

GIFTED AND TALENTED EDUCATION
PROFESSIONAL DEVELOPMENT PACKAGE FOR TEACHERS

E X T E N S I O N

Module 2



Early Childhood
Primary
Secondary

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Australian Government
Department of Education,
Science and Training

THE UNIVERSITY OF
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GERRIC

Gifted Education Research, Resource and Information Centre

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Extension Level

Introduction

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

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

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

Additionally there is content differentiated by:

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

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

Thank you! You're now ready to proceed.

You have already completed the six Core Modules which looked at a wide range of issues. Let's briefly review the areas you covered.

Module 1: Understanding Giftedness

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

Module 2: The Identification of Gifted Students

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

Module 3: Social and Emotional Development of Gifted Students

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

Module 4: Understanding Underachievement in Gifted Students

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

Module 5: Curriculum Differentiation for Gifted Students

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

Module 6: Developing Programs and Provisions for Gifted Students

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

The Extension Level of the Professional Development Package builds on, and expands from, the Core Package.

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Module 2



Early Childhood



Caroline Merrick
Ruth Targett

Module 2

Further Issues in Identification of Gifted and Talented Students

Welcome to Extension Module 2, Further Issues in Identification of Gifted and Talented Students. In this Module you will become more familiar with some of the tools and techniques that are used to identify giftedness and talent in students at different levels of schooling.

This is a challenging process, as each school will have students with different characteristics, circumstances and needs.

As will become clear throughout this Extension Module, the key purpose of identifying gifted and talented students is to serve them with a program and curriculum that meet their needs.

Caroline Merrick & Ruth Targett

Extension Module 2: Early Childhood

Further Issues in Identification of Gifted and Talented Students

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1. What is the purpose of using a peer nomination form?
2. What is the purpose of students nominating themselves for a gifted program?
3. What are IQ tests successful at predicting? What do IQ tests not predict about a child?
4. What recommendations do you have regarding the following case study?



Mrs Maxwell teaches students in their first Year of school and is doing some extension science with her class. However, she wants to run a science 'Invention Extension' group across three Years and is looking to add more information to the identification process. She has already collected parent and teacher nominations of gifted students and some anecdotal records of students working on science activities in class. What other subjective measures could she use to add further information to the identification process?

1. To add a peer's perspective to the identification process.
2. To find out specifically what skills and areas of interest the child already possesses in his/her talent domain.

3. IQ tests

- measure the potential to achieve well in the school system.
- do not account for the external and internal catalysts that influence a student's development of talent.
- give us information about a student's relative strengths and weaknesses.
- show us how well students can deal with novel information and their level of reasoning.
- give us information about a student's verbal and non verbal reasoning generally and the subtests give us more detailed information about the relative strengths and weaknesses within these areas.

4. The following modelled response has been provided for the case study.

What other subjective measures could Mrs Maxwell use to add further information to the identification process?

Mrs Maxwell tells the students at assembly about the course she is running. She asks each teacher to conduct a peer nomination orally, with small groups of children. She writes three key questions to be answered in the group peer nomination. She also asks any students who are interested in being considered for her 'Invention Extension' group to nominate themselves by doing one of the following: bring in a special invention they have made and talk about it, write down or tell their teacher why they think they would make a great inventor, describe something they have invented, or draw a diagram of an invention they have designed. She could also use an above-level test of science reasoning from Year 3 to identify students who reason well in science. By adding these subjective data to the already collected objective and subjective data, Mrs Maxwell has broadened the identification process.

Outcomes

At the completion of this Module, you will:

- understand what information subjective and objective measures give teachers.
- be able to identify what identification tools are appropriate for your school population.
- demonstrate your understanding of the need for multiple criteria by identifying which tools to use in a given example.

Part 1

Identification as an ongoing process

As you will know from your reading of Module 1, gifted and talented children have different learning needs from those of their age peers of average ability and therefore require special educational planning to support them in developing their potential. The process of identification is critical if schools are to cater for the intellectual and social-emotional needs of these students. All children deserve to have their educational needs met, no matter where they fall on the learning continuum. To cater successfully for the needs of gifted children we need to know who they are and where their abilities lie.

Once a child has been identified as gifted and/or talented we can use appropriate educational interventions and strategies to move her along the learning continuum. In the process we may identify students whose needs are not being met by the current curriculum, provide evidence for inclusion in a particular program and identify students who will need extension beyond the core curriculum. It is important to remember that the purpose of identifying gifted or talented students is to ensure that the learning experiences they have at school meet their learning needs. The ways these needs are met may vary from school to school - hence the combination of tools used will be chosen to suit the purpose of identifying within your own school population.

When identifying gifted students we need to know not only whether they are gifted and/or talented but also in what domain(s). We need to know whether they are achieving well or underachieving in their current learning situation. We need to know their relative strengths and weaknesses and how best we can serve their learning needs.

Rationale

As the process of identification of gifted and talented students is complex, selecting the most suitable tests, checklists and other tools for your school is very important. Choosing identification tools which provide defensible interventions for gifted and talented students will help you soundly justify your selection to parents, other staff members and the students themselves.

The identification process recommended in this Professional Development Course is based on the Gagné definition of giftedness and talent which was introduced in Core Module 1. It is important that the tools used to identify a student for a particular program or learning experience are in line with our understanding of gifted and talented children. Identification procedures need to allow for the fact that some gifted children freely express their abilities at school, while others may not.

With this in mind, we need to collect information about both the **potential** and the **performance** of a child who is being considered. By focussing on what is measurable (through objective measures) and observable (through subjective measures) we can identify the areas in which the gifted student excels and any possible areas of weakness. Identification is the first step in catering for the needs of a gifted and/or talented student.

The golden rule for identification

‘The careful determination of program goals will set the direction for the entire identification process’ (Feldhusen, Asher & Hoover, 1984). This is referred to by Renzulli (2004) as the golden rule of identification.

Which identification tools do I need?

To determine which tools you will utilise to identify the gifted students in your school, you must first consider who you are looking to identify. Are you looking for students whose gifts are intellectual, creative, socio-affective or kinaesthetic? Are you looking for students who are already demonstrating talent in the intellectual, creative, socio-affective or kinaesthetic domains? What resources do you have to support these students once they have been identified? What is your educational goal for these students once they have been identified? Modules 5 and 6 explain in detail how to provide for these students once they have been identified.

It is important to consider the purpose of identifying gifted and/or talented students in your school.

- Is your goal to identify gifted students to place them in a gifted class?
- Are you initiating a new program to meet the most pressing needs of your gifted students?
- Are you targeting gifted underachievers for a program to address their underachievement?
- Are you identifying these students so that teachers may more effectively differentiate the curriculum within a mixed ability classroom?
- Are you looking to extend a few talented students who are performing above their cohort?

The program goals may determine what characteristics you are looking for in the identification process.

By identifying the specific needs of your individual gifted and talented students you will achieve a careful match between your identification methods and the many areas of giftedness and talent.

In early childhood programs children are often selected in a subject-specific domain. For example, for a literacy withdrawal extension group which may focus on reading of fairy tales and writing fractured fairy tales, the teacher will need to identify children who can read and write at an advanced level for their age. Therefore, the teacher may use objective reading test results, such as the Neale Analysis of reading, along with work samples of their writing. An IQ test will be a useful tool in identifying gifted students who may demonstrate superior abstract reasoning and who would benefit from the higher order thinking required in the group. The program goals will drive the search for the target population for this gifted and talented program. As we discussed in Core Module 2, combining all the information collected from these sources, both the measurable and observable, will help us clearly identify the students who should join this particular literacy group.

The identification process you adopt for your school should match the cultural context and needs of your school population. Students from some culturally diverse or disadvantaged groups do not perform well on standard measures of giftedness and/or talent. It is important to be aware of the limitations of the tools you have available for some groups of students and look for other options. This will be discussed in greater detail later in this Module. The most appropriate methods of identification for your school will be based on the purpose of the program you are developing and the population that you serve.

A wide range of strategies must be used to assist identification. The tools you use will depend upon the student's age, need, location and background, and the resources available to you in your school, district or system. These will differ according to the needs of each individual in each school. In an ideal world, we would design our identification process to meet the specific needs of our gifted and talented students, rather than on the basis of time, cost or resources available. However, at times there are restrictions which mean that we only have certain options available. Careful selection of the best identification measures available to us is important, as choosing the most effective measures and designing tools which match your specific needs will often save you time, cost and resources.

Subjective and objective measures

Let us revisit the definition of the two types of identification which we introduced in Core Module 2:

- **Subjective measures** allow judgements to be made on the basis of structured observations of the student. These include teacher, parent, peer and self nomination, along with anecdotal records contributed by previous teachers and the child's family.
- **Objective measures** are standardised tests of ability or achievement. These include IQ and other forms of psychometric testing, standardised performance tests, dynamic testing and off-level testing.

You may also see these two types of measures referred to as **quantitative** (objective) and **qualitative** (subjective). Effective identification of gifted children requires evidence from both categories.

Not all gifted students perform well in the school system

Many of us can think of students we have taught who did not perform well on school assessments but who asked questions beyond their years; those students about whom we had a ‘gut feeling’ that we were not seeing their best within the school system. We must employ identification procedures which are designed to find students who are not achieving at levels commensurate with their ability, due to intrapersonal and environmental catalysts which impact negatively on their lives. These students are called **gifted underachievers** and, in Extension Module 4, we will explore further reasons why underachievement occurs among gifted children and adolescents.

Subjective measures

Since giftedness has many dimensions so should the identification process. Subjective measures allow teachers, parents, a student’s peers and the students themselves to try to identify giftedness and/or talent, guided by checklists and other descriptors which assist them to make, through observation, evaluative judgements about a student’s ability. These measures add the human touch to the identification process and many adults or fellow students who interact with the individual may have something important to add to the profile. In Core Module 2, we discussed parent and teacher nomination. In this Extension Module we examine two more subjective tools, peer and self nomination.

Peer nomination

A student’s classmates may often perceive his abilities with great clarity. Gifted students can also recognise in others the characteristics of giftedness which they themselves possess. They may not know the terminology to describe what they see but they recognise those characteristics which, in some way, make particular peers different from others but similar to themselves. Peer nomination may reveal insights which are not readily available through other identification tools.



If the purpose of identification is to increase our knowledge of the gifted children in our school in order to best cater for their needs, then asking a student’s peers to contribute to the process can sometimes add another dimension to the process. Peers are aware of other students’ behaviour outside the learning context. That is, they see students in a range of settings and situations to which a teacher or parent may have less access and consequently they may have valuable observations to add.

The peer nomination process can be administered using a variety of formal and informal methods. A peer nomination form can be generic to the characteristics of gifted children, or specific to your class or the program which the school will implement.

Often peer nomination forms contain questions such as; ‘Who is the best problem solver? Who

is the best artist? Who knows how to fix the computer? Who is great at sports using bats and balls?’ However, the information you collect must be relevant and useful to what you are trying to achieve. If the answers to these types of questions do not help you to identify the type of gifted student who will benefit from the specific program being planned, then they are not purposeful. For example, if you are looking for students to be in a gifted art program then asking questions about a student’s ability to solve mathematical problems may not be purposeful. Rather, designing yourself a peer nomination form, which will identify the very characteristics relevant to the program, is much more effective.

Designing a form

When choosing or designing your peer nomination form, start by asking yourself these two questions:

- ***What characteristics of giftedness and talent am I looking for?***
- ***In what areas of giftedness am I missing data?***

For example:

- if you are looking for intellectual giftedness you will need a peer nomination form which includes both cognitive and social-emotional characteristics.
- if you are looking for leadership characteristics, then your peer nomination form should include items which address leadership.
- if you have a particular gifted program already running at your school and you are looking for students to fill the program, you will need to design items which match that program’s goals.

Each school context will be different in this regard. Returning to the purpose of identifying these gifted students will guide you in this decision. Using peer nomination as another screening tool to narrow down the identification process may be useful, as it may give you more insight into all the students about whom you wish to gain information.

Guidelines for using the peer nomination process

Here are some useful guidelines to improve the effectiveness of administering formal peer nomination forms.

- Wait 9-12 weeks into a year before administering a peer nomination form, as students need time to get to know their peers well.
- Explain the purpose of the peer nomination form.
- Start with a warm up activity, so that students understand the purpose of the peer nomination process - eg ‘Our district athletics team is looking for a new runner to join their team. They must be able to compete in the 100m event so a sprinter is required. Who would you nominate?’ or ‘Our band is looking for a new drummer. Who has good rhythm and coordination?’

- Explain to the students that you are not looking for them to pick their friends or only those of the same gender but to think of everybody in the class.
- Use language appropriate to the age of your students. Obviously this will vary from primary to secondary students, but also within these age ranges.

A conversation with students already in a program, with a question such as; ‘Is there anyone who isn’t part of this group but who should be?’ will often elicit a few names. Asking students in programs to complete a peer nomination form specifically designed for the program you are implementing may also identify students who match the target population. Asking students whom you have already identified as gifted to complete a peer nomination form may also reduce the task of administering forms to entire classes or Year groups, as these gifted students will often recognise giftedness in others.

Students who are nominated by peers need to enter the identification process as they would through any other subjective or objective means. Your next step will be to collect information from other objective and subjective measures, to ensure that all efforts are made to identify accurately all gifted students at your school. This is especially so with **any** nomination process, as a student may be nominated because their friends want them in the program, not necessarily because enrolment in the program is in the student’s best interest.

When used with other forms of subjective and objective measures, peer nomination can add another perspective to the identification process.

Limitations of peer nomination

As with all identification procedures, peer nomination has some limitations:

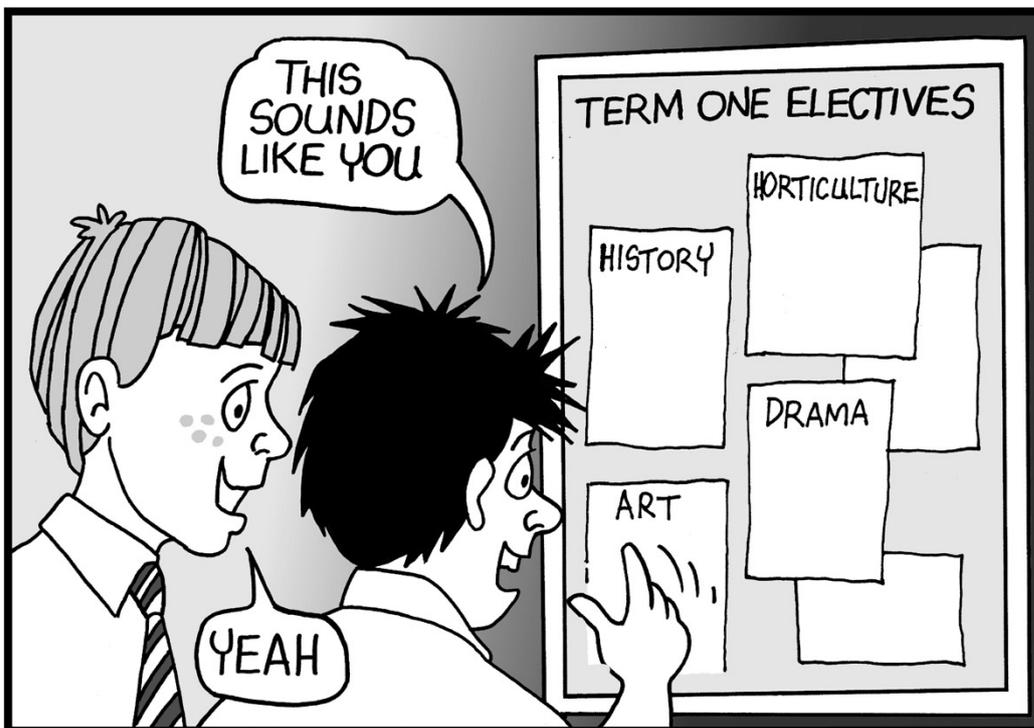
- Peers may not like or respect a particular gifted student so may not record her name.
- Students may wish to record their friends for every item.
- Peers may not be fully aware of another student’s advancement.
- Students may not be fully aware of gifts and talents in students of the other gender, if they do not mix with them outside the classroom.
- Underachievers may not be revealing their gifts and talents to peers.
- Peer nomination is less reliable in early childhood before children have begun to make social comparisons and notice differences between themselves and others, and between other children in their class. As discussed in Core Module 3, children do not generally begin to ‘norm reference’ before age 7.
- Adolescents may be particularly unsuited to this procedure as the need to belong is often the driving force in their lives and some students may be deliberately concealing their ability.
- Oppositional attitudes, as described in Module 4, will continue to have an effect on all elements of the identification process. Peers will be reluctant to nominate their friends if academic learning is not valued by the peer group.

Interpreting peer nomination responses

When you have collated the names listed on the peer nomination forms, you will be ready to interpret the results. When analysing this information, you are looking for any patterns and clusters of names which may appear. Is a student's name recorded a number of times in a particular domain or field? Is a particular student's name appearing for leadership or creative endeavours? Are they being identified by their peers as a writer or mathematician?

Each child whose name is appearing multiple times should be added to the list of students you are considering as part of the identification process. Peer nomination may be the first indication that you need to investigate a student further. If a student is nominated on a peer nomination form, investigate the objective data available to see if they are displaying characteristics of giftedness and talent. What are their teachers and parents saying about their areas of giftedness or talent?

Sometimes you may not find any other data that confirm the student's nomination. In fact the student may not be gifted or may not benefit from the program. However, if your identification process is thorough, these students will not proceed further in the identification process, as the other objective and subjective measures will confirm that they do not qualify.



What does research say about peer nomination?

In 1989, Gagné conducted a critical analysis of 13 validation studies of peer nomination forms. He concluded that although the research was fraught with weaknesses in methodology, there were some advantages which made this subjective measure a 'potentially worthy technique' (p. 53).

Some advantages of the peer nomination form are the ease in design, administration and compilation of results, as well as the large number of judges who are contributing to the group judgement. Even a class of 20 students will provide 20 different judgements, while a larger cohort will add even more judges. Banbury and Wellington (1989) stated that peer nominations 'can be used along with other measures in screening for gifted and talented students' (p. 163). The key to using a peer nomination form is to see it as another **screening** tool in the identification process.

When constructing each item on your own peer nomination form you should address the following questions which Gagné poses, in order to maximise the usefulness of the tool:

- How relevant are the items? For example, some peer nomination forms ask for students who persevere on a task or get bored by routine lessons. Have you included items which are not unique to the gifted?
- Are there any items which are redundant? For example, have you asked for nominations for items which could be identified another way, such as through maths achievement tests or standardised tests of reading?
- How exhaustive are your items? For example, there is more than one dimension to each domain of giftedness and talent. Have you considered each individually?
- How specific are your items? For example, problem solving, spatial and estimation skills are much more specific than generalised maths talent.
- How are your items organised? For example, can you cluster items under domain subheadings or in a hierarchy or taxonomy?

Self nomination

Gifted students can often recognise giftedness in themselves. From a very early age, they are very capable of seeing where their talents lie. They have considerable knowledge about themselves and their passions, which they are willing to share when given the right vehicle and opportunity.



As with peer nomination, self nomination needs to be specific. Teachers should design self nomination forms to elicit the precise information they are lacking through

other screening methods. If the information asked for through self nomination has already been elicited through other methods, then the teacher's task of synthesising the information may be increased unnecessarily.

A self nomination form that is specifically designed to match the goals of the program being developed will give you specific information to add to the other data collected in the identification process.

For example, in a creative writing course, a self nomination form may include items such as:

- What is your favourite style of creative writing?
- Attach your favourite piece of writing. Why is it your favourite?

- What topics do you most like to write about?
- What genres do you most enjoy? Why?
- What genres do you least enjoy? Why?
- What types of books do you like to read at home?

Administering a self nomination form is difficult in the early childhood context if the child is not a competent writer. To overcome this, an interview, where the teacher asks the child questions and records his responses, is a more appropriate method of administration. By responding to the young child's answers, the interviewer can prompt the child and redirect questions if necessary to gain the appropriate information in the identification process.



Nathan became interested in numbers at a very early age. He was fascinated with counting and recognised numbers in his environment long before letters. He would arrange his blocks according to intricate patterns he designed. He could sort objects according to colour and shape long before his other siblings. When he went to school, he was very keen to learn more about maths and would find patterns in the most mundane things. His favourite activity in the car was to read the street directory and match up the grid references.

In Year 1 he taught himself the patterns of multiplying numbers up to ten. He did not know these were multiplication tables; he just found the patterns intriguing. When he discovered the patterning in the 9-times table, he was amazed and told many adults about his new discovery. His swimming teacher demonstrated to him how to use his fingers to show the pattern of the 9s by putting down the corresponding finger for the number he was multiplying by 9, to reveal the answer on his fingers. This was the new 'magic!' method for the next week. He tried this with other tables, even going past 20 in the hope that it worked somewhere else but was even more amazed to find out this was unique to the nines. However, he never told anyone at school because that was not the type of maths they did at school, he reasoned. In fact, he didn't see this as maths, more like fun, he said.

He was quite articulate about his passion for maths and was overheard discussing with his best friend, Michael, how he was good at and loved maths while Michael was good at and loved science. In fact, both boys were very advanced in both areas but they each recognised that the other was superior in his 'passion' area. At the age of 7 they were both norm-referencing and recognised the gifts in the other. Both a peer nomination form and a self nomination form could elicit this information. However, it would be the writer's skill in asking the right question which would determine how effective the tool was.

Some examples of peer nomination items for these two boys might include:

Maths:

- Who really enjoys playing with numbers?
- Who likes to challenge themselves with maths activities just for fun?
- Who is quick with numbers?
- Who can do maths well in his/her head?
- Who likes to do tricky maths problems?

Science:

- Who asks lots of questions about science?
- Who wants to know how things work?
- Who knows a lot about animals and plants?
- Who likes collecting things from nature?

What if students wish to nominate themselves on a peer nomination form?

As seen in the example above, Nathan and Michael would be the obvious names to record on a peer nomination form. If we remove the opportunity for self nomination there may not be anyone close to their giftedness or talent level that they could genuinely nominate! But what if a student self nominates when he is clearly **not** gifted or talented in the area addressed by the peer nomination form? The answer to this question will become clear when the other data are added to the identification process. The student will probably not be nominated by teachers, parents or peers and objective test results will identify her current level of functioning. For these reasons, there is no harm in letting students self nominate on a peer nomination form, as long as peer nomination remains only one element of the identification process.

Gagné conducted some interesting research on this very question and his article is included in the Resource section of this Module. He concluded that:

'Because self nominations appear to have no adverse effect on the ability rankings resulting from peer nomination procedures, and because children insist that they be allowed to nominate themselves, we recommend that self nominations be permitted, particularly at the high school level where self-perceptions of abilities are more modest and accurate. ... To improve the accuracy of self nominations and control for the tendency of students to overuse them, it is recommended that examiners mention in the directions to the students that their self nominations will be compared to those of peers and teachers.' (Gagné, 1989, p. 24)

Placing any nomination form in the right context will help increase its effectiveness. Communicating the purpose of the nomination form will help teachers, parents and students consider their nominations carefully and reduce the number of inappropriate nominations made.

Limitations of self nomination

As with all identification procedures, self nomination has some limitations:

- A student may not want to be seen as different so may not want to self nominate.
- A student who is a perfectionist may not think she is capable enough to perform at a high level.
- A student may not want to be in the program and away from his friends.

Disadvantaged and culturally diverse populations

Identification procedures which are used for the majority of gifted and talented students may not be suitable for some culturally diverse populations. Different methods of identification may be needed for students from culturally diverse, low socio-economic status or Indigenous populations.

These gifted students are not lacking in ability but their ability may be masked by a variety of environmental and socio-emotional factors. Because of this, their giftedness may not be evident in the identification process.

Children and adults in some disadvantaged or culturally diverse communities may not readily trust teachers or the schooling system and hence may not be willing to nominate their children or to nominate themselves for a program. One of the first steps in identifying gifted students from these communities is to establish a trusting relationship with the community. Once this trust has been established, the program goals need to be clearly communicated. Parents may need to be involved in the nomination process, even if it is self or peer nomination, if this helps establish that the program is for the benefit of their children. It may well be beneficial for the school to work with community leaders to construct a tool which asks the right questions to identify giftedness and talent within that community.

Students need to develop trust in the adults in their school before they will nominate themselves or their peers on checklists or nomination forms. If they do not respect the teacher, this will have a negative effect on students' willingness to nominate themselves or their peers. Indeed, this may be the case for any student who is not achieving her potential for whatever reason. The forced-choice dilemma, explained in Core Module 3, can have a significant effect on the usefulness of peer and self nomination forms.

Self and peer nominations of students from disadvantaged backgrounds or culturally diverse populations are most effective when the teachers have training in gifted education, knowledge of underachievement and experience with students from these backgrounds. It is important to have worked with the school community before launching any program.

Conclusion on subjective measures

The information collected on peer and self nomination forms, as part of the identification process, will be used in conjunction with the other subjective screening tools and the objective measures. If a student is identified on both an objective and a subjective measure then they should be included in the program.

When using multiple-criteria identification measures, it is important to remember that these criteria are not a series of hurdles that a student must jump before he is included in a program. Rather, when using subjective measures, students only need to be nominated on one form of subjective measure to be considered for the program. They will then proceed to the next stage of the identification process, where objective measures will be used to ensure that they qualify on the objective data collected. If they qualify on at least one objective and one subjective measure, they should be included in the program.

Include, for further assessment, students you are not entirely sure about, rather than exclude them - and invite surprises.

Write 5 questions that you could use in a peer nomination situation. As the children in this particular age group may not be able to write their responses, you may need to sit with small groups of students to ask these questions. Remember to make the language appropriate to the age group and follow the guidelines given earlier.

Name Year

Program

Questions

1. _____

2. _____

3. _____

4. _____

5. _____

Now ask a colleague who is doing this course with you, or a mentor in this area, to look at the form and give you feedback about the questions you have developed.



You have decided to ask the staff to suggest ideas that would help develop a program for gifted students in your school, using the current resources available. Think about your staff and their strengths in working with students of different levels of ability and interest.

- Create a self nomination form for your staff to suggest ideas for creating programs for the gifted students in your school.
- Write a description of the domains of giftedness which you have already identified in the students in your school.
- Write a list of how gifted students' needs are currently being met.
- Create a self nomination form for staff to become involved in your school's current programs for the gifted.
- Now add to your list any new programs which may have come to light as a result of this professional development course.

Part 2

Objective identification

Objective identification measures are to be used to identify gifted and talented students' aptitude and/or current levels of achievement. As discussed in Core Module 2, objective measures are tools such as standardised tests of potential or performance which give teachers and counsellors a score, or a series of scores, which can be used to compare the students with others from their age group or cohort. These measures usually assess a variety of elements of cognitive processing and reasoning, or achievement levels within the school context or compared to a much larger cohort - eg verbal reasoning or reading comprehension.

Different measures give us different, specific information about a student's capacity to achieve within the school context. The measure may show you either a student's potential to achieve or her current level of achievement within the school environment. These measures may identify a student who is already achieving well and who may need a specific program to meet his needs or a student who is underachieving and may need a different intervention to help her achieve at a level commensurate with her ability.

A variety of objective measures exist and each measure assesses different aspects of a student's ability to learn and deal with new information. Such assessments may also assess a child's ability to reason compared with his age peers as well as how he uses information in new situations and organises that information.

It is important to note that on any objective measure it is possible for a student to score at a level lower than her true ability. If a student can score below his ability level on such measures some may ask whether we should we use them at all. At this point it is important to remember why we identify gifted and talented students: the purpose of such measures is to give us information about the child so that we can better provide for her learning needs. With the reason for administering the measure clearly in mind our focus can then turn to the way a test is administered, and the child's specific context, to help guide you as to the most appropriate objective measure to use to identify a child's ability or level of achievement.

It is almost impossible to achieve **beyond** one's true ability on any test, if it is administered appropriately. This means that a student's test result may be an **underestimation** of his ability. However, if a student scores higher than you expected, the child unquestionably **has** the ability being described by the instrument - even if she is not demonstrating this in class - and it would be beneficial to look at this student from another angle.

What IQ tests do and don't measure

IQ tests have had a chequered history, as in their early years some were used inappropriately, and consequently many people still have misgivings about the use of such tests. IQ stands for 'Intelligence Quotient,' a title which, ironically, is no longer relevant to what the current tests assess. The 'Intelligence Quotient' originally measured the difference between a person's chronological age and age of mental functioning. This particular calculation is no longer made in IQ tests, but the name has remained.



There is no doubt that in times past IQ tests have been misused and applied in some cases for unethical purposes. However, as James Borland (1986) comments, we have to be careful not to 'throw out the baby with the bath water'! When used appropriately, with their correct purpose in mind - of providing appropriate learning contexts for children - they can be useful tools. The IQ tests currently available are designed to assess a number of factors related to children's capacity to learn and manipulate information. They specifically identify a person's ability to reason in particular areas, especially the ability to use abstract reasoning.

What do IQ tests measure?

IQ tests effectively predict a student's **potential** to achieve within the school system (Pirto, 1994; Richert, 1991; Smith, 2005). There are different forms of IQ tests. Some must be administered individually and require a trained psychologist. Others can be given to groups of children and these tests can be administered by schools and organisations that have the rights to use such tests. Each IQ test assesses a slightly different concept of intelligence. However, all measure a person's ability to deal with novel concepts, acquire knowledge and focus on, and retain, information. The Wechsler Intelligence Scale for Children (WISC) and the Stanford Binet Intelligence Scale are the most common tests used at present. New versions of both tests have been released recently and are available currently in Australia. The concepts of verbal and nonverbal reasoning are common to both tests and similar scores on the two tests are comparable.

- **Verbal reasoning** is the ability to reason, solve problems and recall information using verbal methods such as printed and spoken words.
- **Nonverbal reasoning** is the ability to reason, solve problems and recall information using pictures, figural and symbolic forms.

A student's achievement on the verbal components of these tests is more likely than the nonverbal components to predict current success in a school system. This is because the school system primarily uses verbal presentation of material and verbal student responses as the main conduits for teaching and learning. However, the nonverbal components of a test are more likely to be culture-fair for students from culturally diverse backgrounds and, in some situations, these nonverbal components can be a very useful source of information when identifying students from these backgrounds for entry into a particular program. Nonverbal sections of the tests also give us information about a person's ability to deal with abstract concepts in symbolic form and, as such, can give us an indication of a person's ability to deal with abstract concepts in areas such as mathematics.

When examining the scores a child attains on an IQ test, it is important to know which aspects of the test give you information that is valuable in predicting school success. Your school psychologist or the psychologist who has administered the test can give you even more details, in greater depth, than we are able to present in this Extension Module. However, a very brief overview is provided here.

A full scale IQ score should never be used in isolation or without reference to other aspects of the test.

In fact, some psychologists no longer report full-scale IQ scores in the test reports they produce. By examining separately the Verbal and Nonverbal scores, and the various sub-scales of the test, we can assess the level of a student's reasoning abilities in each area. In doing this, we can assess in which areas a student has the potential to be successful within the school context as well as areas in which he may find school more difficult.

Each test is divided into areas called subtests which are then grouped under the headings of Verbal and Nonverbal reasoning. There is also information provided about a child's scores in the subscales. These subtests will show the relative strengths and weaknesses of the child who has been assessed.

When examining a psychologist's report of an IQ assessment, it is important to note the explanation given by the psychologist about the **relative** strengths and weaknesses of the child in question. These subscale scores may help us understand whether a child may be underachieving due to an attention deficit difficulty or whether they may be disengaged due to the level of their cognitive functioning. For example, is a student whose intellectual ability is very high being given work which is much too simple to engage her?

Psychologists are experts in analysing each particular profile of results. They can tell a great deal about the reasoning that a child is demonstrating in a test situation. Psychologists who have substantial experience working with gifted children will have valuable insights to share both with the parents and with the student's school.

Many people concentrate on the full-scale IQ score, believing it to be the most significant finding from the test. However, an informed reading of the full IQ test report requires a thorough analysis of all aspects of the results, noting the pattern of scores and the strengths and weaknesses of the individual. This will reveal a wealth of information to assist us in identifying the best ways to meet the academic needs of the student concerned.

If clarification of the test report is needed, this should be sought from the psychologist who assessed the child, as he or she may have other information from observation during the test's administration that may put things into context, from either the child or his parent. The psychologist's observations or test analysis may highlight any confounding variables that may affect a child's performance on a test, such as specific deficits and the effect of these on the child's learning, as well as behaviours exhibited by the child during the testing situation. For example, some children may answer questions very quickly while others make more thoughtful responses - the 'front end analysers' discussed in Extension Module 1.

What IQ scores do not predict

There are many misconceptions about what an IQ score predicts. Some hope it predicts wealth, success and guaranteed happiness, or a short cut through life's difficulties. However, as Gagné has pointed out, we know that many catalysts exist which can have a positive or negative effect upon the development of a child's potential. There are so many non-cognitive variables which come into play when an individual is developing through early childhood, childhood and adolescence, that an IQ test would have to be 'magical'



to predict a person's success in life. The Gagné model, Tannenbaum's 'sea star' and Renzulli's 'three-ring' model of giftedness also emphasise the importance of socio-affective development, and it is difficult for anyone, no matter how highly gifted, to achieve success in an environment - school, workplace or home - which acts as a barrier to success.

However, as a consequence of these misconceptions and the misuse of IQ tests, these tests have been surrounded in controversy and many people have strong opinions about their use.

One of the most fundamental caveats about IQ tests is that they do not test all aspects of intelligence. There are many theories of intelligence and even the theorists themselves do not believe that they have adequately communicated what intelligence comprises (Gardner, 1983; Sternberg, 1985). Conceptions of intelligence vary from culture to culture but most conceptions acknowledge it as a complex interplay of many abstract factors which is unlikely ever to be defined by a single test or score. So an IQ test cannot measure intelligence fully.

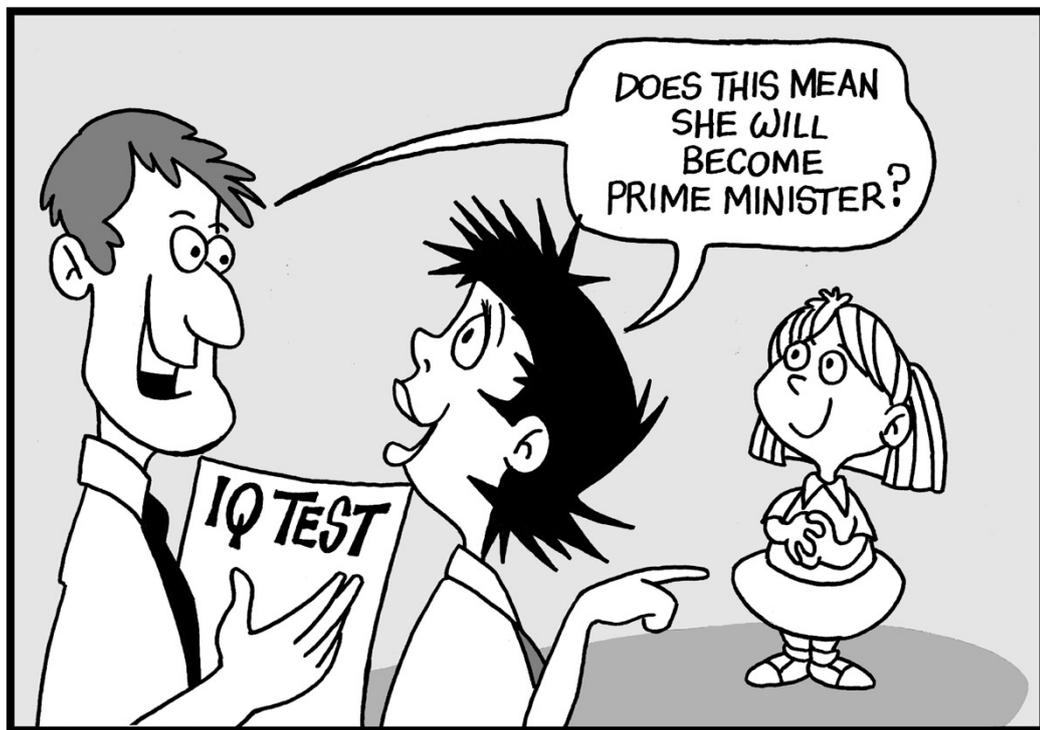
No ability or achievement test can tell us about the intrapersonal aspects of a child. They cannot assess the effects of a student's home environment, personality or experiences. IQ scores cannot predict a student's level of motivation, or identify how a student will respond to the various catalysts affecting her life. So while an IQ assessment can show a student's **potential** to reason and use information or concepts in novel situations within a specific cultural context, it cannot predict **performance** in non-academic or academic areas, only the potential to perform with the right support. It can show how well students can adapt their reasoning to new situations but that potential may not be seen at school for a number of reasons.

As acknowledged by the definition of giftedness and talent presented in this Professional Development Package, there may be many factors which interfere with the expression of a student's giftedness, such as personality, motivation level, family life and myriad other elements. These factors may influence the way students perform within the school context and how they develop their talent. Extension Module 4 explores in depth some factors which have a negative effect upon a student's expression of giftedness and actualisation of talent.

It is important to remember that an IQ test is a measure of **ability** using the definition of intelligence adopted by the test designers. It is also important to note that an assessment of this nature is an assessment of the student on a particular day. If a student has performed well, this is a strong indication that he is intellectually gifted. As discussed earlier, it is almost impossible to achieve **beyond** one's true ability on any test, if it is administered appropriately. However, if a student has a 'bad' day then the information from the assessment will likely be an underestimation of her ability. In this situation the test results may not match information gathered on other identification tools and should be used with caution.

Again, the principle guiding our understanding of a student's performance on a test of ability or achievement is that the student can underperform on a test but can never perform beyond his true ability level.

An IQ test will not predict whether a child will be successful in adult life, it will not identify whether she has good social skills and it will not predict creative, achievement, leadership ability or popularity. IQ tests were not designed for these purposes.



So, if IQ tests are so 'flawed' why use them?

The answer is that, currently, these tests are one of the most effective measures of a student's potential to achieve academically in school (Assouline, 2003; Rogers, 2002).

- We use them because at the present time they are one of the few standardised instruments available to us to identify whether students are achieving in the school system at levels commensurate with their ability.
- They are one of the few ways we can currently identify deficits in certain learning areas which can help us as educators to tailor learning experiences to support a student's strengths and weaknesses.
- IQ tests, when used in conjunction with other objective and subjective measures, can be very useful in identifying children who are gifted but underachieving.

When used in the spirit for which they were designed, and in conjunction with other information, IQ tests provide accurate and valuable information about the way in which a child may learn, reason and appear in the school situation, when compared with his or her age peers.

Off-level testing

Off-level testing involves using with younger students, to assess their talent in a particular area, a test developed for older students. As we discussed in Core Module 2, the purpose of off-level, or above-level, testing is to identify the extent of a student's knowledge or skill in an area of giftedness or talent. Off-level testing allows us to assess students' knowledge or skill base beyond their grade placement. The purpose of such testing is to determine whether the student has knowledge and/or skills that you would expect of a student in a higher Year level. The information gathered from such assessments can help teachers made decisions regarding appropriate curriculum delivery and programs for gifted students.

So when is off-level testing more appropriate than a psychometric assessment, such as an IQ test?

Off-level testing is more appropriate when the purpose of the testing is to identify where the student is on the learning continuum in a particular KLA or subject area. Off-level testing simply means that 'the selection of the testing instrument is made on the basis of the student's pre-existing level of knowledge, skill, or capabilities in an area or domain rather than chronological age or grade' (Olszewski-Kubilius, 1998). Off-level testing is useful for students who perform so well on tests appropriate for their current Year placement that they 'ceiling out' on those tests.

Students who are performing very well at their current Year level, ie the students who often achieve 85% or above in assessments, are suitable for this type of testing or assessment.

To their parents and teachers, these students' results seem to be excellent and we may feel that our 'job is done'. However, the picture may be incomplete as to the full extent of the students' capabilities and their knowledge or skill base. As teachers, we may not know whether the student is achieving these results through a great deal of effort or with little or no effort at all! We may have a feeling that the student is 'cruising' but without testing our hypothesis we may never know if she could achieve at a higher level than her current performance, as the tests or assessment used may be creating a ceiling effect. **We will not know the full 'height' these students could have grown without an off-level measure.**

For a student who is performing well in school an IQ test may not be necessary, as it is obvious that the student is gifted in the area of performance. In such cases, off-level testing may be more appropriate, as it will show the extent to which the student is **ready for more challenge**, rather than simply identifying their potential. With such students we already know that they have the potential to achieve well and what we would like to find out now is how much more they know than they are currently showing us.

Off-level testing can be done within the school context for placement in a program which deals with accelerated content.

Another option is for students to enrol in talent searches such as the Australian Primary Talent Search (APTS) or the Australian Secondary Schools Educational Talent Search (ASSETS), run throughout Australia by GERRIC. The off-level tests used in talent searches allow students who have already been identified as academically gifted in maths, science, English and reading to show their **full** levels of ability in any of the subject areas surveyed by the tests. These tests also provide valuable information, for schools and parents, about the readiness of students to undertake curriculum at a particularly high level.

Information about APTS and ASSETS, can be found on the GERRIC website at: http://www.gerric.arts.unsw.edu.au/stdt_apt.html

The general rule of thumb with off-level testing

- In the **first three Years of school** you should use tests **one to two years above grade level**.
- In the **primary Years of schooling** you should use tests **two to three years above grade level**.
- In **first four years of high school** you should use tests **three to four years above grade level**.

An above-level test would be appropriate for students at the beginning of their first year of school if they have demonstrated through benchmarking that they have achieved a reading level commensurate with students at the end of this year of schooling. It would be appropriate to continue with the reading assessment off-level.

Disadvantaged and culturally diverse populations

Gifted children are found in all cultural groups, in the Indigenous population and in every socio-economic level. However, students who come from backgrounds other than that of the dominant culture may be more difficult to identify using standard identification procedures. These students may not perform well on standardised objective assessments, as we have discussed in Core and Extension Modules 4 of this Course.

Babad and Budoff's (1974, p. 439) research identified some of the reasons why some children from these populations may perform poorly:

'They are fearful of the testing process, expect to do poorly, are often insensitive to speed requirements, are unfamiliar with the problem contents, and do not develop spontaneously the most effective strategies (by middle-class criteria) to solve the problems.'

When using standardised IQ assessments, there are three issues to consider, which will disadvantage these students:

- perceived test bias and selective interpretation of test results.
- failure to consider the intrapersonal and environmental catalysts which will affect the student.
- standardised IQ tests do not provide sufficient information for the teacher to design an effective intervention or remedial program (Chaffey, 2002).

Therefore, if these students are to be identified, the process must be modified. If peer and self nomination are not effective, due to the forced-choice dilemma and the students' reluctance to risk cultural disapproval by 'standing out', other subjective measures will need to be used. A flexible approach must be followed to identify the many facets of reasoning and expressions of giftedness which exist.

The following modifications should be made to the identification process for Indigenous, culturally diverse or low socio-economic students:

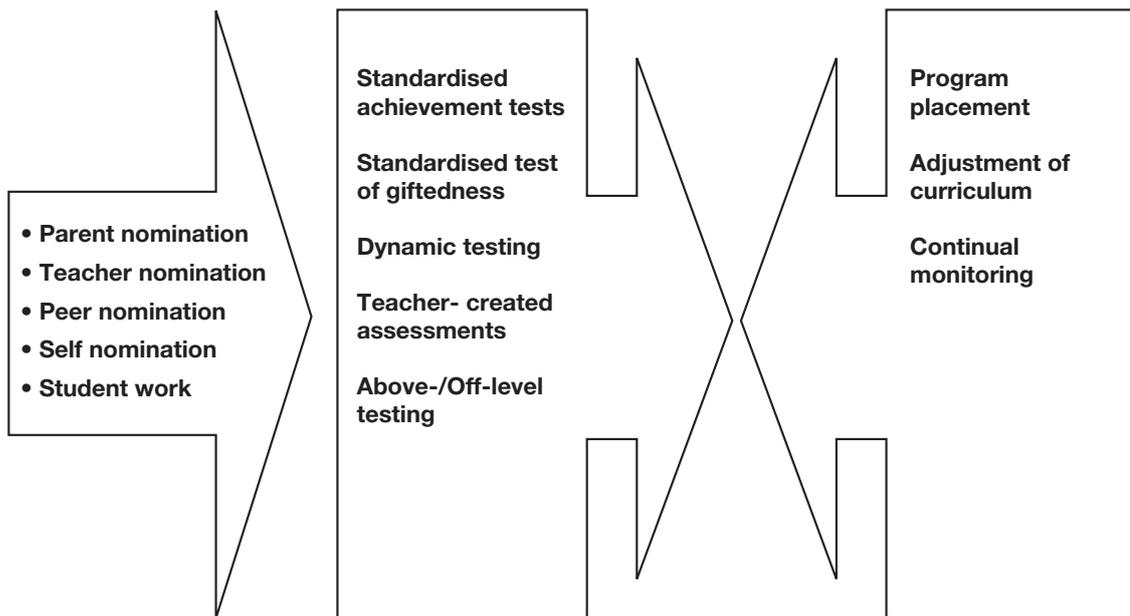
- Use authentic assessment, dynamic testing and exposure to challenging teaching to unlock the potential that exists in both visible and invisible underachievers.
- Educate teachers to be more aware of the environmental and personal catalysts which may affect the expression of giftedness in students from these populations.
- Gain the trust of the parents and assist them to complete a parent nomination form.

One way to identify underachievers from Indigenous and culturally diverse groups or disadvantaged populations is to use the emerging methodology of **dynamic testing**. This represents a very promising alternative to traditional assessment in that it seeks to optimise the student's cognitive performance, rather than simply measure it as it currently manifests itself. Dynamic testing is explained more fully in Core and Extension Modules 4.

So ... which objective and subjective measures should I choose?

As there are so many different types available, it is best to analyse these in a chart format. The Chart Summary of Objective and Subjective Testing was included in Core Module 2, at the end of the section on objective measures. It may be useful to review that chart briefly before completing the rest of this Module.

Identification process flow chart

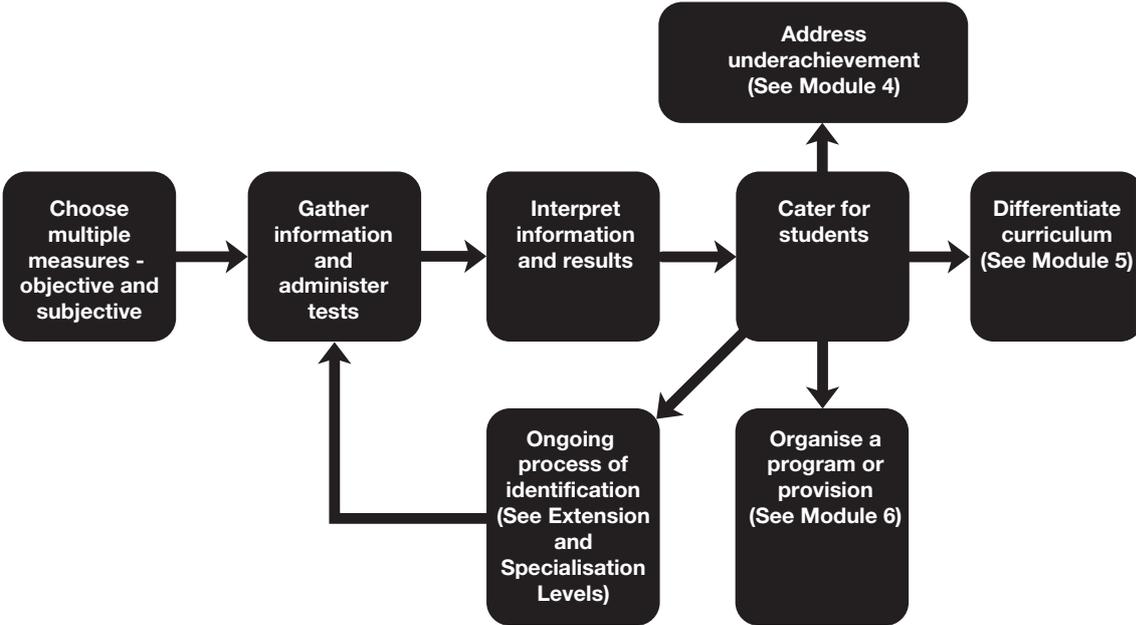


As you can see, the first arrow on the flow chart comprises subjective tools and information that help to screen students. When screening students, you are trying to identify as many likely candidates as possible. The next arrow contains a list of more objective tools which can be used, in combination with the screening measures, to identify students who are gifted or already showing talent. The final arrow summarises what should happen once a student has been identified as gifted or talented. Thus, the identification process is continuous, as is portrayed in the second flow chart on page 34.

The identification process

Now that you have covered material on subjective and objective measures of identification you can see that the identification process is multifaceted and may be different in different contexts. You may wonder where identification fits into the scheme of things in your school.

The following flow chart shows the process of identification from start to 'finish'. You will note that the process is actually a continuous cycle, something that will never be static or complete.



Now, let's return to the assessment we had at the beginning of this Module. By using the same pre-test and post-test, you can measure the knowledge you have gained from the Module.

1. What is the purpose of using a peer nomination form?
2. What is the purpose of students nominating themselves for a gifted program?
3. What are IQ tests successful at predicting? What do IQ tests not predict about a child?
4. What recommendations do you have regarding the following case study?



Mrs Maxwell teaches students in their first Year of school and is doing some extension science with her class. However, she wants to run a science 'Invention Extension' group across three Years and is looking to add more information to the identification process. She has already collected parent and teacher nominations of gifted students and some anecdotal records of students working on science activities in class. What other subjective measures could she use to add further information to the identification process?

1. To add a peer's perspective to the identification process.
2. To find out specifically what skills and areas of interest the child already possesses in their talent domain.
3. IQ tests
 - measure the potential to achieve well in the school system.
 - do not account for the external and internal catalysts that influence a student's development of talent.
 - give us information about a student's relative strengths and weaknesses.
 - show us how well students can deal with novel information and their level of reasoning.
 - give us information about a student's verbal and non-verbal reasoning generally and the subtests give us more detailed information about the relative strengths and weaknesses within these areas.
4. The following modelled response has been provided for the case study.

What other subjective measures could Mrs Maxwell use to add further information to the identification process?

Mrs Maxwell tells the students at assembly about the course she is running. She asks each teacher to conduct a peer nomination orally, with small groups of children. She writes three key questions to be answered in the group peer nomination. She also asks any students who are interested in being considered for her 'Invention Extension' group to nominate themselves by doing one of the following: bring in a special invention they have made and talk about it, write down or tell their teacher why they think they would make a great inventor, describe something they have invented, or draw a diagram of an invention they have designed. She could also use an above-level test of science reasoning from Year 3 to identify students who reason well in science. By adding these subjective data to the already collected objective and subjective data, Mrs Maxwell has broadened the identification process.



Resources

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<http://www.nexus.edu.au/teachstud/gat/gibson.htm>

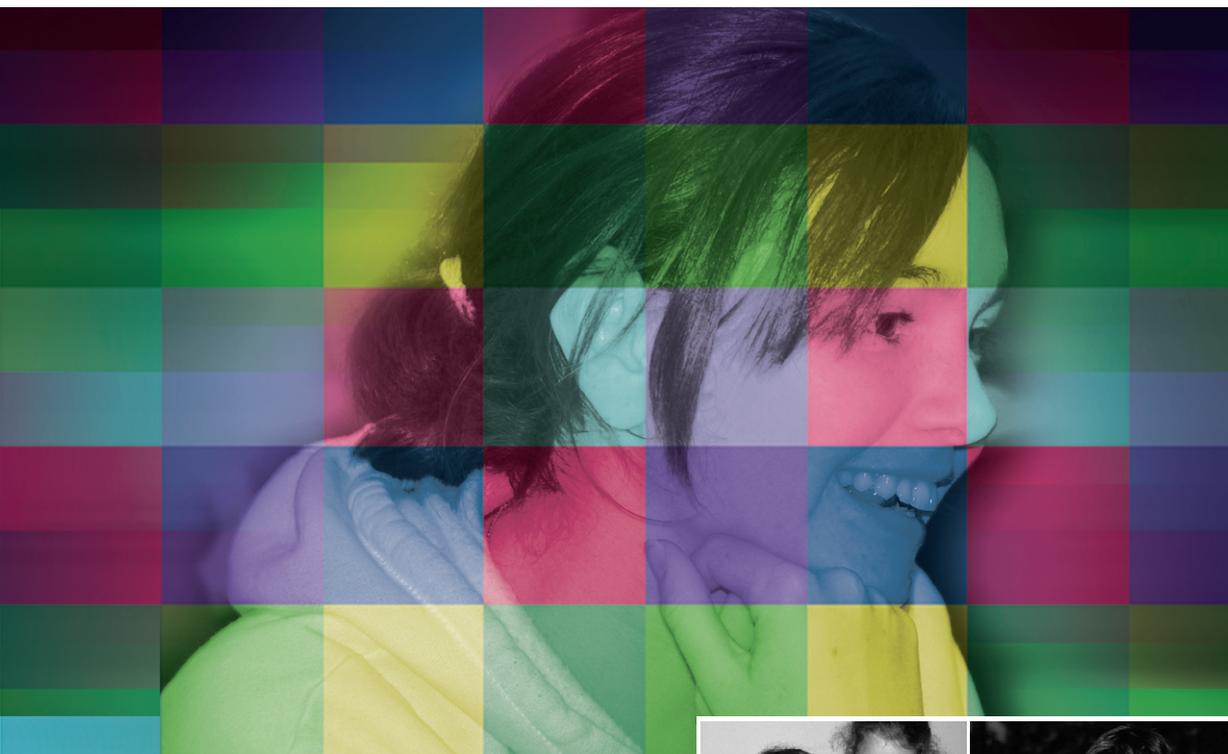
<http://ericec.org/digests/e644.html>

<http://www.nswagtc.org.au/info/identification/>

GIFTED AND TALENTED EDUCATION
PROFESSIONAL DEVELOPMENT PACKAGE FOR TEACHERS

E X T E N S I O N

Module 2



Primary



Caroline Merrick
Ruth Targett

Module 2

Further Issues in Identification of Gifted and Talented Students

Welcome to Extension Module 2, Further Issues in Identification of Gifted and Talented Students. In this Module you will become more familiar with some of the tools and techniques that are used to identify giftedness and talent in students at different levels of schooling.

This is a challenging process, as each school will have students with different characteristics, circumstances and needs.

As will become clear throughout this Extension Module, the key purpose of identifying gifted and talented students is to serve them with a program and curriculum that meet their needs.

Caroline Merrick & Ruth Targett

Extension Module 2: Primary

Further Issues in Identification of Gifted and Talented Students

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1. What is the purpose of using a peer nomination form?
2. What is the purpose of students nominating themselves for a gifted program?
3. What are IQ tests successful at predicting? What do IQ tests not predict about a child?
4. What recommendations do you have regarding the following case study?



Mrs Callaghan, a Year 3 teacher, is starting her Reading Extension group this term. She has a list of students who have been identified by the school testing and teacher nomination process and a list of English standardised test results. However, she is not sure this is enough information as she feels it is important that the students who join the group must also be passionate about reading and widely read. How can Mrs Callaghan ensure that she has enough information from the identification process to select her group?

1. To add a peer's perspective to the identification process.

2. To find out specifically what skills and areas of interest the child already possesses in his/her talent domain.

3. IQ tests
 - measure the potential to achieve well in the school system.
 - do not account for the external and internal catalysts that influence a student's development of talent.
 - give us information about a student's relative strengths and weaknesses.
 - show us how well students can deal with novel information and their level of reasoning.
 - give us information about a student's verbal and nonverbal reasoning generally and the subtests give us more detailed information about the relative strengths and weaknesses within these areas.

4. The following modelled response has been provided for the case study.

How can Mrs Callaghan ensure that she has enough information from the identification process to select her group?

Mrs Callaghan asks the Year 3 students to complete a combination self and peer nomination form. She asks them three key questions to do with their reading habits, books recently read and genres of books most enjoyed. She also asks them who they think reads widely, who can't keep their nose out of a good book and who is a regular library borrower. She collates this information with the other subjective and objective data collected to ensure that she has a balance in the identification process.

Outcomes

At the completion of this Module, you will:

- understand what information subjective and objective measures give teachers.
- be able to identify what identification tools are appropriate for your school population.
- demonstrate your understanding of the need for multiple criteria by identifying which tools to use in a given example.

Part 1

Identification as an ongoing process

As you will know from your reading of Module 1, gifted and talented children have different learning needs from those of their age peers of average ability and therefore require special educational planning to support them in developing their potential. The process of identification is critical if schools are to cater for the intellectual and social-emotional needs of these students. All children deserve to have their educational needs met, no matter where they fall on the learning continuum. To cater successfully for the needs of gifted children we need to know who they are and where their abilities lie.

Once a child has been identified as gifted and/or talented we can use appropriate educational interventions and strategies to move her along the learning continuum. In the process we may identify students whose needs are not being met by the current curriculum, provide evidence for inclusion in a particular program and identify students who will need extension beyond the core curriculum. It is important to remember that the purpose of identifying gifted or talented students is to ensure that the learning experiences they have at school meet their learning needs. The ways these needs are met may vary from school to school - hence the combination of tools used will be chosen to suit the purpose of identifying within your own school population.

When identifying gifted students we need to know not only whether they are gifted and/or talented but also in what domain(s). We need to know whether they are achieving well or underachieving in their current learning situation. We need to know their relative strengths and weaknesses and how best we can serve their learning needs.

Rationale

As the process of identification of gifted and talented students is complex, selecting the most suitable tests, checklists and other tools for your school is very important. Choosing identification tools which provide defensible interventions for gifted and talented students will help you soundly justify your selection to parents, other staff members and the students themselves.

The identification process recommended in this Professional Development Course is based on the Gagné definition of giftedness and talent which was introduced in Core Module 1. It is important that the tools used to identify a student for a particular program or learning experience are in line with our understanding of gifted and talented children. Identification procedures need to allow for the fact that some gifted children freely express their abilities at school, while others may not.

With this in mind, we need to collect information about both the **potential** and the **performance** of a child who is being considered. By focussing on what is measurable (through objective measures) and observable (through subjective measures) we can identify the areas in which the gifted student excels and any possible areas of weakness. Identification is the first step in catering for the needs of a gifted and/or talented student.

The golden rule for identification

‘The careful determination of program goals will set the direction for the entire identification process’ (Feldhusen, Asher & Hoover, 1984). This is referred to by Renzulli (2004) as the golden rule of identification.

Which identification tools do I need?

To determine which tools you will utilise to identify the gifted students in your school, you must first consider who you are looking to identify. Are you looking for students whose gifts are intellectual, creative, socio-affective or kinaesthetic? Are you looking for students who are already demonstrating talent in the intellectual, creative, socio-affective or kinaesthetic domains? What resources do you have to support these students once they have been identified? What is your educational goal for these students once they have been identified? Modules 5 and 6 explain in detail how to provide for these students once they have been identified.

It is important to consider the purpose of identifying gifted and/or talented students in your school.

- Is your goal to identify gifted students to place them in a gifted class?
- Are you initiating a new program to meet the most pressing needs of your gifted students?
- Are you targeting gifted underachievers for a program to address their underachievement?
- Are you identifying these students so that teachers may more effectively differentiate the curriculum within a mixed ability classroom?
- Are you looking to extend a few talented students who are performing above their cohort?

The program goals may determine what characteristics you are looking for in the identification process.

By identifying the specific needs of your individual gifted and talented students you will achieve a careful match between your identification methods and the many areas of giftedness and talent.

In primary schools, some programs are organised in subject-specific areas. For example, a Maths Olympiad team will require students who display mathematical ability and high levels of performance in Maths Olympiad type problems. Participation in a Maths Olympiad requires strategic thinking and a high level of mathematical reasoning. Maths results on aptitude tests would be a key part of the information gathering process. However, observing students attempting complex mathematical problems similar to those to be taught in the program and demonstrating mathematical reasoning, would add further information to the identification process. An above-level test in mathematics may help identify those students who have the ability to perform significantly beyond their Year group. An indicator of intellectual giftedness such as an IQ test may also be a useful tool in identifying students who would most benefit from a program of mathematical problem solving, especially if they have performed well in the nonverbal section of such a test.

Focussing on the goals of the specific program makes it easy to identify the target population, which in turn determines the tools used in the identification process for students entering these programs. Each program may need a different combination of tools to identify students who would benefit from participation. To ensure that we have identified the students who would benefit, we should use a combination of subjective and objective identification tools.

The identification process you adopt for your school should match the cultural context and needs of your school population. Students from some culturally diverse or disadvantaged groups do not perform well on standard measures of giftedness and/or talent. It is important to be aware of the limitations of the tools you have available for some groups of students and look for other options. This will be discussed in greater detail later in this Module. The most appropriate methods of identification for your school will be based on the purpose of the program you are developing and the population that you serve.

A wide range of strategies must be used to assist identification. The tools you use will depend upon the student's age, need, location and background, and the resources available to you in your school, district or system. These will differ according to the needs of each individual in each school. In an ideal world, we would design our identification process to meet the specific needs of our gifted and talented students, rather than on the basis of time, cost or resources available. However, at times there are restrictions which mean that we only have certain options available. Careful selection of the best identification measures available to us is important, as choosing the most effective measures and designing tools which match your specific needs will often save you time, cost and resources.

Subjective and objective measures

Let us revisit the definition of the two types of identification which we introduced in Core Module 2:

- **Subjective measures** allow judgements to be made on the basis of structured observations of the student. These include teacher, parent, peer and self nomination, along with anecdotal records contributed by previous teachers and the child's family.
- **Objective measures** are standardised tests of ability or achievement. These include IQ and other forms of psychometric testing, standardised performance tests, dynamic testing and off-level testing.

You may also see these two types of measures referred to as **quantitative** (objective) and **qualitative** (subjective). Effective identification of gifted children requires evidence from both categories.

Not all gifted students perform well in the school system

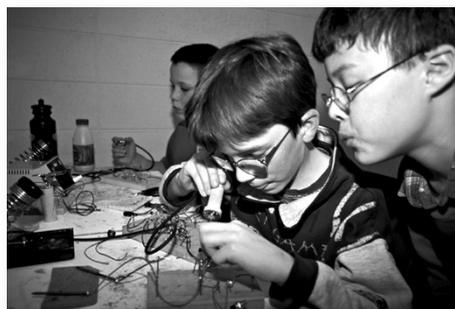
Many of us can think of students we have taught who did not perform well on school assessments but who asked questions beyond their years; those students about whom we had a ‘gut feeling’ that we were not seeing their best within the school system. We must employ identification procedures which are designed to find students who are not achieving at levels commensurate with their ability, due to intrapersonal and environmental catalysts which impact negatively on their lives. These students are called **gifted underachievers** and, in Extension Module 4, we will explore further reasons why underachievement occurs among gifted children and adolescents.

Subjective measures

Since giftedness has many dimensions so should the identification process. Subjective measures allow teachers, parents, a student’s peers and the students themselves to try to identify giftedness and/or talent, guided by checklists and other descriptors which assist them to make, through observation, evaluative judgements about a student’s ability. These measures add the human touch to the identification process and many adults or fellow students who interact with the individual may have something important to add to the profile. In Core Module 2, we discussed parent and teacher nomination. In this Extension Module we examine two more subjective tools, peer and self nomination.

Peer nomination

A student’s classmates may often perceive his abilities with great clarity. Gifted students can also recognise in others the characteristics of giftedness which they themselves possess. They may not know the terminology to describe what they see but they recognise those characteristics which, in some way, make particular peers different from others but similar to themselves. Peer nomination may reveal insights which are not readily available through other identification tools.



If the purpose of identification is to increase our knowledge of the gifted children in our school in order to best cater for their needs, then asking a student’s peers to contribute to the process can sometimes add another dimension to the process. Peers are aware of other students’ behaviour outside the learning context. That is, they see students in a range of settings and situations to which a teacher or parent may have less access and consequently they may have valuable observations to add.

The peer nomination process can be administered using a variety of formal and informal methods. A peer nomination form can be generic to the characteristics of gifted children, or specific to your class or the program which the school will implement.

Often peer nomination forms contain questions such as; ‘Who is the best problem solver? Who is the best artist? Who knows how to fix the computer? Who is great at sports using bats and balls?’ However, the information you collect must be relevant and useful to what you are trying to achieve. If the answers to these types of questions do not help you to identify the type of gifted student who will benefit from the specific program being planned, then they are not purposeful. For example, if you are looking for students to be in a gifted art program then asking questions about a student’s ability to solve mathematical problems may not be purposeful. Rather, designing yourself a peer nomination form, which will identify the very characteristics relevant to the program, is much more effective.

Designing a form

When choosing or designing your peer nomination form, start by asking yourself these two questions:

- ***What characteristics of giftedness and talent am I looking for?***
- ***In what areas of giftedness am I missing data?***

For example:

- if you are looking for intellectual giftedness you will need a peer nomination form which includes both cognitive and social-emotional characteristics.
- if you are looking for leadership characteristics, then your peer nomination form should include items which address leadership.
- if you have a particular gifted program already running at your school and you are looking for students to fill the program, you will need to design items which match that program’s goals.

Each school context will be different in this regard. Returning to the purpose of identifying these gifted students will guide you in this decision. Using peer nomination as another screening tool to narrow down the identification process may be useful, as it may give you more insight into all the students about whom you wish to gain information.

Guidelines for using the peer nomination process

Here are some useful guidelines to improve the effectiveness of administering formal peer nomination forms.

- Wait 9-12 weeks into a year before administering a peer nomination form, as students need time to get to know their peers well.
- Explain the purpose of the peer nomination form.

- Start with a warm up activity, so that students understand the purpose of the peer nomination process - eg 'Our district athletics team is looking for a new runner to join their team. They must be able to compete in the 100m event so a sprinter is required. Who would you nominate?' or 'Our band is looking for a new drummer. Who has good rhythm and coordination?'
- Explain to the students that you are not looking for them to pick their friends or only those of the same gender but to think of everybody in the class.
- Use language appropriate to the age of your students. Obviously this will vary from primary to secondary students, but also within these age ranges.

A conversation with students already in a program, with a question such as; 'Is there anyone who isn't part of this group but who should be?' will often elicit a few names. Asking students in programs to complete a peer nomination form specifically designed for the program you are implementing may also identify students who match the target population. Asking students whom you have already identified as gifted to complete a peer nomination form may also reduce the task of administering forms to entire classes or Year groups, as these gifted students will often recognise giftedness in others.

Students who are nominated by peers need to enter the identification process as they would through any other subjective or objective means. Your next step will be to collect information from other objective and subjective measures, to ensure that all efforts are made to identify accurately all gifted students at your school. This is especially so with **any** nomination process, as a student may be nominated because their friends want them in the program, not necessarily because enrolment in the program is in the student's best interest.

When used with other forms of subjective and objective measures, peer nomination can add another perspective to the identification process.

Limitations of peer nomination

As with all identification procedures, peer nomination has some limitations:

- Peers may not like or respect a particular gifted student so may not record her name.
- Students may wish to record their friends for every item.
- Peers may not be fully aware of another student's advancement.
- Students may not be fully aware of gifts and talents in students of the other gender, if they do not mix with them outside the classroom.
- Underachievers may not be revealing their gifts and talents to peers.
- Peer nomination is less reliable in early childhood before children have begun to make social comparisons and notice differences between themselves and others, and between other children in their class. As discussed in Core Module 3, children do not generally begin to 'norm reference' before age 7.

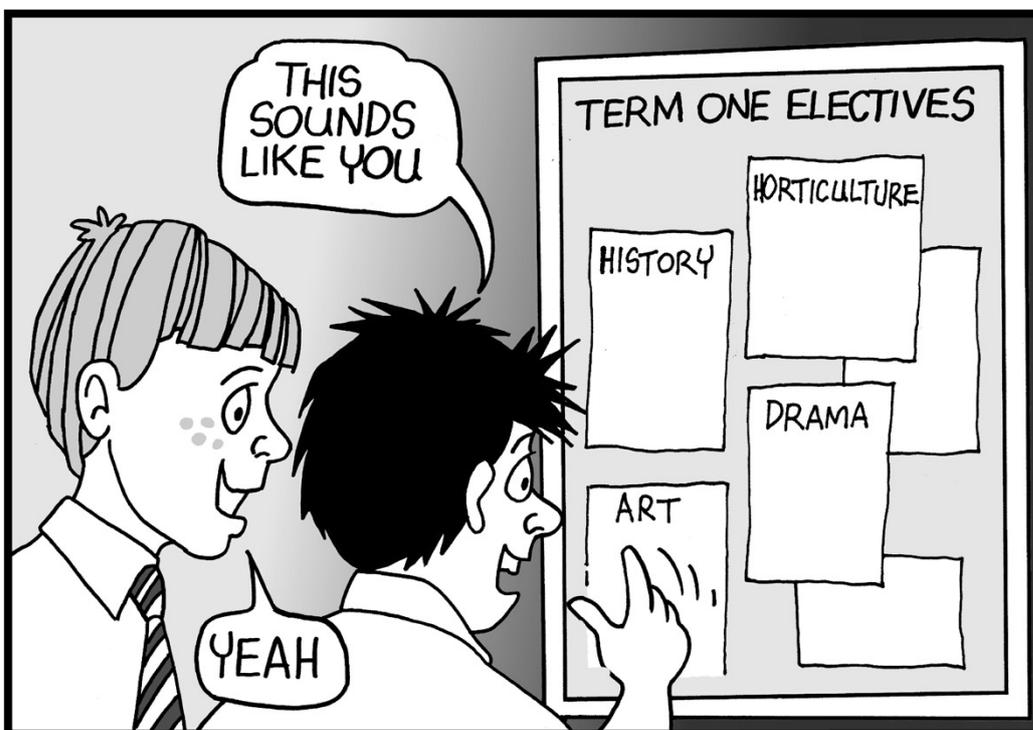
- Adolescents may be particularly unsuited to this procedure as the need to belong is often the driving force in their lives and some students may be deliberately concealing their ability.
- Oppositional attitudes, as described in Module 4, will continue to have an effect on all elements of the identification process. Peers will be reluctant to nominate their friends if academic learning is not valued by the peer group.

Interpreting peer nomination responses

When you have collated the names listed on the peer nomination forms, you will be ready to interpret the results. When analysing this information, you are looking for any patterns and clusters of names which may appear. Is a student's name recorded a number of times in a particular domain or field? Is a particular student's name appearing for leadership or creative endeavours? Are they being identified by their peers as a writer or mathematician?

Each child whose name is appearing multiple times should be added to the list of students you are considering as part of the identification process. Peer nomination may be the first indication that you need to investigate a student further. If a student is nominated on a peer nomination form, investigate the objective data available to see if they are displaying characteristics of giftedness and talent. What are their teachers and parents saying about their areas of giftedness or talent?

Sometimes you may not find any other data that confirm the student's nomination. In fact the student may not be gifted or may not benefit from the program. However, if your identification process is thorough, these students will not proceed further in the identification process, as the other objective and subjective measures will confirm that they do not qualify.



What does research say about peer nomination?

In 1989, Gagné conducted a critical analysis of 13 validation studies of peer nomination forms. He concluded that although the research was fraught with weaknesses in methodology, there were some advantages which made this subjective measure a 'potentially worthy technique' (p. 53).

Some advantages of the peer nomination form are the ease in design, administration and compilation of results, as well as the large number of judges who are contributing to the group judgement. Even a class of 20 students will provide 20 different judgements, while a larger cohort will add even more judges. Banbury and Wellington (1989) stated that peer nominations 'can be used along with other measures in screening for gifted and talented students' (p. 163). The key to using a peer nomination form is to see it as another **screening** tool in the identification process.

When constructing each item on your own peer nomination form you should address the following questions which Gagné poses, in order to maximise the usefulness of the tool:

- How relevant are the items? For example, some peer nomination forms ask for students who persevere on a task or get bored by routine lessons. Have you included items which are not unique to the gifted?
- Are there any items which are redundant? For example, have you asked for nominations for items which could be identified another way, such as through maths achievement tests or standardised tests of reading?
- How exhaustive are your items? For example, there is more than one dimension to each domain of giftedness and talent. Have you considered each individually?
- How specific are your items? For example, problem solving, spatial and estimation skills are much more specific than generalised maths talent.
- How are your items organised? For example, can you cluster items under domain subheadings or in a hierarchy or taxonomy?

Self nomination

Gifted students can often recognise giftedness in themselves. From a very early age, they are very capable of seeing where their talents lie. They have considerable knowledge about themselves and their passions, which they are willing to share when given the right vehicle and opportunity.

As with peer nomination, self nomination needs to be specific. Teachers should design self nomination forms to elicit the precise information they are lacking through other screening methods. If the information asked for through self nomination has already been elicited through other methods, then the teacher's task of synthesising the information may be increased unnecessarily.

A self nomination form that is specifically designed to match the goals of the program being developed will give you specific information to add to the other data collected in the identification process.



For example, in a creative writing course, a self nomination form may include items such as:

- What is your favourite style of creative writing?
- Attach your favourite piece of writing. Why is it your favourite?
- What topics do you most like to write about?
- What genres do you most enjoy? Why?
- What genres do you least enjoy? Why?
- What types of books do you like to read at home?



Scenario of a classroom setting

Mrs Ireland is running a 'Leonardo da Vinci art program' for gifted artists at her school. She plans to meet with them once a week for 60 minutes after school. Students will then continue with their art works in their own time. She determines that the students who will benefit most from this program will need to demonstrate good drawing skills and an understanding of tone and shading.

Mrs Ireland requests a time slot in the weekly school assembly. She prepares a talk on da Vinci, outlining his character and displaying some of his famous artworks. She builds up a picture of da Vinci as a great artist and a risk taker. She explains the course she will be running and invites students who are interested in art and like drawing to apply by completing a self nomination form.

In the weekly staff meeting she explains the rationale for her program and outlines the skills she is hoping to develop and extend in her da Vinci art course. She asks teachers to nominate any students in their classes who they believe demonstrate good drawing skills. The dance teacher comes forward to let Mrs Ireland know that she has a student who designs all the costumes for the dance group and who has excellent drawing skills. Mrs Ireland had been unaware of this student's skills, but she now invites her to submit her dance group drawings. Mrs Ireland also puts a note in the school newsletter, explaining to parents the aim of her course and inviting them to collect a nomination form from the school office, if they feel their child meets the criteria and will benefit from the course.

Mrs Ireland arranges for the students in each of the classes to complete a peer nomination form, asking students to name any peers who think of creative ideas, are good at drawing, like to draw cartoons, prefer to doodle in class or want to be a famous artist when they grow up.

Each student who is nominated through any of the avenues of self, peer, parent or teacher nomination and is interested in attending the course must submit a collection or portfolio of his/her drawing. She suggests that students who have won awards for their artworks or have

attended any special art workshops should include this information. As you can see, Mrs Ireland is giving clear guidance about the type of information that will be useful in the identification process.

The da Vinci Art Course self nomination form

- When did you first begin to become interested in drawing? Why?
- What drawing skills would you like to extend and develop?
- In what ways are you like da Vinci?
- Why should you be included in this art course?

Firstly, Mrs Ireland looks at the students whose name appears in more than one method of identification and sorts the portfolios accordingly, asking another friend who is also an art teacher to help her examine the portfolios. As a result of the multiple criteria she has gathered, Mrs Ireland can see clearly that there are some students who would benefit from this program. Mrs Ireland was not sure how many students she would invite to join the group when she began the process. However, it becomes clear that seven children qualify for the da Vinci art course, as their work is clearly more advanced and shows greater potential and/or performance than that of the others who were nominated.

This particular identification process relies on a number of subjective measures as there are few objective tests available that specifically measure drawing skills. There are some measures of creativity which may be useful but she does not have access to these tools and so has not used them in this process. By spreading the identification net widely and using a variety of sources of information, including parents, teachers, peers and the students themselves, she can be confident that she has used a rigorous, defensible process to identify the students who will be in this program.

What if students wish to nominate themselves on a peer nomination form?

Some teachers may be concerned that a student will nominate herself when she is clearly not gifted or talented in the area addressed by the peer nomination form. The answer to this question will become clear when the data are added to the identification process. The student will probably not be nominated by teachers, parents or peers and objective test results will also identify her current level of functioning. Therefore, there is no harm in letting students self nominate on a peer nomination form, as long as peer nomination remains only one element of the identification process.

Gagné conducted some interesting research on this very question and his article is included in the Resource section of this Module. He concluded that:

‘Because self nominations appear to have no adverse effect on the ability rankings resulting from peer nomination procedures, and because children insist that they be allowed to nominate themselves, we recommend that self nominations be permitted, particularly at the high school level where self-perceptions of abilities are more modest and accurate. ... To improve the accuracy of self nominations and control for the tendency of students to overuse them, it is recommended that examiners mention in the directions to the students that their self nominations will be compared to those of peers and teachers.’ (Gagné, 1989, p. 24)

Placing any nomination form in the right context will help increase its effectiveness. Communicating the purpose of the nomination form will help teachers, parents and students to consider their nominations carefully and reduce the number of inappropriate nominations made.

Limitations of self nomination

As with all identification procedures, self nomination has some limitations:

- A student may not want to be seen as different so may not want to self nominate.
- A student who is a perfectionist may not think she is capable enough to perform at a high level.
- A student may not want to be in the program and away from his friends.

Disadvantaged and culturally diverse populations

Identification procedures which are used for the majority of gifted and talented students may not be suitable for some culturally diverse populations. Different methods of identification may be needed for students from culturally diverse, low socio-economic status or Indigenous populations.

These gifted students are not lacking in ability but their ability may be masked by a variety of environmental and socio-emotional factors. Because of this, their giftedness may not be evident in the identification process.

Children and adults in some disadvantaged or culturally diverse communities may not readily trust teachers or the schooling system and hence may not be willing to nominate their children or to nominate themselves for a program. One of the first steps in identifying gifted students from these communities is to establish a trusting relationship with the community. Once this trust has been established, the program goals need to be clearly communicated. Parents may need to be involved in the nomination process, even if it is self or peer nomination, if this helps establish that the program is for the benefit of their children. It may well be beneficial for the school to work with community leaders to construct a tool which asks the right questions to identify giftedness and talent within that community.

Students need to develop trust in the adults in their school before they will nominate themselves or their peers on checklists or nomination forms. If they do not respect the teacher, this will have a negative effect on students' willingness to nominate themselves or their peers. Indeed, this may be the case for any student who is not achieving her potential for whatever reason. The forced-choice dilemma, explained in Core Module 3, can have a significant effect on the usefulness of peer and self nomination forms.

Self and peer nominations of students from disadvantaged backgrounds or culturally diverse populations are most effective when the teachers have training in gifted education, knowledge of underachievement and experience with students from these backgrounds. It is important to have worked with the school community before launching any program.

Conclusion on subjective measures

The information collected on peer and self nomination forms, as part of the identification process, will be used in conjunction with the other subjective screening tools and the objective measures. If a student is identified on both an objective and a subjective measure then they should be included in the program.

When using multiple-criteria identification measures, it is important to remember that these criteria are not a series of hurdles that a student must jump before he is included in a program. Rather, when using subjective measures, students only need to be nominated on one form of subjective measure to be considered for the program. They will then proceed to the next stage of the identification process, where objective measures will be used to ensure that they qualify on the objective data collected. If they qualify on at least one objective and one subjective measure, they should be included in the program.

Include, for further assessment, students you are not entirely sure about, rather than exclude them - and invite surprises.

In small groups, discuss the merits of using a peer or self nomination form in your school. Are there any programs which would benefit from the use of a self nomination form? Are there peer groups which would respond positively to a peer nomination form? Choose **either** the peer **or** the self nomination activity below.

Peer Nomination Activity

Think about a program or provision currently offered, or to be offered in the future, at your school. It may be subject-specific or cross-curricular. Now choose which one of two subjective measures - peer or self nomination - you will use as a screening tool in your program.

Write 5 questions or tasks you would like answered or included with each student's submission of this self or peer nomination form.

What is the target population? (For example, are you looking for students who are gifted, gifted and talented, or talented in a particular area?)

What specific characteristics or qualities are you looking for students to possess in order to participate in your program or provision?

Complete the blank student peer nomination form below, by writing items which specifically target the characteristics or qualities you are looking to identify:

Peer Nomination Form

Name Year

Program/Provision

1. _____

2. _____

3. _____

4. _____

5. _____

Self Nomination Activity

Think about a program or provision you are currently offering at your school or hope to offer in the future. It may be subject-specific or cross-curricular.

What is the target population? (For example, are you looking for students who are gifted, gifted and talented, or talented in a particular area?)

What specific characteristics or qualities are you looking for students to possess in order to participate in your program or provision?

Write a description of your school program or provision, which will inform your students:

Complete the blank student self nomination form below, by writing 5 items, tasks or questions which specifically target the characteristics or qualities you are looking to identify:

Self Nomination Form

Name Year

Program/Provision

1. _____

2. _____

3. _____

4. _____

5. _____

Now ask a colleague who is doing this course with you, or a mentor in this area, to look at the form and give you feedback about the questions you have developed.



You have decided to ask the staff to suggest ideas that would help develop a program for gifted students in your school, using the current resources available. Think about your staff and their strengths in working with students of different levels of ability and interest.

- Create a self nomination form for your staff to suggest ideas for creating programs for the gifted students in your school.
- Write a description of the domains of giftedness which you have already identified in the students in your school.
- Write a list of how gifted students' needs are currently being met.
- Create a self nomination form for staff to become involved in your school's current programs for the gifted.
- Now add to your list any new programs which may have come to light as a result of this professional development course.

Part 2

Objective identification

Objective identification measures are to be used to identify gifted and talented students' aptitude and/or current levels of achievement. As discussed in Core Module 2, objective measures are tools such as standardised tests of potential or performance which give teachers and counsellors a score, or a series of scores, which can be used to compare the students with others from their age group or cohort. These measures usually assess a variety of elements of cognitive processing and reasoning, or achievement levels within the school context or compared to a much larger cohort - eg verbal reasoning or reading comprehension.

Different measures give us different, specific information about a student's capacity to achieve within the school context. The measure may show you either a student's potential to achieve or her current level of achievement within the school environment. These measures may identify a student who is already achieving well and who may need a specific program to meet his needs or a student who is underachieving and may need a different intervention to help her achieve at a level commensurate with her ability.

A variety of objective measures exist and each measure assesses different aspects of a student's ability to learn and deal with new information. Such assessments may also assess a child's ability to reason compared with his age peers as well as how he uses information in new situations and organises that information.

It is important to note that on any objective measure it is possible for a student to score at a level lower than her true ability. If a student can score below his ability level on such measures some may ask whether we should we use them at all. At this point it is important to remember why we identify gifted and talented students: the purpose of such measures is to give us information about the child so that we can better provide for her learning needs. With the reason for administering the measure clearly in mind our focus can then turn to the way a test is administered, and the child's specific context, to help guide you as to the most appropriate objective measure to use to identify a child's ability or level of achievement.

It is almost impossible to achieve **beyond** one's true ability on any test, if it is administered appropriately. This means that a student's test result may be an **underestimation** of his ability. However, if a student scores higher than you expected, the child unquestionably **has** the ability being described by the instrument - even if she is not demonstrating this in class - and it would be beneficial to look at this student from another angle.

What IQ tests do and don't measure

IQ tests have had a chequered history, as in their early years some were used inappropriately, and consequently many people still have misgivings about the use of such tests. IQ stands for 'Intelligence Quotient,' a title which, ironically, is no longer relevant to what the current tests assess. The 'Intelligence Quotient' originally measured the difference between a person's chronological age and age of mental functioning. This particular calculation is no longer made in IQ tests, but the name has remained.



There is no doubt that in times past IQ tests have been misused and applied in some cases for unethical purposes. However, as James Borland (1986) comments, we have to be careful not to 'throw out the baby with the bath water'! When used appropriately, with their correct purpose in mind - of providing appropriate learning contexts for children - they can be useful tools. The IQ tests currently available are designed to assess a number of factors related to children's capacity to learn and manipulate information. They specifically identify a person's ability to reason in particular areas, especially the ability to use abstract reasoning.

What do IQ tests measure?

IQ tests effectively predict a student's **potential** to achieve within the school system (Pirto, 1994; Richert, 1991; Smith, 2005). There are different forms of IQ tests. Some must be administered individually and require a trained psychologist. Others can be given to groups of children and these tests can be administered by schools and organisations that have the rights to use such tests. Each IQ test assesses a slightly different concept of intelligence. However, all measure a person's ability to deal with novel concepts, acquire knowledge and focus on, and retain, information. The Wechsler Intelligence Scale for Children (WISC) and the Stanford Binet Intelligence Scale are the most common tests used at present. New versions of both tests have been released recently and are available currently in Australia. The concepts of verbal and nonverbal reasoning are common to both tests and similar scores on the two tests are comparable.

- **Verbal reasoning** is the ability to reason, solve problems and recall information using verbal methods such as printed and spoken words.
- **Nonverbal reasoning** is the ability to reason, solve problems and recall information using pictures, figural and symbolic forms.

A student's achievement on the verbal components of these tests is more likely than the nonverbal components to predict current success in a school system. This is because the school system primarily uses verbal presentation of material and verbal student responses as the main conduits for teaching and learning. However, the nonverbal components of a test are more likely to be culture-fair for students from culturally diverse backgrounds and, in some situations, these nonverbal components can be a very useful source of information when identifying students from these backgrounds for entry into a particular program. Nonverbal sections of the tests also give us information about a person's ability to deal with abstract concepts in symbolic form and, as such, can give us an indication of a person's ability to deal with abstract concepts in areas such as mathematics.

When examining the scores a child attains on an IQ test, it is important to know which aspects of the test give you information that is valuable in predicting school success. Your school psychologist or the psychologist who has administered the test can give you even more details, in greater depth, than we are able to present in this Extension Module. However, a very brief overview is provided here.

A full scale IQ score should never be used in isolation or without reference to other aspects of the test.

In fact, some psychologists no longer report full-scale IQ scores in the test reports they produce. By examining separately the Verbal and Nonverbal scores, and the various sub-scales of the test, we can assess the level of a student's reasoning abilities in each area. In doing this, we can assess in which areas a student has the potential to be successful within the school context as well as areas in which he may find school more difficult.

Each test is divided into areas called subtests which are then grouped under the headings of Verbal and Nonverbal reasoning. There is also information provided about a child's scores in the subscales. These subtests will show the relative strengths and weaknesses of the child who has been assessed.

When examining a psychologist's report of an IQ assessment, it is important to note the explanation given by the psychologist about the **relative** strengths and weaknesses of the child in question. These subscale scores may help us understand whether a child may be underachieving due to an attention deficit difficulty or whether they may be disengaged due to the level of their cognitive functioning. For example, is a student whose intellectual ability is very high being given work which is much too simple to engage her?

Psychologists are experts in analysing each particular profile of results. They can tell a great deal about the reasoning that a child is demonstrating in a test situation. Psychologists who have substantial experience working with gifted children will have valuable insights to share both with the parents and with the student's school.

Many people concentrate on the full-scale IQ score, believing it to be the most significant finding from the test. However, an informed reading of the full IQ test report requires a thorough analysis of all aspects of the results, noting the pattern of scores and the strengths and weaknesses of the individual. This will reveal a wealth of information to assist us in identifying the best ways to meet the academic needs of the student concerned.

If clarification of the test report is needed, this should be sought from the psychologist who assessed the child, as he or she may have other information from observation during the test's administration that may put things into context, from either the child or his parent. The psychologist's observations or test analysis may highlight any confounding variables that may affect a child's performance on a test, such as specific deficits and the effect of these on the child's learning, as well as behaviours exhibited by the child during the testing situation. For example, some children may answer questions very quickly while others make more thoughtful responses - the 'front end analysers' discussed in Extension Module 1.

What IQ scores do not predict

There are many misconceptions about what an IQ score predicts. Some hope it predicts wealth, success and guaranteed happiness, or a short cut through life's difficulties. However, as Gagné has pointed out, we know that many catalysts exist which can have a positive or negative effect upon the development of a child's potential. There are so many non-cognitive variables which come into play when an individual is developing through early childhood, childhood and adolescence, that an IQ test would have to be 'magical'



to predict a person's success in life. The Gagné model, Tannenbaum's 'sea star' and Renzulli's 'three-ring' model of giftedness also emphasise the importance of socio-affective development, and it is difficult for anyone, no matter how highly gifted, to achieve success in an environment - school, workplace or home - which acts as a barrier to success.

However, as a consequence of these misconceptions and the misuse of IQ tests, these tests have been surrounded in controversy and many people have strong opinions about their use.

One of the most fundamental caveats about IQ tests is that they do not test all aspects of intelligence. There are many theories of intelligence and even the theorists themselves do not believe that they have adequately communicated what intelligence comprises (Gardner, 1983; Sternberg, 1985). Conceptions of intelligence vary from culture to culture but most conceptions acknowledge it as a complex interplay of many abstract factors which is unlikely ever to be defined by a single test or score. So an IQ test cannot measure intelligence fully.

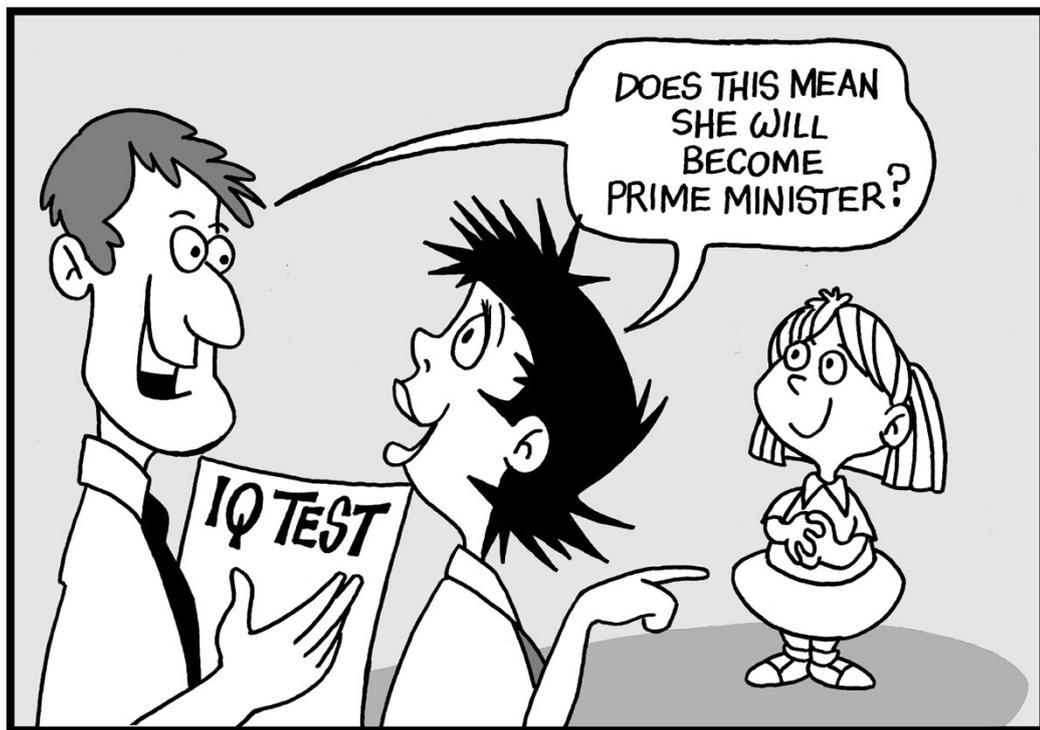
No ability or achievement test can tell us about the intrapersonal aspects of a child. They cannot assess the effects of a student's home environment, personality or experiences. IQ scores cannot predict a student's level of motivation, or identify how a student will respond to the various catalysts affecting her life. So while an IQ assessment can show a student's **potential** to reason and use information or concepts in novel situations within a specific cultural context, it cannot predict **performance** in non-academic or academic areas, only the potential to perform with the right support. It can show how well students can adapt their reasoning to new situations but that potential may not be seen at school for a number of reasons.

As acknowledged by the definition of giftedness and talent presented in this Professional Development Package, there may be many factors which interfere with the expression of a student's giftedness, such as personality, motivation level, family life and myriad other elements. These factors may influence the way students perform within the school context and how they develop their talent. Extension Module 4 explores in depth some factors which have a negative effect upon a student's expression of giftedness and actualisation of talent.

It is important to remember that an IQ test is a measure of **ability** using the definition of intelligence adopted by the test designers. It is also important to note that an assessment of this nature is an assessment of the student on a particular day. If a student has performed well, this is a strong indication that he is intellectually gifted. As discussed earlier, it is almost impossible to achieve **beyond** one's true ability on any test, if it is administered appropriately. However, if a student has a 'bad' day then the information from the assessment will likely be an underestimation of her ability. In this situation the test results may not match information gathered on other identification tools and should be used with caution.

Again, the principle guiding our understanding of a student's performance on a test of ability or achievement is that the student can underperform on a test but can never perform beyond his true ability level.

An IQ test will not predict whether a child will be successful in adult life, it will not identify whether she has good social skills and it will not predict creative, achievement, leadership ability or popularity. IQ tests were not designed for these purposes.



So, if IQ tests are so 'flawed' why use them?

The answer is that, currently, these tests are one of the most effective measures of a student's potential to achieve academically in school (Assouline, 2003; Rogers, 2002).

- We use them because at the present time they are one of the few standardised instruments available to us to identify whether students are achieving in the school system at levels commensurate with their ability.
- They are one of the few ways we can currently identify deficits in certain learning areas which can help us as educators to tailor learning experiences to support a student's strengths and weaknesses.
- IQ tests, when used in conjunction with other objective and subjective measures, can be very useful in identifying children who are gifted but underachieving.

When used in the spirit for which they were designed, and in conjunction with other information, IQ tests provide accurate and valuable information about the way in which a child may learn, reason and appear in the school situation, when compared with his or her age peers.

Off-level testing

Off-level testing involves using with younger students, to assess their talent in a particular area, a test developed for older students. As we discussed in Core Module 2, the purpose of off-level, or above-level, testing is to identify the extent of a student's knowledge or skill in an area of giftedness or talent. Off-level testing allows us to assess students' knowledge or skill base beyond their grade placement. The purpose of such testing is to determine whether the student has knowledge and/or skills that you would expect of a student in a higher Year level. The information gathered from such assessments can help teachers made decisions regarding appropriate curriculum delivery and programs for gifted students.

So when is off-level testing more appropriate than a psychometric assessment, such as an IQ test?

Off-level testing is more appropriate when the purpose of the testing is to identify where the student is on the learning continuum in a particular KLA or subject area. Off-level testing simply means that 'the selection of the testing instrument is made on the basis of the student's pre-existing level of knowledge, skill, or capabilities in an area or domain rather than chronological age or grade' (Olszewski-Kubilius, 1998). Off-level testing is useful for students who perform so well on tests appropriate for their current Year placement that they 'ceiling out' on those tests.

Students who are performing very well at their current Year level, ie the students who often achieve 85% or above in assessments, are suitable for this type of testing or assessment.

To their parents and teachers, these students' results seem to be excellent and we may feel that our 'job is done'. However, the picture may be incomplete as to the full extent of the students' capabilities and their knowledge or skill base. As teachers, we may not know whether the student is achieving these results through a great deal of effort or with little or no effort at all! We may have a feeling that the student is 'cruising' but without testing our hypothesis we may never know if she could achieve at a higher level than her current performance, as the tests or assessment used may be creating a ceiling effect. **We will not know the full 'height' these students could have grown without an off-level measure.**

For a student who is performing well in school an IQ test may not be necessary, as it is obvious that the student is gifted in the area of performance. In such cases, off-level testing may be more appropriate, as it will show the extent to which the student is **ready for more challenge**, rather than simply identifying their potential. With such students we already know that they have the potential to achieve well and what we would like to find out now is how much more they know than they are currently showing us.

Off-level testing can be done within the school context for placement in a program which deals with accelerated content.

Another option is for students to enrol in talent searches such as the Australian Primary Talent Search (APTS) or the Australian Secondary Schools Educational Talent Search (ASSETS), run throughout Australia by GERRIC. The off-level tests used in talent searches allow students who have already been identified as academically gifted in maths, science, English and reading to show their **full** levels of ability in any of the subject areas surveyed by the tests. These tests also provide valuable information, for schools and parents, about the readiness of students to undertake curriculum at a particularly high level.

Information about APTS and ASSETS, can be found on the GERRIC website at: http://www.gerric.arts.unsw.edu.au/stdt_apt.html

The general rule of thumb with off-level testing

- In the **first three Years of school** you should use tests **one to two years above grade level**.
- In the **primary Years of schooling** you should use tests **two to three years above grade level**.
- In **first four years of high school** you should use tests **three to four years above grade level**.

A student who has achieved 85% or above on the end of unit assessment in mathematics could be eligible for off-level testing in maths for possible placement in extension level maths. Using an assessment two or more years above students' present Year placement will provide an overview of their current knowledge base and also identify any 'gaps' in their mastery of the next two Years' maths. For example, students may be assessed in Year 6 using a Year 8 University of NSW maths competition.

Disadvantaged and culturally diverse populations

Gifted children are found in all cultural groups, in the Indigenous population and in every socio-economic level. However, students who come from backgrounds other than that of the dominant culture may be more difficult to identify using standard identification procedures. These students may not perform well on standardised objective assessments, as we have discussed in Core and Extension Modules 4 of this Course.

Babad and Budoff's (1974, p. 439) research identified some of the reasons why some children from these populations may perform poorly:

'They are fearful of the testing process, expect to do poorly, are often insensitive to speed requirements, are unfamiliar with the problem contents, and do not develop spontaneously the most effective strategies (by middle-class criteria) to solve the problems.'

When using standardised IQ assessments, there are three issues to consider, which will disadvantage these students:

- perceived test bias and selective interpretation of test results.
- failure to consider the intrapersonal and environmental catalysts which will affect the student.
- standardised IQ tests do not provide sufficient information for the teacher to design an effective intervention or remedial program (Chaffey, 2002).

Therefore, if these students are to be identified, the process must be modified. If peer and self nomination are not effective, due to the forced-choice dilemma and the students' reluctance to risk cultural disapproval by 'standing out', other subjective measures will need to be used. A flexible approach must be followed to identify the many facets of reasoning and expressions of giftedness which exist.

The following modifications should be made to the identification process for Indigenous, culturally diverse or low socio-economic students:

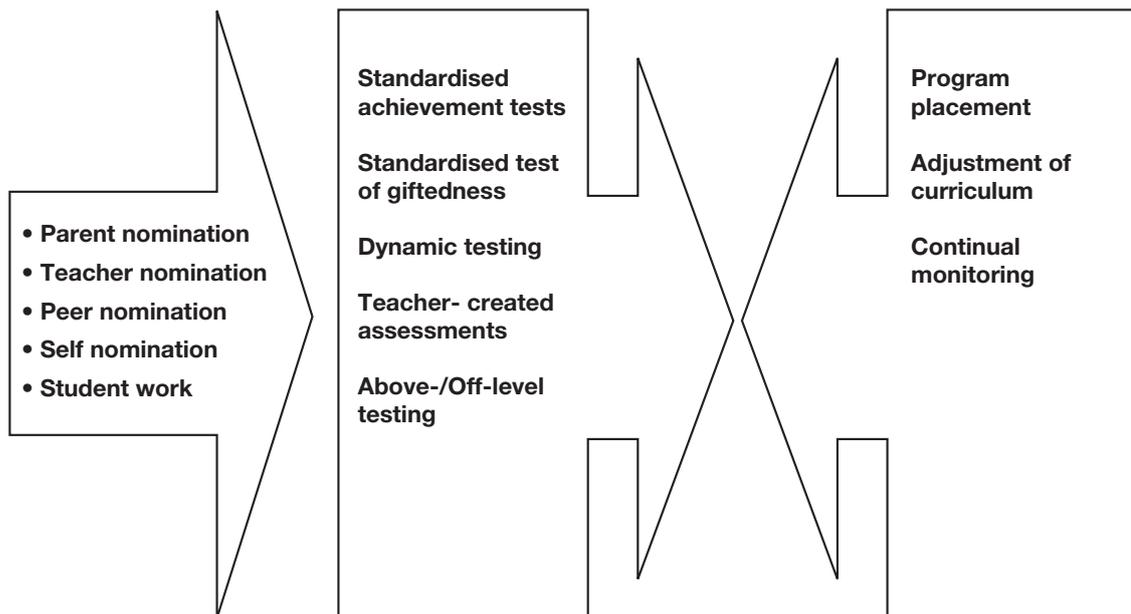
- Use authentic assessment, dynamic testing and exposure to challenging teaching to unlock the potential that exists in both visible and invisible underachievers.
- Educate teachers to be more aware of the environmental and personal catalysts which may affect the expression of giftedness in students from these populations.
- Gain the trust of the parents and assist them to complete a parent nomination form.

One way to identify underachievers from Indigenous and culturally diverse groups or disadvantaged populations is to use the emerging methodology of **dynamic testing**. This represents a very promising alternative to traditional assessment in that it seeks to optimise the student's cognitive performance, rather than simply measure it as it currently manifests itself. Dynamic testing is explained more fully in Core and Extension Modules 4.

So ... which objective and subjective measures should I choose?

As there are so many different types available, it is best to analyse these in a chart format. The Chart Summary of Objective and Subjective Testing was included in Core Module 2, at the end of the section on objective measures. It may be useful to review that chart briefly before completing the rest of this Module.

Identification process flow chart

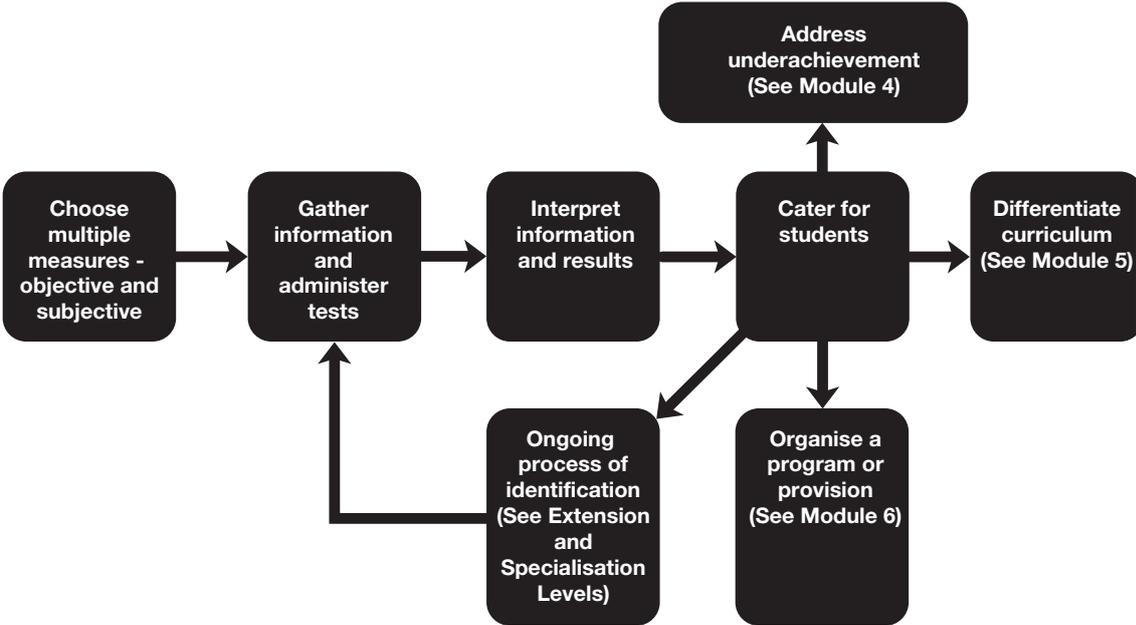


As you can see, the first arrow on the flow chart comprises subjective tools and information that help to screen students. When screening students, you are trying to identify as many likely candidates as possible. The next arrow contains a list of more objective tools which can be used, in combination with the screening measures, to identify students who are gifted or already showing talent. The final arrow summarises what should happen once a student has been identified as gifted or talented. Thus, the identification process is continuous, as is portrayed in the second flow chart on page 36.

The identification process

Now that you have covered material on subjective and objective measures of identification you can see that the identification process is multifaceted and may be different in different contexts. You may wonder where identification fits into the scheme of things in your school.

The following flow chart shows the process of identification from start to 'finish'. You will note that the process is actually a continuous cycle, something that will never be static or complete.



Now, let's return to the assessment we had at the beginning of this Module. By using the same pre-test and post-test, you can measure the knowledge you have gained from the Module.

1. What is the purpose of using a peer nomination form?
2. What is the purpose of students nominating themselves for a gifted program?
3. What are IQ tests successful at predicting? What do IQ tests not predict about a child?
4. What recommendations do you have regarding the following case study?



Mrs Callaghan, a Year 3 teacher, is starting her Reading Extension group this term. She has a list of students who have been identified by the school testing and teacher nomination process and a list of English standardised test results. However, she is not sure this is enough information as she feels it is important that the students who join the group must also be passionate about reading and widely read. How can Mrs Callaghan ensure that she has enough information from the identification process to select her group?

1. To add a peer's perspective to the identification process.

2. To find out specifically what skills and areas of interest the child already possesses in their talent domain.

3. IQ tests

- measure the potential to achieve well in the school system.
- do not account for the external and internal catalysts that influence a student's development of talent.
- give us information about a student's relative strengths and weaknesses.
- show us how well students can deal with novel information and their level of reasoning.
- give us information about a student's verbal and non-verbal reasoning generally and the subtests give us more detailed information about the relative strengths and weaknesses within these areas.

4. The following modelled response has been provided for the case study.

How can Mrs Callaghan ensure that she has enough information from the identification process to ensure that the right children are selected for her group?

Mrs Callaghan asks the Year 3 students to complete a combination self and peer nomination form. She asks them three key questions to do with their reading habits, books recently read and genres of books most enjoyed. She also asks them who they think reads widely, who can't keep their nose out of a good book and who is a regular library borrower. She collates this information with the other subjective and objective data collected to ensure she has a balance in the identification process.



Resources

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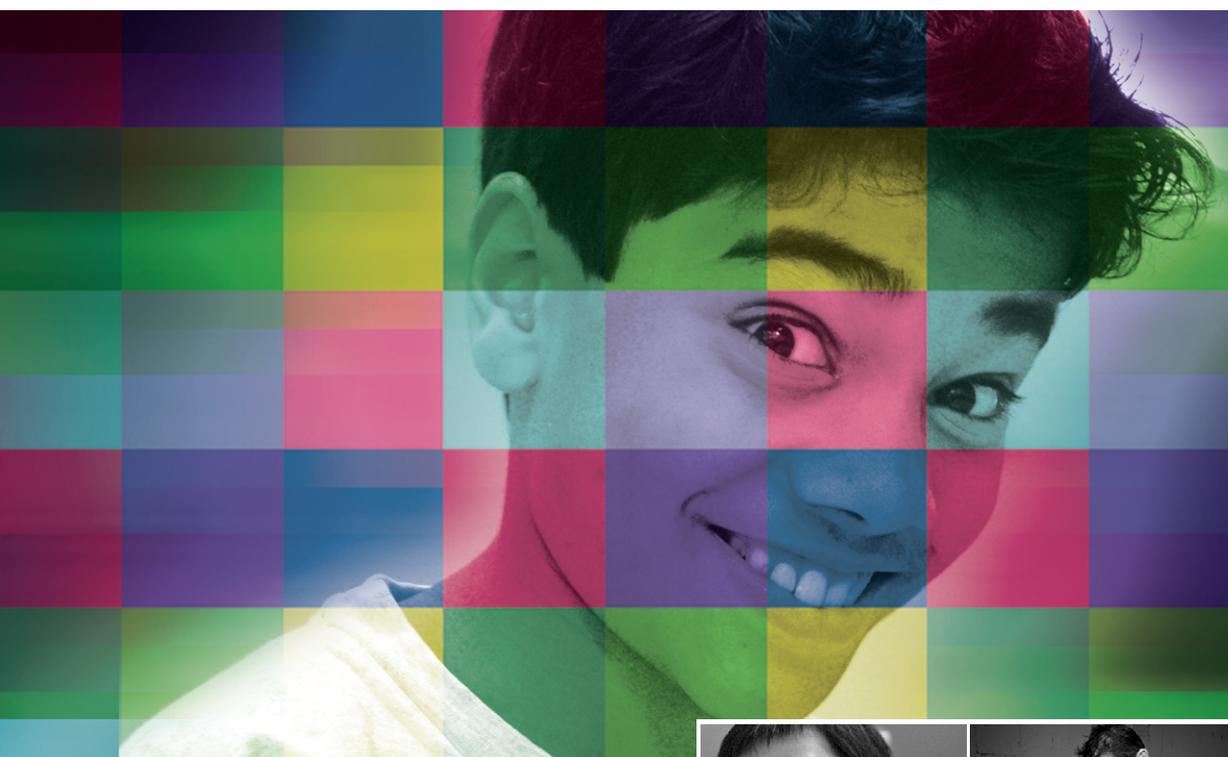
<http://ericec.org/digests/e644.html>

<http://www.nswagtc.org.au/info/identification/>

GIFTED AND TALENTED EDUCATION
PROFESSIONAL DEVELOPMENT PACKAGE FOR TEACHERS

E X T E N S I O N

Module 2



Secondary



Caroline Merrick
Ruth Targett

Module 2

Further Issues in Identification of Gifted and Talented Students

Welcome to Extension Module 2, Further Issues in Identification of Gifted and Talented Students. In this Module you will become more familiar with some of the tools and techniques that are used to identify giftedness and talent in students at different levels of schooling.

This is a challenging process, as each school will have students with different characteristics, circumstances and needs.

As will become clear throughout this Extension Module, the key purpose of identifying gifted and talented students is to serve them with a program and curriculum that meet their needs.

Caroline Merrick & Ruth Targett

Extension Module 2: Secondary

Further Issues in Identification of Gifted and Talented Students

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1. What is the purpose of using a peer nomination form?
2. What is the purpose of students nominating themselves for a gifted program?
3. What are IQ tests successful at predicting? What do IQ tests not predict about a child?
4. What recommendations do you have regarding the following case study?



Mr Wells is a Year 9 maths teacher, who is considering running a new 'Galileo maths' course which would cater for the needs of gifted maths students in Year 9. Students in this course will need to be strong in the area of problem solving and using maths in a creative way. He has a list of the end of year maths results from the previous year and a list of students who have been identified as gifted. What other subjective methods can Mr Wells use to ensure he is casting his net wide enough to identify all the students who should be in his Galileo program?

1. To add a peer's perspective to the identification process.

2. To find out specifically what skills and areas of interest the child already possesses in his/her talent domain.

3. IQ tests
 - measure the potential to achieve well in the school system.
 - do not account for the external and internal catalysts that influence a student's development of talent.
 - give us information about a student's relative strengths and weaknesses.
 - show us how well students can deal with novel information and their level of reasoning.
 - give us information about a student's verbal and nonverbal reasoning generally and the subtests give us more detailed information about the relative strengths and weaknesses within these areas.

4. The following modelled response has been provided for the case study.

What other subjective methods can Mr Wells use to ensure he is casting his net wide enough to identify all the students who should be in his Galileo program?

Mr Wells distributes a self nomination form to all students in Year 9. His form begins with an outline of the Galileo program goals and a description of the target population. He asks the students three key questions about their interest in maths, what they like to do with maths outside school and in what areas of maths they are most interested. He also asks them to submit one mathematical question or idea that has always made them wonder - about how it worked or why it was. He also decides to examine the competition paper results from the previous year to identify students who have done well on these papers, which require mathematical problem solving for achievement. He then uses some older competition papers from Years 11 and 12 as an above-level test. He adds the data collected on the self nomination form to his other subjective and objective data, in order to screen which students are to be identified for his Galileo program.

Outcomes

At the completion of this Module, you will:

- understand what information subjective and objective measures give teachers.
- be able to identify what identification tools are appropriate for your school population.
- demonstrate your understanding of the need for multiple criteria by identifying which tools to use in a given example.

Part 1

Identification as an ongoing process

As you will know from your reading of Module 1, gifted and talented children have different learning needs from those of their age peers of average ability and therefore require special educational planning to support them in developing their potential. The process of identification is critical if schools are to cater for the intellectual and social-emotional needs of these students. All children deserve to have their educational needs met, no matter where they fall on the learning continuum. To cater successfully for the needs of gifted children we need to know who they are and where their abilities lie.

Once a child has been identified as gifted and/or talented we can use appropriate educational interventions and strategies to move her along the learning continuum. In the process we may identify students whose needs are not being met by the current curriculum, provide evidence for inclusion in a particular program and identify students who will need extension beyond the core curriculum. It is important to remember that the purpose of identifying gifted or talented students is to ensure that the learning experiences they have at school meet their learning needs. The ways these needs are met may vary from school to school - hence the combination of tools used will be chosen to suit the purpose of identifying within your own school population.

When identifying gifted students we need to know not only whether they are gifted and/or talented but also in what domain(s). We need to know whether they are achieving well or underachieving in their current learning situation. We need to know their relative strengths and weaknesses and how best we can serve their learning needs.

Rationale

As the process of identification of gifted and talented students is complex, selecting the most suitable tests, checklists and other tools for your school is very important. Choosing identification tools which provide defensible interventions for gifted and talented students will help you soundly justify your selection to parents, other staff members and the students themselves.

The identification process recommended in this Professional Development Course is based on the Gagné definition of giftedness and talent which was introduced in Core Module 1. It is important that the tools used to identify a student for a particular program or learning experience are in line with our understanding of gifted and talented children. Identification procedures need to allow for the fact that some gifted children freely express their abilities at school, while others may not.

With this in mind, we need to collect information about both the **potential** and the **performance** of a child who is being considered. By focussing on what is measurable (through objective measures) and observable (through subjective measures) we can identify the areas in which the gifted student excels and any possible areas of weakness. Identification is the first step in catering for the needs of a gifted and/or talented student.

The golden rule for identification

‘The careful determination of program goals will set the direction for the entire identification process’ (Feldhusen, Asher & Hoover, 1984). This is referred to by Renzulli (2004) as the golden rule of identification.

Which identification tools do I need?

To determine which tools you will utilise to identify the gifted students in your school, you must first consider who you are looking to identify. Are you looking for students whose gifts are intellectual, creative, socio-affective or kinaesthetic? Are you looking for students who are already demonstrating talent in the intellectual, creative, socio-affective or kinaesthetic domains? What resources do you have to support these students once they have been identified? What is your educational goal for these students once they have been identified? Modules 5 and 6 explain in detail how to provide for these students once they have been identified.

It is important to consider the purpose of identifying gifted and/or talented students in your school.

- Is your goal to identify gifted students to place them in a gifted class?
- Are you initiating a new program to meet the most pressing needs of your gifted students?
- Are you targeting gifted underachievers for a program to address their underachievement?
- Are you identifying these students so that teachers may more effectively differentiate the curriculum within a mixed ability classroom?
- Are you looking to extend a few talented students who are performing above their cohort?

The program goals may determine what characteristics you are looking for in the identification process.

By identifying the specific needs of your individual gifted and talented students you will achieve a careful match between your identification methods and the many areas of giftedness and talent.

In secondary schools, many programs are organised by subject areas, which require specific aptitudes. For example, an advanced science course would require students who are already performing at an advanced level in their current science subjects. However, another program may be targeting young students who have exceptional science reasoning. That is, they may be gifted but not necessarily talented (in Gagné’s sense, achieving) in science. In this case students who perform well in science competitions, but not necessarily in other subjects, may be good candidates for this program. In addition, the teacher who runs the Science Club may notice students who are passionate about science and show advanced scientific reasoning and factual knowledge in science and thus nominate them for the class. As you can see, the purpose of the program may require different tools and a variety of methods of identifying students. It is for this reason that we need to have a multiple criteria approach to identification, once we determine why we are attempting to identify students with high ability in specific subject areas.

The identification process you adopt for your school should match the cultural context and needs of your school population. Students from some culturally diverse or disadvantaged groups do not perform well on standard measures of giftedness and/or talent. It is important to be aware of the limitations of the tools you have available for some groups of students and look for other options. This will be discussed in greater detail later in this Module. The most appropriate methods of identification for your school will be based on the purpose of the program you are developing and the population that you serve.

A wide range of strategies must be used to assist identification. The tools you use will depend upon the student’s age, need, location and background, and the resources available to you in your school, district or system. These will differ according to the needs of each individual in each school. In an ideal world, we would design our identification process to meet the specific needs of our gifted and talented students, rather than on the basis of time, cost or resources available. However, at times there are restrictions which mean that we only have certain options available. Careful selection of the best identification measures available to us is important, as choosing the most effective measures and designing tools which match your specific needs will often save you time, cost and resources.

Subjective and objective measures

Let us revisit the definition of the two types of identification which we introduced in Core Module 2:

- **Subjective measures** allow judgements to be made on the basis of structured observations of the student. These include teacher, parent, peer and self nomination, along with anecdotal records contributed by previous teachers and the child’s family.
- **Objective measures** are standardised tests of ability or achievement. These include IQ and other forms of psychometric testing, standardised performance tests, dynamic testing and off-level testing.

You may also see these two types of measures referred to as **quantitative** (objective) and **qualitative** (subjective). Effective identification of gifted children requires evidence from both categories.

Not all gifted students perform well in the school system

Many of us can think of students we have taught who did not perform well on school assessments but who asked questions beyond their years; those students about whom we had a ‘gut feeling’ that we were not seeing their best within the school system. We must employ identification procedures which are designed to find students who are not achieving at levels commensurate with their ability, due to intrapersonal and environmental catalysts which impact negatively on their lives. These students are called **gifted underachievers** and, in Extension Module 4, we will explore further reasons why underachievement occurs among gifted children and adolescents.

Subjective measures

Since giftedness has many dimensions so should the identification process. Subjective measures allow teachers, parents, a student’s peers and the students themselves to try to identify giftedness and/or talent, guided by checklists and other descriptors which assist them to make, through observation, evaluative judgements about a student’s ability. These measures add the human touch to the identification process and many adults or fellow students who interact with the individual may have something important to add to the profile. In Core Module 2, we discussed parent and teacher nomination. In this Extension Module we examine two more subjective tools, peer and self nomination.

Peer nomination

A student’s classmates may often perceive his abilities with great clarity. Gifted students can also recognise in others the characteristics of giftedness which they themselves possess. They may not know the terminology to describe what they see but they recognise those characteristics which, in some way, make particular peers different from others but similar to themselves. Peer nomination may reveal insights which are not readily available through other identification tools.



If the purpose of identification is to increase our knowledge of the gifted children in our school in order to best cater for their needs, then asking a student’s peers to contribute to the process can sometimes add another dimension to the process. Peers are aware of other students’ behaviour outside the learning context. That is, they see students in a range of settings and situations to which a teacher or parent may have less access and consequently they may have valuable observations to add.

The peer nomination process can be administered using a variety of formal and informal methods. A peer nomination form can be generic to the characteristics of gifted children, or specific to your class or the program which the school will implement.

Often peer nomination forms contain questions such as; ‘Who is the best problem solver? Who is the best artist? Who knows how to fix the computer? Who is great at sports using bats and balls?’ However, the information you collect must be relevant and useful to what you are trying to achieve. If the answers to these types of questions do not help you to identify the type of gifted student who will benefit from the specific program being planned, then they are not purposeful. For example, if you are looking for students to be in a gifted art program then asking questions about a student’s ability to solve mathematical problems may not be purposeful. Rather, designing yourself a peer nomination form, which will identify the very characteristics relevant to the program, is much more effective.

Designing a form

When choosing or designing your peer nomination form, start by asking yourself these two questions:

- ***What characteristics of giftedness and talent am I looking for?***
- ***In what areas of giftedness am I missing data?***

For example:

- if you are looking for intellectual giftedness you will need a peer nomination form which includes both cognitive and social-emotional characteristics.
- if you are looking for leadership characteristics, then your peer nomination form should include items which address leadership.
- if you have a particular gifted program already running at your school and you are looking for students to fill the program, you will need to design items which match that program’s goals.

Each school context will be different in this regard. Returning to the purpose of identifying these gifted students will guide you in this decision. Using peer nomination as another screening tool to narrow down the identification process may be useful, as it may give you more insight into all the students about whom you wish to gain information.

Guidelines for using the peer nomination process

Here are some useful guidelines to improve the effectiveness of administering formal peer nomination forms.

- Wait 9-12 weeks into a year before administering a peer nomination form, as students need time to get to know their peers well.
- Explain the purpose of the peer nomination form.
- Start with a warm up activity, so that students understand the purpose of the peer nomination process - eg ‘Our district athletics team is looking for a new runner to join their team. They must be able to compete in the 100m event so a sprinter is required. Who would you nominate?’ or ‘Our band is looking for a new drummer. Who has good rhythm and coordination?’

- Explain to the students that you are not looking for them to pick their friends or only those of the same gender but to think of everybody in the class.
- Use language appropriate to the age of your students. Obviously this will vary from primary to secondary students, but also within these age ranges.

A conversation with students already in a program, with a question such as; ‘Is there anyone who isn’t part of this group but who should be?’ will often elicit a few names. Asking students in programs to complete a peer nomination form specifically designed for the program you are implementing may also identify students who match the target population. Asking students whom you have already identified as gifted to complete a peer nomination form may also reduce the task of administering forms to entire classes or Year groups, as these gifted students will often recognise giftedness in others.

Students who are nominated by peers need to enter the identification process as they would through any other subjective or objective means. Your next step will be to collect information from other objective and subjective measures, to ensure that all efforts are made to identify accurately all gifted students at your school. This is especially so with **any** nomination process, as a student may be nominated because their friends want them in the program, not necessarily because enrolment in the program is in the student’s best interest.

When used with other forms of subjective and objective measures, peer nomination can add another perspective to the identification process.

Limitations of peer nomination

As with all identification procedures, peer nomination has some limitations:

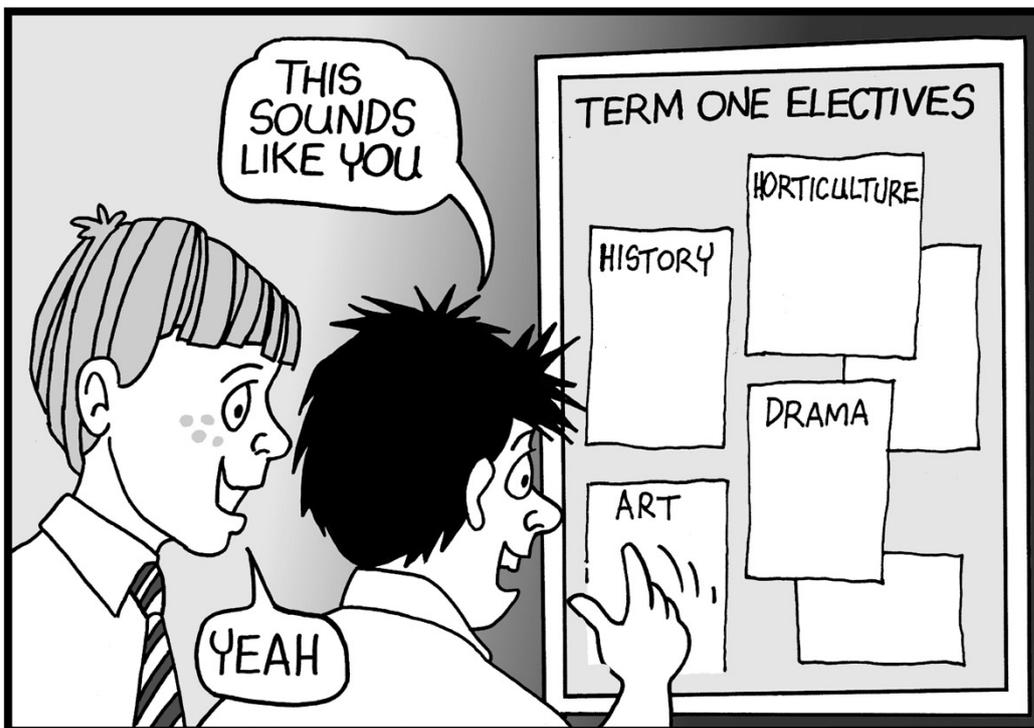
- Peers may not like or respect a particular gifted student so may not record her name.
- Students may wish to record their friends for every item.
- Peers may not be fully aware of another student’s advancement.
- Students may not be fully aware of gifts and talents in students of the other gender, if they do not mix with them outside the classroom.
- Underachievers may not be revealing their gifts and talents to peers.
- Peer nomination is less reliable in early childhood before children have begun to make social comparisons and notice differences between themselves and others, and between other children in their class. As discussed in Core Module 3, children do not generally begin to ‘norm reference’ before age 7.
- Adolescents may be particularly unsuited to this procedure as the need to belong is often the driving force in their lives and some students may be deliberately concealing their ability.
- Oppositional attitudes, as described in Module 4, will continue to have an effect on all elements of the identification process. Peers will be reluctant to nominate their friends if academic learning is not valued by the peer group.

Interpreting peer nomination responses

When you have collated the names listed on the peer nomination forms, you will be ready to interpret the results. When analysing this information, you are looking for any patterns and clusters of names which may appear. Is a student's name recorded a number of times in a particular domain or field? Is a particular student's name appearing for leadership or creative endeavours? Are they being identified by their peers as a writer or mathematician?

Each child whose name is appearing multiple times should be added to the list of students you are considering as part of the identification process. Peer nomination may be the first indication that you need to investigate a student further. If a student is nominated on a peer nomination form, investigate the objective data available to see if they are displaying characteristics of giftedness and talent. What are their teachers and parents saying about their areas of giftedness or talent?

Sometimes you may not find any other data that confirm the student's nomination. In fact the student may not be gifted or may not benefit from the program. However, if your identification process is thorough, these students will not proceed further in the identification process, as the other objective and subjective measures will confirm that they do not qualify.



What does research say about peer nomination?

In 1989, Gagné conducted a critical analysis of 13 validation studies of peer nomination forms. He concluded that although the research was fraught with weaknesses in methodology, there were some advantages which made this subjective measure a 'potentially worthy technique' (p. 53).

Some advantages of the peer nomination form are the ease in design, administration and compilation of results, as well as the large number of judges who are contributing to the group judgement. Even a class of 20 students will provide 20 different judgements, while a larger cohort will add even more judges. Banbury and Wellington (1989) stated that peer nominations 'can be used along with other measures in screening for gifted and talented students' (p. 163). The key to using a peer nomination form is to see it as another **screening** tool in the identification process.

When constructing each item on your own peer nomination form you should address the following questions which Gagné poses, in order to maximise the usefulness of the tool:

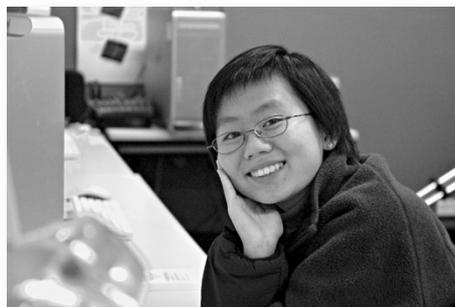
- How relevant are the items? For example, some peer nomination forms ask for students who persevere on a task or get bored by routine lessons. Have you included items which are not unique to the gifted?
- Are there any items which are redundant? For example, have you asked for nominations for items which could be identified another way, such as through maths achievement tests or standardised tests of reading?
- How exhaustive are your items? For example, there is more than one dimension to each domain of giftedness and talent. Have you considered each individually?
- How specific are your items? For example, problem solving, spatial and estimation skills are much more specific than generalised maths talent.
- How are your items organised? For example, can you cluster items under domain subheadings or in a hierarchy or taxonomy?

Self nomination

Gifted students can often recognise giftedness in themselves. From a very early age, they are very capable of seeing where their talents lie. They have considerable knowledge about themselves and their passions, which they are willing to share when given the right vehicle and opportunity.

As with peer nomination, self nomination needs to be specific. Teachers should design self nomination forms to elicit the precise information they are lacking through other screening methods. If the information asked for through self nomination has already been elicited through other methods, then the teacher's task of synthesising the information may be increased unnecessarily.

A self nomination form that is specifically designed to match the goals of the program being developed will give you specific information to add to the other data collected in the identification process.



For example, in a creative writing course, a self nomination form may include items such as:

- What is your favourite style of creative writing?
- Attach your favourite piece of writing. Why is it your favourite?
- What topics do you most like to write about?
- What genres do you most enjoy? Why?
- What genres do you least enjoy? Why?
- What types of books do you like to read at home?



Scenario of a classroom setting

Mr Wagner is running a 'composers' program' for gifted musicians at his school. He plans to meet with them once a week for 60 minutes after school, where he will immerse them in various styles of composition and musical genre. He will also teach them how to use computer software to compose a piece of their own. Students will then continue with their compositions in their own time, between sessions. Mr Wagner believes that using technology will allow participation of students who may not have any formal experience or background in traditional notation but may have learned music by ear. That is, they may be musically gifted but may or may not have yet become talented.

He determines that to be suitable for this program the students need to demonstrate a keen interest in music and a passion to create their own work. He aims to offer his course to students in Years 8-10.

Mr Wagner talks with his colleagues at a faculty meeting. He explains the rationale for his program and outlines the skills he is hoping to develop and extend in his composition course. He asks teachers to nominate any students in their music classes whom they feel may have musical aptitude or who have already shown interest in composition.

Mr Wagner puts a note in the school newsletter explaining to parents the aim of his course and inviting them to collect a nomination form from the school office and nominate their child if they feel he or she meets the criteria and would benefit from the course.

Mr Wagner also asks students in his two elective classes to complete a peer nomination form which asks students to name a student who:

- you think is a good musician
- likes to compose his or her own music
- has written his or her own song
- is good at composing music on the computer in class
- has written some music you think is cool.

Mr Wagner addresses the weekly school assembly and reminds students that in the past ten years a number of students have gone on to become professional musicians, composing music for orchestra or film, as well as one student who has become a successful recording and performing rock artist. He outlines his composers' course and invites students to apply. He places a self nomination form on the school noticeboard and asks students for the following information:

- What interests you about composing and why?
- Which styles of music do you like?
- Have you composed any pieces of music in any of these styles? Explain.
- Why should you be included in this composers' course?
- Please submit a sample of one or more of your compositions in any of the following media: a printed or handwritten score, tape, video or CD recording of a live performance, or a computer generated piece.

(For students who don't have these facilities, Mr Wagner offers several lunchtimes to hear students play excerpts of compositions.)

Mr Wagner uses composition criteria available from his state syllabus document to assess objectively the compositions submitted. He narrows down the compositions to rank the best 15. He reads the teacher, parent, peer and self nomination forms and records students whose name appears on more than one subjective measure. He combines these data with information from the students' compositions. He draws on the expertise of another faculty member or musician's judgement to assist with the final selection process.

He records the objective data he has from class music results and school based assessments. He also reads the student files and finds that a number of students have already been identified as gifted and talented in other subject areas. Mr Wagner uses any combination of one subjective and one objective measure to identify students who would be suitable for inclusion in this program.

Mr Wagner identifies eight students for his composers' course. It is clear from the identification process that he must differentiate for the three students who don't have musical training, the four students who are currently studying music and performing in various ensembles and James, a student who is already performing original pieces in his own garage rock band. James was identified through peer nomination and when he submitted his CD it was clear he was very talented. He was found through peer nomination because his peers trusted Mr Wagner and have respect for him. They see him as a 'significant other', a concept that will be elaborated upon in Extension Module 4.

The identification process for Mr Wagner's composers' course has utilised a variety of subjective and objective measures. By spreading the identification net wide and using multiple sources, including parents, teachers, peers and the students themselves, Mr Wagner has ensured that he has used the most effective measures in the identification process for his school context.

However, this will vary from school to school, district to district and system to system. Successful identification is not a series of obstacles which a student must traverse. Rather, it is about using different types of lures and bait to catch all the fish! Multiple criteria, specific to the target population and program goals, are critical to the successful identification of the gifted and talented students in your school.

What if students wish to nominate themselves on a peer nomination form?

Some teachers may be concerned that a student will nominate herself when she is clearly not gifted or talented in the area addressed by the peer nomination form. The answer to this question will become clear when all the data are added to the identification process. The student will probably not be nominated by teachers, parents or peers and objective test results will identify her current level of functioning. Therefore, there is no harm in letting students self nominate on a peer nomination form, as long as peer nomination remains only one element of the identification process.

Gagné conducted some interesting research on this very question and his article is included in the Resource section of this Module. He concluded that:

'Because self nominations appear to have no adverse effect on the ability rankings resulting from peer nomination procedures, and because children insist that they be allowed to nominate themselves, we recommend that self nominations be permitted, particularly at the high school level where self-perceptions of abilities are more modest and accurate. ... To improve the accuracy of self nominations and control for the tendency of students to overuse them, it is recommended that examiners mention in the directions to the students that their self nominations will be compared to those of peers and teachers.' (Gagné, 1989, p. 24)

Placing any nomination form in the right context will help increase its effectiveness. Communicating the purpose of the nomination form will help teachers, parents and students to consider their nominations carefully and reduce the number of inappropriate nominations made.

Limitations of self nomination

As with all identification procedures, self nomination has some limitations:

- A student may not want to be seen as different so may not want to self nominate.
- A student who is a perfectionist may not think she is capable enough to perform at a high level.
- A student may not want to be in the program and away from his friends.

Disadvantaged and culturally diverse populations

Identification procedures which are used for the majority of gifted and talented students may not be suitable for some culturally diverse populations. Different methods of identification may be needed for students from culturally diverse, low socio-economic status or Indigenous populations.

These gifted students are not lacking in ability but their ability may be masked by a variety of environmental and socio-emotional factors. Because of this, their giftedness may not be evident in the identification process.

Children and adults in some disadvantaged or culturally diverse communities may not readily trust teachers or the schooling system and hence may not be willing to nominate their children or to nominate themselves for a program. One of the first steps in identifying gifted students from these communities is to establish a trusting relationship with the community. Once this trust has been established, the program goals need to be clearly communicated. Parents may need to be involved in the nomination process, even if it is self or peer nomination, if this helps establish that the program is for the benefit of their children. It may well be beneficial for the school to work with community leaders to construct a tool which asks the right questions to identify giftedness and talent within that community.

Students need to develop trust in the adults in their school before they will nominate themselves or their peers on checklists or nomination forms. If they do not respect the teacher, this will have a negative effect on students' willingness to nominate themselves or their peers. Indeed, this may be the case for any student who is not achieving her potential for whatever reason. The forced-choice dilemma, explained in Core Module 3, can have a significant effect on the usefulness of peer and self nomination forms.

Self and peer nominations of students from disadvantaged backgrounds or culturally diverse populations are most effective when the teachers have training in gifted education, knowledge of underachievement and experience with students from these backgrounds. It is important to have worked with the school community before launching any program.

Conclusion on subjective measures

The information collected on peer and self nomination forms, as part of the identification process, will be used in conjunction with the other subjective screening tools and the objective measures. If a student is identified on both an objective and a subjective measure then they should be included in the program.

When using multiple-criteria identification measures, it is important to remember that these criteria are not a series of hurdles that a student must jump before he is included in a program. Rather, when using subjective measures, students only need to be nominated on one form of subjective measure to be considered for the program. They will then proceed to the next stage of the identification process, where objective measures will be used to ensure that they qualify on the objective data collected. If they qualify on at least one objective and one subjective measure, they should be included in the program.

Include, for further assessment, students you are not entirely sure about, rather than exclude them - and invite surprises.

In small groups, discuss the merits of using a peer or self nomination form in your school. Are there any programs which would benefit from the use of a self nomination form? Are there peer groups which would respond positively to a peer nomination form? Choose **either** the peer **or** the self nomination activity below.

Peer Nomination Activity

Think about a program or provision currently offered, or to be offered in the future, at your school. It may be subject-specific or cross-curricular. Now choose which one of two subjective measures - peer or self nomination - you will use as a screening tool in your program.

Write 5 questions or tasks you would like answered or included with each student's submission of this self or peer nomination form.

What is the target population? (For example, are you looking for students who are gifted, gifted and talented, or talented in a particular area?)

What specific characteristics or qualities are you looking for students to possess in order to participate in your program or provision?

Complete the blank student peer nomination form below, by writing items which specifically target the characteristics or qualities you are looking to identify:

Peer Nomination Form

Name Year

Program/Provision

1. _____

2. _____

3. _____

4. _____

5. _____

Self Nomination Activity

Think about a program or provision you are currently offering at your school or hope to offer in the future. It may be subject-specific or cross-curricular.

What is the target population? (For example, are you looking for students who are gifted, gifted and talented, or talented in a particular area?)

What specific characteristics or qualities are you looking for students to possess in order to participate in your program or provision?

Write a description of your school program or provision, which will inform your students:

Complete the blank student self nomination form below, by writing 5 items, tasks or questions which specifically target the characteristics or qualities you are looking to identify:

Self Nomination Form

Name Year

Program/Provision

1. _____

2. _____

3. _____

4. _____

5. _____

Now ask a colleague who is doing this course with you, or a mentor in this area, to look at the form and give you feedback about the questions you have developed.



You have decided to ask the staff to suggest ideas that would help develop a program for gifted students in your school, using the current resources available. Think about your staff and their strengths in working with students of different levels of ability and interest.

- Create a self nomination form for your staff to suggest ideas for creating programs for the gifted students in your school.
- Write a description of the domains of giftedness which you have already identified in the students in your school.
- Write a list of how gifted students' needs are currently being met.
- Create a self nomination form for staff to become involved in your school's current programs for the gifted.
- Now add to your list any new programs which may have come to light as a result of this professional development course.

Part 2

Objective identification

Objective identification measures are to be used to identify gifted and talented students' aptitude and/or current levels of achievement. As discussed in Core Module 2, objective measures are tools such as standardised tests of potential or performance which give teachers and counsellors a score, or a series of scores, which can be used to compare the students with others from their age group or cohort. These measures usually assess a variety of elements of cognitive processing and reasoning, or achievement levels within the school context or compared to a much larger cohort - eg verbal reasoning or reading comprehension.

Different measures give us different, specific information about a student's capacity to achieve within the school context. The measure may show you either a student's potential to achieve or her current level of achievement within the school environment. These measures may identify a student who is already achieving well and who may need a specific program to meet his needs or a student who is underachieving and may need a different intervention to help her achieve at a level commensurate with her ability.

A variety of objective measures exist and each measure assesses different aspects of a student's ability to learn and deal with new information. Such assessments may also assess a child's ability to reason compared with his age peers as well as how he uses information in new situations and organises that information.

It is important to note that on any objective measure it is possible for a student to score at a level lower than her true ability. If a student can score below his ability level on such measures some may ask whether we should we use them at all. At this point it is important to remember why we identify gifted and talented students: the purpose of such measures is to give us information about the child so that we can better provide for her learning needs. With the reason for administering the measure clearly in mind our focus can then turn to the way a test is administered, and the child's specific context, to help guide you as to the most appropriate objective measure to use to identify a child's ability or level of achievement.

It is almost impossible to achieve **beyond** one's true ability on any test, if it is administered appropriately. This means that a student's test result may be an **underestimation** of his ability. However, if a student scores higher than you expected, the child unquestionably **has** the ability being described by the instrument - even if she is not demonstrating this in class - and it would be beneficial to look at this student from another angle.

What IQ tests do and don't measure

IQ tests have had a chequered history, as in their early years some were used inappropriately, and consequently many people still have misgivings about the use of such tests. IQ stands for 'Intelligence Quotient,' a title which, ironically, is no longer relevant to what the current tests assess. The 'Intelligence Quotient' originally measured the difference between a person's chronological age and age of mental functioning. This particular calculation is no longer made in IQ tests, but the name has remained.



There is no doubt that in times past IQ tests have been misused and applied in some cases for unethical purposes. However, as James Borland (1986) comments, we have to be careful not to 'throw out the baby with the bath water'! When used appropriately, with their correct purpose in mind - of providing appropriate learning contexts for children - they can be useful tools. The IQ tests currently available are designed to assess a number of factors related to children's capacity to learn and manipulate information. They specifically identify a person's ability to reason in particular areas, especially the ability to use abstract reasoning.

What do IQ tests measure?

IQ tests effectively predict a student's **potential** to achieve within the school system (Pirto, 1994; Richert, 1991; Smith, 2005). There are different forms of IQ tests. Some must be administered individually and require a trained psychologist. Others can be given to groups of children and these tests can be administered by schools and organisations that have the rights to use such tests. Each IQ test assesses a slightly different concept of intelligence. However, all measure a person's ability to deal with novel concepts, acquire knowledge and focus on, and retain, information. The Wechsler Intelligence Scale for Children (WISC) and the Stanford Binet Intelligence Scale are the most common tests used at present. New versions of both tests have been released recently and are available currently in Australia. The concepts of verbal and nonverbal reasoning are common to both tests and similar scores on the two tests are comparable.

- **Verbal reasoning** is the ability to reason, solve problems and recall information using verbal methods such as printed and spoken words.
- **Nonverbal reasoning** is the ability to reason, solve problems and recall information using pictures, figural and symbolic forms.

A student's achievement on the verbal components of these tests is more likely than the nonverbal components to predict current success in a school system. This is because the school system primarily uses verbal presentation of material and verbal student responses as the main conduits for teaching and learning. However, the nonverbal components of a test are more likely to be culture-fair for students from culturally diverse backgrounds and, in some situations, these nonverbal components can be a very useful source of information when identifying students from these backgrounds for entry into a particular program. Nonverbal sections of the tests also give us information about a person's ability to deal with abstract concepts in symbolic form and, as such, can give us an indication of a person's ability to deal with abstract concepts in areas such as mathematics.

When examining the scores a child attains on an IQ test, it is important to know which aspects of the test give you information that is valuable in predicting school success. Your school psychologist or the psychologist who has administered the test can give you even more details, in greater depth, than we are able to present in this Extension Module. However, a very brief overview is provided here.

A full scale IQ score should never be used in isolation or without reference to other aspects of the test.

In fact, some psychologists no longer report full-scale IQ scores in the test reports they produce. By examining separately the Verbal and Nonverbal scores, and the various sub-scales of the test, we can assess the level of a student's reasoning abilities in each area. In doing this, we can assess in which areas a student has the potential to be successful within the school context as well as areas in which he may find school more difficult.

Each test is divided into areas called subtests which are then grouped under the headings of Verbal and Nonverbal reasoning. There is also information provided about a child's scores in the subscales. These subtests will show the relative strengths and weaknesses of the child who has been assessed.

When examining a psychologist's report of an IQ assessment, it is important to note the explanation given by the psychologist about the **relative** strengths and weaknesses of the child in question. These subscale scores may help us understand whether a child may be underachieving due to an attention deficit difficulty or whether they may be disengaged due to the level of their cognitive functioning. For example, is a student whose intellectual ability is very high being given work which is much too simple to engage her?

Psychologists are experts in analysing each particular profile of results. They can tell a great deal about the reasoning that a child is demonstrating in a test situation. Psychologists who have substantial experience working with gifted children will have valuable insights to share both with the parents and with the student's school.

Many people concentrate on the full-scale IQ score, believing it to be the most significant finding from the test. However, an informed reading of the full IQ test report requires a thorough analysis of all aspects of the results, noting the pattern of scores and the strengths and weaknesses of the individual. This will reveal a wealth of information to assist us in identifying the best ways to meet the academic needs of the student concerned.

If clarification of the test report is needed, this should be sought from the psychologist who assessed the child, as he or she may have other information from observation during the test's administration that may put things into context, from either the child or his parent. The psychologist's observations or test analysis may highlight any confounding variables that may affect a child's performance on a test, such as specific deficits and the effect of these on the child's learning, as well as behaviours exhibited by the child during the testing situation. For example, some children may answer questions very quickly while others make more thoughtful responses - the 'front end analysers' discussed in Extension Module 1.

What IQ scores do not predict

There are many misconceptions about what an IQ score predicts. Some hope it predicts wealth, success and guaranteed happiness, or a short cut through life's difficulties. However, as Gagné has pointed out, we know that many catalysts exist which can have a positive or negative effect upon the development of a child's potential. There are so many non-cognitive variables which come into play when an individual is developing through early childhood, childhood and adolescence, that an IQ test would have to be 'magical'



to predict a person's success in life. The Gagné model, Tannenbaum's 'sea star' and Renzulli's 'three-ring' model of giftedness also emphasise the importance of socio-affective development, and it is difficult for anyone, no matter how highly gifted, to achieve success in an environment - school, workplace or home - which acts as a barrier to success.

However, as a consequence of these misconceptions and the misuse of IQ tests, these tests have been surrounded in controversy and many people have strong opinions about their use.

One of the most fundamental caveats about IQ tests is that they do not test all aspects of intelligence. There are many theories of intelligence and even the theorists themselves do not believe that they have adequately communicated what intelligence comprises (Gardner, 1983; Sternberg, 1985). Conceptions of intelligence vary from culture to culture but most conceptions acknowledge it as a complex interplay of many abstract factors which is unlikely ever to be defined by a single test or score. So an IQ test cannot measure intelligence fully.

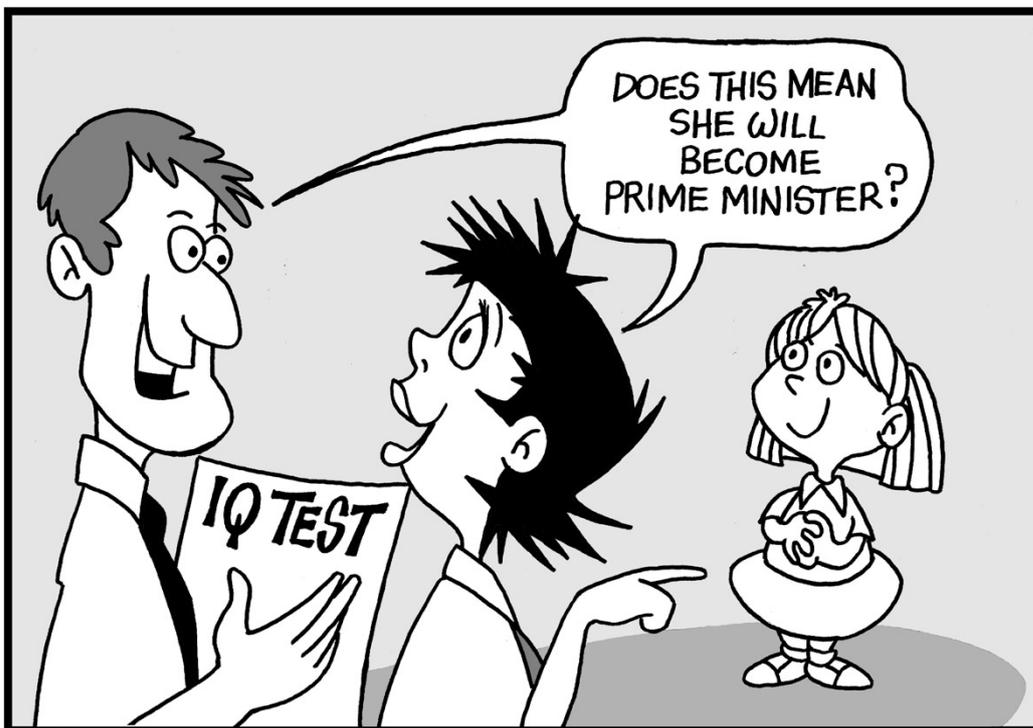
No ability or achievement test can tell us about the intrapersonal aspects of a child. They cannot assess the effects of a student's home environment, personality or experiences. IQ scores cannot predict a student's level of motivation, or identify how a student will respond to the various catalysts affecting her life. So while an IQ assessment can show a student's **potential** to reason and use information or concepts in novel situations within a specific cultural context, it cannot predict **performance** in non-academic or academic areas, only the potential to perform with the right support. It can show how well students can adapt their reasoning to new situations but that potential may not be seen at school for a number of reasons.

As acknowledged by the definition of giftedness and talent presented in this Professional Development Package, there may be many factors which interfere with the expression of a student's giftedness, such as personality, motivation level, family life and myriad other elements. These factors may influence the way students perform within the school context and how they develop their talent. Extension Module 4 explores in depth some factors which have a negative effect upon a student's expression of giftedness and actualisation of talent.

It is important to remember that an IQ test is a measure of **ability** using the definition of intelligence adopted by the test designers. It is also important to note that an assessment of this nature is an assessment of the student on a particular day. If a student has performed well, this is a strong indication that he is intellectually gifted. As discussed earlier, it is almost impossible to achieve **beyond** one's true ability on any test, if it is administered appropriately. However, if a student has a 'bad' day then the information from the assessment will likely be an underestimation of her ability. In this situation the test results may not match information gathered on other identification tools and should be used with caution.

Again, the principle guiding our understanding of a student's performance on a test of ability or achievement is that the student can underperform on a test but can never perform beyond his true ability level.

An IQ test will not predict whether a child will be successful in adult life, it will not identify whether she has good social skills and it will not predict creative, achievement, leadership ability or popularity. IQ tests were not designed for these purposes.



So, if IQ tests are so 'flawed' why use them?

The answer is that, currently, these tests are one of the most effective measures of a student's potential to achieve academically in school (Assouline, 2003; Rogers, 2002).

- We use them because at the present time they are one of the few standardised instruments available to us to identify whether students are achieving in the school system at levels commensurate with their ability.
- They are one of the few ways we can currently identify deficits in certain learning areas which can help us as educators to tailor learning experiences to support a student's strengths and weaknesses.
- IQ tests, when used in conjunction with other objective and subjective measures, can be very useful in identifying children who are gifted but underachieving.

When used in the spirit for which they were designed, and in conjunction with other information, IQ tests provide accurate and valuable information about the way in which a child may learn, reason and appear in the school situation, when compared with his or her age peers.

Off-level testing

Off-level testing involves using with younger students, to assess their talent in a particular area, a test developed for older students. As we discussed in Core Module 2, the purpose of off-level, or above-level, testing is to identify the extent of a student's knowledge or skill in an area of giftedness or talent. Off-level testing allows us to assess students' knowledge or skill base beyond their grade placement. The purpose of such testing is to determine whether the student has knowledge and/or skills that you would expect of a student in a higher Year level. The information gathered from such assessments can help teachers made decisions regarding appropriate curriculum delivery and programs for gifted students.

So when is off-level testing more appropriate than a psychometric assessment, such as an IQ test?

Off-level testing is more appropriate when the purpose of the testing is to identify where the student is on the learning continuum in a particular KLA or subject area. Off-level testing simply means that 'the selection of the testing instrument is made on the basis of the student's pre-existing level of knowledge, skill, or capabilities in an area or domain rather than chronological age or grade' (Olszewski-Kubilius, 1998). Off-level testing is useful for students who perform so well on tests appropriate for their current Year placement that they 'ceiling out' on those tests.

Students who are performing very well at their current Year level, ie the students who often achieve 85% or above in assessments, are suitable for this type of testing or assessment.

To their parents and teachers, these students' results seem to be excellent and we may feel that our 'job is done'. However, the picture may be incomplete as to the full extent of the students' capabilities and their knowledge or skill base. As teachers, we may not know whether the student is achieving these results through a great deal of effort or with little or no effort at all! We may have a feeling that the student is 'cruising' but without testing our hypothesis we may never know if she could achieve at a higher level than her current performance, as the tests or assessment used may be creating a ceiling effect. **We will not know the full 'height' these students could have grown without an off-level measure.**

For a student who is performing well in school an IQ test may not be necessary, as it is obvious that the student is gifted in the area of performance. In such cases, off-level testing may be more appropriate, as it will show the extent to which the student is **ready for more challenge**, rather than simply identifying their potential. With such students we already know that they have the potential to achieve well and what we would like to find out now is how much more they know than they are currently showing us.

Off-level testing can be done within the school context for placement in a program which deals with accelerated content.

Another option is for students to enrol in talent searches such as the Australian Primary Talent Search (APTS) or the Australian Secondary Schools Educational Talent Search (ASSETS), run throughout Australia by GERRIC. The off-level tests used in talent searches allow students who have already been identified as academically gifted in maths, science, English and reading to show their **full** levels of ability in any of the subject areas surveyed by the tests. These tests also provide valuable information, for schools and parents, about the readiness of students to undertake curriculum at a particularly high level.

Information about APTS and ASSETS, can be found on the GERRIC website at: http://www.gerric.arts.unsw.edu.au/stdt_apts.html

The general rule of thumb with off-level testing

- In the **first three Years of school** you should use tests **one to two years above grade level**.
- In the **primary Years of schooling** you should use tests **two to three years above grade level**.
- In **first four years of high school** you should use tests **three to four years above grade level**.

In the secondary years of schooling, above-level assessments should be **at least three years above** current Year placement. Students who achieve at or above the 85th percentile in a secondary entry test might then sit a school's certificate paper in that subject area, for example in maths. This testing may guide the teacher as to the appropriate level of work particular students need, to continue learning new concepts in this subject/KLA.

Disadvantaged and culturally diverse populations

Gifted children are found in all cultural groups, in the Indigenous population and in every socio-economic level. However, students who come from backgrounds other than that of the dominant culture may be more difficult to identify using standard identification procedures. These students may not perform well on standardised objective assessments, as we have discussed in Core and Extension Modules 4 of this Course.

Babad and Budoff's (1974, p. 439) research identified some of the reasons why some children from these populations may perform poorly:

'They are fearful of the testing process, expect to do poorly, are often insensitive to speed requirements, are unfamiliar with the problem contents, and do not develop spontaneously the most effective strategies (by middle-class criteria) to solve the problems.'

When using standardised IQ assessments, there are three issues to consider, which will disadvantage these students:

- perceived test bias and selective interpretation of test results.
- failure to consider the intrapersonal and environmental catalysts which will affect the student.
- standardised IQ tests do not provide sufficient information for the teacher to design an effective intervention or remedial program (Chaffey, 2002).

Therefore, if these students are to be identified, the process must be modified. If peer and self nomination are not effective, due to the forced-choice dilemma and the students' reluctance to risk cultural disapproval by 'standing out', other subjective measures will need to be used. A flexible approach must be followed to identify the many facets of reasoning and expressions of giftedness which exist.

The following modifications should be made to the identification process for Indigenous, culturally diverse or low socio-economic students:

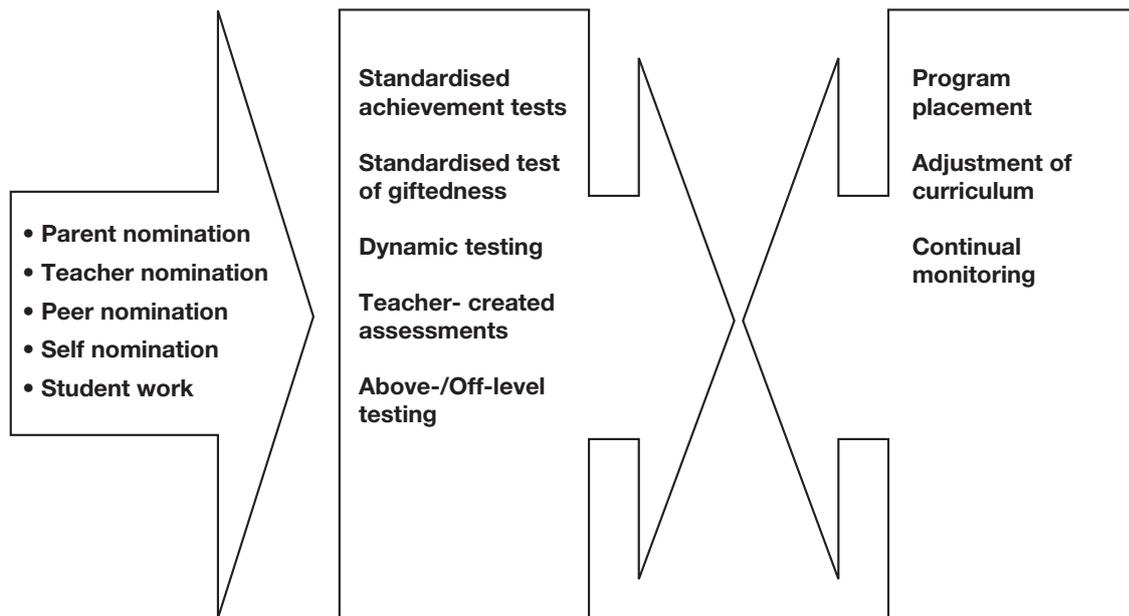
- Use authentic assessment, dynamic testing and exposure to challenging teaching to unlock the potential that exists in both visible and invisible underachievers.
- Educate teachers to be more aware of the environmental and personal catalysts which may affect the expression of giftedness in students from these populations.
- Gain the trust of the parents and assist them to complete a parent nomination form.

One way to identify underachievers from Indigenous and culturally diverse groups or disadvantaged populations is to use the emerging methodology of **dynamic testing**. This represents a very promising alternative to traditional assessment in that it seeks to optimise the student's cognitive performance, rather than simply measure it as it currently manifests itself. Dynamic testing is explained more fully in Core and Extension Modules 4.

So ... which objective and subjective measures should I choose?

As there are so many different types available, it is best to analyse these in a chart format. The Chart Summary of Objective and Subjective Testing was included in Core Module 2, at the end of the section on objective measures. It may be useful to review that chart briefly before completing the rest of this Module.

Identification process flow chart

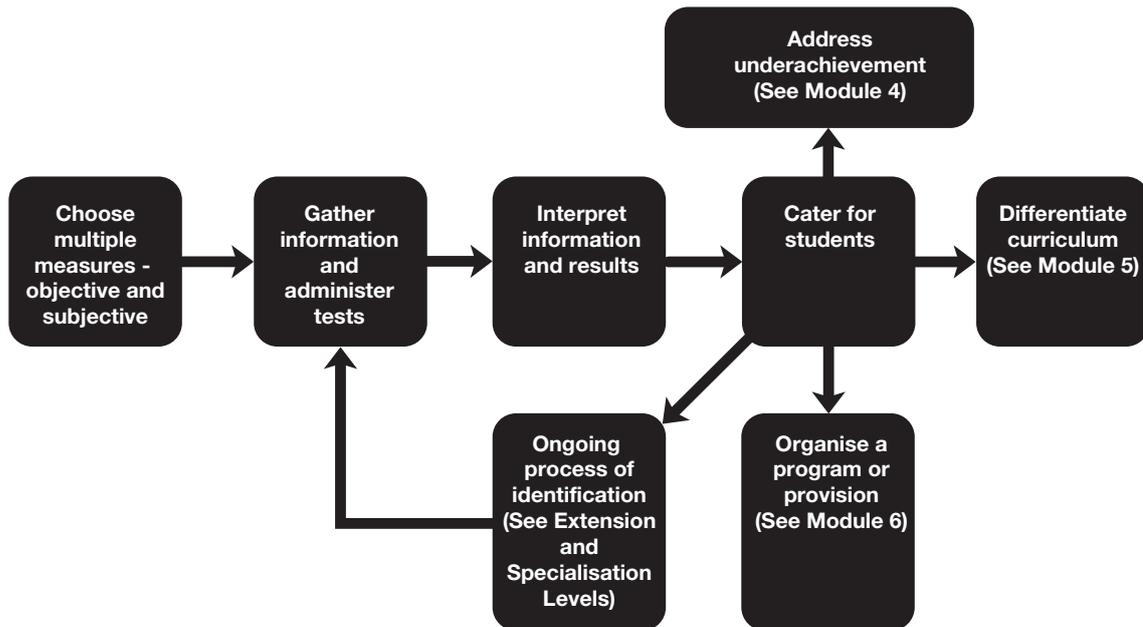


As you can see, the first arrow on the flow chart comprises subjective tools and information that help to screen students. When screening students, you are trying to identify as many likely candidates as possible. The next arrow contains a list of more objective tools which can be used, in combination with the screening measures, to identify students who are gifted or already showing talent. The final arrow summarises what should happen once a student has been identified as gifted or talented. Thus, the identification process is continuous, as is portrayed in the second flow chart on page 37.

The identification process

Now that you have covered material on subjective and objective measures of identification you can see that the identification process is multifaceted and may be different in different contexts. You may wonder where identification fits into the scheme of things in your school.

The following flow chart shows the process of identification from start to 'finish'. You will note that the process is actually a continuous cycle, something that will never be static or complete.



Now, let's return to the assessment we had at the beginning of this Module. By using the same pre-test and post-test, you can measure the knowledge you have gained from the Module.

1. What is the purpose of using a peer nomination form?
2. What is the purpose of students nominating themselves for a gifted program?
3. What are IQ tests successful at predicting? What do IQ tests not predict about a child?
4. What recommendations do you have regarding the following case study?



Mr Wells is a Year 9 maths teacher, who is considering running a new 'Galileo maths' course which would cater for the needs of gifted maths students in Year 9. Students in this course will need to be strong in the area of problem solving and using maths in a creative way. He has a list of the end of year maths results from the previous year and a list of students who have been identified as gifted. What other subjective methods can Mr Wells use to ensure he is casting his net wide enough to identify all the students who should be in his Galileo program?

1. To add a peer's perspective to the identification process.
2. To find out specifically what skills and areas of interest the child already possesses in their talent domain.

3. IQ tests

- measure the potential to achieve well in the school system.
- do not account for the external and internal catalysts that influence a student's development of talent.
- give us information about a student's relative strengths and weaknesses.
- show us how well students can deal with novel information and their level of reasoning.
- give us information about a student's verbal and non-verbal reasoning generally and the subtests give us more detailed information about the relative strengths and weaknesses within these areas.

4. The following modelled response has been provided for the case study.

What other subjective methods can Mr Wells use to ensure he is casting his net wide enough to identify all the students who should be in his Galileo program?

Mr Wells distributes a self nomination form to all students in Year 9. His form begins with an outline of the Galileo program goals and a description of the target population. He asks the students three key questions about their interest in maths, what they like to do with maths outside school and in what areas of maths they are most interested. He also asks them to submit one mathematical question or idea that has always made them wonder - about how it worked or why it was. He also decides to examine the competition paper results from the previous year to identify students who have done well on these papers, which require mathematical problem solving for achievement. He then uses some older competition papers from Years 11 and 12 as an above-level test. He adds the data collected on the self nomination form to his other subjective and objective data, in order to screen which students are to be identified for his Galileo program.



Resources

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