GIFTED AND TALENTED EDUCATION
PROFESSIONAL DEVELOPMENT PACKAGE FOR TEACHERS

SPECIALISATION

Module 2

Early Childhood
Primary
Secondary

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Ruth Targett
Specialisation Level

Introduction

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

As with the Core and Extension Packages which you have completed earlier, 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.

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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.
Module 1: Understanding Giftedness

The course has examined and analysed three influential models of giftedness, Françoys Gagné’s Differentiated Model of Giftedness and Talent, Joseph Renzulli’s ‘three-ring’ model and Abraham Tannenbaum’s ‘sea-star’ model. 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 and, in particular, how intellectually/academically gifted students tend to differ in the ways they learn. In the Extension Module we revisited Betts and Neihart’s six ‘profiles’ of gifted learners and discussed how different learning styles could help to explain some of the attitudes and behaviours of these students. We looked at levels of giftedness and the implications of this for program development.

Module 2: The Identification of Gifted Students

We have looked at the principles of effective identification in early childhood, in the primary school years and in adolescence. We examined the principles of reliability and validity and discussed how important these are in selecting identification tools. 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 have analysed the strengths and weaknesses of teacher, parent, peer and self-nomination and the use of IQ, aptitude and achievement testing and off-level testing. We have highlighted the use of dynamic testing to identify students from disadvantaged and culturally diverse populations. We analysed two different ways of synthesising the valuable data gathered from all these procedures to provide a useful identification matrix for your school.

Module 3: Social and Emotional Development of Gifted Students

This Module has highlighted ways in which intellectually or academically gifted children may differ from age-peers in their emotional maturity, their friendship conceptions, their feelings about their gifts and talents and even their hobbies and interests. We analysed possible outcomes of the ‘forced-choice dilemma’, for example ‘dumbing down’ or moderating one’s 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). We looked at how motivation and optimism can influence achievement and we evaluated positive and negative aspects of perfectionism. We explored some issues in parenting gifted students, such as how to encourage task-oriented rather than performance-oriented self-expectations and the importance of building facilitative home-school partnerships. We explored a range of issues in self-esteem and noted that unrealistically inflated self-esteem can be moderated by the experience of working with other students as able as oneself.

Module 4: Understanding Underachievement in Gifted Students

We explored some of the causes of underachievement among gifted students. Boredom, learning disabilities, low teacher expectations and dysfunctional perfectionism were examined. 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. We noted that underachievement often arises from students’ own beliefs that they are of low ability or little value and we suggested strategies through which teachers can identify and assist those students. We discussed the links between academic self-efficacy and students'
abilities to persevere in the face of difficulties and we examined some strategies that teachers can use to enhance students’ self-efficacy through mastery experiences — including the provision of positive role models. We investigated key factors in underachievement in Australian Indigenous children such as the educational disadvantage experienced by involuntary minority status peoples, and the distrust of, and negative attitudes toward, education that can emerge from this. We affirmed the importance of allowing all underachievers to experience ‘flow’.

**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. We showed how the use of 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. The Maker model provides a vehicle for developing extension activities through differentiating the content, process, product and learning environment and through providing rich tasks and ‘real world’ problem solving activities for gifted students. We examined some of the research supporting curriculum differentiation for gifted students and explored different ways in which we can evaluate the effectiveness of curriculum differentiation. We noted that different levels of giftedness require different curriculum differentiation strategies.

**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. The concept of effect size was introduced as a useful way of representing learning gains through different programs of acceleration and ability or achievement grouping. Several forms of grouping and acceleration were described and their academic outcomes reported. Practical hints were provided to maximise the effectiveness of these programs. 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. We examined both the possibilities and the pitfalls of using cooperative group learning with gifted students. We explored the possibilities of online and group mentoring and its particular advantages for gifted students in rural and remote areas. We explored issues in the development and management of individual education programs which can be extremely beneficial and which are particularly necessary for students of more than moderate levels of giftedness, students who have a learning disability or physical impairment, or indeed any gifted student who is significantly underachieving or at risk of becoming a chronic underachiever.

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

We have not provided pre-tests for the Specialisation Modules as we anticipate that, having progressed this far, you are enjoying the Professional Development Package and will be eager to work through the material that follows.
Welcome to Specialisation Module 2: Other Issues in the Identification of Gifted and Talented Students. In this Module you will become familiar with what research says about the identification of gifted and talented children. You will become even more familiar with the tools available to identify this population of students and how to decide which tools may be the most appropriate to use within the specific context of your school.

Caroline Merrick & Ruth Targett
Specialisation Module 2: Early Childhood

Other Issues in the Identification of Gifted and Talented Students

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Outcomes

At the completion of this Module you will:

- have a fuller understanding of what research tells us about the identification of gifted and talented children and adolescents.

- understand the differences between reliability and validity, and efficiency and effectiveness, and how these concepts influence the choice of identification tools.

- be able to analyse and evaluate identification methods and recommend improvements to your school’s current procedures using objective and subjective measures.
Part 1

What research says about identification

As you have worked through each Module you will have come to understand how and why gifted and talented students are a special group of children and adolescents who have special learning needs. Their needs are different from those of their age-peers of average ability and, as a result, they require special educational planning to support the development of their gifts and talents. You will have become acquainted with characteristics of these students in Module 1 and how to create effective learning plans for these students in Module 5. Using the knowledge that you have gained you will be able to provide more effective programs for gifted and talented students in your school, district or system.

The process of identification is integral to providing effective programs and interventions for gifted students. It is imperative that the identification tools that we use actively complement what research tells us about the identification of such students. Therefore, you must know which tools will be the most appropriate to your individual context.

As educators we believe that meeting their learning and emotional needs is the most important role we play in the lives of our students. Regardless of where students are on the learning continuum, we aim to provide learning experiences which will enable them to move forward from their current level of development. In order to ensure that we are catering to these needs, we need to know both the potential and the current level of performance of our gifted students.

If we use research-based, effective identification tools, as we continually reassess students and their current levels of achievement, we will be more able to provide educational interventions that are appropriate. We need to know which tools to use to identify giftedness or talent and which tools will be most appropriate for the specific program in the child’s particular school situation.

So what does research tell us about the identification process and the tools that are available to us?

The most recent research in the identification of gifted and talented students has focussed on what current identification tools can and cannot achieve. Researchers have expressed concern at the lessened ability of some identification tools to effectively identify students from culturally diverse backgrounds, particularly those whose first language is not English or who may be less accustomed to using ‘formal’ English.
Consequently, there has been a greater focus on the assessment of students’ nonverbal ability to provide an objective way of identifying these students.

Research over the past 20 years consistently identifies the following as important guidelines which can assist teachers to plan identification procedures for their school's gifted and talented students.

Research-based guidelines for determining a school's identification process

- Identification should be multifaceted.
- Different tools will be appropriate for use with different populations and different age groups.
- The identification process must match the definition of giftedness and talent adopted by the school.
- Use both subjective and objective tools, as these provide different but complementary information.
- Teachers with training in gifted education are more effective in identifying gifted and talented students than are teachers without such training.
- Some tools have much stronger reliability and/or validity than others.
- Identification should be an ongoing process.
- The primary reason for identifying a gifted and/or talented student is to provide an appropriate educational program.

A graphic summary of these follows:
Research into the identification of gifted and talented students has been going on for many years. In fact it is one of the most researched and debated areas in gifted education. However, over the years the tools that have been used for identification, and the rationales for using these tools, have changed significantly.

The period between the early 1980s and the mid-1990s focussed on the justification of the use of standardised assessment procedures in appropriate situations — for example, the use of IQ tests to identify intellectually gifted students who had the potential for high academic achievement in school. Leading on from this, research in the subsequent 10 years has taken a strong equity focus, examining ways in which these procedures can be harnessed to identify students from culturally diverse and socio-economically disadvantaged situations. By examining the research from the past 20 years, we can gain a better understanding of the history of the identification debate.

As Specialisation Module 1 has described, Talent Searches have been employed for many hundreds of years in a range of cultures. Ironically, the first modern IQ test was developed by French psychologist Alfred Binet at the start of the 20th century to identify slow-learning children who were at risk for educational failure. Later these tests were modified and used to identify students who were intellectually gifted. Specialisation Module 1 has outlined some of the findings of studies such as those conducted by Lewis Terman and Leta Hollingworth. Group intelligence tests were developed during the early years of World War I to assist the allocation of soldiers to different responsibilities; however, even though a nonverbal version was available, these tests were culturally biased and made no allowance for individuals’ background and experience.

Theoretical rationale should underpin the identification system

One of the most important issues in gifted education, including the identification of gifted and talented children, is that sound theory must underpin practice (Feldhusen, Asher & Hoover, 1984; Renzulli, 2004). Conceptions of giftedness and talent have been discussed in Module 1 and we have shown that our rationale for adopting the Gagné model has been based on its defensibility, its flexibility and its operational application. Similarly, we need to ensure that the tools we use to identify gifted and talented students are both grounded in solid research and effective in their application. Some gifted students will be quickly identified as they perform well in the school system. However, underachievers and children from culturally diverse populations may need different forms of identification to determine their potential. We must also consider the age of the student(s) we wish to identify, as different tools will be more useful with some age groups than others.

As discussed in the Core and Extension Modules, the goals of any program should determine the identification process. If the program is an accelerated program in mathematics, it follows that the identification tools will focus on tests of mathematical aptitude and achievement. However, if the goal of the program is to promote giftedness and talent within the school population no matter where these talents lie, the process must be much broader and more flexible.
Multifaceted approach

One of the common points of agreement among researchers is that using one single score from an IQ test or cognitive ability test is not appropriate practice in the identification of gifted and talented children (Borland, 1989; Feldhusen, Asher & Hoover, 1984; Assouline, 2003). This does not mean that IQ tests or cognitive ability tests do not give us useful information. Rather it indicates that a combination of subjective and objective measures should be used, with the weighting of each measure taken carefully into consideration.

For example, to create a ‘talent pool’ of students by bringing together information about gifted behaviours gleaned from parent and teacher nomination forms, portfolios of the students’ work samples or creative endeavours, and results of IQ and achievement tests, we would probably place more weight on the classroom work samples and on the objective test results than on the more subjective parent and teacher nomination forms. However, we will make an informed judgement about the best way to meet the academic needs of the child on the basis of all the information we have collected.

We know that IQ tests used appropriately give us reliable information about a child’s potential to achieve within the school system. For children from the cultural group for which a test was designed, individually administered psychometric assessments are often the most effective form of identification (Assouline, 2003; Naglieri & Ford, 2005). These tests include group and individually administered tests. However, even within the population for which the test was designed there could be some students who may not be identified. For example, students who have specific learning difficulties or who worry excessively about tests may be less readily identified by group tests than on individual testing.

Is the process of identification an exact science? Unfortunately it is not. There is no formula that will ensure that we have identified every gifted student in every situation. However, by using a combination of tools that will give us information not only about a child’s achievement but also about his or her capacity to achieve, we can make a more informed decision about placement and educational interventions.

Culturally diverse populations

Research on identifying gifted students shows that different tools are more appropriate for different populations. At present, much of the research that is being undertaken on identification in the USA and Australia focusses on how to use a variety of tools and procedures to ensure that we are able to identify children from all cultural and socio-economic backgrounds (Assouline, 2003; Borland, 1994; Borland & Wright, 1994; Naglieri & Ford, 2005). The use of nonverbal measures and dynamic testing is important in ensuring inclusiveness in the identification process.

If we identify gifted students using tools that measure their potential to achieve but do not provide a program which will enable them to develop their skills then the process has been pointless. We must be careful, however, to ensure that the identification tools match the program that is provided. For example, identifying gifted students whose first language is not English
through the use of tests which measure nonverbal ability is an important first step in identifying their high ability. However, immediately placing these children into a gifted program where the majority of the work relies on excellent verbal skills in English would be premature before these students have had a chance to consolidate their English skills.

As has been discussed in Core and Extension Modules 4, recent research has found that gifted children from culturally diverse backgrounds may score at levels below their true potential on standardised assessments such as IQ or achievement tests, due to inefficient metacognition, learned helplessness and the forced-choice dilemma rather than because their cognitive potential is below that of children from mainstream cultures (Chaffey, Bailey & Vine, 2003). Equally, these students may not be identified by subjective evaluations such as teacher or peer nomination due to teachers’ stereotyped perceptions of gifted students being successful achievers from the dominant culture. This is important to note as it has implications for the equity of any identification process in schools which contain students from culturally diverse and/or socio-economically disadvantaged backgrounds. In such situations communication, teacher professional development and collaboration with the community will be essential in creating trust. As outlined in Modules 4 and 6, students from such situations may need to have a number of other supports put into place to help them translate their potential into performance.

Students from culturally diverse populations are more easily identified by their ability to manipulate the abstract symbol systems which are valued in their own culture, their ability to think logically about given data, their ability to solve problems, or their capacity to reason by analogy and extend their knowledge into new situations (Clark, 2002). However, indications of these abilities may only be visible in situations where the children feel comfortable and accepted. Their self-confidence and perceptions of self-efficacy may need to be developed before testing (Chaffey, Bailey & Vine, 2003). This may mean that the identification process will take longer with these students than with other processes. The gifted program developed for these students needs to support their intellectual and social-emotional development along the learning continuum, rather than place them immediately in a situation where they have been accurately identified as gifted but may not yet have the intrapersonal resources or skills to perform well in the program.

**Gifted students with special needs**

Students who are gifted may also have special needs. A student may be gifted but also hearing impaired. Similarly, a gifted student may have Aspergers Syndrome, or may have an auditory processing problem, or be dyslexic. Each of these children will show different patterns of strengths and weaknesses. These children are sometimes termed ‘twice exceptional’.

The identification of gifted students who also have special needs is challenging. The most common way for this identification to occur is through psychometric assessment (Ruban & Reis, 2005). For example, students who are gifted but who also have learning difficulties may be identified through large discrepancies between the subtests in an IQ test, or discrepancies between the verbal and nonverbal scores.

It is extremely important that we identify these students as early as possible as, unfortunately, our school systems too often work on a deficit model which encourages teachers to focus on the children’s weaknesses rather than on their strengths. While it is important that deficits are identified and remediated, these children must also be assisted to show what they can achieve in their talent areas. A further challenge in identifying these students arises from the fact that
giftedness may help them compensate for their deficit in the early years of school, so that they can function at age-appropriate level. However, as they progress through the school system and tasks become more abstract and complex, these students may begin to fall behind.

Although there is substantial agreement in the research literature about the characteristics and needs of twice-exceptional students there is little agreement as to appropriate strategies through which these students can be identified. Some researchers suggest a longitudinal approach which includes observations, individual IQ tests, measures of cognitive functioning and an achievement battery, suggesting that this combination of measures should highlight the strengths and weaknesses of these students (McCoach et al, 2001). McCoach et al also believe it is essential to assess the students’ level of functioning in the classroom and to tap twice-exceptional students’ own assessment of their attitudes and achievement.

As with other gifted students, a series of objective and subjective measures should be used to identify gifted students with learning difficulties. Accurate diagnosis is imperative in dealing with the deficit as well as fostering the talent. These students may be enrolled in a gifted program while simultaneously working to remediate their weaknesses. This process recognises and provides for the ‘duality’ of these children.

**Teachers are better at identifying gifted students if they have training in gifted education**

Teachers who do not have training in gifted education are much less effective in identifying gifted students than are teachers who do have such training (Siegle, 2001). Teachers who are familiar with the characteristics of gifted children and the cognitive and affective needs of these children are less likely to identify as gifted only these students who are successful, compliant and easy to teach — George Betts and Maureen Neihart’s Type 1 student, for example. This has important implications for the use of teacher nomination.

Teachers with training in gifted education are more likely to identify, as gifted, students who do not fit the teachers’ own gender stereotypes and students who have unexpected interests which produce unusual behaviours. This means that a student who stands out as being different is more likely to be identified as gifted than a student who seems to fit into the regular group. This issue is important; as we have discussed in Core and Extension Modules 3 and 4, as many gifted students put a lot of effort into appearing ‘average’ (Gross, 1989). Teachers also tend to be concerned about misidentifying students and placing, in gifted programs, students who cannot keep up with the work. These teachers may be reluctant to recommend students who are not visibly achieving — and underachieving gifted students will rarely be identified in such situations.
As discussed earlier, teachers may focus on student weaknesses rather than strengths. This may disadvantage gifted students whose achievement profiles are inconsistent. Additionally, teachers tend to focus on skills associated with academic performance rather than those associated with creativity — and this may have implications for the underachievement of gifted divergent thinkers (Siegle, 2001). Gifted, creative and divergent thinkers may not demonstrate the skills that teachers associate with academic performance — or they may prefer to approach tasks in their own way rather than the way the teacher has prescribed.

Teachers may have quite different perceptions of the characteristics of students in their subject area. For example, one study showed that teachers of mathematics generally perceive mathematically gifted students as those who are ‘school-smart’ in maths. However, maths teachers with higher degrees were more likely to value and identify gifted problem solvers, while female maths teachers were more likely to identify students who could apply mathematics to real world situations (Ficici, 2003). Schools and faculties need to agree on what student needs their specific gifted program will be designed to meet, and train staff to identify the same specific gifted characteristics. Staff support is essential if the identification process is to be appropriately matched with the resulting program.

Happily, teachers’ attitudes can change and they can be assisted to become effective identifiers of the gifted. A study conducted by Gross (1994), which measured change in teachers’ attitudes towards gifted children and gifted education after an intensive professional development program, found that teachers’ attitudes can improve significantly. The participants in the study completed their Certificate of Gifted Education (COGE) at the University of New South Wales. This course comprised 75 contact hours of lectures and seminars, over an 18-month period, during which students completed five assignments.
Participants were tested before commencing their training and again at the conclusion of their COGE course on a standardised questionnaire which measures teachers’ attitudes towards issues including needs of gifted and talented students, support or lack of support for gifted education, social usefulness of gifted persons, rejection of gifted persons, ability grouping and acceleration. The study demonstrated that a professional development program which is carefully planned and well-conducted can achieve strong positive changes in teacher attitudes.

Trained teachers are more effective in the identification of gifted children than teachers who do not have training in the area of gifted and talented education.

**Gender and the identification process**

Another consideration in determining an effective identification process is that of gender. A recent study suggests that when a high weighting is given to group ability tests in a coeducational situation boys may be more readily identified than girls (Kerr & Nicpon, 2003). Some studies suggest that girls attribute success and failure negatively compared to boys — especially in the case of mathematics. They use self-defeating attitudes when explaining success (attributing it to external factors) and failure (attributing it to lack of ability on their part) and this internal attribution can lead to a lack of self-efficacy. Boys may not perform well in identification procedures if they feel that they will lose peer acceptance (Hawkes, 2001). Boys who feel that their environment does not support academic achievement may deliberately underachieve in the identification procedure to ensure that their social image remains intact.
How do we make subjective tools more objective?

We cannot turn a subjective identification tool into a completely objective one. However, we can improve the efficacy of these instruments by following a few simple guidelines. As we know, subjective measures are measures that allow judgements to be made on the basis of observations made of the child or adolescent. These may be based on the observable behaviour exhibited by the child. Such tools include teacher, parent, peer and self nomination, along with anecdotal records contributed by previous teachers and by the child’s family. These observations may be inconsistent, as each person may have a slightly different interpretation of what specific behaviours indicate or where along the continuum of below average to above average the behaviour lies. Just as our perception of normality is relative, our perception of giftedness may also be relative. For example, the parents of a gifted child may not see their child as gifted if his or her siblings achieved the same milestones at the same time. For example, early reading may be the norm in a particular family and the parents may not perceive it as unusual to have a child who reads before school entry.

Similarly, teachers who have taught for a long time in one particular school where the average student ability level is unusually low or unusually high may not have seen the variety of students which would enable them to make an accurate assessment of what is a gifted child, so may need assistance in this area.

To increase the objectivity of subjective tools we can use checklists and scales which are based on the characteristics and behaviours that research has shown are common to gifted and talented students (Feldhusen, Asher & Hoover, 1984). By using research-based checklists or nomination forms we can reduce the ‘elasticity’ of people’s interpretation of a stereotypical profile of a gifted and talented child. We can also give examples of how these behaviours may appear in both positive and negative forms. By giving examples of the positive and negative behaviours which may be exhibited by a student, we can again extend the range of observers’ understanding of giftedness and talent while reducing the potential for error.

We can also use checklists and nomination forms that require evidence from the observer about the child’s behaviour. When evidence is required the person completing the form must examine his or her own assumptions about the behaviours being observed. He or she must also think of a specific incidence — as evidence of the characteristic or behaviour — which can be highlighted and recorded on the nomination form.

Another way to increase the objectivity of checklists and observation forms is to use a rubric which gives examples of the behaviours and the relativity of these observations when compared with other children. This rubric is one way of increasing inter-rater reliability. This is where the raters of the scale come to an agreement as to what constitutes a particular observation and what might be appropriate evidence to support their judgment. If we increase the raters’ agreement about the specific gifted characteristics that we wish to observe and how much these differ from their age peers, then we are more likely to gain a more objective perspective on the subjective measures. When the subjectivity of nomination forms is reduced, we still have to complement subjective procedures with more objective measures. However, the more objective the subjective measures become, the more effective the collection of observations of gifted behaviours and annotated examples will be in identifying your gifted and talented children.
Schools can work with their trained staff to create rubrics that will improve the inter-rater reliability of the tools they develop. Meeting and agreeing on the rubric will help the school ensure that the tools being used are useful in the process.

Another way to ensure that the subjective tools you use are highly effective is to use a scale that has already had its reliability and validity tested. In their 1984 article in *Gifted Child Quarterly*, Feldhusen, Asher and Hoover noted three tools which show substantial reliability and validity. They are the GIFT rating scale, the Multidimensional Screening Device and the Inventory for Finding Creative Talent. This does not mean that these scales should be used in isolation; however, it is certainly wise to use scales for which we have evidence of strong reliability and validity.
Self-Reflection

What recommendations do you have for the educator to deal with the following dilemma? (You may prefer to do this alone or perhaps in discussion with another colleague who is also completing this Specialisation Module.)

Ms Jones teaches Kindergarten/Reception in the local school. She wishes to meet the variety of needs of the children in her class this year and has decided to send home a nomination form for parents to complete. How could she improve the objectivity of this tool so that the information she gets back will be useful?

As the Infants Coordinator, Mrs Williams wishes to improve the identification of gifted students enrolling in their first year of school. The staff have been given a checklist of behaviours to look for during orientation mornings. How could she improve this process to make the identification of these students more consistent? What skills might her staff benefit from developing?
Part 2

How validity and reliability affect our choice of objective tools

Validity

One of the biggest issues in identification is the validity of the tools being used in relation to the program’s goals and the resources available. If a program is designed to promote and develop the talents of students who are gifted in the verbal domain a tool which identifies students with strong visual-spatial abilities will be inappropriate. A test which identifies a student’s specific talent in mathematics only will also be inappropriate. However, a tool which identifies students who are gifted and/or talented in the verbal area will be appropriate.

There have been instances in the past where tools have been used inappropriately to identify students for programs. The application of the measures was not without good intentions as the program organisers wanted to include children from all situations; however the results were not positive. For example, there have been instances where nonverbal tests, or segments of tests, were used to identify students from culturally diverse backgrounds. These students were then being placed in gifted programs which required good verbal skills in English. There is obviously a validity problem here as the tools used do not match the program and as a result the students were placed in a vulnerable situation. While the students in such situations are gifted they are not being given their best chance to show and develop their giftedness if the identification tool used does not match the program for which they are being assessed.

Validity is the level of agreement between the test, or other measure, and the quality it is supposed to assess. There are four major types of validity:

- face validity
- content-related validity
- criterion-related validity
- construct validity.

Each type of validity deals with a different aspect of the match between the tools and what the tools are supposed to be measuring.

Face validity is the appearance that the measure has validity. This type of validity may be important in situations where observation is involved. For example, the use of an observation checklist might have face validity. As a user of this procedure you must assume that the
behaviours you see are relevant to the learning environment. However, while this type of validity has relevance to the behaviours we may observe it has little relevance to us as educators choosing appropriate identification tools for gifted and talented students.

**Content-related validity** is one of the biggest concerns when creating or using tests that cover particular content. For example, if you are studying history and you are told that the test will be on the first six chapters of the history text you have been working on but the test assesses chapters 6–10 instead, the content-related validity is poor. If the test contained what you had been told it would cover (i.e., what you had been expected to learn) then it is a valid test. This type of validity is of great concern to students and teachers when creating achievement tests which are designed to assess the amount of knowledge or skills a student has gained through the teaching of the subject. This type of validity is important to consider in pre-testing and post-testing of students.

**Criterion-related validity** tells us how well a test corresponds to a criterion set before the test is applied. Such validity would be used to assess whether the tools used to identify students for a particular program were successful in predicting their success in this program. For example, if you were using a series of tools to identify gifted and talented students in mathematics, to determine if the tools you have used are valid in identifying the right children, the criterion might be their success in the Maths Olympiad.

The final type of validity is **construct validity**, which will often be recorded in the introduction section of tests of ability or IQ tests. Because tests of ability or intelligence are assessing a construct for which we have no concrete parameters, the validity of such tests is assessed when the creators of the tool simultaneously define the construct and develop the instrument to measure it. They must assemble evidence about what the tool means and they can do this through comparing its results with other tests of similar constructs and observations over time. Before a tool such as an IQ test or an aptitude test is released for use a rigorous process of testing and retesting is employed to ensure that the tool is valid.
So why is validity important in determining the tools you wish to use in your identification process?

The validity of a measure is important as it tells you whether the test will actually assess what you hope it assesses. It is important because some tools may be more valid than others and you can take that into account to make a sound judgement about the tools you are choosing for your program. If we have the choice of two standardised tools to use as one of the measures for the identification of students for a particular program we need, firstly, to consider what we are looking for and, secondly, to check the construct validity as reported by the people who constructed the test. If we are going to create the test then we need to consider the content validity of the test, as we are unlikely to be able to conduct the rigorous assessment needed to identify the construct validity of the tool.

We know, for example, that IQ tests effectively predict a student’s potential to achieve well within the school system (Piirto, 1994; Richert, 2003;). We also know that such tests have undergone a rigorous development procedure and that their creators have ensured that the test has high validity. However, if the program for which you are identifying students is completely achievement-based then assessing the students’ potential and expecting them to perform well without support is an invalid use of this test.

We need to ensure that the tools we use are valid in their construction and the way in which we use them.

Reliability

The reliability of a tool relates to the confidence we can have that a student would attain much the same results if attempting the test again. The reliability results for a standardised test give us information about how likely it is that the score achieved is due to chance. For example, when a psychologist reports a child’s score on a test such as the WISC-IV he or she will report a confidence interval which states, for example, that we can be 95% confident that the child would achieve a score within this range if doing the test again after the prescribed period of time — according to the manual it is usually two years before a child can re-sit the same IQ test.

So why is it important that you consider the reliability of a test? It is important because if you are going to run a program for longer than a year and you are going to assess new students using the same procedure you need to know that the students have been identified as accurately, and fairly, as possible.

Hence, when choosing a standardised test it is worth reading about its validity and reliability to ensure that you are choosing the best possible tools for the identification process in your particular school context — and that you understand their limitations.
**Efficiency and effectiveness**

Finally, we need to consider the efficiency and effectiveness of the tools within the school setting in which they are being used.

By **efficiency** we mean how much time is allocated to the process for the amount and relevance of the information gained. This may be measured as a ratio between the number of children nominated and the number of gifted children found. For example, a peer nomination process that involves the teacher talking to each student individually is far less efficient (though possibly more effective) than one where the teacher uses a written form which all class members complete at the same time.

By **effectiveness** we need to know whether the tool is effective year in, year out in identifying the most appropriate students for the intervention or program offered. Effectiveness may be measured as a percentage of the gifted children it locates. Effectiveness may be considered to be high if the numbers of false negatives (ie gifted students wrongly identified as not gifted) and false positives (ie students wrongly identified as gifted) are low. For example, you would not use a group aptitude test if you were trying to identify students from Indigenous populations for it is likely to miss the ‘invisible underachievers’ we have discussed in Module 4. Instead it would be more effective (though less efficient) to use dynamic testing to identify gifted students in this population.

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**Note that the most efficient identification method will not necessarily be the most effective.** The principles of fairness and inclusion (eg of gifted underachievers or of culturally diverse students) ought not be sacrificed lightly, in the name of what is least demanding of your time or least costly.

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**Conclusion**

As you have worked through the Core, Extension and Specialisation levels of Module 2 you will have become more familiar with the types of identification tools available. You will know that before you implement your school’s identification process, your definition of giftedness and talent must be agreed upon, which in turn determines the rationale for identifying students.

You will have considered — and should be able to defend your choice of — the best available tools for identification and the coherent process you wish to implement in your school. You know that schools need to use a variety of measures — both objective and subjective — to ensure that the process is inclusive and fair. You will know about the validity and reliability of the identification measures and be able to make a more informed choice about the types of program you plan and how to identify students for such programs.

---

Importantly, you will have considered that no single measure will identify all gifted students — nor can any combination of measures be assumed to have done so, though it should mean that fewer are missed — and hence the identification process needs to be seen as an ongoing as well as wide-ranging one.
1. Which type of validity is useful when evaluating whether to use an IQ test:
   - face validity?
   - criterion validity?
   - construct validity?

2. How can you make a subjective tool more objective?

3. Why is it important to consider the validity and reliability of tools that we may use to identify gifted and talented children?

4. Choose one of the following case studies pertinent to your area and in point form recommend what the teachers, or members of the school executive, should do in this situation. You will need to consider information from the Specialisation Modules and knowledge gained through the previous Core and Extension Modules.
a) Mr Young wishes to identify students in his Year 2 class who have high ability in maths. He is deciding between two standardised tests available in his school’s resource room.

- What factors should he consider when choosing between the two tests?
- What other tools/identification techniques might he employ to ensure that he is using multiple criteria which are relevant to his school population?

b) Ms Kowalski teaches Kindergarten/Reception at the Central School in a small town. She has been asked to identify gifted students in her class. She has decided to use a parent nomination form as well as a series of activities to identify students who can already read and who perform above their peers in maths.

- What objective tools could she use with children this young?
- How could she ensure that the parents who nominate their children are reporting the information as reliably and objectively as possible?

c) Mr Ryan teaches Year 2 in an independent school in the city. In his class he has noticed James, who has difficulty reading and writing at the same level as the other students in the class but who has an incredible general knowledge for a child of this age.

- What recommendations could you make to help Mr Ryan diagnose whether James is a gifted child with learning difficulties?
The Principal of a school which has a large Indigenous population wishes to identify gifted students within the school. Those identified are to be placed in an extension program which focuses specifically on supporting underachievers in reaching their potential.

The Principal has asked the school’s Gifted Education Coordinator to investigate the best ways to identify such students. The Gifted Education Coordinator needs to write a proposal which explains the identification process and justifies why s/he has selected each of the specific identification tools.

• What would you expect this proposal to include?
You have been asked to write a proposal for an effective identification strategy for use in your school. You will need to consider all the steps and information from the Core, Extension and Specialisation levels of Module 2 to create a proposal that will be effective and relevant for your situation.

In your proposal make sure you consider the program, the population, the section of the school you work in, the resources available and the age of the children you deal with.

Appendix A is a sample checklist which may help you to think about the identification process that you wish to introduce.

Compile a needs assessment regarding the identification processes used to identify gifted and talented students in your school. In your analysis consider:

- the measures your staff are using effectively.
- the measures in which staff may need further professional development.

Appendix B is a sample checklist which may help you to create a similar one that is appropriate to your situation.

Create a checklist of objective and subjective measures that are currently in use and measures you would like to introduce. Determine a Professional Development plan for your staff, to improve their knowledge of, and skill in using, some of these tools.
1. Construct validity is useful when evaluating whether to use an IQ test.

2. You can make a subjective tool more objective by:
   • using tools that have been tested for validity and reliability.
   • using tools supported by research.
   • creating a rubric to increase inter-rater reliability.
   • requiring evidence for the observed behaviours.

3. It is important to consider the reliability and validity of the measures you use because this ensures that the tools actually measure the concept, construct or behaviour that you wish to measure. It ensures that you are likely to get similar results if the same measures are used again, giving you confidence that the results are consistent.

4. Suggested case study responses:

   a) Mr Young should look at the reliability and validity of the two tests and choose whichever is the more reliable and valid. He could add parent nomination to this process and collect work samples.

   b) Ms Kowalski could use standardised reading and maths tests as the objective measures. To make the parent nomination responses more objective she could provide a rubric to help parents think about the behaviours they are observing. She should also ask for specific examples.

   c) Mr Ryan would talk to the appropriate people about having James assessed using an IQ test as this will help Mr Ryan to understand where James has strengths and also where possible weaknesses are in his processing. He would organise this using the appropriate procedures which are established in his school.
The Gifted Education Coordinator should consider using dynamic testing and parent and self nomination, after gaining the trust of the local community.
References and Further Reading


**Websites**

http://www.hoagiesgifted.org/identification.htm


http://eric.ed.gov/digests/e644.html


Sample Checklist for the Identification Process

This checklist suggests components to think about when deciding the most appropriate identification process for your school and program. There is no single, best way, but you need to consider all aspects of the process.

1. What is the school’s definition of giftedness and talent?
   ........................................................................................................................................................
   ........................................................................................................................................................

2. Purpose/ Rationale for this Identification process(select from the following):
   • To identify gifted and talented students
   ........................................................................................................................................................
   • To identify talented students in the following subject(s): ...................................................
     ............................................................................................................................................
   • To identify gifted and talented students in the following subject area(s): ..........................
     ............................................................................................................................................
   • Other: ................................................................................................................................

3. Are there special contextual considerations regarding the identification process in your school? (eg, Are some students from culturally diverse backgrounds?)
   ........................................................................................................................................................
   ........................................................................................................................................................
   ........................................................................................................................................................
   ........................................................................................................................................................
   ........................................................................................................................................................

4. Is there a specific program already running within the school for which you wish to change how you identify/select student participants? If so, describe the program below, considering the skills, talents and gifts that you wish to identify:
   ........................................................................................................................................................
   ........................................................................................................................................................
   ........................................................................................................................................................
   ........................................................................................................................................................
   ........................................................................................................................................................
   .......................................................................................................................................................
To help you plan your identification process, complete the table below. Keep in mind that you will not use all of the tools below, but the best tools you have available to match your purpose. Remember that you must use a combination of subjective and objective measures.

<table>
<thead>
<tr>
<th>The Identification Process</th>
<th>Are these identification tools available in the school already?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated time for completing the identification process:</td>
<td></td>
</tr>
<tr>
<td>Age/ Year of students:</td>
<td></td>
</tr>
</tbody>
</table>

**Objective Measures**

<table>
<thead>
<tr>
<th>Name(s) of IQ test(s) you would like to use:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Standardised test(s) you would like to use:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Off-level(s) test(s) you would like to use:</th>
<th>Yes</th>
<th>No</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>State-wide literacy and/or numeracy tests:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
After completing the checklist, are there identification tools that you would like to ask your school to purchase? If so, rank them in priority order, from those needed most urgently to those that you can wait for if necessary.

1. 
2. 
3. 
4. 
5. 
6. 

<table>
<thead>
<tr>
<th>Competition papers:</th>
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<td>•</td>
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<td>•</td>
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</table>

<table>
<thead>
<tr>
<th>Teacher-made tests and assessments:</th>
</tr>
</thead>
<tbody>
<tr>
<td>•</td>
</tr>
<tr>
<td>•</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Dynamic testing:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Subjective Measures</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent nomination form (see Core Module 2)</td>
</tr>
<tr>
<td>Teacher nomination form (see Core Module 2)</td>
</tr>
<tr>
<td>Peer nomination form (see Extension Module 2)</td>
</tr>
<tr>
<td>Self nomination form (see Extension Module 2)</td>
</tr>
<tr>
<td>Work samples</td>
</tr>
<tr>
<td>Annotated observations</td>
</tr>
</tbody>
</table>
Using the checklist above to assist you, complete the flow chart below, to outline the sequence of the identification process in your school. You may prefer to make a list or present the information in another format. The most important thing is that you can articulate the tools and the process of identifying gifted and talented students in your school context.

Flow Chart of Identification Process
Principal's Evaluation of Staff Professional Development Needs for the Identification of Gifted and Talented Students

<table>
<thead>
<tr>
<th>Evaluation of Staff Needs re the Identification Process</th>
<th>Do staff need further professional development on the following?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete the table below to determine your staff’s professional development needs for the effective Identification of gifted and talented students at your school. Consider what staff members already know and what you would like them to know.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Objective Measures**

<table>
<thead>
<tr>
<th>Objective Measures</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>IQ tests (eg administration; what they tell us; how effective they are)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standardised tests (eg what is already available within the school; what else could be acquired; what information they provide)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Off-levels tests (eg what is already available within the school; what else could be acquired; what information they provide)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State-wide literacy and/or numeracy tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Competition papers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher-made tests and assessments (eg how teacher judgement may be improved; criteria we use when marking; how we can make these more reliable and effective in diagnosing strengths and weaknesses)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Dynamic testing  
(eg appropriateness of this method for our school population; familiarity of staff members with this method; any staff trained as dynamic assessors)

<table>
<thead>
<tr>
<th>Subjective Measures</th>
</tr>
</thead>
</table>

**Parent nomination form**  
(eg teachers’ willingness to have parents complete these forms; teachers’ views about their reliability)

**Teacher nomination form**  
(eg staff expertise in the administration of these forms; staff awareness of the significance of both positive and negative characteristics)

**Peer nomination form**  
(eg appropriateness for this age group; staff expertise in writing and administering a peer nomination form effectively)

**Self nomination form**  
(eg appropriateness for this age group; staff expertise in writing and administering a self nomination form effectively)

**Work samples**

**Annotated observations**
Module 2

Caroline Merrick
Ruth Targett
Welcome to Specialisation Module 2: Other Issues in the Identification of Gifted and Talented Students. In this Module you will become familiar with what research says about the identification of gifted and talented children. You will become even more familiar with the tools available to identify this population of students and how to decide which tools may be the most appropriate to use within the specific context of your school.

Caroline Merrick & Ruth Targett
Specialisation Module 2: Primary

Other Issues in the Identification of Gifted and Talented Students

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Outcomes

At the completion of this Module you will:

- have a fuller understanding of what research tells us about the identification of gifted and talented children and adolescents.

- understand the differences between reliability and validity, and efficiency and effectiveness, and how these concepts influence the choice of identification tools.

- be able to analyse and evaluate identification methods and recommend improvements to your school’s current procedures using objective and subjective measures.
Part 1

What research says about identification

As you have worked through each Module you will have come to understand how and why gifted and talented students are a special group of children and adolescents who have special learning needs. Their needs are different from those of their age-peers of average ability and, as a result, they require special educational planning to support the development of their gifts and talents. You will have become acquainted with characteristics of these students in Module 1 and how to create effective learning plans for these students in Module 5. Using the knowledge that you have gained you will be able to provide more effective programs for gifted and talented students in your school, district or system.

The process of identification is integral to providing effective programs and interventions for gifted students. It is imperative that the identification tools that we use actively complement what research tells us about the identification of such students. Therefore, you must know which tools will be the most appropriate to your individual context.

As educators we believe that meeting their learning and emotional needs is the most important role we play in the lives of our students. Regardless of where students are on the learning continuum, we aim to provide learning experiences which will enable them to move forward from their current level of development. In order to ensure that we are catering to these needs, we need to know both the potential and the current level of performance of our gifted students.

If we use research-based, effective identification tools, as we continually reassess students and their current levels of achievement, we will be more able to provide educational interventions that are appropriate. We need to know which tools to use to identify giftedness or talent and which tools will be most appropriate for the specific program in the child’s particular school situation.

So what does research tell us about the identification process and the tools that are available to us?

The most recent research in the identification of gifted and talented students has focussed on what current identification tools can and cannot achieve. Researchers have expressed concern at the lessened ability of some identification tools to effectively identify students from culturally diverse backgrounds, particularly those whose first language is not English or who may be less accustomed to using ‘formal’ English.
Consequently, there has been a greater focus on the assessment of students’ nonverbal ability to provide an objective way of identifying these students.

Research over the past 20 years consistently identifies the following as important guidelines which can assist teachers to plan identification procedures for their school's gifted and talented students.

Research-based guidelines for determining a school’s identification process

- Identification should be multifaceted.
- Different tools will be appropriate for use with different populations and different age groups.
- The identification process must match the definition of giftedness and talent adopted by the school.
- Use both subjective and objective tools, as these provide different but complementary information.
- Teachers with training in gifted education are more effective in identifying gifted and talented students than are teachers without such training.
- Some tools have much stronger reliability and/or validity than others.
- Identification should be an ongoing process.
- The primary reason for identifying a gifted and/or talented student is to provide an appropriate educational program.

A graphic summary of these follows:
Research into the identification of gifted and talented students has been going on for many years. In fact it is one of the most researched and debated areas in gifted education. However, over the years the tools that have been used for identification, and the rationales for using these tools, have changed significantly.

The period between the early 1980s and the mid-1990s focussed on the justification of the use of standardised assessment procedures in appropriate situations — for example, the use of IQ tests to identify intellectually gifted students who had the potential for high academic achievement in school. Leading on from this, research in the subsequent 10 years has taken a strong equity focus, examining ways in which these procedures can be harnessed to identify students from culturally diverse and socio-economically disadvantaged situations. By examining the research from the past 20 years, we can gain a better understanding of the history of the identification debate.

As Specialisation Module 1 has described, Talent Searches have been employed for many hundreds of years in a range of cultures. Ironically, the first modern IQ test was developed by French psychologist Alfred Binet at the start of the 20th century to identify slow-learning children who were at risk for educational failure. Later these tests were modified and used to identify students who were intellectually gifted. Specialisation Module 1 has outlined some of the findings of studies such as those conducted by Lewis Terman and Leta Hollingworth. Group intelligence tests were developed during the early years of World War I to assist the allocation of soldiers to different responsibilities; however, even though a nonverbal version was available, these tests were culturally biased and made no allowance for individuals’ background and experience.

Theoretical rationale should underpin the identification system

One of the most important issues in gifted education, including the identification of gifted and talented children, is that sound theory must underpin practice (Feldhusen, Asher & Hoover, 1984; Renzulli, 2004). Conceptions of giftedness and talent have been discussed in Module 1 and we have shown that our rationale for adopting the Gagné model has been based on its defensibility, its flexibility and its operational application. Similarly, we need to ensure that the tools we use to identify gifted and talented students are both grounded in solid research and effective in their application. Some gifted students will be quickly identified as they perform well in the school system. However, underachievers and children from culturally diverse populations may need different forms of identification to determine their potential. We must also consider the age of the student(s) we wish to identify, as different tools will be more useful with some age groups than others.

As discussed in the Core and Extension Modules, the goals of any program should determine the identification process. If the program is an accelerated program in mathematics, it follows that the identification tools will focus on tests of mathematical aptitude and achievement. However, if the goal of the program is to promote giftedness and talent within the school population no matter where these talents lie, the process must be much broader and more flexible.
Multifaceted approach

One of the common points of agreement among researchers is that using one single score from an IQ test or cognitive ability test is not appropriate practice in the identification of gifted and talented children (Borland, 1989; Feldhusen, Asher & Hoover, 1984; Assouline, 2003). This does not mean that IQ tests or cognitive ability tests do not give us useful information. Rather it indicates that a combination of subjective and objective measures should be used, with the weighting of each measure taken carefully into consideration.

For example, to create a ‘talent pool’ of students by bringing together information about gifted behaviours gleaned from parent and teacher nomination forms, portfolios of the students’ work samples or creative endeavours, and results of IQ and achievement tests, we would probably place more weight on the classroom work samples and on the objective test results than on the more subjective parent and teacher nomination forms. However, we will make an informed judgement about the best way to meet the academic needs of the child on the basis of all the information we have collected.

We know that IQ tests used appropriately give us reliable information about a child’s potential to achieve within the school system. For children from the cultural group for which a test was designed, individually administered psychometric assessments are often the most effective form of identification (Assouline, 2003; Naglieri & Ford, 2005). These tests include group and individually administered tests. However, even within the population for which the test was designed there could be some students who may not be identified. For example, students who have specific learning difficulties or who worry excessively about tests may be less readily identified by group tests than on individual testing.

Is the process of identification an exact science? Unfortunately it is not. There is no formula that will ensure that we have identified every gifted student in every situation. However, by using a combination of tools that will give us information not only about a child’s achievement but also about his or her capacity to achieve, we can make a more informed decision about placement and educational interventions.

Culturally diverse populations

Research on identifying gifted students shows that different tools are more appropriate for different populations. At present, much of the research that is being undertaken on identification in the USA and Australia focusses on how to use a variety of tools and procedures to ensure that we are able to identify children from all cultural and socio-economic backgrounds (Assouline, 2003; Borland, 1994; Borland & Wright, 1994; Naglieri & Ford, 2005). The use of nonverbal measures and dynamic testing is important in ensuring inclusiveness in the identification process.

If we identify gifted students using tools that measure their potential to achieve but do not provide a program which will enable them to develop their skills then the process has been pointless. We must be careful, however, to ensure that the identification tools match the program that is provided. For example, identifying gifted students whose first language is not English
through the use of tests which measure nonverbal ability is an important first step in identifying their high ability. However, immediately placing these children into a gifted program where the majority of the work relies on excellent verbal skills in English would be premature before these students have had a chance to consolidate their English skills.

As has been discussed in Core and Extension Modules 4, recent research has found that gifted children from culturally diverse backgrounds may score at levels below their true potential on standardised assessments such as IQ or achievement tests, due to inefficient metacognition, learned helplessness and the forced-choice dilemma rather than because their cognitive potential is below that of children from mainstream cultures (Chaffey, Bailey & Vine, 2003). Equally, these students may not be identified by subjective evaluations such as teacher or peer nomination due to teachers’ stereotyped perceptions of gifted students being successful achievers from the dominant culture. This is important to note as it has implications for the equity of any identification process in schools which contain students from culturally diverse and/or socio-economically disadvantaged backgrounds. In such situations communication, teacher professional development and collaboration with the community will be essential in creating trust. As outlined in Modules 4 and 6, students from such situations may need to have a number of other supports put into place to help them translate their potential into performance.

Students from culturally diverse populations are more easily identified by their ability to manipulate the abstract symbol systems which are valued in their own culture, their ability to think logically about given data, their ability to solve problems, or their capacity to reason by analogy and extend their knowledge into new situations (Clark, 2002). However, indications of these abilities may only be visible in situations where the children feel comfortable and accepted. Their self-confidence and perceptions of self-efficacy may need to be developed before testing (Chaffey, Bailey & Vine, 2003). This may mean that the identification process will take longer with these students than with other processes. The gifted program developed for these students needs to support their intellectual and social-emotional development along the learning continuum, rather than place them immediately in a situation where they have been accurately identified as gifted but may not yet have the intrapersonal resources or skills to perform well in the program.

**Gifted students with special needs**

Students who are gifted may also have special needs. A student may be gifted but also hearing impaired. Similarly, a gifted student may have Aspergers Syndrome, or may have an auditory processing problem, or be dyslexic. Each of these children will show different patterns of strengths and weaknesses. These children are sometimes termed ‘twice exceptional’.

The identification of gifted students who also have special needs is challenging. The most common way for this identification to occur is through psychometric assessment (Ruban & Reis, 2005). For example, students who are gifted but who also have learning difficulties may be identified through large discrepancies between the subtests in an IQ test, or discrepancies between the verbal and nonverbal scores.

It is extremely important that we identify these students as early as possible as, unfortunately, our school systems too often work on a deficit model which encourages teachers to focus on the children’s weaknesses rather than on their strengths. While it is important that deficits are identified and remediated, these children must also be assisted to show what they can achieve in their talent areas. A further challenge in identifying these students arises from the fact that
giftedness may help them compensate for their deficit in the early years of school, so that they can function at age-appropriate level. However, as they progress through the school system and tasks become more abstract and complex, these students may begin to fall behind.

Although there is substantial agreement in the research literature about the characteristics and needs of twice-exceptional students there is little agreement as to appropriate strategies through which these students can be identified. Some researchers suggest a longitudinal approach which includes observations, individual IQ tests, measures of cognitive functioning and an achievement battery, suggesting that this combination of measures should highlight the strengths and weaknesses of these students (McCoach et al, 2001). McCoach et al also believe it is essential to assess the students’ level of functioning in the classroom and to tap twice-exceptional students’ own assessment of their attitudes and achievement.

As with other gifted students, a series of objective and subjective measures should be used to identify gifted students with learning difficulties. Accurate diagnosis is imperative in dealing with the deficit as well as fostering the talent. These students may be enrolled in a gifted program while simultaneously working to remediate their weaknesses. This process recognises and provides for the ‘duality’ of these children.

**Teachers are better at identifying gifted students if they have training in gifted education**

Teachers who do not have training in gifted education are much less effective in identifying gifted students than are teachers who do have such training (Siegle, 2001). Teachers who are familiar with the characteristics of gifted children and the cognitive and affective needs of these children are less likely to identify as gifted only these students who are successful, compliant and easy to teach — George Betts and Maureen Neihart’s Type 1 student, for example. This has important implications for the use of teacher nomination.

Teachers with training in gifted education are more likely to identify, as gifted, students who do not fit the teachers’ own gender stereotypes and students who have unexpected interests which produce unusual behaviours. This means that a student who stands out as being different is more likely to be identified as gifted than a student who seems to fit into the regular group. This issue is important; as we have discussed in Core and Extension Modules 3 and 4, as many gifted students put a lot of effort into appearing ‘average’ (Gross, 1989). Teachers also tend to be concerned about misidentifying students and placing, in gifted programs, students who cannot keep up with the work. These teachers may be reluctant to recommend students who are not visibly achieving — and underachieving gifted students will rarely be identified in such situations.
As discussed earlier, teachers may focus on student weaknesses rather than strengths. This may disadvantage gifted students whose achievement profiles are inconsistent. Additionally, teachers tend to focus on skills associated with academic performance rather than those associated with creativity — and this may have implications for the underachievement of gifted divergent thinkers (Siegle, 2001). Gifted, creative and divergent thinkers may not demonstrate the skills that teachers associate with academic performance — or they may prefer to approach tasks in their own way rather than the way the teacher has prescribed.

Teachers may have quite different perceptions of the characteristics of students in their subject area. For example, one study showed that teachers of mathematics generally perceive mathematically gifted students as those who are ‘school-smart’ in maths. However, maths teachers with higher degrees were more likely to value and identify gifted problem solvers, while female maths teachers were more likely to identify students who could apply mathematics to real world situations (Ficici, 2003). Schools and faculties need to agree on what student needs their specific gifted program will be designed to meet, and train staff to identify the same specific gifted characteristics. Staff support is essential if the identification process is to be appropriately matched with the resulting program.

Happily, teachers’ attitudes can change and they can be assisted to become effective identifiers of the gifted. A study conducted by Gross (1994), which measured change in teachers’ attitudes towards gifted children and gifted education after an intensive professional development program, found that teachers’ attitudes can improve significantly. The participants in the study completed their Certificate of Gifted Education (COGE) at the University of New South Wales. This course comprised 75 contact hours of lectures and seminars, over an 18-month period, during which students completed five assignments.
Participants were tested before commencing their training and again at the conclusion of their COGE course on a standardised questionnaire which measures teachers’ attitudes towards issues including needs of gifted and talented students, support or lack of support for gifted education, social usefulness of gifted persons, rejection of gifted persons, ability grouping and acceleration. The study demonstrated that a professional development program which is carefully planned and well-conducted can achieve strong positive changes in teacher attitudes.

Trained teachers are more effective in the identification of gifted children than teachers who do not have training in the area of gifted and talented education.

**Gender and the identification process**

Another consideration in determining an effective identification process is that of gender. A recent study suggests that when a high weighting is given to group ability tests in a coeducational situation boys may be more readily identified than girls (Kerr & Nicpon, 2003). Some studies suggest that girls attribute success and failure negatively compared to boys — especially in the case of mathematics. They use self-defeating attitudes when explaining success (attributing it to external factors) and failure (attributing it to lack of ability on their part) and this internal attribution can lead to a lack of self-efficacy. Boys may not perform well in identification procedures if they feel that they will lose peer acceptance (Hawkes, 2001). Boys who feel that their environment does not support academic achievement may deliberately underachieve in the identification procedure to ensure that their social image remains intact.
How do we make subjective tools more objective?

We cannot turn a subjective identification tool into a completely objective one. However, we can improve the efficacy of these instruments by following a few simple guidelines. As we know, subjective measures are measures that allow judgements to be made on the basis of observations made of the child or adolescent. These may be based on the observable behaviour exhibited by the child. Such tools include teacher, parent, peer and self nomination, along with anecdotal records contributed by previous teachers and by the child’s family. These observations may be inconsistent, as each person may have a slightly different interpretation of what specific behaviours indicate or where along the continuum of below average to above average the behaviour lies. Just as our perception of normality is relative, our perception of giftedness may also be relative. For example, the parents of a gifted child may not see their child as gifted if his or her siblings achieved the same milestones at the same time. For example, early reading may be the norm in a particular family and the parents may not perceive it as unusual to have a child who reads before school entry.

Similarly, teachers who have taught for a long time in one particular school where the average student ability level is unusually low or unusually high may not have seen the variety of students which would enable them to make an accurate assessment of what is a gifted child, so may need assistance in this area.

To increase the objectivity of subjective tools we can use checklists and scales which are based on the characteristics and behaviours that research has shown are common to gifted and talented students (Feldhusen, Asher & Hoover, 1984). By using research-based checklists or nomination forms we can reduce the ‘elasticity’ of people’s interpretation of a stereotypical profile of a gifted and talented child. We can also give examples of how these behaviours may appear in both positive and negative forms. By giving examples of the positive and negative behaviours which may be exhibited by a student, we can again extend the range of observers' understanding of giftedness and talent while reducing the potential for error.

We can also use checklists and nomination forms that require evidence from the observer about the child's behaviour. When evidence is required the person completing the form must examine his or her own assumptions about the behaviours being observed. He or she must also think of a specific incidence — as evidence of the characteristic or behaviour — which can be highlighted and recorded on the nomination form.

Another way to increase the objectivity of checklists and observation forms is to use a rubric which gives examples of the behaviours and the relativity of these observations when compared with other children. This rubric is one way of increasing inter-rater reliability. This is where the raters of the scale come to an agreement as to what constitutes a particular observation and what might be appropriate evidence to support their judgment. If we increase the raters’ agreement about the specific gifted characteristics that we wish to observe and how much these differ from their age peers, then we are more likely to gain a more objective perspective on the subjective measures. When the subjectivity of nomination forms is reduced, we still have to complement subjective procedures with more objective measures. However, the more objective the subjective measures become, the more effective the collection of observations of gifted behaviours and annotated examples will be in identifying your gifted and talented children.
Schools can work with their trained staff to create rubrics that will improve the inter-rater reliability of the tools they develop. Meeting and agreeing on the rubric will help the school ensure that the tools being used are useful in the process.

Another way to ensure that the subjective tools you use are highly effective is to use a scale that has already had its reliability and validity tested. In their 1984 article in *Gifted Child Quarterly*, Feldhusen, Asher and Hoover noted three tools which show substantial reliability and validity. They are the GIFT rating scale, the Multidimensional Screening Device and the Inventory for Finding Creative Talent. This does not mean that these scales should be used in isolation; however, it is certainly wise to use scales for which we have evidence of strong reliability and validity.
What recommendations do you have for the educator to deal with the following dilemma? (You may prefer to do this alone or perhaps in discussion with another colleague who is also completing this Specialisation Module.)

Mr Najar teaches Year 5. He has information on his students’ abilities and achievements from the basic skills test used in his state as well as information from standardised tests of maths and reading which he is using to assist him to identify gifted and talented students in his class. However, he is concerned that perhaps he has missed some students. He wants to ask the parents about their children’s strengths and talents, but there are a few parents who have not attended the school’s parent-teacher night. How could he ensure that his collection of information is both as objective as possible and seen as relevant by the parents?

As a Primary School Principal, Mr Thomas wishes to improve the identification of gifted students currently in Year 3. Each year the staff are given a checklist of behaviours to look for during first term. How could he improve this process to make the identification of these students more consistent? What skills might his staff benefit from developing?
Part 2

How validity and reliability affect our choice of objective tools

Validity

One of the biggest issues in identification is the validity of the tools being used in relation to the program’s goals and the resources available. If a program is designed to promote and develop the talents of students who are gifted in the verbal domain a tool which identifies students with strong visual-spatial abilities will be inappropriate. A test which identifies a student’s specific talent in mathematics only will also be inappropriate. However, a tool which identifies students who are gifted and/or talented in the verbal area will be appropriate.

There have been instances in the past where tools have been used inappropriately to identify students for programs. The application of the measures was not without good intentions as the program organisers wanted to include children from all situations; however the results were not positive. For example, there have been instances where nonverbal tests, or segments of tests, were used to identify students from culturally diverse backgrounds. These students were then being placed in gifted programs which required good verbal skills in English. There is obviously a validity problem here as the tools used do not match the program and as a result the students were placed in a vulnerable situation. While the students in such situations are gifted they are not being given their best chance to show and develop their giftedness if the identification tool used does not match the program for which they are being assessed.

Validity is the level of agreement between the test, or other measure, and the quality it is supposed to assess. There are four major types of validity:

- face validity
- content-related validity
- criterion-related validity
- construct validity.

Each type of validity deals with a different aspect of the match between the tools and what the tools are supposed to be measuring.

Face validity is the appearance that the measure has validity. This type of validity may be important in situations where observation is involved. For example, the use of an observation checklist might have face validity. As a user of this procedure you must assume that the
behaviours you see are relevant to the learning environment. However, while this type of validity has relevance to the behaviours we may observe it has little relevance to us as educators choosing appropriate identification tools for gifted and talented students.

**Content-related validity** is one of the biggest concerns when creating or using tests that cover particular content. For example, if you are studying history and you are told that the test will be on the first six chapters of the history text you have been working on but the test assesses chapters 6–10 instead, the content-related validity is poor. If the test contained what you had been told it would cover (ie what you had been expected to learn) then it is a valid test. This type of validity is of great concern to students and teachers when creating achievement tests which are designed to assess the amount of knowledge or skills a student has gained through the teaching of the subject. This type of validity is important to consider in pre-testing and post-testing of students.

**Criterion-related validity** tells us how well a test corresponds to a criterion set before the test is applied. Such validity would be used to assess whether the tools used to identify students for a particular program were successful in predicting their success in this program. For example, if you were using a series of tools to identify gifted and talented students in mathematics, to determine if the tools you have used are valid in identifying the right children, the criterion might be their success in the Maths Olympiad.

The final type of validity is **construct validity**, which will often be recorded in the introduction section of tests of ability or IQ tests. Because tests of ability or intelligence are assessing a construct for which we have no concrete parameters, the validity of such tests is assessed when the creators of the tool simultaneously define the construct and develop the instrument to measure it. They must assemble evidence about what the tool means and they can do this through comparing its results with other tests of similar constructs and observations over time. Before a tool such as an IQ test or an aptitude test is released for use a rigorous process of testing and retesting is employed to ensure that the tool is valid.
So why is validity important in determining the tools you wish to use in your identification process?

The validity of a measure is important as it tells you whether the test will actually assess what you hope it assesses. It is important because some tools may be more valid than others and you can take that into account to make a sound judgement about the tools you are choosing for your program. If we have the choice of two standardised tools to use as one of the measures for the identification of students for a particular program we need, firstly, to consider what we are looking for and, secondly, to check the construct validity as reported by the people who constructed the test. If we are going to create the test then we need to consider the content validity of the test, as we are unlikely to be able to conduct the rigorous assessment needed to identify the construct validity of the tool.

We know, for example, that IQ tests effectively predict a student’s potential to achieve well within the school system (Piirto, 1994; Richert, 2003). We also know that such tests have undergone a rigorous development procedure and that their creators have ensured that the test has high validity. However, if the program for which you are identifying students is completely achievement-based then assessing the students’ potential and expecting them to perform well without support is an invalid use of this test.

We need to ensure that the tools we use are valid in their construction and the way in which we use them.

Reliability

The reliability of a tool relates to the confidence we can have that a student would attain much the same results if attempting the test again. The reliability results for a standardised test give us information about how likely it is that the score achieved is due to chance. For example, when a psychologist reports a child’s score on a test such as the WISC-IV he or she will report a confidence interval which states, for example, that we can be 95% confident that the child would achieve a score within this range if doing the test again after the prescribed period of time — according to the manual it is usually two years before a child can re-sit the same IQ test.

So why is it important that you consider the reliability of a test? It is important because if you are going to run a program for longer than a year and you are going to assess new students using the same procedure you need to know that the students have been identified as accurately, and fairly, as possible.

Hence, when choosing a standardised test it is worth reading about its validity and reliability to ensure that you are choosing the best possible tools for the identification process in your particular school context — and that you understand their limitations.
Efficiency and effectiveness

Finally, we need to consider the efficiency and effectiveness of the tools within the school setting in which they are being used.

By **efficiency** we mean how much time is allocated to the process for the amount and relevance of the information gained. This may be measured as a ratio between the number of children nominated and the number of gifted children found. For example, a peer nomination process that involves the teacher talking to each student individually is far less efficient (though possibly more effective) than one where the teacher uses a written form which all class members complete at the same time.

By **effectiveness** we need to know whether the tool is effective year in, year out in identifying the most appropriate students for the intervention or program offered. Effectiveness may be measured as a percentage of the gifted children it locates. Effectiveness may be considered to be high if the numbers of false negatives (ie gifted students wrongly identified as not gifted) and false positives (ie students wrongly identified as gifted) are low. For example, you would not use a group aptitude test if you were trying to identify students from Indigenous populations for it is likely to miss the ‘invisible underachievers’ we have discussed in Module 4. Instead it would be more effective (though less efficient) to use dynamic testing to identify gifted students in this population.

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Note that the most efficient identification method will not necessarily be the most effective. The principles of fairness and inclusion (eg of gifted underachievers or of culturally diverse students) ought not be sacrificed lightly, in the name of what is least demanding of your time or least costly.
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Conclusion

As you have worked through the Core, Extension and Specialisation levels of Module 2 you will have become more familiar with the types of identification tools available. You will know that before you implement your school’s identification process, your definition of giftedness and talent must be agreed upon, which in turn determines the rationale for identifying students.

You will have considered — and should be able to defend your choice of — the best available tools for identification and the coherent process you wish to implement in your school. You know that schools need to use a variety of measures — both objective and subjective — to ensure that the process is inclusive and fair. You will know about the validity and reliability of the identification measures and be able to make a more informed choice about the types of program you plan and how to identify students for such programs.

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Importantly, you will have considered that no single measure will identify all gifted students — nor can any combination of measures be assumed to have done so, though it should mean that fewer are missed — and hence the identification process needs to be seen as an ongoing as well as wide-ranging one.
```
1. Which type of validity is useful when evaluating whether to use an IQ test:
   - face validity?
   - criterion validity?
   - construct validity?

2. How can you make a subjective tool more objective?

3. Why is it important to consider the validity and reliability of tools that we may use to identify gifted and talented children?

4. Choose one of the following case studies pertinent to your area and in point form recommend what the teachers, or members of the school executive, should do in this situation. You will need to consider information from the Specialisation Modules and knowledge gained through the previous Core and Extension Modules.
a) Mrs Jones wished to identify gifted students for an extension reading program in her school. She has a choice of three different tests of reading achievement which she can buy for the school.

- What are some of the things she will need to consider when she is deciding which test to buy?

b) Mr Wong teaches a Year 6 class in an inner-city school. His is a full-time gifted class and he wishes to identify students in it who are particularly gifted in science.

- What subjective and objective measures could he use to help him in this process?
- How could he make the subjective tools more objective?

c) Ms Nahar works in an inner-city school teaching Year 4. In her class she has Jamelle who seems to struggle with reading. However, her maths ability is excellent, except in problem solving which requires a significant amount of comprehension. Ms Nahar begins to think more closely about Jamelle after Jamelle asked her what ‘pi’ was used for when talking with her in the playground one day.

- What could Ms Nahar do to support Jamelle?
The Principal of a school which has a large Indigenous population wishes to identify gifted students within the school. Those identified are to be placed in an extension program which focusses specifically on supporting underachievers in reaching their potential.

The Principal has asked the school's Gifted Education Coordinator to investigate the best ways to identify such students. The Gifted Education Coordinator needs to write a proposal which explains the identification process and justifies why s/he has selected each of the specific identification tools.

- What would you expect this proposal to include?
You have been asked to write a proposal for an effective identification strategy for use in your school. You will need to consider all the steps and information from the Core, Extension and Specialisation levels of Module 2 to create a proposal that will be effective and relevant for your situation.

In your proposal make sure you consider the program, the population, the section of the school you work in, the resources available and the age of the children you deal with.

Appendix A is a sample checklist which may help you to think about the identification process that you wish to introduce.

Compile a needs assessment regarding the identification processes used to identify gifted and talented students in your school. In your analysis consider:

- the measures your staff are using effectively.
- the measures in which staff may need further professional development.

Appendix B is a sample checklist which may help you to create a similar one that is appropriate to your situation.

Create a checklist of objective and subjective measures that are currently in use and measures you would like to introduce. Determine a Professional Development plan for your staff, to improve their knowledge of, and skill in using, some of these tools.
1. Construct validity is useful when evaluating whether to use an IQ test.

2. You can make a subjective tool more objective by:
   - using tools that have been tested for validity and reliability.
   - using tools supported by research.
   - creating a rubric to increase inter-rater reliability.
   - requiring evidence for the observed behaviours.

3. It is important to consider the reliability and validity of the measures you use because this ensures that the tools actually measure the concept, construct or behaviour that you wish to measure. It ensures that you are likely to get similar results if the same measures are used again, giving you confidence that the results are consistent.

4. Suggested case study responses:

   a) Mrs Jones needs to consider the validity and reliability of the tests. She should ensure that the tests assess what she is trying to assess and that she should get similar results if she used the same assessment again. She may also need to consider the cost of the tests.

   b) Mr Wong could use a parent nomination form and a self-nomination form as the subjective tools, as this combination may give him revealing information about the students. He could also use above-level tests such as old competition papers to identify students who reason well in science. To make the subjective tools more objective Mr Wong could provide a rubric describing the behaviours he is looking for and ask for specific examples to support the judgements made.

   c) Ms Nahar could talk to a member of the school executive about having Jamelle assessed using an IQ test. This would provide the school with information about Jamelle’s strengths and weaknesses. Ms Nahar should follow the school’s guidelines when asking for such an assessment.
The Gifted Education Coordinator should consider using dynamic testing and parent and self nomination, after gaining the trust of the local community.
References and Further Reading


**Websites**

http://www.hoagiesgifted.org/identification.htm


http://ericc.org/digests/e644.html


Resources
Sample Checklist for the Identification Process

This checklist suggests components to think about when deciding the most appropriate identification process for your school and program. There is no single, best way, but you need to consider all aspects of the process.

1. What is the school’s definition of giftedness and talent?

2. Purpose/ Rationale for this Identification process (select from the following):
   - To identify gifted and talented students
   - To identify talented students in the following subject(s): ...................................................
   - To identify gifted and talented students in the following subject area(s): ..........................
   - Other: ..................................................................

3. Are there special contextual considerations regarding the identification process in your school? (e.g., Are some students from culturally diverse backgrounds?)

4. Is there a specific program already running within the school for which you wish to change how you identify/select student participants? If so, describe the program below, considering the skills, talents and gifts that you wish to identify:

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To help you plan your identification process, complete the table below. Keep in mind that you will not use all of the tools below, but the best tools you have available to match your purpose. Remember that you must use a combination of subjective and objective measures.

<table>
<thead>
<tr>
<th>The Identification Process</th>
<th>Are these identification tools available in the school already?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated time for completing the identification process:</td>
<td>Yes</td>
</tr>
<tr>
<td>Age/ Year of students:</td>
<td></td>
</tr>
</tbody>
</table>

**Objective Measures**

Name(s) of IQ test(s) you would like to use:  
-  
-  

Standardised test(s) you would like to use:  
-  
-  

Off-level(s) test(s) you would like to use:  
-  
-  

State-wide literacy and/or numeracy tests:  
-  
-  

<table>
<thead>
<tr>
<th>Competition papers:</th>
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<tbody>
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<td>•</td>
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<table>
<thead>
<tr>
<th>Teacher-made tests and assessments:</th>
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<td>•</td>
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<td>•</td>
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<table>
<thead>
<tr>
<th>Dynamic testing:</th>
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<tbody>
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<td></td>
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</table>

<table>
<thead>
<tr>
<th><strong>Subjective Measures</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent nomination form (see Core Module 2)</td>
</tr>
<tr>
<td>Teacher nomination form (see Core Module 2)</td>
</tr>
<tr>
<td>Peer nomination form (see Extension Module 2)</td>
</tr>
<tr>
<td>Self nomination form (see Extension Module 2)</td>
</tr>
<tr>
<td>Work samples</td>
</tr>
<tr>
<td>Annotated observations</td>
</tr>
</tbody>
</table>

After completing the checklist, are there identification tools that you would like to ask your school to purchase? If so, rank them in priority order, from those needed most urgently to those that you can wait for if necessary.

1. 
2. 
3. 
4. 
5. 
6. 
Using the checklist above to assist you, complete the flow chart below, to outline the sequence of the identification process in your school. You may prefer to make a list or present the information in another format. The most important thing is that you can articulate the tools and the process of identifying gifted and talented students in your school context.

**Flow Chart of Identification Process**

```
[Flow chart image]
```

- Screening tools
- Other measures
- Program placement
  - When will students be re-evaluated?

Re-evaluation of students and process
Principal's Evaluation of Staff Professional Development Needs for the Identification of Gifted and Talented Students

**Evaluation of Staff Needs re the Identification Process**

Complete the table below to determine your staff's professional development needs for the effective Identification of gifted and talented students at your school.

Consider what staff members already know and what you would like them to know.

<table>
<thead>
<tr>
<th>Objective Measures</th>
<th>Do staff need further professional development on the following?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>IQ tests</td>
<td></td>
</tr>
<tr>
<td>(eg administration; what they tell us; how effective they are)</td>
<td></td>
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<tr>
<td>Standardised tests</td>
<td></td>
</tr>
<tr>
<td>(eg what is already available within the school; what else could be acquired; what information they provide)</td>
<td></td>
</tr>
<tr>
<td>Off-levels tests</td>
<td></td>
</tr>
<tr>
<td>(eg what is already available within the school; what else could be acquired; what information they provide)</td>
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</tr>
<tr>
<td>State-wide literacy and/or numeracy tests</td>
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<tr>
<td>Competition papers</td>
<td></td>
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<tr>
<td>Teacher-made tests and assessments</td>
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<tr>
<td>(eg how teacher judgement may be improved; criteria we use when marking; how we can make these more reliable and effective in diagnosing strengths and weaknesses)</td>
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<tr>
<td>Dynamic testing</td>
<td></td>
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<td>--------------------------------------------------</td>
<td></td>
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<tr>
<td>(eg appropriateness of this method for our school population;</td>
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<tr>
<td>familiarity of staff members with this method; any staff trained as</td>
<td></td>
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<tr>
<td>dynamic assessors)</td>
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</table>

### Subjective Measures

<table>
<thead>
<tr>
<th>Parent nomination form</th>
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<tbody>
<tr>
<td>(eg teachers’ willingness to have parents complete these forms; teachers’ views about their reliability)</td>
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<table>
<thead>
<tr>
<th>Teacher nomination form</th>
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<tbody>
<tr>
<td>(eg staff expertise in the administration of these forms; staff awareness of the significance of both positive and negative characteristics)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Peer nomination form</th>
</tr>
</thead>
<tbody>
<tr>
<td>(eg appropriateness for this age group; staff expertise in writing and administering a peer nomination form effectively)</td>
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| Annotated observations |
Module 2

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Ruth Targett
Welcome to Specialisation Module 2: Other Issues in the Identification of Gifted and Talented Students. In this Module you will become familiar with what research says about the identification of gifted and talented children. You will become even more familiar with the tools available to identify this population of students and how to decide which tools may be the most appropriate to use within the specific context of your school.

Caroline Merrick & Ruth Targett
Specialisation Module 2: Secondary

Other Issues in the Identification of Gifted and Talented Students

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Outcomes

At the completion of this Module you will:

- have a fuller understanding of what research tells us about the identification of gifted and talented children and adolescents.
- understand the differences between reliability and validity, and efficiency and effectiveness, and how these concepts influence the choice of identification tools.
- be able to analyse and evaluate identification methods and recommend improvements to your school’s current procedures using objective and subjective measures.
What research says about identification

As you have worked through each Module you will have come to understand how and why gifted and talented students are a special group of children and adolescents who have special learning needs. Their needs are different from those of their age-peers of average ability and, as a result, they require special educational planning to support the development of their gifts and talents. You will have become acquainted with characteristics of these students in Module 1 and how to create effective learning plans for these students in Module 5. Using the knowledge that you have gained you will be able to provide more effective programs for gifted and talented students in your school, district or system.

The process of identification is integral to providing effective programs and interventions for gifted students. It is imperative that the identification tools that we use actively complement what research tells us about the identification of such students. Therefore, you must know which tools will be the most appropriate to your individual context.

As educators we believe that meeting their learning and emotional needs is the most important role we play in the lives of our students. Regardless of where students are on the learning continuum, we aim to provide learning experiences which will enable them to move forward from their current level of development. In order to ensure that we are catering to these needs, we need to know both the potential and the current level of performance of our gifted students.

If we use research-based, effective identification tools, as we continually reassess students and their current levels of achievement, we will be more able to provide educational interventions that are appropriate. We need to know which tools to use to identify giftedness or talent and which tools will be most appropriate for the specific program in the child’s particular school situation.

So what does research tell us about the identification process and the tools that are available to us?

The most recent research in the identification of gifted and talented students has focussed on what current identification tools can and cannot achieve. Researchers have expressed concern at the lessened ability of some identification tools to effectively identify students from culturally diverse backgrounds, particularly those whose first language is not English or who may be less accustomed to using ‘formal’ English.
Consequently, there has been a greater focus on the assessment of students’ nonverbal ability to provide an objective way of identifying these students.

Research over the past 20 years consistently identifies the following as important guidelines which can assist teachers to plan identification procedures for their school’s gifted and talented students.

Research-based guidelines for determining a school’s identification process

- Identification should be multifaceted.
- Different tools will be appropriate for use with different populations and different age groups.
- The identification process must match the definition of giftedness and talent adopted by the school.
- Use both subjective and objective tools, as these provide different but complementary information.
- Teachers with training in gifted education are more effective in identifying gifted and talented students than are teachers without such training.
- Some tools have much stronger reliability and/or validity than others.
- Identification should be an ongoing process.
- The primary reason for identifying a gifted and/or talented student is to provide an appropriate educational program.

A graphic summary of these follows:
Research into the identification of gifted and talented students has been going on for many years. In fact it is one of the most researched and debated areas in gifted education. However, over the years the tools that have been used for identification, and the rationales for using these tools, have changed significantly.

The period between the early 1980s and the mid-1990s focussed on the justification of the use of standardised assessment procedures in appropriate situations — for example, the use of IQ tests to identify intellectually gifted students who had the potential for high academic achievement in school. Leading on from this, research in the subsequent 10 years has taken a strong equity focus, examining ways in which these procedures can be harnessed to identify students from culturally diverse and socio-economically disadvantaged situations. By examining the research from the past 20 years, we can gain a better understanding of the history of the identification debate.

As Specialisation Module 1 has described, Talent Searches have been employed for many hundreds of years in a range of cultures. Ironically, the first modern IQ test was developed by French psychologist Alfred Binet at the start of the 20th century to identify slow-learning children who were at risk for educational failure. Later these tests were modified and used to identify students who were intellectually gifted. Specialisation Module 1 has outlined some of the findings of studies such as those conducted by Lewis Terman and Leta Hollingworth. Group intelligence tests were developed during the early years of World War I to assist the allocation of soldiers to different responsibilities; however, even though a nonverbal version was available, these tests were culturally biased and made no allowance for individuals’ background and experience.

**Theoretical rationale should underpin the identification system**

One of the most important issues in gifted education, including the identification of gifted and talented children, is that sound theory must underpin practice (Feldhusen, Asher & Hoover, 1984; Renzulli, 2004). Conceptions of giftedness and talent have been discussed in Module 1 and we have shown that our rationale for adopting the Gagné model has been based on its defensibility, its flexibility and its operational application. Similarly, we need to ensure that the tools we use to identify gifted and talented students are both grounded in solid research and effective in their application. Some gifted students will be quickly identified as they perform well in the school system. However, underachievers and children from culturally diverse populations may need different forms of identification to determine their potential. We must also consider the age of the student(s) we wish to identify, as different tools will be more useful with some age groups than others.

As discussed in the Core and Extension Modules, the goals of any program should determine the identification process. If the program is an accelerated program in mathematics, it follows that the identification tools will focus on tests of mathematical aptitude and achievement. However, if the goal of the program is to promote giftedness and talent within the school population no matter where these talents lie, the process must be much broader and more flexible.
Multifaceted approach

One of the common points of agreement among researchers is that using one single score from an IQ test or cognitive ability test is not appropriate practice in the identification of gifted and talented children (Borland, 1989; Feldhusen, Asher & Hoover, 1984; Assouline, 2003). This does not mean that IQ tests or cognitive ability tests do not give us useful information. Rather it indicates that a combination of subjective and objective measures should be used, with the weighting of each measure taken carefully into consideration.

For example, to create a ‘talent pool’ of students by bringing together information about gifted behaviours gleaned from parent and teacher nomination forms, portfolios of the students’ work samples or creative endeavours, and results of IQ and achievement tests, we would probably place more weight on the classroom work samples and on the objective test results than on the more subjective parent and teacher nomination forms. However, we will make an informed judgement about the best way to meet the academic needs of the child on the basis of all the information we have collected.

We know that IQ tests used appropriately give us reliable information about a child’s potential to achieve within the school system. For children from the cultural group for which a test was designed, individually administered psychometric assessments are often the most effective form of identification (Assouline, 2003; Naglieri & Ford, 2005). These tests include group and individually administered tests. However, even within the population for which the test was designed there could be some students who may not be identified. For example, students who have specific learning difficulties or who worry excessively about tests may be less readily identified by group tests than on individual testing.

Is the process of identification an exact science? Unfortunately it is not. There is no formula that will ensure that we have identified every gifted student in every situation. However, by using a combination of tools that will give us information not only about a child’s achievement but also about his or her capacity to achieve, we can make a more informed decision about placement and educational interventions.

Culturally diverse populations

Research on identifying gifted students shows that different tools are more appropriate for different populations. At present, much of the research that is being undertaken on identification in the USA and Australia focusses on how to use a variety of tools and procedures to ensure that we are able to identify children from all cultural and socio-economic backgrounds (Assouline, 2003; Borland, 1994; Borland & Wright, 1994; Naglieri & Ford, 2005). The use of nonverbal measures and dynamic testing is important in ensuring inclusiveness in the identification process.

If we identify gifted students using tools that measure their potential to achieve but do not provide a program which will enable them to develop their skills then the process has been pointless. We must be careful, however, to ensure that the identification tools match the program that is provided. For example, identifying gifted students whose first language is not English...
through the use of tests which measure nonverbal ability is an important first step in identifying their high ability. However, immediately placing these children into a gifted program where the majority of the work relies on excellent verbal skills in English would be premature before these students have had a chance to consolidate their English skills.

As has been discussed in Core and Extension Modules 4, recent research has found that gifted children from culturally diverse backgrounds may score at levels below their true potential on standardised assessments such as IQ or achievement tests, due to inefficient metacognition, learned helplessness and the forced-choice dilemma rather than because their cognitive potential is below that of children from mainstream cultures (Chaffey, Bailey & Vine, 2003). Equally, these students may not be identified by subjective evaluations such as teacher or peer nomination due to teachers’ stereotyped perceptions of gifted students being successful achievers from the dominant culture. This is important to note as it has implications for the equity of any identification process in schools which contain students from culturally diverse and/or socio-economically disadvantaged backgrounds. In such situations communication, teacher professional development and collaboration with the community will be essential in creating trust. As outlined in Modules 4 and 6, students from such situations may need to have a number of other supports put into place to help them translate their potential into performance.

Students from culturally diverse populations are more easily identified by their ability to manipulate the abstract symbol systems which are valued in their own culture, their ability to think logically about given data, their ability to solve problems, or their capacity to reason by analogy and extend their knowledge into new situations (Clark, 2002). However, indications of these abilities may only be visible in situations where the children feel comfortable and accepted. Their self-confidence and perceptions of self-efficacy may need to be developed before testing (Chaffey, Bailey & Vine, 2003). This may mean that the identification process will take longer with these students than with other processes. The gifted program developed for these students needs to support their intellectual and social-emotional development along the learning continuum, rather than place them immediately in a situation where they have been accurately identified as gifted but may not yet have the intrapersonal resources or skills to perform well in the program.

**Gifted students with special needs**

Students who are gifted may also have special needs. A student may be gifted but also hearing impaired. Similarly, a gifted student may have Aspergers Syndrome, or may have an auditory processing problem, or be dyslexic. Each of these children will show different patterns of strengths and weaknesses. These children are sometimes termed ‘twice exceptional’.

The identification of gifted students who also have special needs is challenging. The most common way for this identification to occur is through psychometric assessment (Ruban & Reis, 2005). For example, students who are gifted but who also have learning difficulties may be identified through large discrepancies between the subtests in an IQ test, or discrepancies between the verbal and nonverbal scores.

It is extremely important that we identify these students as early as possible as, unfortunately, our school systems too often work on a deficit model which encourages teachers to focus on the children’s weaknesses rather than on their strengths. While it is important that deficits are identified and remediated, these children must also be assisted to show what they can achieve in their talent areas. A further challenge in identifying these students arises from the fact that
giftedness may help them compensate for their deficit in the early years of school, so that they can function at age-appropriate level. However, as they progress through the school system and tasks become more abstract and complex, these students may begin to fall behind.

Although there is substantial agreement in the research literature about the characteristics and needs of twice-exceptional students there is little agreement as to appropriate strategies through which these students can be identified. Some researchers suggest a longitudinal approach which includes observations, individual IQ tests, measures of cognitive functioning and an achievement battery, suggesting that this combination of measures should highlight the strengths and weaknesses of these students (McCoach et al, 2001). McCoach et al also believe it is essential to assess the students’ level of functioning in the classroom and to tap twice-exceptional students’ own assessment of their attitudes and achievement.

As with other gifted students, a series of objective and subjective measures should be used to identify gifted students with learning difficulties. Accurate diagnosis is imperative in dealing with the deficit as well as fostering the talent. These students may be enrolled in a gifted program while simultaneously working to remediate their weaknesses. This process recognises and provides for the ‘duality’ of these children.

**Teachers are better at identifying gifted students if they have training in gifted education**

Teachers who do not have training in gifted education are much less effective in identifying gifted students than are teachers who do have such training (Siegle, 2001). Teachers who are familiar with the characteristics of gifted children and the cognitive and affective needs of these children are less likely to identify as gifted only those students who are successful, compliant and easy to teach — George Betts and Maureen Neihart’s Type 1 student, for example. This has important implications for the use of teacher nomination.

Teachers with training in gifted education are more likely to identify, as gifted, students who do not fit the teachers’ own gender stereotypes and students who have unexpected interests which produce unusual behaviours. This means that a student who stands out as being different is more likely to be identified as gifted than a student who seems to fit into the regular group. This issue is important; as we have discussed in Core and Extension Modules 3 and 4, as many gifted students put a lot of effort into appearing ‘average’ (Gross, 1989). Teachers also tend to be concerned about misidentifying students and placing, in gifted programs, students who cannot keep up with the work. These teachers may be reluctant to recommend students who are not visibly achieving — and underachieving gifted students will rarely be identified in such situations.
As discussed earlier, teachers may focus on student weaknesses rather than strengths. This may disadvantage gifted students whose achievement profiles are inconsistent. Additionally, teachers tend to focus on skills associated with academic performance rather than those associated with creativity — and this may have implications for the underachievement of gifted divergent thinkers (Siegle, 2001). Gifted, creative and divergent thinkers may not demonstrate the skills that teachers associate with academic performance — or they may prefer to approach tasks in their own way rather than the way the teacher has prescribed.

Teachers may have quite different perceptions of the characteristics of students in their subject area. For example, one study showed that teachers of mathematics generally perceive mathematically gifted students as those who are ‘school-smart’ in maths. However, maths teachers with higher degrees were more likely to value and identify gifted problem solvers, while female maths teachers were more likely to identify students who could apply mathematics to real world situations (Ficici, 2003). Schools and faculties need to agree on what student needs their specific gifted program will be designed to meet, and train staff to identify the same specific gifted characteristics. Staff support is essential if the identification process is to be appropriately matched with the resulting program.

Happily, teachers’ attitudes can change and they can be assisted to become effective identifiers of the gifted. A study conducted by Gross (1994), which measured change in teachers’ attitudes towards gifted children and gifted education after an intensive professional development program, found that teachers’ attitudes can improve significantly. The participants in the study completed their Certificate of Gifted Education (COGE) at the University of New South Wales. This course comprised 75 contact hours of lectures and seminars, over an 18-month period, during which students completed five assignments.
Participants were tested before commencing their training and again at the conclusion of their COGE course on a standardised questionnaire which measures teachers’ attitudes towards issues including needs of gifted and talented students, support or lack of support for gifted education, social usefulness of gifted persons, rejection of gifted persons, ability grouping and acceleration. The study demonstrated that a professional development program which is carefully planned and well-conducted can achieve strong positive changes in teacher attitudes.

Trained teachers are more effective in the identification of gifted children than teachers who do not have training in the area of gifted and talented education.

**Gender and the identification process**

Another consideration in determining an effective identification process is that of gender. A recent study suggests that when a high weighting is given to group ability tests in a coeducational situation boys may be more readily identified than girls (Kerr & Nicpon, 2003). Some studies suggest that girls attribute success and failure negatively compared to boys — especially in the case of mathematics. They use self-defeating attitudes when explaining success (attributing it to external factors) and failure (attributing it to lack of ability on their part) and this internal attribution can lead to a lack of self-efficacy. Boys may not perform well in identification procedures if they feel that they will lose peer acceptance (Hawkes, 2001). Boys who feel that their environment does not support academic achievement may deliberately underachieve in the identification procedure to ensure that their social image remains intact.
How do we make subjective tools more objective?

We cannot turn a subjective identification tool into a completely objective one. However, we can improve the efficacy of these instruments by following a few simple guidelines. As we know, subjective measures are measures that allow judgements to be made on the basis of observations made of the child or adolescent. These may be based on the observable behaviour exhibited by the child. Such tools include teacher, parent, peer and self nomination, along with anecdotal records contributed by previous teachers and by the child’s family. These observations may be inconsistent, as each person may have a slightly different interpretation of what specific behaviours indicate or where along the continuum of below average to above average the behaviour lies. Just as our perception of normality is relative, our perception of giftedness may also be relative. For example, the parents of a gifted child may not see their child as gifted if his or her siblings achieved the same milestones at the same time. For example, early reading may be the norm in a particular family and the parents may not perceive it as unusual to have a child who reads before school entry.

Similarly, teachers who have taught for a long time in one particular school where the average student ability level is unusually low or unusually high may not have seen the variety of students which would enable them to make an accurate assessment of what is a gifted child, so may need assistance in this area.

To increase the objectivity of subjective tools we can use checklists and scales which are based on the characteristics and behaviours that research has shown are common to gifted and talented students (Feldhusen, Asher & Hoover, 1984). By using research-based checklists or nomination forms we can reduce the ‘elasticity’ of people’s interpretation of a stereotypical profile of a gifted and talented child. We can also give examples of how these behaviours may appear in both positive and negative forms. By giving examples of the positive and negative behaviours which may be exhibited by a student, we can again extend the range of observers' understanding of giftedness and talent while reducing the potential for error.

We can also use checklists and nomination forms that require evidence from the observer about the child’s behaviour. When evidence is required the person completing the form must examine his or her own assumptions about the behaviours being observed. He or she must also think of a specific incidence — as evidence of the characteristic or behaviour — which can be highlighted and recorded on the nomination form.

Another way to increase the objectivity of checklists and observation forms is to use a rubric which gives examples of the behaviours and the relativity of these observations when compared with other children. This rubric is one way of increasing inter-rater reliability. This is where the raters of the scale come to an agreement as to what constitutes a particular observation and what might be appropriate evidence to support their judgment. If we increase the raters’ agreement about the specific gifted characteristics that we wish to observe and how much these differ from their age peers, then we are more likely to gain a more objective perspective on the subjective measures. When the subjectivity of nomination forms is reduced, we still have to complement subjective procedures with more objective measures. However, the more objective the subjective measures become, the more effective the collection of observations of gifted behaviours and annotated examples will be in identifying your gifted and talented children.
Schools can work with their trained staff to create rubrics that will improve the inter-rater reliability of the tools they develop. Meeting and agreeing on the rubric will help the school ensure that the tools being used are useful in the process.

Another way to ensure that the subjective tools you use are highly effective is to use a scale that has already had its reliability and validity tested. In their 1984 article in *Gifted Child Quarterly*, Feldhusen, Asher and Hoover noted three tools which show substantial reliability and validity. They are the GIFT rating scale, the Multidimensional Screening Device and the Inventory for Finding Creative Talent. This does not mean that these scales should be used in isolation; however, it is certainly wise to use scales for which we have evidence of strong reliability and validity.
What recommendations do you have for the educator to deal with the following dilemma? (You may prefer to do this alone or perhaps in discussion with another colleague who is also completing this Specialisation Module.)

Ms James teaches English in a local secondary school and wishes to identify the gifted readers and writers in next year’s entry cohort before they arrive in the school. On orientation day she plans to survey the students regarding their talents and interests. How could she ensure that the form she will use provides the most objective, relevant information possible?

As Principal of a large secondary college Mr Daniels wishes to improve the identification of gifted students enrolling in their first year of secondary education. Each year the staff are given a checklist of behaviours to look for during first term. How could he improve this process to make the identification of these new students more consistent? What skills might his staff benefit from developing?
Part 2

How validity and reliability affect our choice of objective tools

Validity

One of the biggest issues in identification is the validity of the tools being used in relation to the program’s goals and the resources available. If a program is designed to promote and develop the talents of students who are gifted in the verbal domain a tool which identifies students with strong visual-spatial abilities will be inappropriate. A test which identifies a student’s specific talent in mathematics only will also be inappropriate. However, a tool which identifies students who are gifted and/ or talented in the verbal area will be appropriate.

There have been instances in the past where tools have been used inappropriately to identify students for programs. The application of the measures was not without good intentions as the program organisers wanted to include children from all situations; however the results were not positive. For example, there have been instances where nonverbal tests, or segments of tests, were used to identify students from culturally diverse backgrounds. These students were then being placed in gifted programs which required good verbal skills in English. There is obviously a validity problem here as the tools used do not match the program and as a result the students were placed in a vulnerable situation. While the students in such situations are gifted they are not being given their best chance to show and develop their giftedness if the identification tool used does not match the program for which they are being assessed.

Validity is the level of agreement between the test, or other measure, and the quality it is supposed to assess. There are four major types of validity:

- face validity
- content-related validity
- criterion-related validity
- construct validity.

Each type of validity deals with a different aspect of the match between the tools and what the tools are supposed to be measuring.

Face validity is the appearance that the measure has validity. This type of validity may be important in situations where observation is involved. For example, the use of an observation checklist might have face validity. As a user of this procedure you must assume that the
behaviours you see are relevant to the learning environment. However, while this type of validity has relevance to the behaviours we may observe it has little relevance to us as educators choosing appropriate identification tools for gifted and talented students.

**Content-related validity** is one of the biggest concerns when creating or using tests that cover particular content. For example, if you are studying history and you are told that the test will be on the first six chapters of the history text you have been working on but the test assesses chapters 6–10 instead, the content-related validity is poor. If the test contained what you had been told it would cover (i.e., what you had been expected to learn) then it is a valid test. This type of validity is of great concern to students and teachers when creating achievement tests which are designed to assess the amount of knowledge or skills a student has gained through the teaching of the subject. This type of validity is important to consider in pre-testing and post-testing of students.

**Criterion-related validity** tells us how well a test corresponds to a criterion set before the test is applied. Such validity would be used to assess whether the tools used to identify students for a particular program were successful in predicting their success in this program. For example, if you were using a series of tools to identify gifted and talented students in mathematics, to determine if the tools you have used are valid in identifying the right children, the criterion might be their success in the Maths Olympiad.

The final type of validity is **construct validity**, which will often be recorded in the introduction section of tests of ability or IQ tests. Because tests of ability or intelligence are assessing a construct for which we have no concrete parameters, the validity of such tests is assessed when the creators of the tool simultaneously define the construct and develop the instrument to measure it. They must assemble evidence about what the tool means and they can do this through comparing its results with other tests of similar constructs and observations over time. Before a tool such as an IQ test or an aptitude test is released for use a rigorous process of testing and retesting is employed to ensure that the tool is valid.
So why is validity important in determining the tools you wish to use in your identification process?

The validity of a measure is important as it tells you whether the test will actually assess what you hope it assesses. It is important because some tools may be more valid than others and you can take that into account to make a sound judgement about the tools you are choosing for your program. If we have the choice of two standardised tools to use as one of the measures for the identification of students for a particular program we need, firstly, to consider what we are looking for and, secondly, to check the construct validity as reported by the people who constructed the test. If we are going to create the test then we need to consider the content validity of the test, as we are unlikely to be able to conduct the rigorous assessment needed to identify the construct validity of the tool.

We know, for example, that IQ tests effectively predict a student’s potential to achieve well within the school system (Piirto, 1994; Richert, 2003). We also know that such tests have undergone a rigorous development procedure and that their creators have ensured that the test has high validity. However, if the program for which you are identifying students is completely achievement-based then assessing the students’ potential and expecting them to perform well without support is an invalid use of this test.

We need to ensure that the tools we use are valid in their construction and the way in which we use them.

Reliability

The reliability of a tool relates to the confidence we can have that a student would attain much the same results if attempting the test again. The reliability results for a standardised test give us information about how likely it is that the score achieved is due to chance. For example, when a psychologist reports a child’s score on a test such as the WISC-IV he or she will report a confidence interval which states, for example, that we can be 95% confident that the child would achieve a score within this range if doing the test again after the prescribed period of time — according to the manual it is usually two years before a child can re-sit the same IQ test.

So why is it important that you consider the reliability of a test? It is important because if you are going to run a program for longer than a year and you are going to assess new students using the same procedure you need to know that the students have been identified as accurately, and fairly, as possible.

Hence, when choosing a standardised test it is worth reading about its validity and reliability to ensure that you are choosing the best possible tools for the identification process in your particular school context — and that you understand their limitations.
**Efficiency and effectiveness**

Finally, we need to consider the efficiency and effectiveness of the tools within the school setting in which they are being used.

By **efficiency** we mean how much time is allocated to the process for the amount and relevance of the information gained. This may be measured as a ratio between the number of children nominated and the number of gifted children found. For example, a peer nomination process that involves the teacher talking to each student individually is far less efficient (though possibly more effective) than one where the teacher uses a written form which all class members complete at the same time.

By **effectiveness** we need to know whether the tool is effective year in, year out in identifying the most appropriate students for the intervention or program offered. Effectiveness may be measured as a percentage of the gifted children it locates. Effectiveness may be considered to be high if the numbers of false negatives (ie gifted students wrongly identified as not gifted) and false positives (ie students wrongly identified as gifted) are low. For example, you would not use a group aptitude test if you were trying to identify students from Indigenous populations for it is likely to miss the ‘invisible underachievers’ we have discussed in Module 4. Instead it would be more effective (though less efficient) to use dynamic testing to identify gifted students in this population.

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**Note that the most efficient identification method will not necessarily be the most effective.** The principles of fairness and inclusion (eg of gifted underachievers or of culturally diverse students) ought not be sacrificed lightly, in the name of what is least demanding of your time or least costly.

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**Conclusion**

As you have worked through the Core, Extension and Specialisation levels of Module 2 you will have become more familiar with the types of identification tools available. You will know that before you implement your school’s identification process, your definition of giftedness and talent must be agreed upon, which in turn determines the rationale for identifying students.

You will have considered — and should be able to defend your choice of — the best available tools for identification and the coherent process you wish to implement in your school. You know that schools need to use a variety of measures — both objective and subjective — to ensure that the process is inclusive and fair. You will know about the validity and reliability of the identification measures and be able to make a more informed choice about the types of program you plan and how to identify students for such programs.

Importantly, you will have considered that no single measure will identify all gifted students — nor can any combination of measures be assumed to have done so, though it should mean that fewer are missed — and hence the identification process needs to be seen as an ongoing as well as wide-ranging one.
1. Which type of validity is useful when evaluating whether to use an IQ test:
   - face validity?
   - criterion validity?
   - construct validity?

2. How can you make a subjective tool more objective?

3. Why is it important to consider the validity and reliability of tools that we may use to identify gifted and talented children?

4. Choose one of the following case studies pertinent to your area and in point form recommend what the teachers, or members of the school executive, should do in this situation. You will need to consider information from the Specialisation Modules and knowledge gained through the previous Core and Extension Modules.
a) Mr Vashnu wishes to identify gifted students for an accelerated maths program in his secondary school. He has consulted with the maths faculty and they have decided that for this accelerated program they need to identify gifted mathematicians who are already exhibiting maths talent. They have decided to use a series of aptitude and achievement tests in mathematics to ensure that they are identifying students who are gifted and talented in maths.

- What types of validity should Mr Vashnu be looking for in the tests that he will recommend to the maths faculty?

b) Mrs Hanlon teaches English in a rural high school. She has been asked by her Head of Faculty to develop a process for identifying students in their first Year of high school who are gifted in English, as the faculty plans to conduct an extension program for gifted students in this Year group next year.

- What information does she need to gather?
- Which subjective and objective measures should she use and how will she know that she has chosen the best possible tools for her particular situation?

c) Mr Alvaro teaches history in a city high school. He has noticed that Jose, in his Year 9 class, does not participate in class discussions and is quite disruptive at times. Jose often corrects Mr Alvaro when he has the ‘facts’ wrong and is quite disdainful in his attitude. Mr Alvaro thinks that Jose might be gifted but has no evidence other than these glimpses of the student's advanced knowledge.

- What recommendations would you make to help Mr Alvaro?
The Principal of a school which has a large Indigenous population wishes to identify gifted students within the school. Those identified are to be placed in an extension program which focuses specifically on supporting underachievers in reaching their potential.

The Principal has asked the school's Gifted Education Coordinator to investigate the best ways to identify such students. The Gifted Education Coordinator needs to write a proposal which explains the identification process and justifies why s/he has selected each of the specific identification tools.

• What would you expect this proposal to include?
You have been asked to write a proposal for an effective identification strategy for use in your school. You will need to consider all the steps and information from the Core, Extension and Specialisation levels of Module 2 to create a proposal that will be effective and relevant for your situation.

In your proposal make sure you consider the program, the population, the section of the school you work in, the resources available and the age of the children you deal with.

Appendix A is a sample checklist which may help you to think about the identification process that you wish to introduce.

Compile a needs assessment regarding the identification processes used to identify gifted and talented students in your school. In your analysis consider:

- the measures your staff are using effectively.
- the measures in which staff may need further professional development.

Appendix B is a sample checklist which may help you to create a similar one that is appropriate to your situation.

Create a checklist of objective and subjective measures that are currently in use and measures you would like to introduce. Determine a Professional Development plan for your staff, to improve their knowledge of, and skill in using, some of these tools.
1. Construct validity is useful when evaluating whether to use an IQ test.

2. You can make a subjective tool more objective by:
   - using tools that have been tested for validity and reliability.
   - using tools supported by research.
   - creating a rubric to increase inter-rater reliability.
   - requiring evidence for the observed behaviours.

3. It is important to consider the reliability and validity of the measures you use because this ensures that the tools actually measure the concept, construct or behaviour that you wish to measure. It ensures that you are likely to get similar results if the same measures are used again, giving you confidence that the results are consistent.

4. Suggested case study responses:
   
   a) Mr Vashnu would be looking for content and criterion validity in the test he recommends for use. He would look for content validity as the test needs to ascertain whether students have the knowledge and skills needed for such a program. He would use criterion-based validity so that the program’s success could be regularly evaluated.

   b) Mrs Hanlon needs to gather a combination of subjective and objective information about the students. She might suggest the use of a parent nomination form and a self nomination form. She might also use above-level tests to identify students who are working above the current Year level. She can ensure that the subjective measures are effective by creating a rubric and requiring specific examples to support the nomination. She would ensure that the tests had sound content- and criterion-based validity before administering them to the selected pool of candidates.

   c) Mr Alvaro might suggest an IQ test to examine Jose’s level of reasoning. He might talk to Jose and Jose’s parents about how well Jose had performed in primary school. He might also ask Jose to sit an above-level test.
The Gifted Education Coordinator should consider using dynamic testing and parent and self nomination, after gaining the trust of the local community.
References and Further Reading


**Websites**

http://www.hoagiesgifted.org/identification.htm
http://ericecd.org/digests/e644.html
Sample Checklist for the Identification Process

This checklist suggests components to think about when deciding the most appropriate identification process for your school and program. There is no single, best way, but you need to consider all aspects of the process.

1. What is the school's definition of giftedness and talent?

2. Purpose/ Rationale for this Identification process(select from the following):
   - To identify gifted and talented students
   - To identify talented students in the following subject(s): ....................................................
   - To identify gifted and talented students in the following subject area(s): ..........................
   - Other: ................................................................................................................................

3. Are there special contextual considerations regarding the identification process in your school? (eg, Are some students from culturally diverse backgrounds?)

4. Is there a specific program already running within the school for which you wish to change how you identify/select student participants? If so, describe the program below, considering the skills, talents and gifts that you wish to identify:
To help you plan your identification process, complete the table below. Keep in mind that you will not use all of the tools below, but the best tools you have available to match your purpose. Remember that you must use a combination of subjective and objective measures.

<table>
<thead>
<tr>
<th>The Identification Process</th>
<th>Are these identification tools available in the school already?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated time for completing the identification process:</td>
<td></td>
</tr>
<tr>
<td>Age/ Year of students:</td>
<td></td>
</tr>
</tbody>
</table>

### Objective Measures

<table>
<thead>
<tr>
<th>Name(s) of IQ test(s) you would like to use:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Standardised test(s) you would like to use:</td>
<td></td>
</tr>
<tr>
<td>Off-level(s) test(s) you would like to use:</td>
<td></td>
</tr>
<tr>
<td>State-wide literacy and/or numeracy tests:</td>
<td></td>
</tr>
</tbody>
</table>
### Subjective Measures

<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent nomination form (see Core Module 2)</td>
<td></td>
</tr>
<tr>
<td>Teacher nomination form (see Core Module 2)</td>
<td></td>
</tr>
<tr>
<td>Peer nomination form (see Extension Module 2)</td>
<td></td>
</tr>
<tr>
<td>Self nomination form (see Extension Module 2)</td>
<td></td>
</tr>
<tr>
<td>Work samples</td>
<td></td>
</tr>
<tr>
<td>Annotated observations</td>
<td></td>
</tr>
</tbody>
</table>

After completing the checklist, are there identification tools that you would like to ask your school to purchase? If so, rank them in priority order, from those needed most urgently to those that you can wait for if necessary.

1.  
2.  
3.  
4.  
5.  
6.  
Using the checklist above to assist you, complete the flow chart below, to outline the sequence of the identification process in your school. You may prefer to make a list or present the information in another format. The most important thing is that you can articulate the tools and the process of identifying gifted and talented students in your school context.

Flow Chart of Identification Process
## Principal's Evaluation of Staff Professional Development Needs for the Identification of Gifted and Talented Students

**Evaluation of Staff Needs re the Identification Process**

Complete the table below to determine your staff’s professional development needs for the effective Identification of gifted and talented students at your school.

Consider what staff members already know and what you would like them to know.

<table>
<thead>
<tr>
<th>Evaluation of Staff Needs re the Identification Process</th>
<th>Do staff need further professional development on the following?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Objective Measures</strong></td>
<td></td>
</tr>
<tr>
<td>IQ tests</td>
<td>Yes No</td>
</tr>
<tr>
<td>(eg administration; what they tell us; how effective they are)</td>
<td></td>
</tr>
<tr>
<td>Standardised tests</td>
<td></td>
</tr>
<tr>
<td>(eg what is already available within the school; what else could be acquired; what information they provide)</td>
<td></td>
</tr>
<tr>
<td>Off-levels tests</td>
<td></td>
</tr>
<tr>
<td>(eg what is already available within the school; what else could be acquired; what information they provide)</td>
<td></td>
</tr>
<tr>
<td>State-wide literacy and/or numeracy tests</td>
<td></td>
</tr>
<tr>
<td>Competition papers</td>
<td></td>
</tr>
<tr>
<td>Teacher-made tests and assessments</td>
<td></td>
</tr>
<tr>
<td>(eg how teacher judgement may be improved; criteria we use when marking; how we can make these more reliable and effective in diagnosing strengths and weaknesses)</td>
<td></td>
</tr>
</tbody>
</table>
**Dynamic testing**  
(eg appropriateness of this method for our school population; familiarity of staff members with this method; any staff trained as dynamic assessors)

**Subjective Measures**

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent nomination form</td>
<td>(eg teachers’ willingness to have parents complete these forms; teachers’ views about their reliability)</td>
</tr>
<tr>
<td>Teacher nomination form</td>
<td>(eg staff expertise in the administration of these forms; staff awareness of the significance of both positive and negative characteristics)</td>
</tr>
<tr>
<td>Peer nomination form</td>
<td>(eg appropriateness for this age group; staff expertise in writing and administering a peer nomination form effectively)</td>
</tr>
<tr>
<td>Self nomination form</td>
<td>(eg appropriateness for this age group; staff expertise in writing and administering a self nomination form effectively)</td>
</tr>
<tr>
<td>Work samples</td>
<td></td>
</tr>
<tr>
<td>Annotated observations</td>
<td></td>
</tr>
</tbody>
</table>