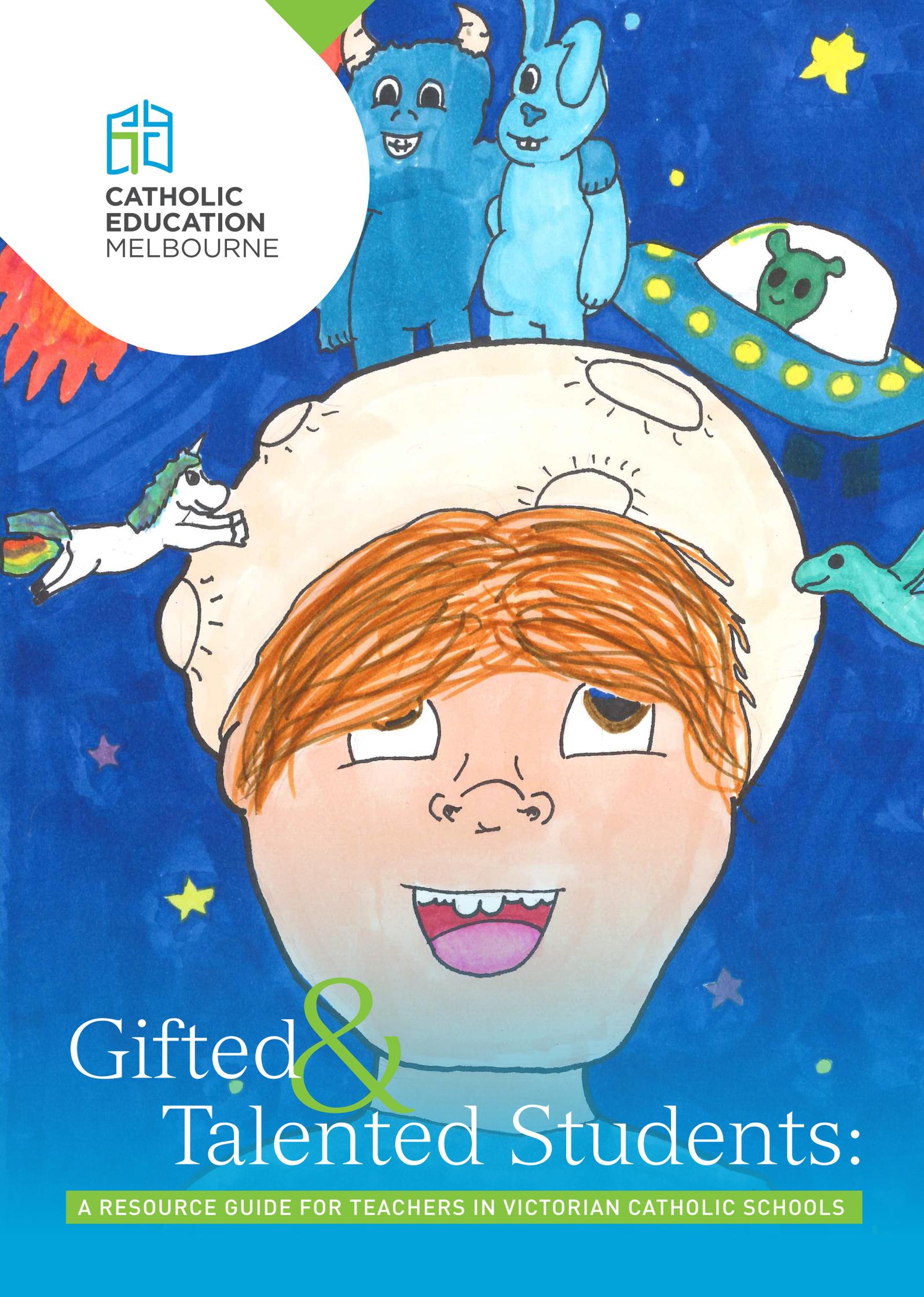




CATHOLIC
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Gifted & Talented Students:

A RESOURCE GUIDE FOR TEACHERS IN VICTORIAN CATHOLIC SCHOOLS



Cover artwork

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Acknowledgments

Catholic Education Melbourne acknowledges the contribution of the Gifted Think Tank in the preparation of this guide.

First published August 2013

Revised June 2019

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ISBN: 978-0-86407-440-9

Foreword

Gifted and Talented Students: A Resource Guide for Teachers in Victorian Catholic Schools is designed to assist Catholic schools to respond authentically to the needs of gifted students.

This guide has been developed by Catholic Education Melbourne in consultation with school communities across Melbourne. It aims to support schools in their collaborative pursuit of excellence and equity within the central vision of Catholic education and the 'Horizons of Hope' framework.

In order to achieve the full flourishing of each and every student, the inherent dignity of each person is respected and diversity is embraced and celebrated ... Every student is entitled to enriching learning experiences across all areas of the curriculum ... each individual requires educational adjustments specific to their needs (Catholic Education Melbourne [CEM] 2017, pp. 8 & 5).

Gifted students need their curriculum adjusted, so that it maximises growth in their learning.

The globalised availability of information provides schools with an abundance of educational outcomes. The question of which evidence to consider is important; however, some data, including Australia's National Assessment Program – Literacy and Numeracy (NAPLAN), the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS), indicate that our high achievers may not be achieving to their fullest potential.

Catholic schools seek to provide all students with a learning environment that acknowledges and maximises their individual potential, and promotes their wellbeing and their experience of participation and inclusion. Recognising that students have varying needs, Catholic schools seek to navigate the current educational landscape to provide equity of opportunity. We embrace the challenge to find new ways of teaching and learning for our gifted students.

Highly able students are acknowledged as having particular learning needs which require adjustments to their educational program. This ensures that they remain highly engaged and active learners. The aims of this resource are to support teachers in identifying, assessing and teaching gifted students, and to support schools in developing policies and procedures and planning future directions for enhancing the education of their gifted students.

I commend this guide to you and trust that it will be an invaluable resource in your efforts to provide enriching learning opportunities for all your students.



Jim Miles
Acting Executive Director
Catholic Education Melbourne

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The Catholic context

Horizons of Hope: Curriculum in a Catholic School discusses how Catholic faith illuminates teaching and learning with the formation of, and reverence for, the learner at the centre. This empowers gifted learners as they:

are entitled to access a quality curriculum where they have a feeling of connectedness and belonging ... A key aspect of curriculum design in a Catholic school is to challenge learners to explore and consider deep questions, and big ideas (CEM 2016, p. 3).

Catholic schools strive to develop the potential of each student. This occurs in the context of each student's holistic development: spiritual, moral, social, emotional, physical and intellectual, across every domain of learning.

Catholic schools, supported by Catholic Education Melbourne, are committed to building communities of learning that provide a safe, nurturing and academically stimulating environment for all students. Such communities promote inclusion and celebrate diversity. They aim to develop a sense of connectedness and belonging, and to strengthen the wellbeing of students and the whole community.



PART A:

Giftedness

Historical background to giftedness

The notion of giftedness has changed over time, with contributors to the field dating as far back as Socrates (c. 469–399 BC). Through his portrayal in Plato's dialogues, Socrates is renowned for his contribution to the study of ethics. He also lends his name to the concepts of 'Socratic irony' and the 'Socratic method' or *elenchus*. Socratic teaching is considered the oldest method of fostering critical thinking, in which the focus is on giving students questions, not answers. Teachers endeavour to develop and stimulate enquiring minds by continually probing into the subject with questions.

In the early 20th century, Alfred Binet and Theodore Simon began developing a series of intelligence tests primarily to identify children with intellectual deficits in order to separate them from normally functioning children for placement in special classrooms.

Another recognised pioneer of the day was Lewis Terman, whose studies at Stanford University led him to publish the Stanford–Binet Intelligence Scale in 1916. Known as 'the father of the gifted education movement', Terman was the first to use intelligence tests to identify gifted school children. In the 1920s, a gifted person came to be regarded as one who excelled in most areas of development. Terman's work formed the basis for modern intelligence tests.

While these tests made sense in the early 20th century, this is no longer the case. The problems that society needs its gifted individuals to solve in the 21st century involve much more than IQ. In addition, our gifted are required to display active, concerned and ethical

leadership skills. As a society, we can develop these through teaching gifted children to possess analytical, creative, practical, innovative, wisdom-based and problem-solving skills.

Definition of giftedness

Catholic Education Melbourne has adopted François Gagné's 2008 Differentiated Model of Giftedness and Talent (DMGT) (see Figure 2, page 6), as it is the most generally accepted definition of giftedness and talent in Australia (Parliament of Victoria Education and Training Committee 2012). The DMGT provides research-based definitions that are directly and logically connected to learning and teaching. While gifted students are defined as those who possess distinctly above average intellectual, creative, social or physical abilities, talented students are those whose skills are distinctly above average in one or more areas of human performance. The emergence of talent from giftedness is observed through a complex developmental process and via a number of influences, including a variety of teaching and learning opportunities.

Gagné's model recognises that although giftedness is a broad concept encompassing a range of abilities, it is essentially only potential that is identified and the ability must undergo a transformation in order to become a talent. Therefore, it is necessary that school support is adequate if students are to develop their gifts or high abilities into talents or high achievements. Catholic Education Melbourne asserts that gifted and talented students are entitled to rigorous, relevant and engaging learning opportunities drawn from the Victorian Curriculum and aligned with students' individual learning needs, strengths, interests and goals.

Although there are numerous models of curriculum adjustment related to gifted and talented students, the focus should be on how teachers use the flexible design of the Victorian Curriculum and make necessary adjustments to meet the individual learning needs of these students. There is considerable diversity with regard to the nature and level of the abilities of gifted and talented students; there is no single homogeneous group (Parliament of Victoria Education and Training Committee 2012).



PART A:

Giftedness

continued



The *Inquiry into the Education of Gifted and Talented Students* noted that gifted and talented students:

- vary in abilities and aptitudes (gifts and talents may be demonstrated in a single area or across a variety of domains)
- may also have a disability (these students are often called 'twice-exceptional')
- vary in level of giftedness (e.g. two students with gifts in the same field will not necessarily have the same abilities in that field)
- vary in achievement (achievement can vary across gifted students over time, with some students underachieving or experiencing difficulty translating their gifts into talents)
- are not always easy to identify (visibility can be impacted by cultural/linguistic background, gender, language/learning difficulties, socioeconomic circumstance, location and lack of engagement in curriculum that is not matched to ability)

- exhibit an almost unlimited range of personal characteristics (i.e. no standard pattern exists in the temperament, personality, motivation and behaviour of gifted individuals)
- come from diverse backgrounds (students are found in all cultures, socioeconomic levels and geographic locations).

Characteristics of gifted students

Many researchers have tried to identify traits common to gifted students. Consequently, there are numerous research articles on their characteristics. Blaas (2015) suggests these traits include:

- high levels of alertness
- excellent memory
- unusually large vocabulary
- complex sentence structure
- great sense of curiosity.

Research has also found that gifted students have an increased chance of experiencing social and emotional difficulties (including depression, anxiety and low self-esteem), with some students highly sensitive, perfectionistic or more likely to internalise problems. Fortunately, this is not the case for all gifted students.

It is difficult to generalise about students who are gifted because their characteristics and needs are personal and unique. However, there is general agreement among academics and teachers that gifted students:

- comprehend complex ideas more fully
- learn more rapidly and in greater depth than their same age peers
- may exhibit interests that differ from those of their same age peers.

Gifted students may also have:

- an unusually well-developed sense of justice and fairness
- emotional intensity
- play/hobby interests that are more like those of older peers
- a tendency to prefer the companionship of peers a little older, or sometimes many years older
- an enhanced capacity to empathise with the feelings of others
- a more mature sense of humour than same age peers.

Models of giftedness

Renzulli's model

Joseph Renzulli's model explains giftedness as 'a dynamic interaction between three traits': high ability, creativity and task commitment. Renzulli (2016) describes high ability as being a combination of above average general ability (e.g. intelligence) and having an above average ability in specific areas (e.g. ballet, mathematics or music). Task commitment is comparable with motivation, and includes endurance, hard work, perseverance and the belief in oneself to complete a task. Giftedness can

therefore be determined for those possessing high levels of these three traits and applied to any area related to human performance.

However, upon further consideration, it becomes clear that Renzulli's Three-Ring Conception of Giftedness (2016) (see Figure 1) does not address 'gifted underachievers'; that is, those students achieving less than their full potential. There are many reasons why gifted students might underperform or underachieve and this model would make it difficult to support them as they are not even recognised as gifted.

Gagné's model

In contrast to Renzulli's model, Blaas (2015) notes that François Gagné's DMGT 'recognises that gifted students have the potential to underachieve'. Not only is Gagné's model used to define giftedness in the education departments of most Australian states and territories, it is central to recommendations for gifted students in the Australian Curriculum.

Gagné's model leads us to understand the interrelationships between natural abilities, environmental stimuli, intrapersonal characteristics and opportunities in the development of talents. Students are born with the potential for giftedness, but environmental factors such as home nurturing and school stimulation play a major part in bringing out these gifts and developing them to their fullest potential. Students may be born with the potential for giftedness, but may not have the intrapersonal characteristics, such as motivation, or the opportunities to develop their gifts into talents.

The DMGT presents the talent development process (D) as the transformation of outstanding natural abilities, or gifts (G), into outstanding systematically developed skills which define expertise, or talents (T), in a particular occupational field (Gagné 2012). This developmental sequence constitutes the heart of the DMGT.

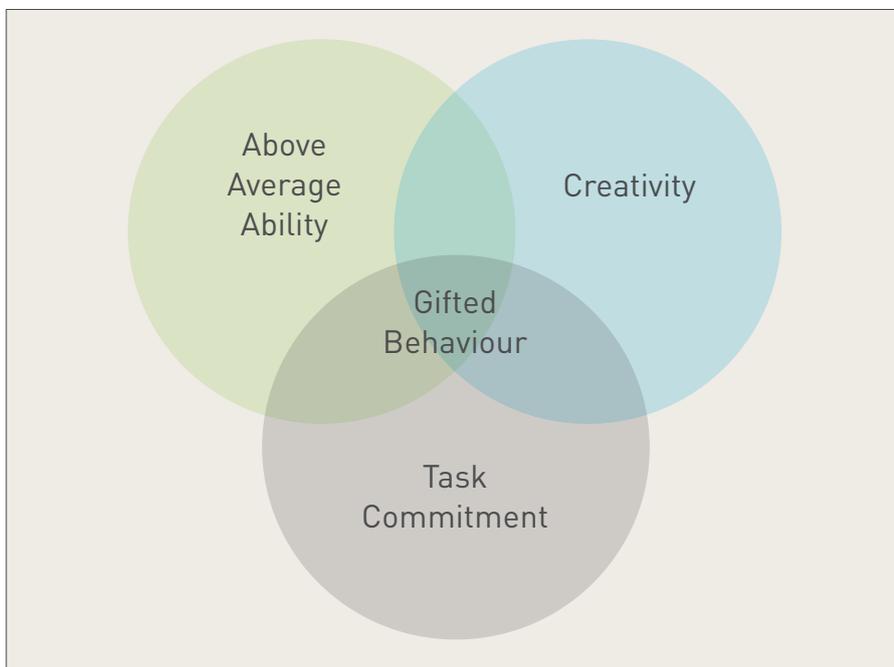


Figure 1: Renzulli's Three-Ring Conception of Giftedness (2016)

PART A: Giftedness continued

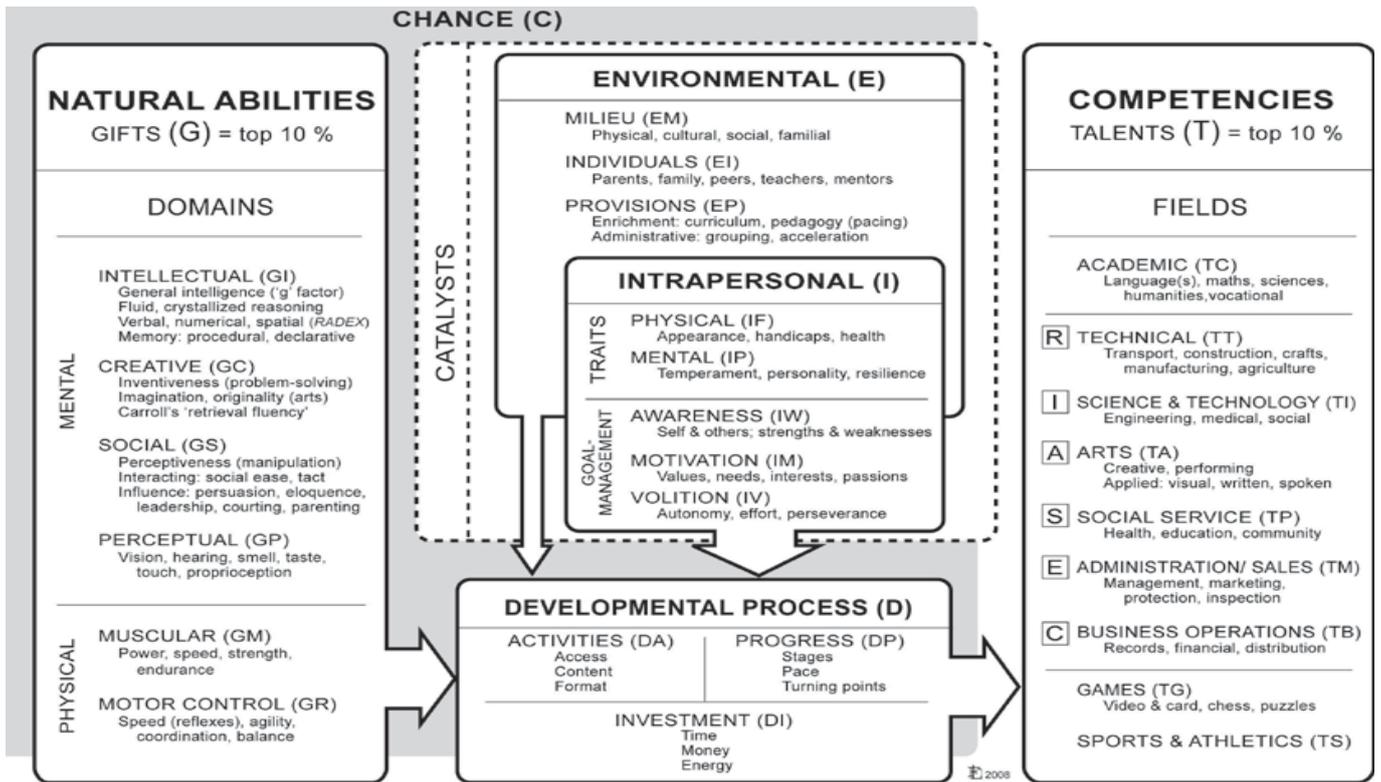


Figure 2: Gagné's Differentiated Model of Giftedness and Talent (2012)

Three factors help or hinder that process:

1. intrapersonal (I) catalysts, including personal traits and self-management processes
2. environmental (E) catalysts, such as sociodemographic factors, psychological influences [e.g. from parents or carers, teachers or peers], and special talent development facilities and programs
3. chance (C).

Gagné continued to review his model and as such developed the 'biological underpinnings' of the DMGT (Gagné 2013). He used a 'house' metaphor, with the DMGT occupying the ground floor (see Figure 3) and three distinct basements underneath. The third basement is the *chemistry* level and the second the *biology* level, associated with 'physical traits'. The first basement, the closest to the ground floor, includes 'anatomical or morphological characteristics that have been shown to impact abilities or intrapersonal catalysts' (2013, p. 10).

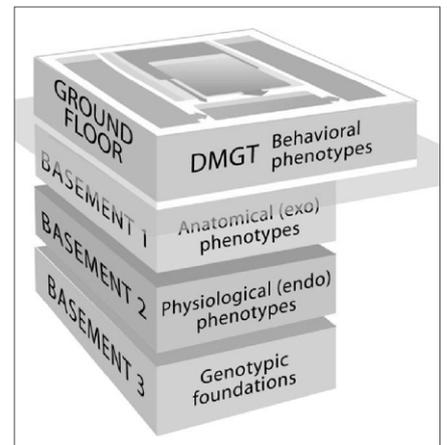


Figure 3: Biological Underpinnings of the DMGT (Gagné 2013)

Victorian Government inquiry into the education of gifted and talented students

In 2011–12, the Victorian Education and Training Committee, at the request of the Parliament of Victoria, conducted an inquiry into the education of gifted and talented students. The final report was tabled in parliament on 20 June 2012.

The report considers the concept of giftedness and the identification of gifted students. It examines the provision of education for gifted students in Victoria at three levels: early childhood education, primary school and secondary school.

Some key recommendations in the report (Parliament of Victoria Education and Training Committee 2012) were:

Recommendation 1: Research on the extent and causes of underachievement by gifted students

That the Victorian Government commission research into the extent and causes of underachievement by gifted students in Victoria.

Recommendation 11: Identification toolkit for teachers

That the Victorian Government develop a toolkit, including checklists and other information, to assist teachers to identify giftedness.

Recommendation 18: Information for teachers and schools about strategies for educating gifted students

That the Victorian Government provide information and support for teachers and schools about strategies for educating gifted students, including:

- individual learning plans
- curriculum differentiation
- acceleration, particularly year level acceleration
- ability grouping, including vertical timetabling
- enrichment and enhancement.

Recommendation 19: Guidelines for year level acceleration

That the Victorian Government develop and promote guidelines for year level acceleration.

Recommendation 20: Virtual school for gifted students

That the Victorian Government utilise technology to establish a virtual school to provide extended learning opportunities for gifted students throughout the state.

Recommendation 26: Indigenous education policies that promote high achievement

That the Victorian Government continue to support high achievement among Indigenous students through targeted education policies.

Many of the above areas are addressed throughout this guide.

Equity and giftedness

Catholic schools seek to provide equitable access and opportunity for all, with a preferential option for the poor and marginalised. Gifted students are among those who may experience marginalisation. Catholic education respects the dignity of each student and the diversity of their gifts, whether they be academic, interpersonal, artistic

or reflective of myriad other facets of human capacity. Catholic Education Melbourne supports Catholic schools to ensure that the distinctive nature of teaching gifted students flourishes in their local contexts.

All students have the right to a learning environment that will assist them to reach their full potential. Catholic schools are learning-centred schools, where planning for learning and teaching is 'respectful and responsive to [the] community and the diversity of its learners ... Teaching is shaped by the individual backgrounds and histories; and by learners' unique talents and needs' (CEM 2016, pp. 6 & 4).

Learning and teaching in Catholic schools is founded on a belief of the dignity of the human person, a commitment to social justice and a transformative view of education. Strategies are designed to 'shape a local curriculum that will maximise the growth of every learner' and develop the abilities, gifts and talents of all students (CEM 2016, p. 5). Teaching strategies are personalised, differentiated and scaffolded using ongoing data to ensure that each learner is fully developed across a range of learning areas, and that their talents and worth are appreciated.

Catholic Education Melbourne works closely with governments, institutions, authorities and organisations to represent and support gifted students.

PART B:

Gifted students

Identification of gifted students

In order to assist gifted and talented students to develop their potential, 'the first step is to accurately locate and describe their specific or multiple gift(s) and talent(s) – commonly termed **identification**' (Hodge 2013, p. 1). Historically, giftedness was only recognised and/or identified by an IQ score of 130 and above. This was calculated using a method such as the well-known Stanford–Binet test. As shown in Figure 4, 130 is located on the far right-hand side of a standard bell curve.

As gifted students are present in all communities, regardless of their cultural or socioeconomic background, Hodge (2013) suggests that identifying such students requires teachers to understand what 'giftedness' means.

Some gifted students hide or mask their giftedness as they do not want to seem

'different' to their peers. Some are twice-exceptional, combining giftedness with a learning or physical disability.

It is important to effectively identify gifted students' specific area of giftedness. It may be located in the artistic or intellectual area, or may relate to physical prowess.

If a student has been identified by a cognitive test, the results should be communicated to the school as the level of giftedness can be moderate to extreme. For example, a psychologist may administer a Wechsler Intelligence Scale for Children (e.g. WISC-V) and explain the scoring and diagnosis to all teachers involved with the education of the specific student.

Identification should be ongoing and occur regularly throughout the student's time at school. Methods can be subjective or objective and data should be obtained from a wide variety of sources.

It is important that teachers consider a number of methods for identifying gifted students so they do not 'slip through the cracks' in the school system. Gifted students may be identified through:

- self-identification
- teacher checklists
- peer observation
- parent or carer nomination
- standardised testing
- observation by an expert in the gifted arena.

Classroom environments that encourage creative, diverse and higher-order thinking, and an open-ended approach to learning will foster the emergence of students' gifts and talents. Casting a wide net will afford the greatest opportunity to include those students whose abilities are not easily revealed by overall school performance or general classroom testing procedures. This will assist teachers to recognise signs of giftedness.

There is no single technique that teachers can employ to fully identify and be certain about the gifts of any student. However, by a combination of careful and sensitive observations in an atmosphere which encourages individual expression and objective assessment, teachers can build up a detailed picture of their students and make confident judgments.

The identification process should be inclusive to ensure gifted students are not disadvantaged on the basis of gender, race, culture, socioeconomic background or disability. Triangulation of data is recommended to fully inform evidence and practice.

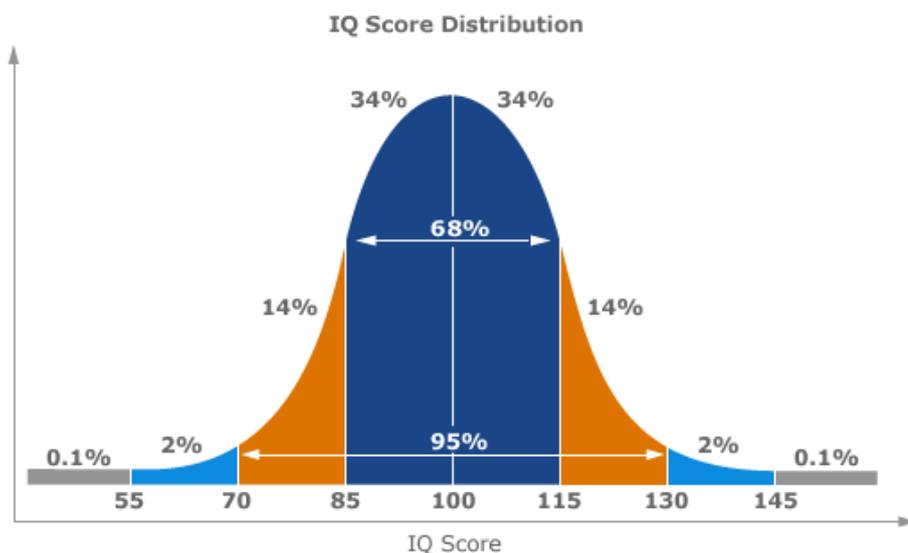


Figure 4: IQ Score Distribution Standard Bell Curve

There is general agreement, too, that identification should be a flexible, continuous process to allow for the recognition of gifts and talents that may not be immediately apparent. Teacher, parent or carer, peer and self-nomination, when used with care, can contribute to the identification process.

Information that will help the teacher identify a student's gifts and talents is available from a broad range of sources; for example, pages 75–108 of the *Inquiry into the Education of Gifted and Talented Students* (Parliament of Victoria Education and Training Committee 2012).

Identifying gifted students in any school is not an end in itself. Rather, it is undertaken for the purpose of finding the most appropriate provision to assist students. Teachers may begin with close analysis of their own classroom observations, guided by a checklist or teacher/parent/carer rating scales. These are commercially available and are designed to help identify children for placement in gifted and talented educational programs. Questionnaires to be completed by the student's teacher are also commercially available or printed in reference books, which detail the identification of gifted students.

Parents or carers can offer a wealth of information, which is particularly useful in the early identification of gifted students and the completion of developmental questionnaires.

Many diagnostic tests require reasonable literacy levels, such as the Progressive Achievement Tests



in Reading (PAT-R) and the Middle Years Achievement Test (MYAT), both published by Australian Council for Educational Research (ACER). These types of tests may be ineffective for identifying higher abilities in students from culturally diverse backgrounds or those with specific learning disorders. However, standardised tests may be appropriate for other students and can identify innate potential. These may be particularly useful in identifying underachieving gifted students and include the ACER General Ability Test (AGAT) or Cognitive Abilities Test (CogAT), which can be administered by teachers. There are also many other tests that can be administered by suitably qualified professionals. Both ACER and Pearson Education sell commercial products.

Regardless of the method used, any identification process should consider:

- the importance of parents or carers and teachers in recognising and nurturing giftedness
- that evidence-based characteristics can lead to recognition and understanding of giftedness
- the existence of factors that can mask a child's abilities, including personal beliefs
- the requirement that informal identification of possible giftedness occur in order for formal identification to be made (Hodge 2013).

PART B:

Gifted students

continued

Diversity of gifted students

The diversity of gifted learners can mean that teachers need to remain vigilant and watch for any signs of 'spark' or 'light-bulb' moments. Teachers should see themselves as 'talent spotters', constantly on the lookout for signs of ability and talent (Eyre & Lowe 2002).

The experience of being gifted is often accompanied by particular social-emotional needs. Gifted students may struggle to be comfortable with themselves as gifted and talented. They can be vulnerable to internal and external pressures to excel or conform. They may struggle to feel a sense of belonging. In addition, they experience those challenges common to all young people: physical, emotional and psychological changes, particularly in adolescence, and the demands of coping with an uncertain and ever-changing world.

In his research on gifted students, Pohl (2012) notes that gifted students:

- tend to be more independent and less conforming
- frequently show leadership qualities and concern for universal problems
- prefer peers who are of a similar intellect and tend to choose friends more like themselves rather than same age peers
- enjoy high social status among same age peers; however, in their teenage years this may change when other preferred popularity factors may arise in peer groups.

In the past 60 years, educators and psychologists have become increasingly aware of the impact supportive relationships have on the attainment of human potential (Sears & Barbee 1977). In seeking out supportive relationships and companionship, there is a tendency for gifted students to connect with older students, or peers as equally gifted (O'Shea 2005). Programs that provide opportunities for these relationships, and programs offering more formal mentoring relationships, can be helpful to gifted students.

Pohl (2012) also highlights eight areas of vulnerability for highly gifted students:

1. **Self-definition.** Gifted students often have unusually high expectations of themselves that place pressure upon them to excel, which is essential for high levels of achievement to occur. Some gifted students may mask their difficulties because they think teachers expect a high level of achievement at all times.
2. **Inappropriate environments.** Some classrooms may lack the stimulation and exposure to higher-order thinking skills necessary to nurture the abilities of gifted individuals. Gifted students do not flourish if their learning environment is colourless, with little differentiation in the curriculum.
3. **Uneven development.** Gifted students may develop at different rates in the cognitive, emotional and physical domains. This results in uneven development and can create tension for the student; for instance, when a student's intellectual abilities outweigh their manipulative/motor skills.
4. **Perfectionism.** Some students can display a compulsive attitude to tasks and attention to detail and set unrealistic expectations for themselves and other students.
5. **Alienation.** Gifted students may feel different and want acceptance from their peer group more than anything else.
6. **Role conflict.** Gifted students quite often do not know if they should be smart, popular, sporty or 'cool', when interacting with others.
7. **Intensity or overexcitability.** Gifted students often have inborn, heightened abilities to receive and respond to stimuli (Dabrowski & Piechowski 1977, p. 12). They are likely to experience everything intensely. This intensity, or overexcitability, is 'often not valued socially, being viewed instead as nervousness, hyperactivity, neurotic temperament, excessive emotional intensity that most people feel uncomfortable at close range' (Piechowski & Colangelo 1984, p. 81).
8. **Adult expectations.** High expectations by teachers and parents are critical factors that have the potential to impact on high achievement; however, unrealistic expectations may arise due to students displaying a level of maturity beyond their years. At times, gifted students may try to mask difficulties in order to try to meet perceived external expectations.

It is now widely accepted that gifted students have a broad range of characteristics that are reflected across the population. Hence giftedness should be regarded as being equally represented across all races, cultures and economic groupings. This is particularly relevant in the Victorian context, which is rich in cultural diversity. In Victorian schools there are gifted students among the new arrivals, refugees and Aboriginal and Torres Strait Islander students, and teachers must be aware of language background and cultural sensitivities when considering the identification of gifted students.

Highly able students are enrolled in every primary and secondary school, in almost every class and from every cultural and socioeconomic group.

Twice-exceptional students

In some instances, when students have a disability, they may not achieve their potential despite the fact that they demonstrate high ability or gifted characteristics. These students exhibit characteristics of both exceptionalities; giftedness plus a specific learning disorder or physical disability. Many writers define these students through the discrepancy between their ability and their academic performance. McCoach et al. (2001, p. 405) define such learners as 'students of superior intellectual ability who exhibit a significant discrepancy in their level of performance in a particular academic area such as reading, mathematics, spelling or written expression'. Several terms can be found in the literature to describe students who are gifted, but also have a learning disability. These may include 'dual-exceptional' and 'twice-exceptional' students.

In some cases these students may have a physical disability such as a hearing impairment or autism spectrum disorder. Children with dual exceptionalities can be difficult to identify, as their strengths, including their superior intellect, could be masked by the weaknesses associated with their disability. Their academic performance can present as being substantially below what would be expected based on their cognitive ability.

Gifted underachieving students

Underachievement is typically defined as a discrepancy between the child's school performance and some index of their ability, such as intelligence, achievement, creativity test scores or ethnographic data. Although many studies use highly technical definitions, the discrepancy between a measure of potential and actual productivity is often referred to in the definitions. The lack of precision in defining underachievement makes it difficult, if not impossible, to calculate percentages of underachievers, but too much precision in definition would prevent many underachievers from being identified and therefore receiving appropriate curriculum adjustments.

There are other less obvious examples of underachievement. Sometimes students hide their gifts because they do not want to stand out in the class or are desperate to 'fit in'. Occasionally, their gifts are not recognised because the students think 'outside the box'. Teachers must develop an awareness of the existence of these students and an understanding of their needs, both intellectual and social-emotional.

Some gifted students do not achieve at an appropriate level for their giftedness. Often the gifted underachieving student will resist challenges, participate reluctantly and strive to belong socially to a peer group. The gifted underachieving student may deny their talent and even be perceived as a compliant but average student. Gifted girls can often underachieve, as they do not want to appear to be smart in front of boys (Kerr 1985).

It is important to determine the reasons for underachievement in order to tackle it. All too often and for a myriad of reasons, gifted students can slip under the radar. The process for assessing gifted students needs to be multi-dimensional, drawing on a selection of objective and subjective sources for information gathering. This balance is particularly important in identifying the underachieving student. Furthermore, some teachers may have misconceptions about giftedness which may result in an inaccurate assessment of giftedness in students. It is therefore imperative that teachers should be particularly alert to two groups of gifted students: gifted underachieving students and gifted learning-disabled students. It is also essential that all teachers understand the role of different assessment tools for the gifted students, especially the difference between ability and achievement testing.

PART C:

Assessing gifted students

Assessing giftedness

Efficient and accurate assessment of giftedness in students requires the use of multiple assessment tools, including data from both ability and achievement tests. Understanding the difference between ability and achievement testing is vital to this process. Achievement tests such as NAPLAN attempt to measure how much students have learned in school and the extent of their knowledge and skills within a specific curriculum. Achievement tests measure student performance and not a student's capacity to learn. Ability tests (aptitude tests) such as WISC-V attempt to measure a student's abstract, critical and logical reasoning abilities; that is, how well a student can process verbal and quantitative information, interpret data, solve problems and think critically. They also focus on higher-order thinking skills. Ability tests describe a student's capacity to learn, independent of what has been achieved.

Assessing giftedness purely on data obtained from tests such as NAPLAN can be both inefficient and inaccurate. Ability can be hidden and doesn't always translate into performance for a myriad of reasons, resulting in gifted students not being identified. Gifted students with a specific learning disorder, gifted underachieving students and students who are creatively gifted are examples where achievement tests would often present an inaccurate picture of the student's actual ability.

The assessment process should also be inclusive, ensuring that gifted students of different genders, cultures, socioeconomic backgrounds or disabilities are not disadvantaged.

Sources of evidence for identification of giftedness in the classroom

Checklists, rating scales and questionnaires

Teachers may begin with a careful analysis of their own classroom observations, guided by a checklist or rating scales completed by teachers and parents or carers.

Questionnaires completed by the student's teacher are also available online or printed in reference books, which detail the identification of gifted students.

Teachers may need to consider the use of interpreters and translators for students from culturally and linguistically diverse backgrounds when collecting a student's developmental history or biographical information, or when completing checklists and questionnaires with parents or carers.

Academic and school records

Schools may also conduct a review of a portfolio of the student's work in one or more areas of endeavour. A review of the student's cumulative school file may include school records, certificates recognising creative and/or physical excellence, anecdotal records such as interviews (parent/carer/child/community member/previous teacher/school psychologist), results from achievement tests (e.g. reading, mathematics) and/or NAPLAN.

Formal assessments

Formal assessments may include IQ tests (verbal and non-verbal) and standardised tests, including diagnostic reading or mathematics tests, or normed measures of motor and visual/perceptual abilities. Standardised tests of ability and achievement can be of great value in forming a basis for identification. Differentiation of the curriculum can begin on the basis of these results.



Identification of giftedness is most effective with a full evaluation. This involves looking at the student from many different perspectives, and integrates the information gleaned from testing and other assessment tools into an accurate identification. From the resulting information, teachers should be able to make very specific educational and behavioural recommendations to both teachers and the parents or carers of the student.

A follow-up interpretive consultation with the family is also a valuable and essential component of a full evaluation. During this follow-up session, the teacher, psychologist or learning consultant has an opportunity to explain the results of the testing, including providing an explanation of the scores on the test. At this stage there is also the opportunity to provide feedback about relevant observations of the student during the testing process, and for discussion of possible recommendations for home and school-based activities.

Gifted students can be found in all groups within a culturally diverse society. However, giftedness in students from cultural groups outside the mainstream, such as Aboriginal and Torres Strait Islander students, refugees and new arrivals from a range of countries or cultures is not always recognised. This may be due, in part, to misconceptions about giftedness on the part of the teacher.

Often too, the tests used to identify giftedness are inadequate for these students. Tests which include a large non-verbal component may be more appropriate. An example of a test including non-verbal components is the CogAT. This test appraises the level and pattern of quantitative and spatial (non-verbal) reasoning abilities for students in kindergarten through Year 12. These abilities reflect the overall efficiency of cognitive processes and strategies that enable individuals to learn new tasks and solve problems. Because these abilities closely relate to a student's success in school, CogAT test results are helpful in planning effective personalised learning programs and adapting instruction in ways that enhance the student's chances of success in learning.

It is not a simple task to create an effective assessment that provides clear evidence of student learning. Some assessments provide better information than others. To determine what makes a good assessment, it is helpful to consider a few key questions:

- Do the items align with the outcome intended? That is, is the assessment appropriate to test for giftedness?
- Does the assessment have the appropriate level of rigour?
- Do the items cover a variety of higher-order thinking (HOT) levels?
- Are the items free from unintentional sensitivity or bias?
- Are they normed for Australian settings?

Appropriate testing instruments

Please note that these tests can be administered by staff with various qualifications. *A psychologist can administer all tests, teachers with special education qualifications can administer some, and any teacher who is registered can administer others.*

QUALIFICATION LEVEL A:

There are no special qualifications to administer these tests.

QUALIFICATION LEVEL T:

A teaching qualification is required to administer these tests.

QUALIFICATION LEVEL B:

Tests may be administered by individuals with a master's degree in psychology, education, speech language pathology, occupational therapy, social work, counselling, or in a field closely related to the intended use of the assessment, and formal training in the ethical administration, scoring and interpretation of clinical assessments.

QUALIFICATION LEVEL C:

Tests with a C qualification require a high level of expertise in test interpretation and can be purchased by individuals with a doctorate degree in psychology, education, or closely related field with formal training in the ethical administration, scoring and interpretation of clinical assessments related to the intended use of the assessment.

PART C:

Assessing gifted students

continued

Some examples of formal assessments that measure ability are:

- **Raven's 2** (Raven 2018). This is a digital assessment used to assess observational skills, intellectual capacity and thinking ability in a variety of settings. It is a non-verbal assessment that is suitable for a wide range of individuals including non-verbal adults, the gifted and talented, and children as young as four years.

Can be administered by teachers with Level B qualifications.

- **Mill Hill Vocabulary Scales** (MHV) (Raven 2003). This is a companion measure to the Raven's Standard Progressive Matrices.

Can be administered by teachers with Level B qualifications.

- **Middle Years Ability Test** (MYAT) (ACER 2009). MYAT is a general ability test suitable for students aged 10–15 years. It provides a multi-faceted estimate of general intellectual ability through verbal, numerical and non-verbal (or abstract) reasoning items.

Can be administered by any registered teacher (Level A qualifications) if the assessment is purchased through a school.

- **Higher Ability Selection Test** (HAST) and the **Higher Ability Selection Test – Primary** (HAST-P) (ACER 2011). These tests can be used to identify academically gifted students from middle primary to senior secondary school. The tests were designed for the purpose of identifying students for participation in gifted and talented programs. The HAST and HAST-P can be used to test whole cohorts or as a second-stage test to verify existing information about a student or refine the assessment of highly able students at the upper end of the scale.

Can be administered by teachers with Level B qualifications.

- **Wechsler Nonverbal Scale of Ability** (WNV) (Wechsler & Naglieri 2006). The WNV is designed for culturally and linguistically diverse groups. It is helpful for those who are not proficient in the English language, or have other language considerations.

- **Wechsler Intelligence Scale for Children, Fifth Edition: Australian and New Zealand Standardised Edition** (WISC-V A&NZ) (Wechsler 2016). This is a psychometric assessment tool and must be administered by an educational psychologist. It is recommended for students aged six to 17 years.

Can be administered by psychologists with Level C qualifications.

- **Naglieri Nonverbal Ability Test, 2nd edition** (NNAT2) (Naglieri 2011). This test was developed for Indigenous students, but it can be used for non-English speakers. The NNAT2's norm-based score identifies students who are likely to have the potential for advanced scholastic achievement.

Can be administered by teachers with Level B qualifications.

- **Cognitive Abilities Test** (CogAT) (Lohman 2012). This test appraises the level and pattern of quantitative and spatial (non-verbal) reasoning abilities for students in kindergarten through to Year 12. The Catholic Education Melbourne Gifted Think Tank members trialled this test with their students and found it to be most helpful.

Can be administered by any registered teacher (Level A qualifications).

PART D:

Learning and teaching of gifted students

Learning and teaching

Catholic Education Melbourne values the dignity, differences and infinite possibilities in each student, and their full flourishing is at the heart of all its endeavours. Teaching is personalised, responding to each student's learning needs, interests and experiences, and is informed by a sense of who students are and might become. Catholic perspectives imbue and inspire all learning and teaching. They provide opportunities for students to engage with the Catholic Tradition in dialogue with multiple perspectives and their own experiences, and to form new insights.

Catholic Education Melbourne highlights through its strategic plan for 2015–2019 that it supports schools to provide quality teaching for all learners that 'empowers students with the knowledge, skills, capabilities and confidence to embrace the opportunities and challenges of their world and commit to authentic action for justice and the common good' (CEM 2015, p. 10).

Australian Professional Standards for Teachers

Differentiation is supported by the Australian Professional Standards for Teachers (AITSL 2011). The standards guide teacher professional learning, practice and engagement and outline how teachers can work towards becoming more proficient practitioners. Two standards that relate closely to the work of teachers in supporting gifted students are:

- Standard 1: Know students and how they learn
- Standard 3: Plan for and implement effective teaching and learning.

Within each standard there are further focus areas. In some cases, specific reference is made to how teachers can refine their work to better cater for the learning needs of gifted students; for example (AITSL 2011):

Standard 1.5: Differentiate teaching to meet the specific learning needs of students across the full range of abilities.

At various career stages, as teachers' progress from graduates through to highly accomplished or lead teachers, they achieve this standard by:

- demonstrating knowledge and understanding of strategies for differentiating
- developing teaching activities that incorporate differentiated strategies
- evaluating learning and teaching programs, using student assessment data, that are differentiated for the specific learning needs of students
- evaluating the effectiveness of differentiated learning and teaching programs.

Standard 3.1: Establish challenging learning goals

As teachers grow and develop throughout their careers, they refine their craft in setting challenging learning goals for students by:

- setting learning goals that provide achievable challenges for students of varying abilities and characteristics
- setting explicit, challenging and achievable learning goals for all students
- developing a culture of high expectations for all students by modelling and setting challenging learning goals
- demonstrating exemplary practice and high expectations and lead colleagues to encourage students to pursue challenging goals in all aspects of their education.



PART D:

Learning and teaching of gifted students

continued

Victorian Curriculum

The Victorian Curriculum framework should be consulted when designing appropriate programs to support the learning of gifted students. The Victorian Curriculum and Assessment Authority (VCAA) has incorporated the Australian Curriculum into the local context, reflecting Victorian standards and priorities.

The Victorian Curriculum F–10 structure enables the curriculum to be used to appropriately target the learning level of each individual student in a class. This includes gifted and talented students who are able to work well above the nominally age expected level of achievement (VCAA n.d.).

Contemporary learning

Today's students were born into a digital world. They have spent their entire lives surrounded by social media, computers, video games, smart phones, digital music players, the Internet, online streaming and all the other toys and tools of the digital age (Prensky 2001). The core knowledge, skills and understandings for living and thriving in the 21st century are identified in contemporary learning and integrated across the curriculum to create deep and powerful learning opportunities.

Learning occurs in a climate of inquiry, which promotes the creative exploration of ideas, reflection, higher-order thinking and collaboration. It is evidence-based and is therefore responsive to each student's learning needs, promoting collaboration, communication, critical thinking and creativity. This prepares learners to be 'collaborative problem solvers who strive to contribute to the common good in today's world' (CEM 2016, p.3).

Contemporary learning requires the use of new and emerging technologies and the development of contemporary literacies. Learning opportunities engage students in the contemporary world and foster communities of learning, both locally and globally.

Students' familiarity and engagement with contemporary tools, and the potential of new and emerging technologies to enhance learning, make them an essential element of contemporary learning and a significant aid to differentiating the curriculum. Using these contemporary tools to collaborate, research, learn, communicate, produce and publish is second nature to today's students.

The use of new and emerging technologies promotes effective and authentic learning for all students and offers particular advantages for gifted students. Using contemporary tools in learning and teaching programs:

- extends learning beyond the classroom and the school, and beyond the conventional school day: learning anytime, anywhere
- allows students to communicate and collaborate with students, experts and communities anywhere and to develop new learning partnerships
- provides new ways of working individually and in collaboration with others
- provides personalised access to knowledge and expertise
- provides opportunities to engage with different cultures and different perspectives and to build new knowledge and understanding
- supports self-directed learning
- promotes learning at the student's own pace and stage of readiness
- provides opportunities to engage with real-world problems affecting real people
- can assist in providing effective feedback.

It should be noted, however, that technology-powered personal learning cannot provide the power and potential of individuals to strengthen human connections. By proactively teaching social and emotional skills, we teach students how to make responsible choices and shape their experiences autonomously. An investment in people and in fostering relationships between them is an important addition to digital learning.

Supporting structures and approaches

The teaching and learning of gifted students is supported by a number of structures or approaches underpinning school operations.

It is important to have a range of these measures in place to ensure that there are appropriate policies and practices for the identification, learning and teaching, and assessment of gifted students. The measures include:

- active engagement of parents or carers in students' learning processes
- whole-school planning and coordination of gifted education
- appropriate and evidence-based identification (both quantitative and qualitative)
- well-planned and articulated programs and provision
- curriculum differentiation
- opportunity for gifted students to work together



- flexible pathways in progression and study options, including the opportunity to undertake VCE Units 1 and 2 in Year 10 and VCE Units 3 and 4 in Year 11, Victorian Certificate of Applied Learning (VCAL) and Vocational Education and Training in Schools (VETiS)
- the use of Personalised Learning Plans (PLPs) and Program Support Groups (PSGs) where appropriate
- regular collaborative review; that is, needs assessment and evaluation of goals and outcomes
- appropriate and effective professional learning avenues for accessing resources available in the wider community; for example, mentoring.

Pre-assessment tasks:

- show what a student knows, understands and is able to do before the teaching of a unit begins
- enable teachers to adjust the curriculum to respond to the students' degree of mastery of the material, ensuring the curriculum is challenging and engaging and will move the students to a higher level of competence
- enable teachers to group students for specific instruction according to need
- will lead to different learning experiences for students in the same classroom
- should be done well in advance of the curriculum delivery to facilitate appropriate modification.

PART D:

Learning and teaching of gifted students

continued

Differentiating the curriculum

Curriculum should be designed to meet the individual learning needs of each student. This will be discussed in more detail in Part E.

Providing meaningful feedback

An important aspect of assessment is the feedback students receive from their teachers. Some practical suggestions for giving students meaningful feedback include:

- Provide feedback about individual learning growth.
- When returning student work, encourage students to read and respond to the feedback before you assign a grade or mark.

- Invite students to assess their own work using a negotiated rubric or agreed criteria before you assess.
- Give students the opportunity to re-submit an assessment after being given feedback to show their understanding of and response to the feedback.
- Base support and 'extension' assessments on assessment tasks that have worked well and that have engaged the student or held their attention.

Post-assessment tasks:

- should be developed to maintain unity of purpose between teaching and assessment
- may be summative and/or formative in nature and will be designed to ensure that each learner is able to engage in the learning process
- will include higher-order thinking skills and more complex or abstract content and understandings (such assessments may be more appropriate for students in the higher levels of schooling who are not undergoing acceleration programs)
- when compared with students' pre-assessments, will inform teachers about the learning growth of individual students.

Reporting

The Catholic Education Commission of Victoria Ltd *Reporting Student Progress and Achievement – 2017 Revised Guidelines for Victorian Catholic Schools* provide guidance with regard to the reporting of student achievement for gifted students against the Victorian Curriculum.

All students are expected to experience learning and teaching sequences in, and be assessed against, all Victorian Curriculum domains relevant for their year of schooling. As the Victorian Curriculum has been constructed on a sequential basis and calibrated over a number of levels, it can help teachers plan for the more complex learning tasks and assessment needed by gifted students to ensure maximal learning progression.

The A–E reporting scale indicating achievement against the expected standard at the time of reporting also provides a mechanism for the learning of gifted students to be assessed above or well above the expected standard. It is important that there is a mechanism in place for high ratings for individual students to be shared with teaching colleagues. This can help ensure that gifted students experience learning and teaching sequences appropriate to their needs, which will support transition from year to year.

Students with additional learning needs can receive modified subject reports for a specific learning area. Program Support Group (PSG) meetings and Personalised Learning Plans (PLPs) can be put in place for any gifted student in a Catholic school in the Archdiocese of Melbourne, regardless of the reporting implications. They can help ensure that a 'holistic' view of the gifted student's learning progression over time is established, monitored and reviewed, and are therefore highly recommended.



PART E:

Differentiated instruction

Curriculum differentiation

Curriculum differentiation refers to adapting the usual curriculum in order to meet an individual student's specific learning needs; curriculum objectives, teaching methods, assessment methods, resources and learning activities are carefully planned to cater for the specific individual needs of students (Kronborg & Plunkett 2008).

An effective curriculum for gifted students is essentially a core curriculum that has been adjusted to meet their various learning needs (Tomlinson & McTighe 2006). Often, highly able students learn more quickly than others their age. As a result, they typically need a more rapid instructional pace than do many of their peers. That being said, even the gifted group will have individual differences. There will be times when certain gifted students will require a slower pace. At times, they may not want to progress through

the curricular hierarchy at a pace faster than their peers, but may prefer to study a topic of interest in much greater depth or breadth. It is the teacher's role to recognise these individual differences and plan for them as part of a personalised learning approach.

Reasons for differentiating instruction

In a typical school environment, variability among students is the norm, not the exception. Students bring a huge variety of skills, needs and interests to their learning. We know from research in the field of neuroscience that the differences between students are as varied and unique as our fingerprints or DNA. If curriculum is designed to meet the learning needs of an imaginary 'average' student, it cannot address this variability and therefore fails to provide all individuals with fair and equal opportunities to learn. When students' abilities, needs, interests, motivations,

backgrounds and experiences are valued, curriculum will be differentiated and learning personalised. The diversity of gifted students means that levels of giftedness, needs and interests vary enormously.

Research has highlighted curriculum differentiation as a key strategy for providing appropriate access to learning for gifted students. For example, Monash gifted education experts, Dr Leonie Kronborg and Dr Margaret Plunkett (2008, p. 19) have found that 'while a number of requirements appear to be vital to any successful programmatic response to meeting the needs of high ability students, curriculum differentiation inevitably emerges as perhaps the most important of all'.

Differentiating instruction enables teachers to respond to the diversity of abilities, levels of giftedness, learning needs and interests of gifted students. The aim is to ensure each student is challenged and supported to grow in knowledge, skills and understanding across the curriculum domains. In this way, each student has the opportunity to exceed beyond their potential and aspirations (Hattie 2012).

Differentiation is an organised, yet flexible, way of proactively adjusting learning and teaching to target students' current level of attainment and to help all students to achieve maximum growth as learners. The design and implementation of differentiated learning and teaching strategies are based on student need according to the student's skills, knowledge and understanding, as shown in pre-assessment and in combination with teachers' professional



PART E:

Differentiated instruction

continued

judgment. Educators refer to this as one type of 'acceleration'. They compare acceleration to running or walking. A faster pace *may* be uncomfortable and indeed unsuitable for most learners. For many gifted learners, however, it's a *comfortable* pace, and the pace at which they learn best. An analogy would be to compare someone with long legs and short legs. Walking 'quickly' suits someone with very long legs. It's only 'fast' for someone with shorter legs. According to Tomlinson and McTighe (2006), accelerated content isn't really 'fast' to a gifted child, it's comfortable. It is counter-productive and very frustrating to a gifted student to sit through long explanations of what they already know.

These strategies include tasks which accommodate different students' abilities, learning preferences and readiness, and are linked to specific curriculum requirements.

How differentiation works for gifted students

Differentiating the learning to ensure high impact on student outcomes is sound pedagogy, not only for gifted students, but for all students.

Differentiation is making sure that the right students get the right learning tasks at the right time. Once you have a sense of what each student holds as given or known and what they need in order to learn, differentiation is no longer an option, it is an obvious response! (Earl 2003, pp. 86–87).

Pre-testing is essential as no two students start learning at the same place. We need to first pre-test to understand what our students know or do not know, what they can and cannot do. Then we can differentiate the curriculum according to what they will learn (content), how they will learn (process) and how they will demonstrate their learning (product).

Strategies for differentiation

The key aspects of differentiation for gifted students are:

- **Pre-testing.** Establishing prior knowledge is a vital prerequisite for differentiation.
- **Content.** Learning should be targeted through regular pre-testing prior to topic introduction. It is common for gifted students to be at least one or two years ahead of expected curriculum in one or more areas.
- **Pace or process.** Gifted students typically grasp new concepts very quickly and need to have the opportunity to work at a faster pace. Sitting through what they already understand causes frustration, despondency and disengagement, and is a major cause of underachievement.
- **Depth and breadth.** Gifted students often have an insatiable curiosity and great general knowledge. They have a keen ability to reason and are often very capable in critical and creative thinking. A curriculum differentiated for their needs keeps this in mind.
- **Product.** Is something tangible going to be an outcome or something more esoteric?
- **Method.** Different approaches to learning are vital for differentiation to be truly valuable.



- **Environment.** We have moved far from the rigid rows of desks which were a feature of the 1950s and 1960s. Grouping of desks in learning hubs is a great way to alter the learning environment. So, too, is providing students with the opportunity to move around the room and engage with different members of their class.

In addition, teaching strategies need to be rich, varied and flexible to provide for differences in students' learning preferences, interests and engagement. Just like any other group, there are variations in how gifted students best learn.

Universal Design for Learning

The Universal Design for Learning (UDL) principles indicate that to develop expert learners, differentiation should take place for the why, what and how of learning. These relate to the affective, recognition and strategic networks of the brain (Center for Applied Special Technology (CAST) 2018). The *UDL Guidelines* are based on scientific insights into how humans learn. They outline a framework that can be used by schools to build capacity in teachers and optimise learning opportunities for all students (CAST 2018).

In exploring the UDL Guidelines, teachers are able to provide opportunities for all students to achieve to their potential through:

Providing multiple means of engagement (the 'why' of learning)

'Affect represents a crucial element to learning, and learners differ markedly in the ways in which they can be engaged or motivated to learn. There are a variety of sources that can influence individual variation in affect including neurology, culture, personal relevance, subjectivity, and background knowledge, along with a variety of other factors presented in these guidelines. Some learners are highly engaged by spontaneity and novelty while others are disengaged, even frightened, by those aspects, preferring strict routine. Some learners might like to work alone, while others prefer to work with their peers. In reality, there is not one means of engagement that will be optimal for all learners in all contexts; providing multiple options for engagement is essential' (CAST 2018).

Providing multiple means of representation (the 'what' of learning)

Students vary in the manner in which they perceive and comprehend information that they are exposed to. For example, those with sensory disabilities (e.g. a vision or hearing impairment); learning disorders (e.g. dyslexia); language or cultural differences, require different ways of approaching learning. 'Learning, and transfer of learning, occurs when multiple representations are used, because it allows students to make

connections within, as well as between, concepts. In short, there is not one means of representation that will be optimal for all learners; providing options for representation is essential' (CAST 2018).

Providing multiple means of action and expression (the 'how' of learning)

Students vary with how they navigate learning environments and demonstrate their knowledge. For example, individuals with significant physical disabilities (e.g. cerebral palsy), those who find strategic and organisational tasks challenging (i.e. students with executive function disorders), or those who experience language barriers, take different approaches to the same learning tasks with some able to express themselves well in speech, but not in written text, and vice versa. 'It should also be recognised that action and expression require a great deal of strategy, practice, and organisation, and this is another area in which learners can differ. In reality, there is not one means of action and expression that will be optimal for all learners; providing options for action and expression is essential' (CAST 2018).

The following table provides some further information about these principles, detailing the various underlying checkpoints of the guidelines (see Figure 5, page 22).

PART E:

Differentiated instruction

continued

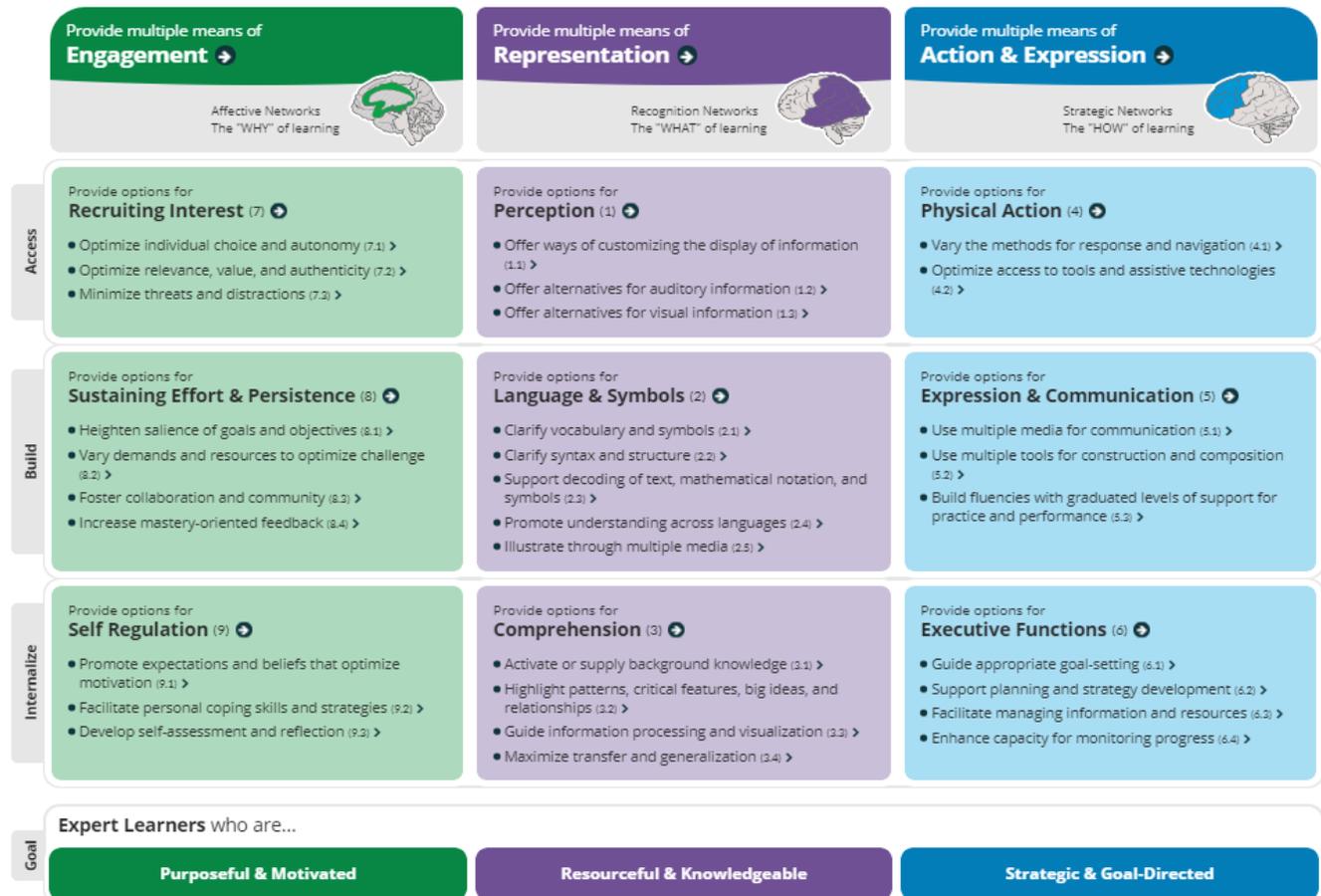


Figure 5: Universal Design for Learning (UDL) Guidelines (CAST 2018)

Characteristics of an assessment for a differentiated curriculum

Differentiated assessment aims to:

- enable all students to demonstrate the extent of their learning
- enable all students to access assessments appropriate to their current level of development
- enable all students to experience success in learning, where success is the individual's progress in learning

- assist teachers to identify and respond to underachievement
- counter underachievement through the provision of engaging learning opportunities and appropriate assessments
- inform teaching and learning practices
- support lifelong learning.

Learning for gifted students

Teachers using differentiated assessment need to gather data from multiple sources before, during and

after the learning process to identify and respond to learners' needs and strengths and to determine progress. Planning for pre- and post-assessment tasks is vital for the success of differentiated instruction.

Differentiation using acceleration

Acceleration can take many forms. Research supports the use of acceleration as an effective strategy for the education of gifted students (Hattie 2009). Sometimes, in schools, acceleration concerns a single learning area.

Choosing acceleration for gifted students

Acceleration may be a good option for students who show advanced learning in a range of academic pursuits, display a high level of performance in a single curriculum domain or can progress rapidly through the curriculum in one or more areas beyond their current year level.

Individual circumstances will dictate whether in-class acceleration (where the student works at a different pace or level to other students within the class), or a different setting is required. Acceleration can allow more time for specialties and interests and, in the case of secondary students, opportunities for developing insights into possible career choices.

The long-term advantages of acceleration far outweigh any disadvantages for learners (Hattie 2012). However, attention must be paid to the social and emotional wellbeing of the student in an acceleration program. Care must be taken that 'asynchrony' does not lead to social and emotional issues (Silverman 2002). Asynchrony refers to uneven development in gifted students; for example, they may be academically advanced, but emotionally on par with same age peers.

Acceleration options

Rogers (2010) identified the most common forms of subject-based acceleration and grade-based acceleration. Since 2010, the number of forms of acceleration has increased as further research explores the concept further (e.g. Danielian, Fugate & Fogarty 2018). Some of the more common practices are listed below.

1. **Subject-based acceleration:** This exposes learners to knowledge, skills and understandings beyond expected age or grade levels. Usually a Grade 3 student may study literacy with the Grade 4 students, but return for the remaining subjects with the Grade 3 cohort. It is usually more difficult to organise with Years 7 to 9 as the timetable does not often schedule the same subject at the same time in each year level. This, however, is very common in Years 10 to 11 where students study a half or a three-quarters subject in the year prior to the remainder of those subjects (Rogers 2010).
2. **Grade-based acceleration:** This allows gifted learners to progress more quickly through the general F–12 curriculum. Usually, schools use subject-based acceleration; however, skipping a grade still continues to be a practice. Skipping a grade requires close analysis of all aspects of the gifted student's strengths and challenges plus their social and emotional readiness to leave their peers (Rogers 2010).
3. **Accelerated/Year 13 classes:** Gifted students are grouped together for curriculum that extends and moves more rapidly, usually pairing up with a university partnership. Sometimes the lecturer delivers the course in a school, but at other times the students attend the university (Rogers 2010).
4. **Advanced placement (AP) courses:** Students take AP classes in specific content areas and usually take normed assessments to determine their suitability. Sometimes an AP class will group gifted Year 7 and 8 students so they are working with like-minded students in allocated subjects. This is sometimes not beneficial to the student if the number of subjects includes subjects in which they are not gifted. If English and Maths are both in the AP the student may be gifted in only one area and may suffer social and emotional self-esteem issues (Danielian, Fugate & Fogarty 2018).
5. **Compacted curriculum:** Four years of education are combined into three. This is usually a whole-school decision and can play havoc with the timetable if the decision is not across the board (Rogers 2010).
6. **Education courses provided by an outside organisation:** These allow gifted learners to work with outside materials provided by a university or other organisation in lieu of the regular grade-level curriculum of the school (Rogers 2010).
7. **Mentorship/coaching:** Students are placed with a content expert to extend learning in the expert's content area (one-year placement). This option connects school students who require higher-order assistance in a curriculum area. The content 'expert' oversees the student's studies and learning over the course of a year, usually inside school time (Rogers 2010; Danielian, Fugate & Fogarty 2018).
8. **Multi-grade/combination classrooms:** Learners of all ability levels are placed in a classroom that covers two years' curriculum, such as a combined first/second grade classroom. The student may be in Grade 1, but moves to Grade 2 work throughout the year (Rogers 2010).

PART F:

Resources

Useful links

Australian Association for the Education of the Gifted and Talented (AAEGT): www.aaegt.net.au.

Gifted Education Research, Resource and Information Centre (GERRIC): <https://education.arts.unsw.edu.au/about-us/gerric>.

Victorian Association for Gifted and Talented Children (VAGTC): www.vagtc.org.au.

Victorian Curriculum and Assessment Authority (VCAA): <https://victoriancurriculum.vcaa.vic.edu.au/overview/diversity-of-learners>.

Victorian Department of Education and Training: www.education.vic.gov.au/about/programs/Pages/student-excellence-program.aspx.

Glossary

Ability grouping – Grouping students of similar ability together for learning and teaching.

Acceleration – Presenting curriculum earlier or at a faster pace than usual; for example, grade skipping, early entrance, subject acceleration.

Asynchronous development – Developing cognitively, physically and emotionally at different rates.

Authentic assessment – Assessing using real-world challenges that require students to apply the relevant skills and knowledge they have learned in the classroom.

Dual exceptionality – see twice-exceptional.

Early entrance – Starting school at a younger age than usual.

Enrichment and enhancement – Adding breadth and depth to the curriculum so that students are challenged and can explore areas of interest.

Formative assessment – Assessing to provide ongoing feedback on learning to students and teachers, including areas needing further development.

Gifted-learning-disabled – Being intellectually gifted as well as having one or more learning disability (see twice-exceptional).

Gifted underachiever – A student whose actual achievement does not match her high potential as measured by some reliable index of actual ability.

Higher-order thinking (HOT) – Thinking that includes abstract reasoning, critical thinking, creative thinking and problem-solving.

Intelligence Quotient (IQ) – A measure of aptitude or intellectual capabilities, determined by psychometric testing.

Overexcitabilities – Intensities or sensitivities to stimuli in one or more of the psychomotor, sensual, intellectual, imaginal and emotional domains (a term originated by Kazimierz Dabrowski in 1937).

Personalised Learning Plan (PLP) – A documented and agreed plan for addressing the learning needs of a particular student (sometimes called an Individual Education Plan (IEP)).

Pre-assessment (also known as pre-test) – Assessing students' current level of mastery of the intended curriculum before teaching the unit.

Psychometric assessment – Measuring mental capabilities quantitatively, as in IQ tests.

Self-esteem – What we feel about who we are, and how we value ourselves.

Summative assessment – Assessing to provide a summary of a student's learning, usually completed at the end of a course or unit. The summary is often used in awarding grades.

Twice-exceptional – Describing a student who is gifted, but also has a disability.

Underachievement – see gifted underachiever.

References

- Australian Council for Educational Research (ACER) 2011, *Higher Ability Selection Test*, ACER, Camberwell, Victoria, www.acer.org/au/hast-secondary.
- Australian Council for Educational Research (ACER) 2009, *Middle Years Ability Test*, ACER, Camberwell, Victoria, www.acer.org/au/tsa/middle-years-ability-test-myat.
- Australian Institute for Teaching and School Leadership (AITSL) 2011, *Australian Professional Standards for Teachers*, Education Services Australia, Melbourne, www.aitsl.edu.au/teach/standards.
- Blaas, S 2015, 'What is 'giftedness' and why do some 'gifted' children underachieve?', *EduResearch Matters*, Australian Association for Research in Education, www.aare.edu.au/blog/?p=1154.
- Catholic Education Commission of Victoria Ltd (CECV) 2017, *Reporting Student Progress and Achievement – 2017 Revised Guidelines for Victorian Catholic Schools*, CECV, East Melbourne.
- Catholic Education Melbourne (CEM) 2017, *Horizons of Hope: Learning Diversity in a Catholic School (Foundation Statement)*, CEM, East Melbourne, www.cem.edu.au/CatholicEducationMelbourne/media/Documentation/HoH%20Documents/HoH-Learning-Diversity.pdf.
- Catholic Education Melbourne (CEM) 2016, *Horizons of Hope: Curriculum in a Catholic School (Foundation Statement)*, CEM, East Melbourne, www.cem.edu.au/CatholicEducationMelbourne/media/Documentation/HoH%20Documents/HoH-Curriculum.pdf.
- Catholic Education Melbourne (CEM) 2015, *To Serve and Lead: Strategic Plan 2015–2019*, CEM, East Melbourne, www.cem.edu.au/CatholicEducationMelbourne/media/About-Us/Documentation/Strategic-Plan-2015-19.pdf.
- Center for Applied Special Technology (CAST) 2018, *Universal Design for Learning Guidelines version 2.2*, <http://udlguidelines.cast.org/>.
- Dabrowski, K & Piechowski, MM 1977, *Theory of Levels of Emotional Development Vols 1 & 2*, Dabor Science Publications, New York.
- Danielian, J, Fugate, CM & Fogarty, E 2018, *Teaching Gifted Children: Success Strategies for Teaching High-Ability Learners*, Prufrock Press Inc, Waco, Texas.
- Earl, LM 2003, *Assessment as Learning: Using Classroom Assessment to Maximize Student Learning*, Corwin Press, Inc, Thousand Oaks, California.
- Eyre, D & Lowe, H (eds) 2002, *Curriculum Provision for the Gifted and Talented in the Secondary School*, David Fulton Publishers, London.
- Gagné, F 2013, 'The DMGT: Changes within, beneath, and beyond', *Talent Development & Excellence*, 5 (1), 5–19.
- Gagné, F 2012, *Building Gifts into Talents: Brief Overview of the DMGT 2.0*, <https://docs.wixstatic.com/ugd/b64a15d990e509038044d6a59b648bb9e2c472.pdf>.
- Hattie, J 2012, *Visible Learning for Teachers: Maximizing Impact on Learning*, Routledge, New York.
- Hattie, J 2009, *Visible Learning: A Synthesis of over 800 Meta-analyses Relating to Achievement*, Routledge, New York.
- Hodge, K 2013, *Gifted and Talented Education: Identification*, ACT Government Education and Training, www.education.act.gov.au/support-for-our-students?a=587311.
- Kerr, BA 1985, *Smart Girls, Gifted Women*, Ohio Psychology Press, Dayton, Ohio.

- Kronborg, L & Plunkett, M 2008, 'Curriculum differentiation: An innovative Australian secondary school program to extend academic talent', *Australasian Journal of Gifted Education*, 17 (1), 19–29.
- Lohman, DF 2012, *Cognitive Abilities Test*, Houghton Mifflin Harcourt, Boston, MA.
- McCoach, DB, Kehle, TJ, Bray, MA & Siegle, D 2001, 'Best practices in the identification of gifted students with learning disabilities', *Psychology in the Schools*, 38 (5), 403–411.
- Naglieri, JA 2011, *Naglieri Nonverbal Ability Test, 2nd edn*, Pearson Assessments, Sydney.
- O'Shea, MR 2005, *From Standards to Success: A Guide for School Leaders*, Association for Supervision and Curriculum Development, Alexandria, VA.
- Parliament of Victoria Education and Training Committee 2012, *Inquiry into the Education of Gifted and Talented Students*, www.parliament.vic.gov.au/images/stories/committees/etc/Past_Inquiries/EGTS_Inquiry/Final_Report/Gifted_and_Talented_Final_Report.pdf.
- Piechowski, MM & Colangelo, N 1984, 'Developmental potential of the gifted', *Gifted Child Quarterly*, 28 (2), 80–88, <https://journals.sagepub.com/doi/10.1177/001698628402800207>.
- Pohl, M 2012, *Gifted Students in the School Context: An Introductory Guide for Educators*, Hawker Brownlow Education, Moorabbin, Victoria.
- Prensky, M 2001, 'Digital natives, digital immigrants – Part 1', *On the Horizon*, 9 (5), 1–6.
- Raven, JC 2018, *Raven's 2*, Pearson Assessments, Sydney.
- Raven, JC 2003, *Mill Hill Vocabulary Scales*, Pearson Assessments, Sydney.
- Renzulli, JS 2016, 'The three-ring conception of giftedness', in SM Reis (ed.), *Reflections on Gifted Education*, Prufrock Press Inc, Waco, Texas, 55–86.
- Rogers, KB 2010, 'Academic acceleration and giftedness: The research from 1990 to 2008. A best-evidence synthesis', in N Colangelo, S Assouline, D Lohman & MA Marron (eds), *Proceedings of the Acceleration Poster Session at the 2008 Wallace Research Symposium on Talent Development*, The University of Iowa, Iowa City, Iowa, 1–6.
- Sears, PS & Barbee, AH 1977, 'Career and life satisfactions among Terman's gifted women', in JC Stanley, WC George & CH Solano (eds), *The Gifted and the Creative: A Fifty-Year Perspective*, Johns Hopkins University Press, Baltimore, Maryland, 28–65.
- Silverman, LK 2002, 'Asynchronous development', in M Neihart, SM Reis, NM Robinson & SM Moon (eds), *The social and emotional development of gifted children: What do we know?*, Prufrock Press Inc, Waco, Texas, 31–37.
- Tomlinson, CA & McTighe, J 2006, *Integrating Differentiated Instruction and Understanding by Design: Connecting Content and Kids*, Association for Supervision and Curriculum Development, Alexandria, Virginia.
- Victorian Curriculum and Assessment Authority (VCAA) n.d., 'The Victorian Curriculum F–10', <https://victoriancurriculum.vcaa.vic.edu.au>.
- Wechsler, D 2016, *Wechsler Intelligence Scale for Children, Fifth Edition: Australian and New Zealand Standardised Edition (WISC-V A&NZ)*, Pearson Assessments, Sydney.
- Wechsler, D & Naglieri, JA 2006, *Wechsler Nonverbal Scale of Ability (WNV)*, Pearson Assessments, Sydney.



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