Talented
and
Gifted Students
eTAGS

Early
Childhood

**Supporting teachers to develop
the talents of gifted students**

Department of
Education

Department of
Education

Contents

Introduction

Purpose

The purpose of this resource is to assist classroom teachers in the Early Childhood phase of development to:

- identify gifted and talented students
- provide appropriate curriculum for gifted and talented students
- monitor the progress of their gifted and talented students
- evaluate the success of their programs.

Rationale

It is important that schools are encouraged to create stimulating teaching and learning environments that ensure all students are able to access meaningful and appropriate learning experiences. The special learning needs and characteristics of gifted students require specific attention as part of the curriculum planning process.

Background

This resource was originally produced in 1994 and made available to all public schools in hard-copy format. Elements of the Talented and Gifted Students (TAGS) file were later uploaded to the Department of Education Gifted and Talented website in 2004. While long out of print, much of the information contained was still relevant at the time of this revision, a testament to the long-standing value of this resource.

Noticeable changes to this version include its online release format with direct links to checklists and resources instead of direct inclusion. This has reduced its size considerably, enabling users to navigate through the resource with greater efficiency.

This resource encourages flexibility in the use of the activities and information contained. Some sections may suit all users or may be modified to suit an individual's particular need.

Identification and curriculum provision for gifted students should not be treated in isolation but integrated into a total program as part of a whole-school approach.

Note: While all care has been taken in choosing websites with which to link, no responsibility is accepted for the information contained on these sites which may be incorrect, missing, offline or misleading. Please report broken links to gate@det.wa.edu.au.

Acknowledgements

Special thanks to the team of outstanding teachers who have contributed to this resource in its many incarnations and to the previous project coordinators, Carole Peters, Kate Coughlan and Penny Curtis.

Policy and guidelines

The Department of Education Gifted and Talented policies and guidelines can be viewed at www.det.wa.edu.au/curriculumsupport/giftedandtalented/detcms/school-support-programs/gifted-and-talented/services/policy.en?oid=com.arsdigita.cms.contenttypes.ArticleSection-id-2286109&tab=Main.

Professional learning

Online professional learning

During 2005, the Department of Education Science and Training (DEST) developed a professional learning program in collaboration with the Gifted Education Research, Resource and Information Centre (GERRIC) and the University of New South Wales.

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) is available online and highly recommended for all educators. The program consists of six modules which can be accessed at core, extension and specialisation levels. Differentiated options are available for teachers, school executive and principals in rural or urban settings. The program is supported with relevant case studies and examples throughout.

The program can be accessed via the GERRIC website at http://gerric.arts.unsw.edu.au/ or directly through the Department of Education, Employment and Workplace Relations website at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Workshops, seminars, network meetings

A range of professional learning opportunities are provided through the Professional Learning Institute, the Department of Education Gifted and Talented branch, district education offices (through the Primary Extension and Challenge program) and state gifted associations.

Conferences

National and international conferences provide extended opportunities for interested educators. These include regional conferences – such as those organised by the Asia-Pacific Federation for the World Council for Gifted and Talented Education and world conferences such as those organised by the World Council for Gifted and Talented Children.

Post-graduate study

Options are available in a variety of provision modes.

Identification

Who are the gifted and talented?

The Department of Education adopts the Differentiated Model of Giftedness and Talent developed by Françoys Gagné (2008) to underpin its policy and inform practice in Western Australian public schools, whereby the terms 'giftedness' and 'talent' are identified as,

> "Giftedness designates the possession and use of outstanding natural abilities, called aptitudes, in at least one ability domain, to a degree that places a person at least among the top 10% of age peers."

Professor Gagné defines six domains of giftedness: intellectual, creative, social, perceptual, muscular and motor control.

> "Talent designates the outstanding mastery of systematically developed abilities, called competencies (knowledge and skills), in at least one field of human activity to a degree that places a person at least among the top 10% of age peers who are or have been active in that field."

These terms have been reproduced with the permission of Françoys Gagné. More information about this model can be seen on the following page.

Gagné defines the fields of competency/talent development as: academic, technical, science and technology, arts, social service, administration/sales, business operations/games, sports and athletics.

Said differently, the concepts of giftedness and talent are synonymous with the following pairs of concepts: aptitude vs. achievement, potential vs. performance, natural traits vs. systematically trained ability, or origin vs. outcome.

These definitions allow us to conceive talent development as the progressive transformation of outstanding natural abilities (gifts) into outstanding knowledge and skills (talents) in a specific occupational field. Outstanding natural abilities (gifts) from one or more domains may be viewed as raw materials in the talent development process. Two sets of catalysts, *intrapersonal* and *environmental* support or hinder the talent development process.

References/Additional reading

Gagné, F 2008, "Building gifts into talents: Overview of the DMGT" keynote address at the 10th Asia Pacific Conference for Giftedness, Asia-Pacific Federation of the World Council for Gifted and Talented Children, Singapore, 14–17 July 2008.

Rogers, KB 2002, *Re-Forming Gifted Education. How Parents and Teachers Can Match the Program to the Child*. Great Potential Press, Inc., Scottsdale, AZ. Chapters 2 and 3.

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 1 Understanding Giftedness, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Differentiated Model of Giftedness and Talent
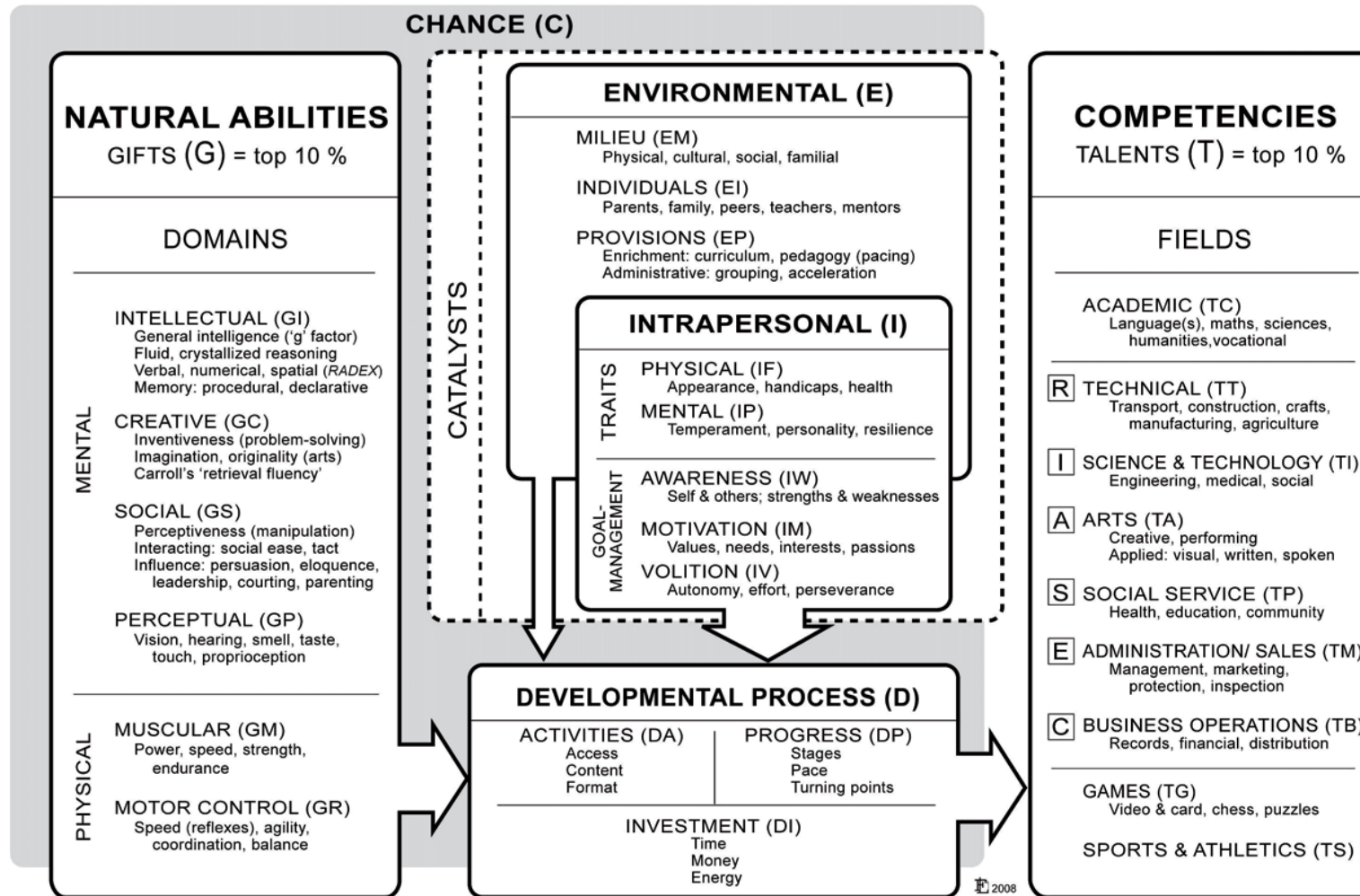

Gagné, F 2008 "Building gifts into talents: Overview of the DMGT." keynote address at the 10th Asia-Pacific Conference for Giftedness, Asia-Pacific Federation of the World Council for Gifted and Talented Children, Singapore, 14–17 July 2008.

Reproduced with the permission of Françoys Gagné.

Indicators of giftedness and early identification

Giftedness manifests itself as a cluster of traits, not as a typical pattern of behaviour and development. Exceptionally able young children vary in the range of talents they exhibit and in their emotional, social and physical development. They may demonstrate outstanding development in one, or in many areas. Young children's development is dynamic and individual. One child may exhibit outstanding reasoning ability and poor manipulative skills. Another child may have highly developed verbal skills but little ability to write or draw accurately. Yet another child may hide their abilities in order to 'fit in' with their peers.

When children have outstanding potential or show advanced abilities and strengths during their early childhood years it is necessary to provide an appropriate curriculum which is matched to their special learning needs and abilities. Very young children who can read early or display other advanced abilities need to be stimulated beyond the regular curriculum. It is also critical in the early years that positive dispositions towards learning are formed and the foundations for future academic success are established. Failure to foster productive dispositions, including habits and attitudes and to develop a love of learning can contribute to subsequent underachievement.

Early identification will enable the school to develop appropriate, comprehensive and challenging long-term programs for exceptionally able young children. Kindergarten and pre-primary teachers play a critical role in this process. A secure, stimulating early childhood learning environment will help students feel safe so that they can demonstrate their advanced abilities. Early indicators which suggest further investigation can be gathered through a variety of means including:

- teacher observations and behavioural checklists
- interactions with students
- discussions with parents/guardians.

Learning characteristics of young gifted students

Students showing a significant clustering of specific learning characteristics may possess exceptional potential. Awareness of these characteristics will help parents/guardians and teachers with the early identification process. Learning characteristic indicators include:

- the ability to understand and use abstract symbol systems at much younger ages than usual
- early language development
- early milestone development
- early development of a rich vocabulary
- exceptional memory
- rapid pace of learning
- the ability to ask reflective and probing questions
- early development of classifying and investigating skills
- fascination in a particular subject
- advanced play behaviour.

Additional reading

Harrison, C 1995, *Giftedness in Early Childhood*, Gifted Education Research Resource and Information Centre, Sydney, pages 14–19.

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 2 The Identification of Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Socio-emotional characteristics of young gifted students

A range of socio-emotional characteristics may be exhibited by students with exceptional ability in the Early Childhood phase of development. Students who are significantly more developmentally advanced in their capacity to learn than their age peers can be more emotionally and socially mature than their classmates. In addition, they may also experience heightened socio-emotional intensity, including, perfectionism, fear of risk taking and anxiety that may cause challenges in the school environment.

A clustering of the following traits is indicative of high potential in young students and suggests further investigation:

- highly developed sense of justice and 'fairness'
- emotional intensity
- interests that are more like those of older children
- preference for companionship with older children
- high sensitivity
- different conceptions and expectations of friendship from those of their age peers
- enhanced capacity to empathise
- frustration when their imperfect fine motor coordination will not allow them to produce art work or writing at the level they can envisage in their imaginations
- advanced play patterns
- developed sense of humour.

The advanced development of a gifted student may result in emotional sensitivity and social isolation. Timely identification by early childhood teachers can provide appropriate support to help exceptionally able young students experiencing social and emotional difficulties.

Additional reading

Harrison, C 1995, *Giftedness in Early Childhood*, Gifted Education Research Resource and Information Centre, Sydney. Chapters 2 and 3.

Rogers, KB 2002, *Re-Forming Gifted Education. How Parents and Teachers Can Match the Program to the Child*. Great Potential Press, Inc., Scottsdale, AZ. Chapter 3.

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 3 Social and Emotional Development of Gifted Students and Module 4 Understanding Underachievement in Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Categories of gifted and talented students

High-achieving students usually identify themselves by the quantity and quality of their responses or activities. Outstanding ability or talent in one or more areas is evident.

Teachers need to be aware that some outstanding students who forge ahead of their peers initially may lose some of the academic gains for a number of reasons, including decreased motivation or a change in the level of enrichment in their learning environment.

Covertly-able students appear to need less attention. They quietly get on with their work and complete the tasks set. They are often shy and reticent and seldom ask a question because they understand and therefore have no need to ask. Sometimes they refrain from questioning or showing their advanced ability because they do not want to be different. They are not easily identified as they may not be given the opportunity to experience challenging tasks or problems. Girls may form a large proportion of this group.

High-potential students with behavioural problems may be aggressive, withdrawn and very active or disruptive. They are not easily identified. The behavioural problems that may mask their potential ability may be psychologically based, result from a physical disability or be attention related, such as in Attention Deficit and Hyperactivity Disorder.

Underachieving students are those whose performance in school is very much lower than their intellectual potential, ie students who are not doing as well as expected. They produce little or no work yet, at times, show evidence of outstanding ability in a particular area. Students from a deprived socioeconomic background may not be readily identified because of low teacher expectations.

With these students, causes such as boredom, lack of challenge, isolation, fear of failure, anxiety, low self-esteem or pressure to conform will often account for lack of achievement. These students may need counselling to address the problems of low self-esteem and feelings of inferiority.

Students with special needs and in particular the following groups of students require attention in the identification process:

- gifted students from economically disadvantaged backgrounds
- culturally diverse students learning English as a second language
- children who are gifted and have a learning disability
- gifted students with physical disabilities, for example visually impaired or hearing impaired gifted students
- gifted students in geographically isolated areas
- gifted students whose love of learning has been dimmed by an unchallenging curriculum
- gifted students who deliberately camouflage their abilities for peer acceptance.

This group may also include students whose gifts are in domains not traditionally recognised in school settings, eg social aptitudes. For special populations of gifted students, it is essential to recognise their potential talent and ability in order to cater for their educational needs. Identification procedures may have to be modified and adapted.

Additional reading

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 2 The Identification of Gifted Students and Module 4 Understanding Underachievement in Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

The gifted and talented continuum

Like other 'at risk' groups in the educational community, gifted and talented students can be ranged along a continuum. A short description of the generic features of various kinds of students may be useful, however, it should be read with caution as the continuum is almost infinite and, necessarily, these are generalised composites.

Mildly gifted

These students could well be those who fit the 'stereotype' of giftedness in that they are compliant, cooperative and often able to discern the assessment requirements of particular teachers and cater to them. They may be well motivated as they do not necessarily suffer from the same emotional disadvantages as more highly gifted students and therefore are able to perform well on classroom tasks and be characterised as 'exceptionally able' as a result. Quite often, teachers mistakenly refer to these students as the truly 'gifted and talented' and they are well represented in special programs for the gifted.

Moderately gifted

These students may not perform well in class nor be as compliant and cooperative as the teacher might like or expect. When identified they may, in fact, resent the fact that teachers make more demands of them in relation to behaviour and maturity as their socio-emotional development may not match their gift or talent in terms of its natural development. These students can often be engaged by innovative and creative teaching and, although they may be plagued with anxiety when attempting new tasks, they will often produce outstanding results if supported and nurtured.

Profoundly gifted

These students are the most challenging for teachers. Typically more intelligent than up to ninety-nine per cent of the population, including their teachers, these students often disengage from education around Year 4 and appear problematic in terms of the standard classroom expectations of teachers from then on. Interestingly, due to the behavioural problems which often accompany their complex way of viewing the world, these students are the least likely to be identified by the school system.

Teachers must not assume that young gifted and talented students are aware of the level of their own potential. Students commonly realise they are different to their age peers and this can give rise to behaviours such as 'masking' – hiding their abilities in order to gain acceptance.

A common problem with regard to gifted students can flow from the perceptions of the various people involved. For example, a parent/guardian who has observed gifted characteristics in their child could have a different perception of the child's ability and potential than a teacher who has not observed performance that would suggest giftedness and each can be defensive of their positions. When the various 'stakeholders' come together in the interests of the student, and an appropriate provision is made, the student can be assisted to build an accurate concept of 'self' that may mitigate problems that impair performance.

Additional reading

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Extension Module 1 Understanding Giftedness Further, Early Childhood, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

How can gifted students be identified?

There is **no single technique** by which teachers can be certain that the strengths and weaknesses of any student can be fully identified. However, by a combination of careful, sensitive observations in an atmosphere which encourages individual expression, together with some objective assessment, a teacher can build up a detailed picture of a student upon which confident judgment can be based. A classroom environment which encourages creative, divergent and higher level thinking and an open-ended approach to learning will foster the emergence of gifts and talents.

Identification processes should include a combination of objective and subjective approaches to be effective. No single technique allows accurate identification as *performance* may require a degree of *motivation* that the student does not possess.

Identification processes should be inclusive to ensure gifted and talented students are not disadvantaged on the basis of gender, racial, cultural or socioeconomic backgrounds, physical or sensory disability or geographic location.

Identification should be a flexible, continuous process to allow for the recognition of gifts and talents which may not at first be apparent as they are yet to emerge from educational practices.

Identification should begin early to avoid recurring patterns of underachievement in later years.

Additional reading

Curriculum Council 1998, *Curriculum Framework for Kindergarten to Year 12 Education in Western Australia*, Curriculum Council, Osborne Park, Western Australia. 'Teaching and Assessment' pages 310–315.

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 2 The Identification of Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Parents/guardians as partners

With access to a wide range of information regarding gifted education and opportunities for independent assessment many parents/guardians in the early years of the child's school life are very well informed about the issues and opportunities available for their child. Other parents/guardians may be anxious about contacting the school, or may be experiencing difficulties in supporting their child at home and require further information and help. A pro-active approach to parent/guardian involvement will ensure the development of strong partnerships and provide positive links between the home and school program.

Kindergarten and pre-primary teachers are well placed to develop positive partnerships that will establish a firm base upon which to build support for exceptionally able students and their families. Open communication in a caring supportive environment will ease anxiety and provide wide ranging benefits for students, parents/guardians and teachers.

Parents/guardians are a valuable source of information regarding their child and can assist in the identification process. A specific set of questions or a checklist can aid parents/guardians in gathering objective information. A teacher–parent/guardian interview may focus on the learning and socio-emotional characteristics of the child, and should include discussions about the following:

- early milestone development
- fluency of speech
- current reading skills
- age at which child commenced reading
- unusual imagination
- special-interest areas
- unusual hobbies
- independent learning
- how the child relates to school
- how the child relates to peers and adults.

Additional reading

Rogers, KB 2002, *Re-Forming Gifted Education. How Parents and Teachers Can Match the Program to the Child*. Great Potential Press, Inc., Scottsdale, AZ. Chapter 3.

Suggested identification tools

The following tables list suggested identification methods with their associated pros and cons.

OBJECTIVE METHODS	PROS	CONS
Psychometric assessment (eg WISC-IV, Stanford-Binet-V IQ tests, Raven's Standard Progressive Matrices)	The best method to identify gifted students Reveals hidden potential in all students Raven's SPM can be administered by teachers	Most tests are expensive in use of professional time and services Less likely to identify creatively gifted students
Advanced developmental milestones	Reliable method of identifying gifted potential	Should not be used as the sole basis of identification
Achievement tests (eg UNSW competitions, Math Olympiad, PAT Math/English, ACER developed tests)	Excellent indication of student's current level of performance in targeted area	Will not identify underachieving, gifted and talented students Can be expensive
Aptitude tests for arts (Horn Art Aptitude Test, Gordon Music Test)	Accurate and reliable	Can be expensive Difficult to source
Teacher constructed assessments (pre-tests, concept maps, diagrams, flow charts, standard classroom tests)	Cost-effective Clear indication of student's current level of achievement	Does not identify underachievers 'Low-ceiling' hides gifted student's true ability
Above-level testing (testing the student at least two years above current year level)	Demonstrates student's capability to operate on a level higher than their current grade level Cost-effective	Will not uncover disengaged learners as it gauges content mastery
Creativity tests (eg creative writing, visual arts creation tasks)	May identify the divergent thinker who could be overlooked on IQ tests	May be too narrow in scope to be used without being supplemented by other measures, unless identifying creativity is the sole objective of testing

SUBJECTIVE METHODS	PROS	CONS
Peer nomination	Aspects of student's personality not seen by adults taken into consideration	Students generally are reliable, but students may nominate friends. This approach needs to be supported by other methods
Student self-nomination	Students are generally objective. Requires sympathetic approach and possibly is best in an interview situation	Peer pressure or poor self-esteem may influence nomination
Teacher nomination	Providing the use of check-lists and that sustained, systematic observations are made – teacher nomination is a valuable tool for the identification of gifted and talented students	Subjective nomination needs to be backed up with objective measures to ensure credibility (not simply choosing favourites) Underachievers with negative behaviour patterns unlikely to be nominated by some teachers
Parent nomination	Longer period of observation in different contexts from which to draw conclusion	Relevance of information presented or possibility of bias. Checklists provide focussed feedback

References/Additional reading

Merrick, C and Targett, R 2004, The *Gifted and Talented Professional Development Package for Teachers* – Module 2 The Identification of Gifted Students, GERRIC School of Education, UNSW, Sydney, viewed at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Education Department of Western Australia 1995, *Teaching TAGS: Talented and Gifted Students*, EDWA, East Perth, Western Australia.

Where can I source identification tools?

Advanced developmental milestones

Exactly as the name suggests – gifted children are often thirty per cent ahead of their peers in motor and cognitive developments.

A table of developmental milestones can be found on the Austega website at www.austega.com/gifted/preschoolers.htm. Search for the article 'Parenting Gifted Preschoolers'.

Psychometric assessment tests

IQ tests

Tools of this nature can only be administered by qualified psychologists. Consult your school psychologist or the School Psychologists' Association of Western Australia for more information about accessing the most appropriate psychometric assessment tool for your context.

The Australian Psychological Society Ltd. – www.psychology.org.au

School Psychologists' Association of Western Australia – http://wa.agca.com.au

Coolabah Dynamic Assessment Model (CDAM)

This is a variation of psychometric testing developed by Professor Graham Chaffey to assist in the identification of gifted and talented Aboriginal students using the Raven's Standard Progressive Matrices.

A report detailing Professor Chaffey's methods can be found on the New South Wales Department of Education and Training website at www.curriculumsupport.education.nsw.gov.au. Search for 'Coolabah Dynamic Assessment Model'.

Essentially, dynamic testing involves setting up a pre-test to gauge initial performance, provide an intervention strategy to boost metacognition and cognition within students and a final test to measure the effectiveness of the intervention.

Achievement tests

Professionally developed standardised achievement tests

A range of standardised tests are available to support the identification of academic talent. Many Australian state education departments use these as selection instruments for entry into their highly competitive selective schools. (Some of these organisations also provide psychometric testing options.)

Test developers

Australian Council for Educational Research at www.acer.edu.au. Follow the **Tests** link.

NCS Pearson – www.pearsonassessments.com/pai/. Search the site for 'gifted and talented'.

For additional information on assessments view the UNSW Education Assessment Australia website at www.eaa.unsw.edu.au/eaa.

Teacher-constructed assessments and above-level testing

School staff can construct pre-tests with minimal cost and effort to determine student's prior knowledge and inform curriculum planning.

Classroom tests, screening tools or checklists used by teachers in higher grades can also be used to provide an indication of the level at which a student can operate. A student who demonstrates strong achievement two years above their current year level will require appropriate adjustments to the curriculum. It must be noted that gifted students may have gaps in their curriculum knowledge, but will usually acquire the relevant knowledge/skills quickly.

Creative thinking tests

Creative test index

The Centre for Creative Learning™ has compiled an index of widely used creativity assessments with a review of each item. View these at www.creativelearning.com/ and follow the link **Assessing Creativity**.

Creative test: Overview

Gayle Dow from Indiana University in the United States has compiled an informative overview of the scope of creativity tests at www.indiana.edu/~bobweb/Handout/cretv_6. html.

Additional reading

Treffinger, DJ, Young, GC, Selby, EC and Stephenson, C 2002, *Assessing Creativity: A Guide for Educators*, The National Research Centre on the Gifted and Talented University of Connecticut, Connecticut, viewed 09 February 2010 at www.creativelearning.com/PDF/AssessCreatReport.pdf.

Identification checklists and nomination forms

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 2 The Identification of Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_ education_professional_development_package.htm.

A selection of up-to-date identification/nomination checklists can be found at the New South Wales Department of Education and Training, available at www.curriculumsupport.education.nsw.gov.au. Search for 'gifted identification checklist'.

Provision overview

Young gifted students learn more rapidly and in greater depth than their age peers. They require a wider variety of more complex, interesting activities delivered at a faster pace, less teacher-directed instruction and a safe, supportive environment. The curriculum for these students should be drawn from their interests and opportunities should be made for their direct involvement in relevant aspects of curriculum decision making. Provision planning must take into account the student's needs, talents and learning styles.

The teacher's disposition and willingness to explore alternative learning opportunities that meet the special needs of exceptionally able young students is critical to their success. Empathy for students who display the characteristics of being exceptionally able, acknowledging their special needs and valuing their achievements will provide the confidence and self-esteem necessary for continued academic and socio-emotional development.

Young gifted students may experience social isolation because of their intellectual abilities. Many gifted students are unwilling to take risks for fear of failure. Those who are fast workers may become bored or frustrated in their desire to work at greater depth and learn new skills. Some may deliberately mask their abilities and underachieve in order to conform to their peers. Other students may become frustrated by the lack of challenge and develop behaviour problems. The learning characteristics, social and emotional needs of the student must all be considered as part of the planning process.

Learning experiences for exceptionally able young students require considerable verbal interaction at a more complex level between teacher and students. Every opportunity should be created in the early years curriculum for gifted children to work at an appropriately advanced level to extend their vocabulary, develop their thinking and problem-solving skills and refine ideas.

Fine motor development

Undeveloped manipulative skills, particularly in Year 1, often do not match advanced thinking skills, verbal skills or reading ability. Recognition of this developmental difference and ongoing support and encouragement will provide confidence to develop the necessary skills. Students who have manipulative difficulties may be supported in using a computer with voice to text conversion software.

Additional reading

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 5 Curriculum Differentiation for Gifted Students and Module 6 Developing Programmes and Provisions for Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Learning environment

The provision of an inclusive, challenging learning environment is critical to meet the needs of all children in their early years of schooling. For exceptionally able students, this provides a safe setting in which to demonstrate their advanced abilities and work at a higher level. A challenging learning environment is the first layer of curriculum differentiation and should include:

- fast-paced learning
- engaging teaching strategies
- flexible classroom organisation
- challenging learning experiences which are in-depth, open-ended and extend thinking
- provision of a range of experiences, resources and materials to extend children's knowledge and provide motivation
- a stimulating and interactive environment that is relevant and meaningful to the child's life experiences, learning style and advanced level of development
- the opportunity to develop independent learning skills
- a recognition and development of individual potential.

What modes of provision exist for gifted students?

Broadly speaking there are three modes of provision that support a differentiated approach for gifted and talented students. These include extension, enrichment and acceleration.

Enrichment activities broaden the range of experience for all students whilst providing scope for gifted students to work at a higher level within the classroom.

Extension activities encourage expansion of knowledge and skills, and provide opportunity for a more individual approach.

A range of **acceleration** strategies enable gifted students to work at a level that better matches their ability. This usually involves working with like-minded intellectual peers who are often older students.

The different levels of provision are not mutually exclusive. It is anticipated that students will be involved in a range of provision modes that provide a 'best fit' option. Various combinations of the three modes of provision can be implemented at the classroom, school and system level.

Examples

- At the classroom level, a student may be involved in computer challenges, be verbally challenged by teachers and parents/guardians (enrichment) whilst at the same time be working on open-ended problem solving or a contract for science (extension) and doing advanced reading with a higher grade (acceleration).
- A pre-primary teacher may use Bloom's taxonomy to focus questioning at higher levels during mat sessions and establish a learning-centre approach which has tiered activities with higher order challenges to extend and enrich the learning program further.

- Following a comprehensive screening process, a school may choose to undertake a cross grading or cross setting approach in English and Maths – providing opportunities for students to work with like-minded peers for part of the school day. The school may also review its home reading program to differentiate opportunities across the early years providing challenging material for exceptional readers.
- A school may identify an exceptionally able young child and as part of the provision options, work with all stakeholders to undertake a comprehensive screening program to consider accelerated learning via grade skipping.

The table below provides examples of the types of activities which may be considered in each mode of provision.

Enrichment . . . activities that broaden the range of experiences for all students	Extension . . . activities that encourage an expansion of knowledge and skills in the regular curriculum	Acceleration . . . participating in learning experiences based on performance, usually with older students
• independence training and independent research • critical and creative thinking skills • higher levels of questioning • problem solving • guest speakers • online learning	• learning centres • challenge corners • parallel programming • tiered learning activities • contracts • mentors • complex ICT activites	• cross setting • cross grading • cluster grouping • compacting the curriculum • subject specific acceleration • year skipping

What are some specific examples?

Enrichment

Enrichment experiences are designed to broaden learning and thinking for all students and should form part of the general curriculum planning process in every classroom. For exceptionally able young students, enriched curriculum activities should be planned to provide increased motivation and engagement with learning at a higher level. An enriched curriculum, offered in a supportive learning environment will challenge gifted students more effectively and enable them to demonstrate their exceptional abilities.

Independence training and independent research

Gifted students often like to explore in depth and opportunities need to be provided to support independent learning. The processes of learning are as important as the product resulting from student investigation. Support strategies for independent/self-directed learning may include:

- discussions with the student to determine his or her interests (topic may evolve from a classroom study, a personal interest, discussion or questions arising from discussion)
- negotiations are the best way to approach study, taking into consideration the student's preferred learning style (investigation may become a search for information, an experimental quest, an analysis of what is known or an inventive exploration)
- supporting the student to select resources
- helping to develop a web explosion chart or other graphic organiser
- assisting to formulate questions and goals
- teaching required research skills
- allowing frequent uninterrupted time for investigations
- providing opportunities for detailed feedback and discussion
- encouraging the student to share completed tasks with peers or other classes (gives a sense of purpose, reduces isolation and is a powerful modelling strategy to encourage other children).

Thinking skills – levels of questioning

Young gifted and talented students are able to work at higher cognitive levels than their age peers and are challenged by complexity and originality. They are able to think in the abstract earlier and therefore need encouragement via teacher questioning techniques to explore, experiment, solve problems, hypothesise and make judgements.

Critical and creative thinking skills should be taught, practised and applied for all students as a core aspect of the general teaching program. Questioning which is open-ended, rather than focusing on a 'right answer', will produce responses that are more creative and enable students to be more innovative and original in their thinking. Looking at other viewpoints, achieving group consensus, seeking justification and defending points of view will stimulate higher levels of thinking.

Promoting and valuing 'different' answers will foster imaginative responses, provide a range of learning strategies for all members of the class and develop a climate of acceptance and challenge. This will aid students to develop confidence and risk-taking abilities and promote a positive learning environment.

Bloom's Taxonomy, discriminates six levels of thinking and provides a sound basis on which to develop higher order questioning, tiered assignments and enriched learning activities. The diagram below presents the original and revised version of the taxonomy.

Original version	Revised version
Evaluation	Creating
Synthesis	Evaluating
Analysis	Analysing
Application	Applying
Comprehension	Understanding
Knowledge	Remembering
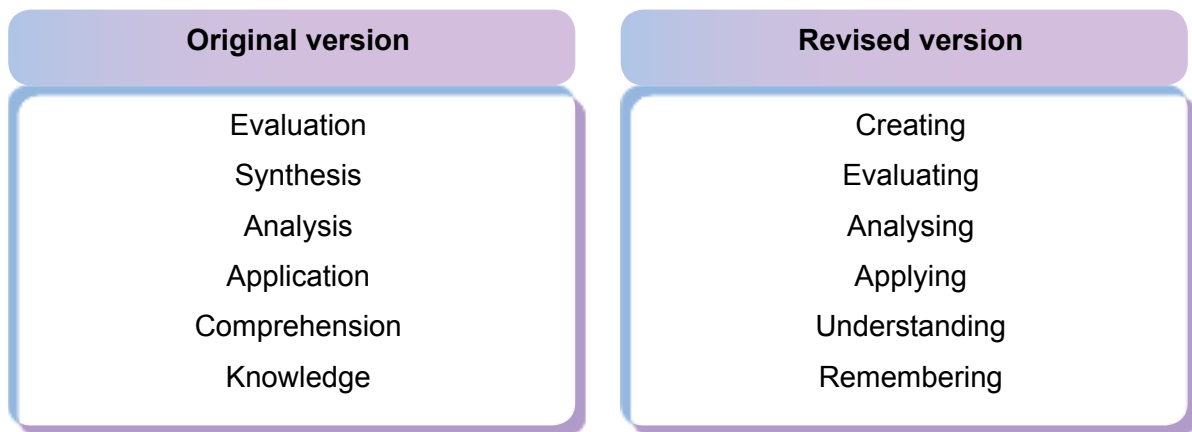
References/Additional reading

Anderson, LW and Krathwohl, DR, (Eds) 2001, *A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, Longman, New York.

Bloom, BS, Englehart, MD, Furst, EJ, Hill, WH and Krathwohl, DR (Eds) 1956, *Taxonomy of Educational Objectives: The Classification of Educational Goals. Handbook 1: Cognitive Domain*, Longmans Green, New York.

Bloom's Cognitive Taxonomy Circle, viewed at the American Psychological Association website at www.apa.org/index.aspx. Search for 'Bloom's Cognitive Taxonomy Circle'.

Bloom's Revised Taxonomy – presentation, planning frameworks, posters and examples, viewed at Kurwongbah State School webiste at www.kurwongbss.eq.edu.au/thinking/Bloom/blooms.htm.

Bloom's Taxonomy by RC Overbaugh and L. Schultz, viewed at Old Dominion University website at www.odu.edu/educ/roverbau/Bloom/blooms_taxonomy.htm.

Whilst gifted students need to acquire, comprehend and apply the knowledge base, it is more important for them to spend a greater proportion of their time analysing, synthesising and evaluating this knowledge. The differences between the way core students and gifted students work in relation to Bloom's revised taxonomy can be seen below.

Creating
Evaluating
Analysing
Applying
Understanding
Remembering
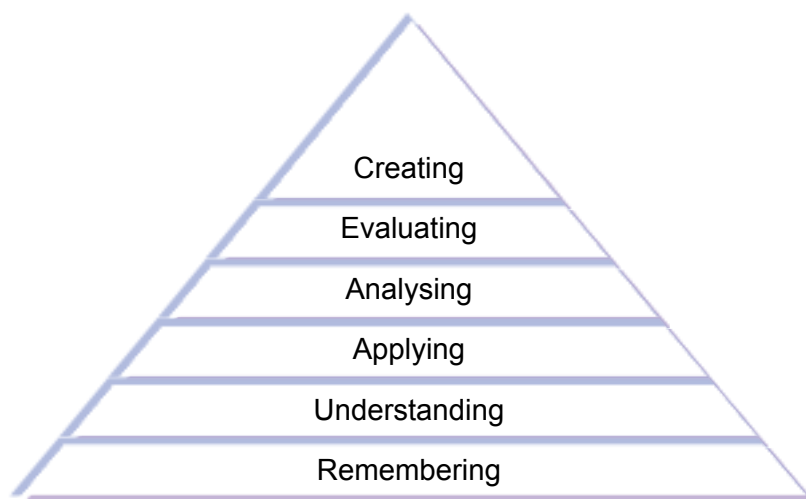
Students working at the core level of the curriculum should have access to all levels of the taxonomy but should spend more learning time using the lower order strategies of remembering, understanding and applying, as they work towards the higher order thinking skills (see above).

Gifted students need to spend more time working at a faster pace, on more complex activities involving, analysing, evaluating and creating (see below).

Creating
Evaluating
Analysing
Applying
Understanding
Remembering
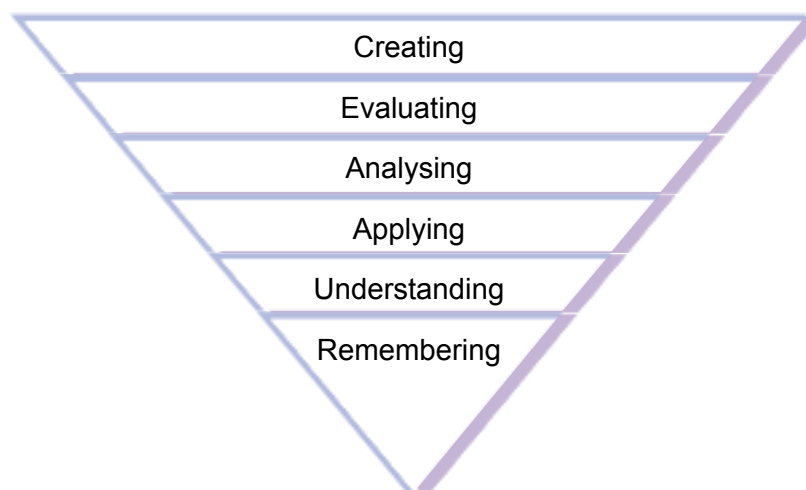
Open-ended questions

Questioning which is open-ended will produce responses that are more creative and enable students to be more innovative and original. Open-ended questions, rather than 'right answer' questions, generate a multitude of answers and provide opportunities for all students to engage effectively in class discussions at a variety of levels. Question stems, such as those below, provide the opportunity for teachers to involve students in justification, extend children's thinking and to help them value other ideas and points of view.

> How would you ...?
>
> How does ...?
>
> In what order could you ...?
>
> What would happen if ...?
>
> How could you ...?
>
> Can you think of another way ...?
>
> How else could you solve that problem ...?

References/Further reading

The *Gifted and Talented Professional Development Package for Teachers* (2004) – Module 5 Curriculum Differentiation for Gifted Students and Module 6 Developing Programmes and Provisions for Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

The following are links to websites with thinking skills resources.

Creating Minds – http://creatingminds.org/index.htm

Global Education – www.globaleducation.edna.edu.au. Follow the link through **Teaching Strategies** to get to Thinking Skills.

Gifted and Talented Education (SCAMPER) – www.det.wa.edu.au/curriculumsupport/giftedandtalented. Search for 'SCAMPER'.

Problem solving

A problem-solving approach encourages students to think creatively, formulate and test hypotheses and develop and extend their thinking skills. Students learn to elaborate and defend their ideas and conclusions and generally integrate and apply their knowledge. Problem solving can be applied to all areas of the curriculum and offers the opportunity for all students to work in a real-world context. Strategies for problem solving (eg brainstorming, graphic organisers, setting hypotheses and recording in a range of forms) need to taught and practised. All students should be encouraged to share and discuss their own techniques.

Guest speakers and excursions

Guest speakers and excursions provide all students with exposure to ideas, processes and techniques beyond the usual range. The opportunity to see and question experts working in specific fields provides motivation and encourages curiosity and questioning. This in turn can be the basis of further research, independent study and extension activities.

An extensive list of excursion possibilities and suggestions can be found on the Department of Education CMIS website at www.det.wa.edu.au/education/cmis/eval/curriculum/excursions/.

Online learning

Gifted and talented students need to access more sophisticated online opportunities in order to expand their repertoire and enable them to carry out research independently. There are many options for online learning which will satisfy the learning needs of all students and provide enriched access for gifted students in both a cooperative and independent mode. See the list below.

Schools' Online Curriculum Services – www.det.wa.edu.au/curriculumsupport/ocs/detcms
Department CMIS – www.det.wa.edu.au/education/cmis/eval/curriculum/ict/index.htm
Education Network Australia (EDNA) – www.edna.edu.au
Ozprojects – www.ozprojects.edu.au/
Global Education – www.globaleducation.edna.edu.au

Extension

Extension should be focused towards the student's individual interests and talents. In providing extension, allowances should be made for the student to participate in the decision making. Exceptionally able students perform better and are more motivated when their preferred learning styles are used for extension activities.

Learning centres and challenge corners

Learning centres and challenge corners involve a level of independent learning which can meet the needs of a range of students. Learning centres usually focus on the current area of study whereas challenge corners provide more generic extension and problem solving opportunities.

A learning centre provides a set of graduated tasks presented through an activity card approach, which allows for individualised learning and promotes independent learning habits. A well-designed learning centre will cater for all student interests and abilities and enable exceptionally able young students to progress at an advanced rate and depth. A colour-coded system may provide opportunities for different levels of challenge using higher order thinking strategies, problem solving and inquiry approaches.

Learning centres should:

- contain a motivating display of materials presented through an activity card approach
- provide some choice with the variety and scope of tasks
- use an open-ended approach in both the scope of the topic activities and tasks set
- allow for student input – before commencement, during use, when evaluating
- emphasise skills, so that the learning centre fulfils a teaching role.

Contracts

A contract is an arrangement between an individual student and the teacher. It states each party's responsibilities, details the work to be completed, the means by which this will be done and the 'reward' to be attained upon satisfactory completion.

Contracts enable students and teachers to openly negotiate a learning program. With appropriate teacher support, a contract can provide structure and motivation for a young gifted student.

Contracts can vary in format but usually contain the following characteristics:

- tasks, which are clearly outlined
- a workable time line
- provision for feedback, follow-up or evaluation
- a formalised commitment by student and teacher
- ongoing negotiation to vary the contract if unforeseen circumstances arise.

Contracts can only work if the student is involved in planning and setting up the work to be done and that they can see the reason for the agreement and understand the process of self-management and goal setting.

Example of a contract

My Reading Sheet   Name _____

Class _____

My books for this week are:

1 _____

2 _____

3 _____

I am going to _____

My free choice activity is _____

I liked this contract   a lot   a little   not much
(circle one)

Signed _____   Signed _____
Student   Teacher

Parallel programming/Tiered learning activities

This form of provision can be used with good effect in extending gifted and talented students. It involves an individual or groups of students working on a theme or topic, but at a range of intellectual or ability levels.

Parallel programming should:

- relate to normal classroom work
- employ higher order thinking skills
- involve a flexible group which has demonstrated mastery of required facts and concepts
- not involve 'busy work'
- enable students to work on activities at the same time as the rest of the class
- be evaluated and recorded by student and teacher.

Examples

- A group of students in pre-primary with early reading development may be identified for additional enrichment including the provision of early reading books, opportunities to read to other students and sharing their knowledge of interesting books they may have read at home. Early readers may also help classmates to choose books in library time. Independent contracts may be established to further challenge reading skills.
- A challenge corner may be established to provide open-ended problem solving activities at a higher level of inquiry. Students could be identified to work at this corner after completing their set tasks, or a group of able students may undertake more challenging work whilst others are engaged with repetitive activities.
- A group of students in a Year 2/3 class could be identified to work on a research project at a faster pace and higher level. More complex, higher order tasks (using skills of evaluation, synthesis and creativity) could provide additional challenges for these students.
- Offering different levels of tiered activities as part of a class activity provides extension and challenge opportunities for exceptionally able young students that can be undertaken as part of the normal class routine.
- An identified group or individual student may undertake additional self-paced computer-based learning similar to the classroom program.

Mentors

Students who have outstanding ability or interest in one area, eg computing, poetry or mathematics, may benefit from interaction with a community member who has expertise in that field. Schools which have peer mentoring programs may also involve older primary students in supporting young exceptionally able students. The mentor needs to relate well with the student and be interested in developing continuing support. The relationship is usually a long-term one and needs to be carefully planned, with full parent/guardian involvement and approval.

Information and communication technology

Using ICT for self-paced learning programs can provide enriched opportunities for many young, exceptionally able early childhood students.

Further information can be viewed at the Department of Education website.
www.det.wa.edu.au/curriculumsupport/ocs/detcms/portal/
www.det.wa.edu.au/education/cmis/eval/curriculum/ict/

Acceleration

The process of acceleration must be negotiated with all stakeholders and be carefully considered with the maximum possible information about the child. A 'best-fit' placement is the desired outcome of any acceleration strategy.

Cross setting

It may be appropriate for students to move and work at an advanced level with a group of students of the same age and year who are drawn from various classes. For example, where there are two or three classes of the same year level, advanced readers may be grouped in one of the classes for language studies each day.

Cross grading

For some subjects it may be convenient and appropriate for students to move from one year to another. For example, students advanced in mathematics may move from Year 1 to Year 2 for that subject each day. This involves careful timetable alignment between classes.

Compacting the curriculum

Compacting or telescoping the curriculum is a form of acceleration in which the learning program is covered in a shorter period of time. Students follow the normal program but work is covered at a faster pace, with less time needed for revision. Student motivation may increase and boredom and frustration can be alleviated. Pre-testing is used to determine the entry-level achievement in a particular subject area, clearly identifying student needs and avoiding unnecessary repetition of work already mastered.

Cluster grouping within the class

Cluster grouping involves identifying a group of students for accelerated work within a class, while they remain with their chronological peers. The group could work on an accelerated program in some or all subjects, depending on their needs and the available organisational structure. If numbers permit, this could prove more convenient than withdrawing the group from the class or cross grading its students with another year level.

Subject specific acceleration

This allows students to spend some time of the day working with their intellectual peers in one subject or specific area, while remaining with their age peer group for all other work. For example, where students are outstanding mathematicians they may need to study mathematics in a higher year level classroom for that subject. Another example is that of a pre-primary student who is advanced in reading and spends part of the day in the Year 1 classroom during the language session. It is also easy to facilitate in multi-aged grouped classes and in small country schools.

Year skipping

Year skipping is a form of acceleration that allows students who show exceptional performance significantly above their age peers, to progress through the educational system one year earlier than their chronological year level. The process may be initiated by the parents/guardians or the school.

Year skipping is a school decision made by the principal, following consultation with the early childhood teacher, the school psychologist, the parents/guardians and information from the relevant advisory and school support personnel. It involves a comprehensive process of assessment to determine whether year skipping is the best fit placement for the student concerned.

Questions to be considered when deciding upon year skipping for an individual student include:

1   What is the match between the social, emotional and physical development of the student and his/her outstanding intellectual, academic or creative abilities?
2   Will the student's abilities, achievements, learning styles, desires and interests be enhanced by acceleration?
3   Is it possible to begin an acceleration program in the present classroom? If the student's strength is only in one area, is it possible to use independent study, grouping options or other strategies to meet the student's learning needs?
4   Is it possible for acceleration to take place in a combined class of mixed age levels?
5   How will the school ensure that acceleration be continuous and coordinated?
6   Will the particular teacher to whose class the student will advance be flexible and understanding?
7   Based on all available data, is acceleration the most appropriate placement decision for the student?

When a decision is taken to year skip a student, it is advisable to establish a transition process and monitor the student's progress carefully.

Further variations of acceleration options are outlined in the John Templeton Foundation report, *A Nation Deceived: How Schools Hold Back America's Brightest Students.*

Additional reading

Assouline, SG, Colangelo, N and Gross, M 2004, *A Nation Deceived: How Schools Hold Back America's Brightest Students* Vol. 1 and Vol. 2, University of Iowa, Iowa.

Assouline, SG, Colangelo, N, Lupkowski-Shoplik, A and Pibscomb, J 2002, *Iowa Acceleration Scale: A guide for whole-grade acceleration*, Gifted Psychology Press Inc., Scottsdale, AZ.

Braggett, EJ 1992, *Pathways for Accelerated Learners*, Hawker Brownlow Education, Melbourne.

Gross, MUM and van Vliet, HE 2003, *Radical acceleration of highly gifted children: An annotated bibliography of international research,* Templeton Foundation, Sydney.

Rogers, KB 2002, *Re-Forming Gifted Education. How Parents and Teachers Can Match the Program to the Child*. Great Potential Press, Inc., Scottsdale, AZ. Chapters 5 and 6.

Differentiating the curriculum

What are the principle ideas behind a differentiated curriculum?

In designing a curriculum for gifted and talented students, many authors suggest that four important elements must be considered: curriculum content, processes, product, overall learning environment. The following is a summary of those suggested by CJ Maker. (Maker, CJ 1982, *Curriculum Development for the Gifted*, Aspen, Rockville, MD.)

Content

Content (what is learned) should be:

- based on concepts
- based on knowledge which is intended to illustrate abstract ideas rather than the acquisition of knowledge as a major focus
- arranged to challenge students to formulate concepts, develop relationships and make applications
- organisationally economic to facilitate transfer of learning, memory and understanding of concepts and generalisations
- an expansion of regular curriculum to include also a study of gifted and creative individuals and the investigative techniques used by scholars in different disciplines
- more abstract, complex and based on ideas that have a wide range of applicability and transfer both within and across disciplines
- of greater variety than the classroom curriculum.

Processes

Processes (methods) should:

- stress the use of information rather than the acquisition of it
- provide opportunities for problem solving and creativity
- use discovery and inductive learning techniques
- lead students to higher levels of thinking
- ensure learning is open-ended
- ensure students have the opportunity to give evidence to support their reasoning, not just the correct answer
- provide greater freedom of choice in selection of topics.

Product

Product should:

- resemble the products being studied and developed by the experts in the field and may include reports, stories, plays, dance, art work, demonstrations in a range of media
- allow solutions to real problems, preferably related to students' local environment
- allow for presentation of these problems to a real audience
- be evaluated by an appropriate audience and by the student
- extend solutions to generalisations
- demonstrate a transformation of information which is based on the collection and analysis of original data rather than a summary of others' research.

Learning environment

Learning environment should be characterised by:

- variety
- flexibility
- more and varied resources
- sophisticated equipment
- warmth and trust
- non-threatening situations for testing views, risk taking
- provision of situations to promote creative and divergent thinking
- student centeredness.

What teaching models are available?

Below is a list of teaching models for a differentiated curriculum:

Kaplan model
www.curriculumsupport.education.nsw.gov.au/policies/gats/assets/pdf/uhsi4hstpre1788.pdf

Maker model
www.curriculumsupport.education.nsw.gov.au/policies/gats/assets/pdf/ust3beach.pdf

Scamper technique
www.det.wa.edu.au/curriculumsupport/giftedandtalented/. Search for 'SCAMPER'.

Williams model
www.curriculumsupport.education.nsw.gov.au/policies/gats/assets/pdf/uhsi3hstanzac.pdf

Developing a school-based program

How should program development be approached?

School-based provision ensures schools and teachers provide a challenging and extended curriculum to enable the gifts and talents of students to emerge, be recognised and be developed. This form of provision is the responsibility of all teachers and relates to as much as fifteen per cent of the population. In some classes, the proportion will be higher.

Each school-based program for gifted and talented students should reflect the school's unique priorities, population and individual learning needs as documented in the school development plan. Program organisation should be sufficiently flexible to allow for the movement of students in and out of programs as needs are identified.

Multiple identification procedures should be used. No student should be admitted or excluded on the basis of the results of a single test or one identification source. Particular attention should be given to the identification and inclusion of underachieving gifted students, students with disabilities and students from culturally diverse or low socioeconomic background.

Steps to develop a school-based program

1   Conduct a school needs assessment and set goals

As a part of the review of standard school planning procedures, a school needs assessment may highlight the need for gifted and talented students to be catered for in a more specialised manner. Realistic and achievable goals should be set in place consistent with the Department of Education policy and guidelines.

2   Gather student information for accurate identification

The use of multiple data is important for the identification of students to be considered for inclusion in a school-based gifted and talented program. Student information may be compiled from a range of sources (see **How can gifted students be identified?**). Interest inventories may be completed by students to provide insights into their needs and interests. Profiles of gifted and talented students should indicate areas of strength and weakness.

3   Consider the model of curriculum provision

Numerous teaching models and taxonomies have been developed and it is essential that a teacher is familiar with these when designing a curriculum specifically to cater for gifted students.

- Aspects of any model may be useful in curriculum design.
- What is chosen will depend on the school environment, the resources available and the desired outcome.

See **What teaching models are available?** for more information.

4 Review provision and organisational options

Provision may follow a number of models and take many organisational forms designed to fit the needs of students and the context of the school.

See **Provision overview** for more information.

5 Identify support requirements for the socio-emotional and special needs of gifted and talented students.

- Be aware that some gifted and talented students may have socio-emotional problems and peer-acceptance issues in schools. Prepare support strategies in collaboration with school psychologists.
- Some students may be 'twice-exceptional', being gifted and having physical impairments.
- Implement strategies for support with school staff, eg psychologist, student tracking, student services coordinator. Encourage inclusiveness, tolerance, understanding and risk taking with learning activities in the classroom.

6 Consider staffing options

- Appoint a coordinator.
- Key teachers with background in gifted education to organise and conduct program.
- Teachers with specific expertise to develop and conduct a relevant program.
- Professional development opportunities to be provided to all staff (see **Professional learning**).

7 Implement program monitoring and evaluation measures

Monitoring and evaluation should be carried out continuously as an integral part of the teaching/learning process to inform future planning. Monitoring and evaluation should focus on individual student performance and program effectiveness, aiming to:

- **identify** student strengths and weaknesses and monitor growth
- **determine** whether program objectives have been met
- **aid** the selection of appropriate curriculum activities and teaching strategies
- **provide** feedback to students
- **provide** information for reporting to parents/guardians
- **provide** useful information for school administration.

8 Adopt a wider community approach

Raise awareness throughout the school community through newsletters and events. Celebrate the achievements of gifted and talented students across all domains.

Additional reading

Hoagies Gifted Education Page – www.hoagiesgifted.com/gifted_programs.htm. View the Gifted Programs information section.

Rogers, KB 2002, *Re-Forming Gifted Education. How Parents and Teachers Can Match the Program to the Child*. Great Potential Press, Inc., Scottsdale, AZ. Chapters 5 and 6.

The *Gifted and Talented Education Professional Development Package for Teachers* (2004) – Module 5 Curriculum Differentiation for Gifted Students and Module 6 Developing Programmes and Provisions for Gifted Students, available at www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm.

Monitoring and evaluation

Ongoing monitoring of student development and evaluation of classroom programs will ensure that curriculum modifications, grouping or placement strategies continue to meet the needs of identified gifted students. Monitoring and evaluation provide detailed information to assess the success of a strategy/program and inform future planning.

Information collected through formal processes as well as informal interactions will provide a rich source of data regarding individual students. Specific information regarding motivation and engagement, challenge and extension and other behavioural information should be gathered to build a more complete profile for each student.

It is important to ensure that the student's learning program provides an appropriate level of academic challenge. Checklists, testing and screening programs provide an important layer of information in the classroom. The teacher must also ensure that scope is available for gifted students to demonstrate learning which is significantly above the classroom level. Open-ended assessment tasks, above-level activities, feedback from student contracts, classroom interactions with the teacher, student checklists and reflections provide valuable opportunities for monitoring student development and evaluating program effectiveness. Using this information to develop a comprehensive student profile will also help to inform longer term planning in successive years.

Parents/guardians provide a rich source of information and their feedback regarding program evaluation and student development should form an integral part of the monitoring and evaluation process. The use of a collaborative goal setting and a regular review process to prioritise desired outcomes are a valuable strategies process to clearly focus action and engage parents/guardians effectively. The checklist overleaf is provided as an example that can be used and amended to evaluate program effectiveness.

Additional reading

Department of Education and Training, Simplified Curriculum, Assessment and Reporting Policy, available at
www.det.wa.edu.au/curriculumsupport/giftedandtalented/. Search for 'SCAMPER'.

Hoagies Gifted Education Page, Gifted Programs information section,
available at www.hoagiesgifted.com/gifted_programs.htm.

Parent/guardian questionnaire: School-based extension program

You can help to improve the school-based extension program by answering the following questions. Your careful thought and opinions are important. We appreciate your cooperation and assistance in helping us to evaluate the program.

No	Question	Yes	No
1	Have you been provided with enough information about why your child was selected for the program?		
2	Have you been provided with enough information about the objectives of the program?		
3	Have you been provided with enough information about the activities and experiences that your child pursues in the program?		
4	Have you been offered sufficient opportunity to discuss your child's progress with the teacher?		
5	Has your child encountered any problems with friends as a result of being involved in the program? If 'yes', please describe.		
6	Which of the following comments best expresses your child's general attitude about extension: ❏ enthusiastic ❏ positive ❏ indifferent ❏ negative		
7	Has your child expressed pleasure or enjoyment about the work in the program? ❏ often ❏ sometimes ❏ seldom ❏ never		
8	Which of the following statements best expresses your child's attitude toward the degree of challenge of the work? ❏ very challenging ❏ somewhat challenging ❏ not at all challenging ❏ no answer		

Further comments/suggestions:

Signature of parent/guardian (optional) | Date

Roles and responsibilities of principals and teachers in developing school-based programs

Principals and teachers should . . .	Ideas to consider
• understand and implement the Department of Education Gifted and Talented Policy	• Nominate a gifted and talented coordinator to promote the policy and help monitor its implementation.
• ensure procedures are in place for the ongoing identification of gifted and talented students, as well as identification for placement in school and supplementary programs	• Use identification procedures in the teaching eTAGS resource. • Teachers monitor students' progress carefully to identify possible gifted and talented students, gather information on identified students using a range of strategies, confirm the information is correct and ensure no student or group of students has been omitted, and ensure the information is incorporated into the school's management information system.
• provide an appropriate and challenging learning program based on a range of strategies which match the learning styles and needs of gifted and talented students	• Devise strategies to use in day-to-day programs to provide a differentiated curriculum (enrichment, extension or acceleration) for identified students. • Provide access to appropriate supplementary programs.
• participate in professional development about the education of gifted and talented students	• Access the online DEST/GERRIC *Gifted and Talented Education Professional Learning Package for Teachers*. • Access information from professional associations to keep abreast of gifted and talented initiatives.

Principals and teachers should . . .	Ideas to consider
• collaborate to share resources within and between schools	• Develop district networks.
• use school development planning processes to collect and review data relevant to the achievement of gifted and talented students and to set priorities and targets which address their needs	• Make provision in the school management information system to identify gifted and talented students and to report on the performance of these students as a sub-group of the school population. • Include gifted and talented provision as a school priority, if warranted.
• encourage parents/guardians of gifted and talented students and community stakeholders to participate in the education of gifted and talented students	• Communicate strategies adopted by the school to cater for gifted and talented students. • Involve parents/guardians in curriculum resource developments. • Draw on community experts to assist with school-based and supplementary programs.

Links and teacher resources

Department of Education Gifted and Talented website
www.det.wa.edu.au/giftedandtalented

Classroom teacher resources

Encouraging Achievement Gifted Education Resources (EAGER)
www.det.wa.edu.au/curriculumsupport/giftedandtalented/detcms/navigation/inclusivity/underachievement/e-a-g-e-r-/?page=2

Gifted Education Research, Resource and Information Centre (GERRIC) *Gifted and Talented Education Professional Development Package for Teachers* (2004), developed for and hosted by the Department of Education and Workplace Relations.
www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm

Kurwongbah State School – Thinking and learning resources
www.kurwongbss.eq.edu.au/. Follow the link to 'Thinking Skills' under **curriculum**.

Gifted and talented websites

GT World
www.gtworld.org

Hoagie's Gifted Education Page
www.hoagiesgifted.org

KidSource OnLine
www.kidsource.com/kidsource/pages/ed.gifted.html

Prufrock Press Inc. blog
http://resources.prufrock.com/GiftedEducationBlog/tabid/56/Default.aspx

The National Research Center on the Gifted and Talented, hosted by the University of Connecticut
www.gifted.uconn.edu/nrcgt.html

World Council for Gifted and Talented Children
https://world-gifted.org/

Australian federal and state education departments – links for gifted education

Department of Education and Early Childhood Development, Victoria – Gifted Education
www.education.vic.gov.au/studentlearning/programs/gifted/default.htm

Department of Education and Training, Northern Territory – Gifted Education
www.det.nt.gov.au/about-us/policies/documents/schools/school-management/gifted-education

Department of Education and Training, Queensland – Gifted Education
www.learningplace.com.au/en/g&t

Department of Education, Employment and Workplace Relations – *Gifted and Talented Education Professional Development Package for Teachers* (2004)
www.dest.gov.au/sectors/school_education/publications_resources/profiles/gifted_education_professional_development_package.htm

Department of Education, Tasmania – Centre for Extended Learning Opportunities (CELO)
www.education.tas.gov.au/school/educators/support/extendedlearning

Department of Education, Western Australia – Gifted and Talented
www.det.wa.edu.au/curriculumsupport/giftedandtalented/detcms/

NSW Department of Education and Training – Gifted and Talented Education
www.curriculumsupport.education.nsw.gov.au/policies/gats/index.htm

Gifted and talented associations

Gifted and Talented Children's Association Of WA (Inc.)
www.gatcawa.org/

Northern Territory Association for the Education of the Gifted and Talented
www.ntaegt.org.au/

NSW Association for Gifted and Talented Children Inc.
http://nswagtc.org.au/

Queensland Association for Gifted and Talented Children Inc.
www.qagtc.org.au/

Tasmanian Association for the Gifted Inc.
www.tasgifted.com/

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