

# Identifying gifted students

## Factsheet 2: Methods for gathering information

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### Purpose

Identifying gifted students early improves the likelihood that a student's gifts can be developed into talents. This factsheet outlines a variety of gathering information methods for identifying gifted students.

### The role of identification

Identifying and recognising gifted students is an important process that:

- provides opportunity to develop relevant learning opportunities that appropriately challenge and support them to excel
- ensures they are not underachieving, relative to ability
- highlights potential development pathways.

Gifted students can be difficult to identify as they have individual needs, strengths, interests and characteristics. There is no single test result or identification process that can identify them. Instead, identification takes time, involving communication and collaboration between teachers, the student and parents/carers, as appropriate.

### General principles of identification

Slater (2018) recommends considering the following general principles when seeking to identify gifted students:

- Provide time — identification needs to occur over time, providing the student with multiple opportunities to exhibit their gifts.
- Ensure equity and inclusivity — a range of instruments should be used for gathering data to provide equitable and inclusive opportunities for identification.
- Recognise diversity — students may demonstrate giftedness within one specific area or across multiple domains.

Specialists such as psychologists, guidance officers or coaches may also contribute key information about the gifts of an individual.

### Selecting appropriate ways of gathering data

Clear and structured data collection processes enable schools to build evidence that supports the accurate identification of gifted students. These processes promote accountability and guide appropriate responses to the variable learning needs of these students. Peters et al. (2024) recommends a three-phase data collection process:

- Phase 1: Universal screening — all students within a cohort complete a universal identification assessment.
- Phase 2: Identification — students who achieve or exceed the required level of the universal screener complete additional assessments.

- Phase 3: Placement — the data collected from Phases 1 and 2 is analysed to guide decisions about the types of programs to be provided, and which students could benefit from placement within these programs. Schools should also consider the type of data that is required, including data related to
  - general cognitive or academic ability
  - knowledge and skills in a specific subject or domain
  - aptitude in a particular area, e.g. swimming speed, musical talent, coding.

If further data is required for individual students, additional tests may be carried out.

## Testing instruments

The selection of effective testing instruments plays a critical role in determining the accuracy, validity and reliability of identification data (Peters et al., 2024). Optimally, to identify a gifted student's needs, a range of objective and subjective data needs to be gathered using a variety of valid and reliable instruments. When selecting data collection tools to use, schools consider practical factors such as time, costs and resources (staff and materials), as well as privacy and storage of data (Masters, 2013).

The following describes a range of testing instruments that schools can use in the identification of gifted students.

### Checklists

Checklists based on gifted traits, attributes and behaviours provide an informal and subjective perspective on student ability. Schools can use them to collect data across many of the domains identified in François Gagné's Differentiating Model of Giftedness and Talent (2021). Checklists present an opportunity to gather information from a range of stakeholders and can be completed by teachers, students, parents/carers, and/or other relevant professionals.

### Standardised psychometric tests

Standardised psychometric tests provide schools with a systematic process for collecting valid and consistent data to identify cognitively gifted students. 'Standardised' means these tests are administered and scored in a uniform manner for all test-takers (ICAS, 2023). Age-appropriate tests of academic ability can be administered to groups of students or individuals. Diagnostic information obtained from these tests can also be used to identify any gaps in a student's knowledge.

#### Standardised psychometric tests — group tests

Psychometric group tests are usually administered by a suitably qualified professional. The benefit of group testing is that it may assist in the identification of students who have been previously overlooked or whose giftedness may not be immediately apparent.

These tests are designed to be administered to:

- a small group of students
- an entire class
- a large group of students, e.g. a year level, as part of an enrolment process.

Commonly used psychometric group tests are:

- Raven’s Progressive Matrices (RPM) — a nonverbal test of ability that uses different forms for various developmental levels
- Otis-Lennon School Ability Test (OLSAT) — a multiple choice test providing overall ability based on verbal and nonverbal results
- Cognitive Abilities Test (CogAT) — a multiple choice test of academic aptitude
- Screening Assessment for Gifted Elementary and Middle School Students (SAGES) — a measure of academic aptitude and achievement for students aged 5–14
- Progressive Achievement Tests (PAT) — a measure of knowledge, skills and understanding in comprehension, reading, spelling, vocabulary and/or mathematics for Prep–Year 10 students.

## **Standardised psychometric tests — individual tests**

Standardised individual psychometric tests allow schools to collect more detailed information about the cognitive gifts of a student. These tests are carried out by educational psychologists, or some guidance officers, and usually incur a cost. They are:

- designed so that questions and interpretations are consistent
- administered and scored in a standard, consistent manner.

The following examples are widely used:

- Wechsler Preschool and Primary Scale of Intelligence (WPPSI) — tests a young child’s intelligence
- Wechsler Intelligence Scale for Children (WISC) — tests a child’s intelligence
- Stanford-Binet Intelligence Scales (SB) — tests a child’s verbal and nonverbal intelligence
- Wechsler Individual Achievement Test (WIAT) — tests a student’s achievement levels
- Woodcock-Johnson Tests of Cognitive Abilities (WJ V COG) — tests a student’s cognitive ability level and achievement levels.

Results from these tests are usually reported as an adjusted score, which allows comparison between different scores. Scores at or above the 90th percentile align with Gagné’s definition of giftedness (2021).

Variation in test scores is common. Discrepancies may indicate the student has had difficulty in an aspect of the test, potentially due to misunderstanding, fatigue or reduced attention.

Significant discrepancy between ability and achievement scores may indicate a need to explore whether the student has one or more disabilities that co-exist with their giftedness. This is referred to as ‘twice exceptional’ or ‘2e’ and can be one cause of underachieving relative to their potential (Kettler & Sulak, 2022).

## **Non-standardised tests**

Schools regularly administer tests that are not standardised but nonetheless may provide useful data when identifying gifted students. Parents may also provide schools with results from tests conducted outside of school. Information gained from such tests should be regarded as supplementary to standardised test results. Such tests may include:

- teacher-made classroom projects and assessments
- portfolios of student work

- informal observations and interviews
- discussions and/or oral presentations.

## Commonly used tests

Schools may already have access to some assessment instruments which can provide additional data that supports the identification of gifted students. These may include:

- National Assessment Program Literacy and Numeracy (NAPLAN) — tests most students in Years 3, 5, 7, and 9 throughout Australia
- International Competitions and Assessments for Schools (ICAS) — tests English, Mathematics, Science, Digital Technologies, writing and spelling in a competition format, which can provide additional information about a student's abilities within a particular area.

## Pre-tests

Students who are advanced in a subject may have a depth of curriculum knowledge before enrolling in a course. By routinely implementing formal or informal pre-tests to identify what students already know before commencing a unit, teachers will be able to differentiate the learning to address gifted students' needs.

Some pre-tests are designed in a way that may produce a 'ceiling effect'. This occurs when an assessment does not sufficiently offer a suitable starting point to allow students to demonstrate their abilities. Instead, student results cluster at the high end of the scale, showing no indication that higher ability may exist. To remove the 'ceiling effect', off-level tests can also be administered to students of an earlier year level than the test is designed for (Johnsen, 2022). This is a useful indicator of a student's ability compared with other students in the cohort. By identifying the extent of a student's prior knowledge, off-level tests help to establish an accurate starting point from which appropriate programs and pathways can be implemented.

## Identifying non-academic gifts

Many commonly used testing instruments are primarily concerned with identification of gifts within academic domains, e.g. English or Mathematics. Gagné (2021) identifies three additional 'mental domains' of creativity, social awareness, perceptual ability, and two 'physical domains' of muscular and motor control. Gathering information across non-academic domains may require different approaches and strategies.

## Informal strategies

Informal strategies may be used to support the identification of students with non-academic gifts. Wilfred and Tarmo (2025) suggest information may be drawn from multiple sources including:

- self-identification, e.g. checklists, rating scales, portfolios of work completed by the students themselves
- peer identification, e.g. checklists and rating scales that students complete regarding their peers, and encouragement of pupils to talk about their peers' gifts
- teacher observation, e.g. informal observations and anecdotal records taken in class and/or extracurricular activities
- parental input, e.g. checklists and rating scales completed by the parents/carers of the child, additional information provided regarding demonstration of giftedness outside of the school environment

- performance assessment from coaches and other professionals, e.g. targeted opportunities provided for students to demonstrate their gifts in specific domains.

Although more subjective in nature, data gathered through these strategies can support the identification and monitoring of students who demonstrate gifts in non-academic domains. This information can also guide the development of appropriately targeted programs and pathways for identified students.

## Conclusion

Schools initiate and integrate processes to assess and identify gifted students to ensure they receive the challenge and extension required to develop their gifts into talents. This includes gathering valid, equitable and reliable assessment data from a range of sources over time. Analysis of the data can provide teachers and schools with the information needed to provide an engaging learning pathway for gifted students.

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## More information

This is the second factsheet in a suite of documents that examine various aspects of gifted and talented education including:

- Factsheet 1: Understanding gifted students
- Factsheet 2: Identifying gifted students

- Factsheet 3: Developing gifted students

If you would like more information, please visit the QCAA website [www.qcaa.qld.edu.au](http://www.qcaa.qld.edu.au) and search for 'Gifted and Talented'. Alternatively, phone (07) 3120 6102 or email the K–10 Curriculum and Assessment branch at [australiancurriculum@qcaa.qld.edu.au](mailto:australiancurriculum@qcaa.qld.edu.au).



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