonable to suggest that planning, implementing and evaluating appropriate provision for highly to profoundly gifted students should be seen as a whole-school concern, not just that of the teacher(s) in whose class(es) the student is placed.

We recommend that Principals consider how best to provide such support in their school.

It is highly desirable that the availability and extent of such support, and how it is to be managed, are affirmed and detailed in the school’s ongoing policy and practices for addressing the needs of gifted and talented children.

Include in your deliberations how your school might plan, implement, evaluate and support:

• appropriate provision for highly to profoundly gifted students
• individual education plans
• acceleration in its various forms.

It is important also to consider the professional development implications for members of your staff.
Was this flexibility worth the effort?

Yes. Charles’s mother reported that he ‘has regained his love of learning’, ‘is happy to go to school each day because each day brings a new challenge now that he has been accelerated’ and ‘is now feeling like he belongs’.

His maths teacher cited two instances as indicative of Charles’s exceptional maths ability (and his readiness for the acceleration):

- ‘First, Charles had not studied Pythagoras’s Theorem before. I asked him to read through the explanations and examples in the Year 8 textbook, do some questions, and ask me about anything that didn’t make sense. He had no questions for me. I gave him a test and he scored 100%, setting out his solutions clearly and correctly.’
- ‘Secondly, Charles and I spent two hours working through the chapter on Percentages to ensure he had covered the Year 8 curriculum. The unit normally takes about two weeks in class, but after two hours Charles showed a very sound understanding of the whole topic.’

These two positive examples provide models of what can be done to match provision with the specific needs of gifted children. In the first case placement of the student was adjusted, though probably with little curriculum differentiation other than in maths. In the second case the school endeavoured to provide differentiated content in several learning areas, as well as accelerated placement in others.

A negative example

Important lessons can also be learned from negative examples. One former student (Anonymous, 1991) described her experience as follows:

‘I was grade skipped in 1958, in a primary school in [an Australian state]. I had started the school year in Grade 4 (a combined Grade 3/4 classroom) and in term two, aged nine years, I was moved into Grade 5 (a combined Grade 5/6 classroom). I was neither consulted nor prepared for the move which ultimately proved unsuccessful.

The problem, as I now see it, was that the teachers were unaware of my full potential, making them also unaware that I was grossly underachieving and had been all my school life. The effects of years of stagnation and isolation had taken their toll and rather than challenging me, the advanced curriculum broke me.

Rigid timetabling and restricted playing areas based upon grade levels isolated me from my former classmates. While they were not good friends, they were my only form of company in school. Sporting teams and PE groups in my new classroom were already struck and the teams to which I was assigned felt handicapped, for I was physically smaller than my classmates.'
The class teacher also felt put upon and gave vent to her irritation in the form of negative comments to the class, thus further compounding my isolation.

*It is my belief that for grade skipping to work effectively with the underachieving gifted student, an integration strategy has to be devised which includes testing for strengths and weaknesses then providing a bridging course for the student. Student and teachers may need counselling and the school structure needs to be flexible.*

This occurred many years ago when teachers had little information about acceleration to guide their decisions but it reminds us of the need to follow the guidelines discussed in Core Module 6, for this negative example is not evidence that acceleration is inappropriate or risky. Rather, it is a graphic illustration of how not to implement grade skipping.

You might profitably pause here a moment to reflect on:

(a) what mistakes the school made in this girl’s case, and

(b) what could have been done to increase the likelihood of her acceleration being successful.

If possible, discuss your thoughts with a colleague or friend.
Lessons from these and other case studies of acceleration

Teaching is a continual problem solving activity. Furthermore, an effective solution to one teaching problem may not be best in another situation, despite evident similarities. Therefore, we are often better served by principles to guide our professional decision making rather than trying to resort to ‘recipes’ or preconceived solutions - though we can learn from others’ successes and failures.

Some principles that emerge from documented cases of acceleration in practice include:

- Each case really must be considered on its individual merits.
- Acceleration is a process as much as a placement decision, so needs to be planned, implemented and evaluated in light of the best available evidence - about the student and about the process of acceleration.
- The effort expended in preparing a student for acceleration will be well invested, in that it should diminish the need for time consuming ‘remediation’ later.
- Acceleration should be seen as a whole-school concern, to ensure its ongoing success and to avoid its becoming a stressful process for the student’s current class teacher.
- Gifted underachievers should not necessarily be excluded from acceleration just because they are not currently performing well in class.
- Acceleration is not a ‘magic bullet’ - especially if those using it are not well informed about it - and should not be seen as a substitute for a more comprehensive approach to differentiation and pastoral care.
Prepare a plan for how your school can best deal with gifted students who may benefit from acceleration. Include details of the process and of who will be responsible for the various components of this process.

Prepare a plan for how your school can best deal with gifted students who may benefit from acceleration. Include details of the process and of who will be responsible for the various components of this process. Discuss your plan with other teachers and refine it in light of their comments and ideas.
Resources

References and Further Reading

Hastings and Prince Edward District School Board. Cooperative group skills rubric. GE Telesat Project (Gifted Enrichment Program). Accessed 10/2/05, at: http://www.hpedsb.on.ca/telesat/ge/Advertising/Cooperative_group_skills_rubric.htm

Websites

http://www.nationdeceived.org/
[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.]