

IQ Tests: How to mine the data and avoid the pitfalls

The Association often receives enquiries about IQ testing. Parents and teachers often grapple with questions surrounding IQ assessments and how to use them appropriately to provide effective differentiation and to address underachievement. What approaches to IQ testing are helpful? What resources can help teachers and administration teams to respond to IQ test information for individual children? How can parents help schools to respond most appropriately to the information in their child's IQ test? Here are some considerations and resources that may be of use:

IQ Assessments: Accessing and interpreting them

An IQ assessment is just one part of a puzzle for finding out about the needs of a gifted child. But it can be an important part that reveals significant information that may help the child to thrive. If your child has an IQ assessment, it really needs to be used along with other data, collected by the school, to form a profile of the student.

Names of testing psychologists can be found on the QAGTC website:

<https://www.qagtc.org.au/resources/testing-and-psychologists>

The Association can't recommend one provider over another, but we do suggest you contact providers to find out if they have experience testing specifically for giftedness; what IQ test they administer; whether they administer any achievement tests; and the costs that you will incur.

An IQ assessment report will include a whole range of information, from a numerical score, to a written report describing the child's learning profile and some recommendations for responding to the profile. How do parents and teachers interpret all this information?

Firstly, it is important to note that it is difficult for a child to score highly on a reputable IQ test without having a considerable ability, so high scores do need to be respectfully considered. However, it is easy for a child to underperform on an IQ test. Some points to consider may be: was the child anxious in the test situation? Was the child hindered by the rapport with the tester because he/she was a stranger? Results may also be affected by a student having a disability such as ASD. A young child, while potentially gifted, may have other, age-appropriate limitations, that affect his or her performance in a formal testing environment.

Secondly, the nature of gifted understanding and behaviour can interact with the IQ testing in ways that result in a test score that underrepresents the child's ability. Highly gifted children look for complexity and sometimes may be expecting the questions to be more difficult (e.g. for there to be more patterns in the data) than the test question actually requires. This can have the effect of making them slower (which adversely affects their score) or not giving the answer required by the test (because they are going beyond what the test asks).

Sometimes, the IQ test results seem to just raise more questions for the parents and school, when everyone was hoping it would provide a clear-cut answer! However, the questions that the results provoke, can lead to more appropriate educational responses for the gifted child.

IQ reports: Using them to plan appropriate differentiation

When the parent and school have access to an IQ report, it is very important that they use this information as a part of all the data about the child's learning. Effective differentiation will also need to respond to other assessment data that has been collected. The IQ score can give guidance about the extent of differentiation that may be required to enable a student to access enough challenge to ensure that they are both learning, and learning to learn.

Some general advice around differentiation applies for all gifted students. First, information from the psychologist, in terms of recommendations and other achievement data can also be considered by the school. The *Wechsler Individual Achievement Test (WIAT)* or some other achievement measures may have been administered. If so, the results may give an indication of potential with regards to required curriculum provisions.

Second, some further use of school-collected data could also be valuable to tease out the sorts of school response that might be helpful. For example, Progressive Achievement Tests (PAT) from a higher year level can be administered to see where the student starts to run into unknown material. Pretesting in subjects to assess the knowledge and skills a student has, prior to teaching units of work, will also help the teacher to plan adequate differentiation.

More specific guidelines exist in response to the level of giftedness identified by the IQ testing. For students with an IQ of approximately 115-129, a combination of quality differentiation and extension within the classroom and access to external enrichment type programs will tend to meet students' needs. In-class differentiation could include for example: less drill and practice, open-ended questions, faster pace of learning and more complexity in the learning tasks. It is essential to pre-test in subjects to assess knowledge and skills the student has prior to teaching units of work. In this way, the teacher can plan for adequate differentiation. Activities, external to the classroom, could include participation in debating or chess clubs and externally-run days where students work with like-minded peers.

For students with an IQ 130+, their IQ score would indicate that acceleration may be an option in one or more subjects. In this case, schools will need to carefully consider how they can ensure that the child has accessed the curriculum sufficiently to develop the knowledge and skills at the year levels through which they will be fast-tracked. This needs to be documented thoroughly as part of the preparation for successful acceleration. 'Off-level' testing can be used to find the level at which a student begins to encounter knowledge and concepts that are new and challenging.

A Nation Deceived (http://www.accelerationinstitute.org/nation_deceived/) and the updated A Nation Empowered (http://www.accelerationinstitute.org/Nation_Empowered/) are useful articles on acceleration. If grade acceleration is being considered, the IOWA Acceleration Scale is recommended as a tool to assist schools in managing the process. (<https://www.accelerationinstitute.org/Resources/IAS.aspx>)

The IQ score and Underachievement

Sometimes teachers don't see gifted behaviours in the classroom, and yet the IQ testing indicates otherwise. The temptation may be to disregard the IQ results. However, this may not be in the best interests of the child. IQ tests can be a vital part in the puzzle for underachieving students. An approach that responds to the following considerations may provide a way to use the IQ test results as a gamechanger.

The reasons for underachievement can be many and varied. A major reason that can start in early childhood and be very influential in the later primary and early secondary years, is that children's need to fit in socially can be a stronger drive than the need to demonstrate their ability (referred to as 'forced-choice dilemma'). These conflicting needs can cause them to mask their ability (e.g. read at what they perceive to be 'age appropriate' rather than their actual level, fail to answer questions or complete work at a high level).

Children of high ability often learn new material effortlessly and then move on to new thoughts and questions. As a result, they can fail to complete the assessment task to a high standard because it is perceived as repeating work they already know. In our assessment driven school systems, the result of this situation will be that the gifted student's thirst for and capacity for advanced learning will not be reflected in their achievement data.

A variety of developmental factors can impinge on results for many gifted children. A child with less well developed fine-motor skills (at or below age level) may struggle with physical demands of writing the complex narrative or all the information he has in his head. As a result of this asynchronous development, a gifted child's ability can be masked and the student may also become very frustrated. We mentioned above, that a disability or additional special need (e.g. English as an additional language or dialect, cultural expectations that differ from the mainstream) may also be at work to mask high learning potential.

It is often the case that if gifted students aren't operating in their 'zone of proximal development' they may not demonstrate what they can actually do. That is, they require work that is more difficult in order to demonstrate their abilities. This is problematic for teachers because it can seem counterintuitive to give harder work to students who aren't demonstrating excellence in the 'at level' tasks. IQ test results can be useful in this situation. In the absence of the typical data that would justify such extension, the IQ results provide valuable evidence to support the school in their efforts to find a good learning fit for the student.

Additional resources:

Articles regarding underachievement can be found here:

<https://www.hoagiesgifted.org/underachievement.htm> and <https://education.arts.unsw.edu.au/about-us/gerric/resources/pd-package/>.

Understanding and identifying giftedness:

In order for teachers to recognise the signs of giftedness, they may need some further information in terms of what to look for. The teacher might find it helpful to complete

Sayler's checklist <https://www.education.vic.gov.au/Documents/school/teachers/teachingresources/diversity/saylerteach.pdf>

The GERRIC modules- <https://education.arts.unsw.edu.au/about-us/gerric/resources/pd-package/> may help teachers to understand the traits of a gifted child.

Whitmore's checklist is also a good tool for underachievement:

<https://australiangiftedsupport.com/ccmword/wp-content/uploads/2014/12/1352274120.pdf>

The QAGTC website www.qagtc.org.au also lists further resources. For example: The Betts and Neihart Profiles offer thought-provoking ideas and questions to consider in addressing a child's underachievement and it may be a helpful resource to use with the child's teacher.

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