Module 5

Bronwyn MacLeod
Specialisation Module 5 continues your journey in curriculum differentiation, on the assumption that you will have spent time working through the Core and Extension Modules on curriculum differentiation prior to beginning this Module.

This Module has been developed for teachers and administrators who have positions of responsibility which encompass the areas of curriculum and gifted education. This also includes those teachers who are working in one-teacher or small school situations in remote and rural locations.

Bronwyn MacLeod
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Outcomes

At the completion of this Specialisation Module you will be able to assess:

- a variety of strategies and approaches that may be used to address appropriately the needs of students at the various levels of giftedness within a school population.
- some of the strategies that may be used to implement curriculum differentiation in a school, including:
  - assessing the need for curriculum differentiation;
  - using successful models of change;
  - developing a timeline for implementation of curriculum differentiation:
    - Where do you start?
    - What will staff need?
    - What resources will be needed?
    - What is realistic?
- curriculum strategies and innovations which use integrated and multidisciplinary approaches to curriculum differentiation.
- how curriculum differentiation affects the assessment and reporting practices of a school.
Part 1

This Module continues the process of differentiation by examining appropriate strategies for meeting the curriculum needs of students at the various levels of giftedness found within any school population, as well as investigating the strategies that may be used to implement curriculum differentiation into a school.

What curriculum strategies and approaches may be used to meet the needs of students at the various levels of giftedness within a school population?

In Extension Module 2 we discussed the various levels of giftedness that may be found in a school population and we detailed appropriate intervention strategies for these differences. In schools across Australia the number of students identified at each level of giftedness varies greatly and the location of the school may also influence the availability or direct applicability of some of these strategies. Some may need to be modified in the case of remote or rural situations.

It is essential to note that for any of the following interventions to be implemented successfully a solid foundation of curriculum differentiation must be present in the majority of, and preferably all, classrooms within a school. Equally, the program modifications appropriate for gifted students outlined in Core and Extension Modules 6 also rely heavily on the presence of a differentiated curriculum within a school.

Mildly or moderately gifted students

Curriculum Interventions for students who are mildly or moderately gifted (ie students who have an intellectual ability which places them one to two standard deviations above the normal population) include the following:

**Differentiated curriculum:** These students should be encountering a curriculum which is regularly extended in the areas of content, process, product and learning environment (see Core and Extension Module 5) and which meets with Harry Passow's (1982) requirements of 'Would, Could and Should' (again refer to Core and Extension Module 5). This differentiated curriculum should involve curriculum compacting following pretests or assessment for learning activities, and more extended content (eg content that may be outside the core curriculum rather than content from the next level or stage of learning).
Mentoring: These students benefit from experiences in mentoring and this can often be achieved within a school by pairing students from different Years with a passion in the same curriculum area(s), to work on projects together. These projects must also meet with Passow’s requirements of appropriate curriculum for gifted students.

For example, in an early childhood setting or a primary school, a Year 1 identified gifted student with a passion area of rocks and gemstones might be mentored by a Year 5 identified gifted student with a passion in geology.

In a high school, an identified gifted student in Year 8 with a passion in genetics might be mentored by an identified gifted Year 11 student with a similar interest in biotechnics or genetic engineering.

It is important to note here that mentoring requires monitoring by a supervising staff member and accountability by both students involved. This should never be seen as the only intervention required by these students.

The development of differentiated curriculum and the time involved in this process will be examined later in this Module. However, with regard to developing, implementing and monitoring a mentor program, it is essential that time be allocated to the staff member(s) involved to ensure its success. Too often, interventions such as mentoring are seen as additional to a staff member’s workload and no recognition is given to the time and energy involved in this process. Subsequently, staff may not offer to develop such an intervention or the mentoring ceases when the staff member who was running it leaves the school.

Highly gifted students

Curriculum interventions for highly gifted students (i.e., students identified at three standard deviations above the normal population) include those outlined for the mildly and moderately gifted and the following additions:

More advanced content, from within the curriculum and outside the school-based curriculum. The choice of this content should be directly linked to the process of curriculum compacting and student interest areas. These students may also benefit from access to online courses which are developed for at least two or three Year levels above their current placement.

Online or e-Learning courses may be developed ‘in-house’ and be accessed from the school’s intranet (when available) or ‘in-system’ and accessed via the specific system’s intranet or internet facilities. An example of this is the Discover Online Modules developed by the Department of Education Tasmania — see http://www.discover.tased.edu.au/netlearn/courselst.htm — which include modules for gifted students. In all cases, online or e-Learning projects should meet with Passow’s (1982) requirements of curriculum appropriate for gifted learners.
Individual research or study programs in areas of strength and interest. These curriculum programs may be outside the regular curriculum and should be developed in negotiation with the student. Kaplan’s Model (1986) was introduced in Core Module 5 and provides an excellent framework for the development of such individual curriculum strategies.

Exceptionally and profoundly gifted students

Curriculum interventions for exceptionally and profoundly gifted students (i.e., students identified at four or more standard deviations above the normal population) include those outlined for the mildly, moderately and highly gifted, and the following additions:

Highly individualised curriculum programming is essential for these students. In Core and Extension Modules 6 we examined issues of acceleration and grouping and at this level of giftedness a combination of curriculum strategies may be needed to accompany any grouping or acceleration used.

These students need the curriculum they encounter to be complex and high-paced, and they often require a combination of in-class and out-of-class strategies to meet their needs. As discussed in Core and Extension Modules 3 and 4, these students may also experience high levels of underachievement if their curriculum needs are not met early in their school experiences. Disengagement from the core learning process is common from early childhood onwards if they are always offered the same curriculum experiences as their age peers and a variety of curriculum and programming options will be required to meet their needs throughout their schooling.

Specialised mentoring with experts in the student’s field of strength and interest may also be needed to ensure the student meets with a ‘like-minded’ peer who has similar interests and passions.

For many exceptionally and profoundly gifted students, the experience of ‘isolation’ occurs when they have exhausted the extension possibilities in their area of interest within their regular schooling. At this point a mentorship with an ‘expert’ in this field, such as a university lecturer or professor, may prove to be a way in which the student’s intense interest can be furthered without leaving the school system.

The curriculum presented in such a program should be complex and demanding and represent acceleration in this subject area. The program should be accountable on both sides and should be monitored by a staff member from the school. Rogers (2002, p. 146) lists the following characteristics present in a suitable candidate for mentorship:

- ‘Is processing and achieving well beyond grade level peers in a specific academic area;
- is self-directed, independent, and motivated to learn;
- enjoys a variety of delivery methods and challenge in learning experiences; and
- has a strong interest in the specific academic area with little time to supplement the learning outside of school.’
What strategies may be used to implement curriculum differentiation in a school?

Some of the strategies that may be used to implement curriculum differentiation in a school include the following steps:

Step One: Assessing the need for curriculum differentiation within your school

‘Leadership is not something you do to people. It’s something you do with people.’ (Blanchard, Zigarmi & Zigarmi, 2000)

The first step in determining what strategies should be used to implement curriculum differentiation in a school is to conduct a needs analysis of the current curriculum programs in the school. This needs analysis should also include an evaluation of current special needs and gifted programs, and a ‘GAP’ analysis (ie defining the difference between what is needed and what is present).

It must be noted that any needs analysis on one area of the school will affect and reflect on other connected areas of the school. In other words, when examining the state of curriculum in any school environment, the state of gifted and special needs programs will also be reflected in the findings.
The steps for a needs analysis regarding curriculum differentiation may be listed as follows (adapted from Seeley, in VanTassel-Baska, 1998, p. 298):

1. **Current state of curriculum**
   - Pilot programs?
   - Administrative commitment?
   - Any staff development?
   - Type of student assessments (portfolios, standardised tests, etc)?

2. **Approach**
   - Surveys of all, or randomly selected, stakeholders.
   - Structured interviews of randomly selected stakeholders.

3. **Content of needs assessment**
   - Essential elements of definitions of curriculum differentiation; gifted; and special needs.
   - Philosophy and attitudes towards: acceleration; extension; enrichment; giftedness and identification; teacher roles; grouping.
   - Program prototype preferences: rating of major options; amount of time for special instruction; amount of regularly funded staff time commitment; space commitment for programs; materials budget support; parent involvement.
   - Staff development: released time for teachers; Principal and executive staff involvement in professional development; outside ‘expert’ input; planning time.
   - Community resources already developed: school partnerships with the community; community volunteer, mentor programs in school; community service opportunities for students.
   - Leadership role for Principal: planning; initiating parent education activities; demonstrating commitment to past educational innovations.

As part of the development of a needs analysis, it is essential to answer questions such as:
   - Who are the stakeholders in a school?
   - How and why do they interact?
   - In what ways do the stakeholders interfere with, or promote, the change process in a school?
   - What catalysts (refer to Core Module 1 and the Gagné Model) have the greatest effect on students?
   - How do these catalysts correlate with the change process?
   - Are the leaders the most important stakeholders in a school? Why, or why not?
A needs analysis should include surveys of, and interviews with, a random sample of the key stakeholders.

A survey may be developed using Likert-style responses (for example, responses such as Strongly Agree, Agree, No Opinion, Disagree, Strongly Disagree) and/or short answer responses. A student survey might include such statements as:

- It is always easy to know the standard of work expected by my teacher.
- The work in my class helps to develop my problem-solving skills.
- My teacher encourages me to do my best work.
- There is too much homework in my class.
- My teacher knows me as a learner.
- I am able to express my ideas openly in my classroom.
- As a result of the work in my class, I feel happy to try to do unfamiliar problems.
- My teacher helps me with any difficulties I might be having with my work.
- I can work at my own speed in my class.
- The work in this class is a little too easy.
- The activities in my class are complex and make me think.
- I am bored in this class.

Additionally, the following practical tips on curriculum evaluation are useful when defining the need for curriculum differentiation in a school (VanTassel-Baska & Feng, 2004, p. 19):

‘Schools should define the purpose of the evaluation carefully. Not all purposes can be satisfied within time and budget constraints.

Evaluation work needs to be timely for decision makers in a school. Too early evaluation prohibits creative trial and error testing of innovations. Too late evaluation inhibits important formative data from being used to improve programs as they evolve.

Evaluations must be focused around a set of objectives or questions to be answered. Because no evaluation can serve all potential stakeholders equally well, stakeholders representing various groups should come together to negotiate what issues and questions deserve priority.

Remember the personal factor contributes significantly to an evaluation’s effectiveness, meaning that personal interests and commitments of those involved in an evaluation undergird utility. Thus, evaluations should be specifically user-oriented, aimed at the interests and information needs of clients.

There are three primary uses of evaluation findings: judging merit or worth (summative evaluation), improving programs (instrumental use), and generating knowledge (conceptual use).

Useful evaluations must be designed and adapted situationally. Standardised recipe approaches will not work.

Commitment to using evaluation findings can be nurtured and enhanced by actively involving key stakeholders in making significant decisions about the evaluation. Involvement increases relevance, understanding, and ownership of the evaluation, all of which facilitate informed use.’
Step Two: Utilising successful models of change

‘Leadership is the capacity to translate vision into reality.’
(Warren G. Bennis) (Accessed 3.8.05, at: en.thinkexist.com/quotation/leadership_is_the_capacity_to_translate_vision/15169.html)

When planning for change, it must be remembered that a single inservice day on differentiation will not change practice over the long term.

Tomlinson and Allan (2000) list the following nine points as fundamental to change in schools and thus also to leadership for differentiation:

- Change is imperative in today’s classrooms.
- The focus of school change must be classroom practice.
- For schools to become what they ought to be, we need systematic change.
- Change is difficult, slow and uncertain.
- Systematic change requires both leadership and administration.
- To change schools, we must change the culture of schools.
- What leaders do speaks with greater force than what they say.
- Change efforts need to link with a wider world.
- Leaders for change must have a results-based orientation.
Executive staff should understand what differentiation is and what it can look like in a classroom — lead from the front, be committed to the process.

**Effective staff development** has the power to change teacher practice in positive ways. Staff development should:

- Be built on a common vocabulary relating to the curriculum innovation being introduced, i.e., the vocabulary of differentiation.
- Acknowledge teachers’ levels of prior understandings and skills, interest and preferred learning styles.
- Offer options which focus on the particular needs of the subject area or Year.
- Include the leaders of the school and/or region/system.
- Consistently emphasise high quality curriculum and instruction as the starting point for innovation and change, particularly in reference to differentiation.
- Be planned to ensure transfer of knowledge and skills into the classroom.
- Be in harmony with the system or state philosophy.
- Recognise teacher efforts.
- Encourage the development of leadership.

**Step Three: Planning for the issues of change**

A number of issues specific to primary schools may cause difficulties in the development of a positive change such as curriculum differentiation — for example (adapted from VanTassel-Baska, 1998):

**Timetable issues**

Timetable issues are often given as reasons why change is not easily brought about in the primary school environment. Strategies needed to meet the learning needs of gifted students such as grouping, independent research, integrated or interdisciplinary studies and even longer work sessions are highly dependent on a timetable that can be flexible or planned well in advance. In a primary school setting, flexibility of timetables allows teachers to use each other’s strength areas in particular subject areas and to group students accordingly.

It is important that these issues are regularly discussed at executive levels to prevent them from being used as ‘blockers’ for progress. If change is to be brought about successfully then the adjustment of timetabling needs to be a high priority for discussion and planning at each level of the primary school.
Content driven curriculum

The issue of a content driven curriculum faces many primary schools in some states of Australia, particularly those with a heavy focus on mandatory content outcomes. There is a danger of this issue becoming a strong ‘blocker’ of curriculum differentiation, if a firm understanding of the role of assessment for learning, or pretesting strategies, is not established (revisit Core Module 5A for examples of these strategies).

Assessment for learning strategies allow teachers to determine appropriate starting points for the delivery of content as well as where curriculum compacting may be undertaken to avoid unnecessary repetition of known content. Additionally, the delivery of any content outcome must be through the lens of differentiated learning and thinking strategies, with the encouragement of student involvement in the articulation of these strategies.

Inappropriate expectations on gifted students

There is often a misguided idea that it is appropriate to give gifted students more work (particularly in terms of homework) than their average or lower ability peers are given, because gifted students are able to work faster. Teachers ask gifted students to write longer assignments or more assignments and equally expect that these longer or more frequent work samples will also be of higher quality and complexity. This may result in primary students opting out of any extension work or resorting to a ‘minimalisation’ of work in order to cope with the workload and thus begin a cycle of underachievement (see Core and Extension Modules 4). Guidelines should be established regarding the type, quantity, regularity and expectations of homework to ensure students, or teachers, do not experience frustration.

Lack of differentiation in gifted classes or enrichment/extension classes

These classrooms have as great a need for curriculum differentiation as the mixed ability classrooms and the teachers placed on these classes need to have a strong understanding of differentiated pedagogies and the learning needs of gifted students.

Text book driven programs

The problems of a textbook driven program is more of an issue in some subjects, or key learning areas, than others. When there is a policy that all programming for the whole Year stems from a single textbook (often because the textbook has incorporated the appropriate state outcomes within construction of the text), differentiation is limited to the individual teacher’s ability to deliver the content of the text through process modifications only (see Extension Module 5 — the Maker Model). Strategies to move beyond the textbook include the selection of supplementary materials, the use of primary source documents, and the regular employment of reference materials in the classroom.
Passive classroom environments

The need for control in classrooms sometimes leads teachers to the false belief that a restrictive and passive classroom environment will ensure positive student behaviours. ‘Seat work at any level can be deadly, but when executed as a daily staple in programs [at a primary level], it can reinforce student passivity in the learning enterprise, the opposite of what is desired’ (VanTassel-Baska, 1998, p. 255).

It is important that every lesson is divided into at least two segments — one active and one passive — with the active segment involving discussion, experiments, ‘hands-on’ practicals, or collaborations and teamwork. This is critical to enhancing good learning and essential to the success of differentiated curriculum.

Lack of scope and sequence in extension programs

Whilst most state curriculum documents include an appropriate scope and sequence for the core content and/or skills outcomes, gifted students often experience fragmented programs as they move between core and extended curriculum and/or between levels, stages or Years. A policy and template for mapping the progress of gifted students should be part of each Year and whole school planning, to ensure consistency of program outcomes and expectations, and clarity of explanation to parents, students and other staff members.

The following model adapted from one developed by Shachar (cited in VanTassel-Baska, 1998, p. 257), articulates the appropriate stages of implementing curriculum differentiation in a primary school setting:

<p>| Four Stage Working Model for Curriculum Differentiation in Primary Schools |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <strong>Stage 1:</strong> Learning what to do | <strong>Stage 2:</strong> Learning how to do it | <strong>Stage 3:</strong> Expanding the change process | <strong>Stage 4:</strong> Institutionalising the change |
| Principal | | | |
| Defining the Principal’s role as the facilitator of change — accessing research and external advice from appropriate experts | Setting up a schedule for professional development and collaborative planning by staff at Year and individual levels. | Expanding the use of curriculum differentiation and facilitating the development of evaluation and action research methods. | Establishing curriculum differentiation at a school program and policy level. |</p>
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<th>Executive or leadership staff</th>
<th>Defining the role of executive staff — accessing professional development from experts to develop the skills needed to lead the collaborative planning by teachers.</th>
<th>Leading team planning; establishing support structures for individuals and Years, within and outside classrooms.</th>
<th>Developing teamwork and planning action research and evaluation of curriculum strategies and instructional pedagogies.</th>
<th>Ongoing assessment of the change process and implementation of differentiation.</th>
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<td>Classroom teachers</td>
<td>Professional development in appropriate strategies for curriculum differentiation; collaborative planning of units of work and lessons.</td>
<td>Ongoing team planning, evaluating units of work; mapping student learning gains.</td>
<td>Cycle of unit development, implementation, modification and evaluation; communication of change process to colleagues.</td>
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<td>Students</td>
<td>Initial exposure to differentiated units of work, lesson plans and assessment for learning strategies.</td>
<td>Developing skills of critical and creative thinking, independent and autonomous learning.</td>
<td>Mastering different learning techniques, academic and creative risk taking, achieving ‘personal bests’.</td>
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Developing a timeline for implementation of curriculum differentiation

The following timeline suggestions are general as they would follow on from the needs analysis and so each school’s implementation will reflect the issues raised in the needs analysis.

Establish a vision for change

‘An honest, clear, defensible, and compelling need and vision must define what the school wants to become .... Certainly more than one leader needs to ‘own’ and speak to the vision — but a leader at the apex of influence in the school has a great opportunity to inspire and focus others with a carefully conceived and thoughtfully articulated vision’ (Tomlinson, 2000, p. 52)

Establish common definitions and terms

It is important that all stakeholders involved in the change process are operating from the same framework for differentiation which establishes the use of common vocabulary, focusses staff development and provides a basis for evaluation.

Build understanding and rapport among stakeholders

Not all stakeholders greet the introduction of change gladly and it is important that honest interaction is established with and among all involved to allay any fears and to establish processes of support. A sense of trust must be built that this change is not a ‘fad’ soon to disappear nor a mechanism to make judgements on any of the stakeholders. All stakeholders must feel valued and be given ample opportunities to understand the processes being proposed. It is often far wiser to take a slow and steady approach to change in order to build a ‘critical mass’ within the school who have experienced success with the innovation and who are enthusiastic advocates for its continuation.

Link differentiation and best practice

Tomlinson (1998) describes truly effective differentiated classrooms as student centred, hands-on, high-level, and meaning making. Teachers of these classrooms are clear on learning goals and those goals carry with them the power of knowledge, understanding, and skill that a given discipline should develop in all learners. In these classrooms, respect is evident for each learner, and teacher and learner together develop an environment likely to help each student grow as far and as fast as possible. These characteristics define any excellent classroom and differentiation provides the vehicle for adapting the curriculum to each student’s needs.
Differentiation should not be presented as something “extra” that teachers do, but rather as one hallmark of teacher quality .... Differentiation is not a strategy or an add-on, but rather a way of thinking about teaching and learning that reflects a high level of teacher professionalism. Differentiation is not something an educator “already does” fully, nor can it be mastered in a year or two’ (Tomlinson, 1999, p. 53).

Focus school initiatives

Schools are constantly being bombarded by outside demands and initiatives which may draw attention from the goal of differentiated curriculum. In order to continue the process of establishing differentiation in a school, those leading it need to consider each competing demand carefully in the light of its possible effects on the primary goal or objective. While some initiatives dovetail perfectly with the framework of differentiation, others may be seen as distractors and potential additional stress factors on the stakeholders involved. A consistent approach over time is important to embed differentiation in the school, whereas jumping on every ‘new and exciting’ bandwagon often leaves teachers and students disenfranchised and cynical.

‘Teaching is demanding and complex at best. Wise leaders who envision more responsive classrooms in their school support teachers in differentiation by doing whatever they can to keep them from feeling unnecessarily pulled in multiple directions at once’ (Tomlinson, 1999, p. 59).

Plan for leadership and support

Principals must be part of defining the roles of various school personnel in fostering differentiation within the school. General classroom teachers and specialist teachers will need time to work and plan together and so specialist teachers will need to have timetables that reflect connections with the classroom teachers. Specialists might be encouraged to work on a few in-depth collaborations each year rather than spreading themselves too thinly.

The needs of all students should be seen as a ‘shared’ responsibility and so the collaboration of skilled specialist teachers and classroom teachers has a powerful impact on the success of differentiation. Specialist teachers should be given access to professional development relating to curriculum differentiation and, in turn, their understanding of this area combined with their specific area of expertise will increase the opportunities for all students to achieve ‘personal bests’.
Allocate financial resources

It is important to plan for the cost of introducing an initiative such as curriculum differentiation to avoid over promising and underfulfilling the goals involved. This often leads to cynicism and lack of trust from the stakeholders. It is far better to plan to achieve small successes which are continually embedding the practice within the school than to plan short strikes which have minimal impact and staying power.

Plan for the long haul

A one- or two-year commitment to differentiation falls far short of what is required for major change and staff may not even engage in the process unless they see that it will have longevity. Many may attempt to outlast the change when only a short-term commitment has been outlined.
Think about your school for a moment. What are the strengths, weaknesses and interesting features of the curriculum and its delivery? Develop a PMI (Plus, Minus, Interesting) chart to document your thoughts.

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<th>Plus (Strengths)</th>
<th>Minus (Weaknesses)</th>
<th>Interesting (Features)</th>
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Now, following the development of your PMI chart, what are some of the issues of curriculum you would like to see changed at your school? What are some points that are working for curriculum change at your school? What are some points working against curriculum change at your school? What have you tried so far?

Use the following mind map to consider these questions:

- What is working in a positive way for curriculum change?
- What issues of curriculum would you like to see changed?
- What is working against curriculum change?
- What have you tried so far?
Part 2

What approaches to curriculum differentiation use integrated or multidisciplinary strategies and innovations?

Throughout Australia, a number of different curriculum initiatives and innovations are being developed and implemented by various educational systems in order to meet the learning needs of all students. The following ideas are only a few examples of these, for within the educational systems of each state many others are being trialled and evaluated. It is important to contact the system with which your school is affiliated to investigate these further.

Curriculum innovations: Rich Tasks

Rich Tasks provide a means of connecting students with differentiated curriculum that is embedded in the real world. While the modules provided within the New Basics material are not explicitly differentiated in terms of levels of ability in a classroom, they are developed in a way that allows for content, process and product modifications during their implementation. Students may work at their own pace, have choice in the products created, and the academic rigour and integrity of the key learning areas involved are maintained. The Rich Tasks are, in essence, multidisciplinary and require students to engage in intellectual and hands-on inquiry.

The following description of Rich Tasks is taken from the information provided by Education Queensland work on the New Basics:

‘A Rich Task is a culminating performance or demonstration or product that is purposeful and models a life role. It presents substantive, real problems to solve and engages learners in forms of pragmatic social action that have real value in the world. The problems require identification, analysis and resolution, and require students to analyse, theorise and engage intellectually with the world. In this way, tasks connect to the world outside the classroom.

As well as having this connectedness, the tasks are also rich in their application: they represent an educational outcome of demonstrable and substantial intellectual and educational value. And, to be truly rich, a task must be transdisciplinary. Rich Tasks have relevance and power in new worlds of work and everyday life. It is important that they have recognisable face value with educators, parents and community stakeholders as being significant and important. Finally, it is crucial that tasks be rich in developmental, cognitive and intellectual depth and breadth to guide curriculum planning across a significant span of schooling.'
**Characteristics of a Rich Task**

In summary, a Rich Task:

- is an integrated intellectual and linguistic, social and cultural practice
- represents an educational outcome of demonstrable and substantive intellectual substance and educational value
- is transdisciplinary
- draws on a range of operational fields of knowledge
- engages knowledge and skills from at least two of the New Basics clusters
- is problem-based
- connects to the world beyond the classroom
- has face value for educators, parents and community stakeholders
- has sufficient intellectual, cognitive and developmental depth and breadth to guide curriculum planning across a significant span of schooling
- enables flexibility for schools to address the local context
- has a reasonable workload expectation for teachers.

Although Rich Tasks vary in the intensity of what is expected of students, all of them:

- draw from academic scholarship and connect to sensible decisions in a prudent world
- draw on topics widely accepted in history, science, mathematics, home economics and so on
- ask for straightforward analyses and the possession of ingenuity
- ask for analyses that go beyond the data presented (that is, ask the student to do autonomous creative work)
- call for realistic decisions and defences of those decisions
- involve topics of interest to people in that age group
- require judgements that most young people would expect of thoughtful citizens
- depend, in some cases, on the judgement of adults monitoring the process (for example, by defining terms or shaping contemporary meaning).
Curriculum innovation: e-Learning

Definitions of e-Learning (At: http://www.learnframe.com/aboutelearning/ glossary.asp)

Education via the Internet, network, or stand-alone computer.

Network-enabled transfer of skills and knowledge.

‘e-Learning’ refers to using electronic applications and processes to learn.

e-Learning applications and processes include Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. Content is delivered via the Internet, intranet/ extranet, audio- or videotape, satellite TV, and CD-ROM.

A wide variety of different e-Learning strategies may be found in classrooms:

- Traditional course — instruction takes place in a classroom or lab for the requisite number of face-to-face contact hours.

- Computer-assisted instruction (CAI) — the computer is used as a self-contained teaching machine to present individual lessons.

- Distance education — teaching in which teacher and student are separated by place and/or time, and in which they interact through the use of one or more types of communication media.

- Correspondence — student works through content in self-paced manner under the guidance of a teacher. Communication between teacher and student is by ‘snail-mail’ or email.

- Live interactive broadcast — teacher and students are separated by distance, but interact in real time. They meet the requisite number of hours, as in a traditional course.

- Online course — teaching is asynchronous. Content delivery and student-teacher interaction makes use of the Internet. An online course can use a combination of online features: email, bulletin boards, chat rooms, hypertext, images, audio and/or video files.

- Hybrid course — teaching is divided between a traditional face-to-face classroom environment and online (generally about half-and-half).

- Web-enhanced course — a course may have a website, a discussion board, some online tests/’quizzes’, or an online text, but students and teacher meet in the traditional face-to-face classroom for the requisite number of hours.
Effect of e-Learning

e-Learning in itself does not ensure that the curriculum involved is differentiated — however, it does provide a good vehicle to meet the varying needs of students found in a classroom, when the teaching and learning accompanying the resource are differentiated. Students are able to work at their own pace, have freedom of choice, work independently or collaboratively (directly or remotely), engage in critical and creative thinking, work in real-world problems solving situations, and interact with real world audiences.

‘Online instruction can improve students’ sense of personal competence, self-responsibilities, and beliefs about their own learning. In other words, online instruction can be an effective method to promote change from external locus of control to internal locus of control. The relationship of students’ beliefs to learning is a critical dimension especially since personal beliefs relate to online instruction.’ (Liu, Lavelle, & Andras, 2002) Accessed 2.8.05, at: http://www.usdia.org/html/journal/JUN02_Issue/article02.html
How can the effectiveness of curriculum differentiation be evaluated in the classroom?

Research by Cuttance and Stokes (2001) found that one of the dominant features of a successful innovation, such as the introduction of curriculum differentiation, was that of leadership — individuals at the various levels of the school played critical leadership roles. The strategic leadership of Principals was essential in almost every successful innovation. In many cases, Principals were also the initiators and the driving force behind the innovation. Teachers also played critical leadership roles, particularly in terms of the instructional leadership required to establish and develop the effectiveness of innovations. The driving professional passion of teachers was evident in many of the innovations. The research demonstrated that schools needed to have access to a critical level of high quality instructional leadership by teachers if they are to be successful in developing and implementing innovations that lead to substantial improvements for students. Successful schools had developed or gained access to leadership that focussed on action, culture-building and organisation-wide learning.

To support the process of change, it is important that staff ‘own’ the innovation. This can be achieved if both the staff and the leadership of the school agree to a number of ‘non-negotiables’.

For example, Marzano (2003) states that the introduction of innovative curriculum into a school should involve:

- leadership support — from all levels of leadership within the school or even the region.
- planning days — there should be a commitment to whole-day and/or part-day planning sessions regularly throughout the process and at least once per term, eg, for planning differentiated units of work or mapping differentiated outcomes scope and sequences. These days are more effective when an outside consultant is used to facilitate the work.
- regular shared planning — teachers agree to meet regularly in faculty or stage times for further planning and discussion of progress.
- frequent follow-up for staff (either face-to-face or via email) — usually by the outside consultant to keep the process on track.
- the introduction of flexible pacing of curriculum to allow for student differences.
- the introduction of flexible grouping of students to recognise learning needs, learning styles and learning readiness.
- a high level of challenge for gifted learners, as well as a high level of expectation for all learners.

Stylianidou and Ogburn (1999) describe two broad types of transformation that take place when a curriculum innovation is implemented:

- those which occur when the innovation is imposed and those implementing it do not understand it nor are committed to it; and
- those which occur when the innovation is brought about by people who understand the innovation and are committed to it.
In the first type of innovation implementation, transformations often happen only at the verbal level, substituting a new phrase or set of terms for an old one, but rarely changing anything else. Attempts to rationalise the relative levels of difficulty between new and old are also common in this type of innovation. Additionally, there is much switching between using the new innovation and not using it. Teachers will appear to take on the innovation if it is enforced but may subvert it in the classroom any time they do not understand it or see the effectiveness of it.

In the second type of innovation implementation, those affected by the innovation are also involved in bringing the innovation to the school, and so understand it. The innovation becomes a set of strategies which may be different in each context due to the people involved rather than to the innovation itself.

The following case studies provide examples of some of the different approaches schools and the leadership of the school may take when introducing change to their learning community. These examples are not exhaustive; many more approaches than these are possible.

**Case studies**

**School One:** A P–12 school established in the late 1800s, with a strong reputation for high academic results, initiated the introduction of a differentiated pedagogy to all classrooms. Most staff had already participated in a variety of professional development programs addressing curriculum models, gifted education, special needs and programming. However, initially very little of this had been embedded in classroom practice.

A small team of educators within the school, supported by the leadership team, decided to focus their efforts on a smaller ‘critical mass’ of staff within the school who would be encouraged to ‘own’ the process and conduct their own action research as part of the work they undertook. An outside consultant was enlisted to guide and facilitate the work. Two key faculties in the Senior School were involved in the first stage of curriculum change, along with targetted teachers from the Junior School.

The first two years of work began with teachers from each faculty who were primarily involved in teaching Years 7 and 8, followed by a further two years working with teachers of Years 9 and 10. Each faculty was responsible for trialling and documenting the differentiated units developed and mapping student outcomes over time. During this time one faculty also introduced an extension program for highly able students in its subject.

The results of the first group of students who had experienced differentiated curriculum from Year 7 to Year 10 far exceeded initial expectations and the staff felt validated in the work and persistence they had shown. The new approach continues in these faculties and two additional faculties are now embarking on their own projects.
School Two: The Principal of a K–6 school with a strong culturally diverse population and low levels of literacy amongst its student population undertook to focus on the strengths and interests of the staff in introducing a differentiated pedagogy to the curriculum of the school. An outside consultant was enlisted to facilitate the professional development on-site, some staff were released to attend professional development days at a cluster level and other staff were released to attend a professional development series organised at a system level. The commitment to this strategy is now in its third year and the student literacy levels have risen; student engagement in learning is clearly observable. Staff are trialling, modifying, sharing and publishing differentiated units of work with collected student work samples for reflection and outcomes mapping. They now work with greater confidence and belief in the process.

School Three: A number of small regional R–6 schools from two different educational systems decided to embark on a program of introducing curriculum differentiation to their classrooms. To do this, they combined forces and available funds and developed a series of professional development sessions over 12 months, with each session held at a different school location. By combining forces, staff are able to collaborate with other teachers of their Year level to share ideas, issues and challenges.

In between PD sessions, staff were supported in their work by the respective leadership teams at each school and were encouraged to trial their ideas and collect student work to demonstrate the outcomes being achieved. The process was evaluated at the end of the 12 months and the leadership teams have decided to continue to combine for PD sessions for at least another year.
How does curriculum differentiation affect the assessment and reporting practices of a school?

Once a school decides to embark on the journey of differentiating the curriculum within its classrooms and overall programs, the ensuing discussion generally revolves around the effect of this curriculum strategy on the assessment and reporting systems within the school. This area is among those continually debated in educational research and practice and often causes argument at classroom, school, system, state and national levels. The audience for any reporting system is multi-faceted and it is unfortunate that often the direct recipient of the assessment and reporting tool is the last considered in the decision-making process of how to report.

Assessment is the process of collecting, analysing and recording information about student progress. Within the assessment process, two key types of assessment are important to consider in terms of the way they work in a differentiated framework — formative and summative assessment.

- **Formative assessment** is the practice of building a cumulative profile of student achievement. This usually takes place during day-to-day classroom activities and can involve informal interaction, observation of the student or formal assessment procedures.

- **Summative assessment** is the practice of making judgements about student achievement at certain relevant points in the learning program, such as units of work, or the end of term or year of schooling. Formal assessment activities may include tests, projects and assignments and may focus on one or more outcomes.

The goal of differentiation is to maximise student academic growth and to promote individual student success — hence, the assessment and reporting linked to a differentiated curriculum should also reflect these aims. In schools where differentiation of the curriculum is the framework for classroom practice, the issues of cross-Year common assessments and graded reporting must be addressed.

Tomlinson (2000) describes assessment as one of the ways a school communicates with its parent body and so this communication must be effective in achieving its aims. Additionally, it is important that the receivers of this communication are provided with opportunities to be knowledgeable about the nature and benefits of contemporary approaches to both learning and teaching, to prevent preconceptions of how education ‘should be’ from dominating any discussion forum.

In light of these issues, Tomlinson (2000) raises the following **points to consider**:

- There is little evidence that grades motivate students to learn (Kohn, 1993). Rather, the evidence suggests that they diminish the effort made by struggling students and promote the pursuit of an ‘A’ rather than the love of learning.

- There is little evidence that grades communicate to parents or students in meaningful or accurate ways. Consistency of objective judgement across schools and states is difficult.
• Students persist when they experience a balance of hard work and success that stems from the hard work. Where grades are gained through minimal effort rather than through hard work, students do not develop the coping skills of persistence and resilience that are needed to face a genuine challenge.

• Grades are necessarily equivocal. Experience, location, expectations, system-imposed benchmarks and guidelines all influence the assignment of a grade on a student’s performance.

The comparison of one student’s performance against others’ without taking account of that individual student’s learning growth paints a partial, not whole, picture of the student’s academic progression. Tomlinson (2000, p. 110) states: ‘If student differences matter enough to attend to them in instruction, we should not disregard them at the point of grading and communicating with students and parents about student progress.’

Wiggins (1998) suggests the following approaches for assessment and reporting to be considered:

• Report many more subscores of performance in summarising performance data. Highlight a number of key curricular outcomes or goals rather than covering them all with one grade.

• Distinguish explicitly between growth-based evaluation and achievement symbolised by letter grades and numerical scores, respectively, to allow criterion-based and norm-based reporting on the same report card. This would provide information to parents on how their child progressed as an individual learner as well as how their child performed in relationship to other children.

• Report two kinds of expectation-referenced grades. Individual expectations are determined and reported in relation to student progress in achieving individual goals in a key learning area. Year-level expectations can be determined and reported in achieving Year-level benchmarks in a subject, or key learning area.

• Analyse students’ academic achievements through three types of data: level of achievement, quality of work, and progress against standards or benchmarks.

• Evaluate the students’ intellectual character — habits of mind and work — based on established patterns over long periods of time in performance and products.

Translating these suggestions into practice may require simple to complex changes in assessment and reporting procedures, depending on the strategies already in place in your school. No changes should be made without consultation with all stakeholders and, obviously, the mandatory requirements of state and federal authorities may also affect the final product of these discussions.
Tomlinson (2000, p. 113) reminds us that:

‘Research and experience would indicate that maximising the student’s opportunities to make sense of the ideas and skills (a) does not guarantee that all students learn all things, (b) does not result in As and Bs on all report cards, but (c) proves more motivating to students, and (d) results in greater understanding and proficiency than formulaic instruction. At least it’s a place to begin.’
1. When introducing any form of change in an educational climate, it is common to find some people who will be resistant to the ideas or actions this change might bring. Brainstorm some of the arguments that you may hear presented to you against this innovation and then develop the reasons for the innovation.

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<th>Type of curriculum innovation:</th>
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2. Planning for change: map out the steps your school will need to follow to introduce, or to continue the introduction of, curriculum differentiation:

| Step One: What is the vision? |
| Step Two: What common definitions and terms will be needed? |
| Step Three: Who are the stakeholders? |
| Step Four: How will curriculum differentiation be linked to best practice? |
| Step Five: How will the focus be maintained? |
| Step Six: How will competing mandates be handled? |
| Step Seven: How will the leadership support the process and the stakeholders involved? |
| Step Eight: What financial resources will be allocated? |
| Step Nine: How will the process be evaluated? |
| Step Ten: How will the plan demonstrate longevity? |
3. Using a mindmap, flowchart or another graphic organiser to document the process, discuss the possible short-term and long-term effects differentiation might have on assessment. You may like to use the following headings to guide you:

- Short-term effects
- Long-term effects
- Reporting
- Levels of assessment
- K–12 continuum
- Parent communication.
Resources

References and Further Reading


