What Does IQ Really Measure?

An intelligence quotient, or IQ, is the name given to a score taken from one or several tests designed to assess intelligence. Research has shown that, on average, the higher a child's IQ score, the better they tend do on conventional measures of success later in life such as academic achievement, job performance, income, and life expectancy. Because of this, IQ tests have been used by schools and employers to identify "gifted" and "clever" individuals, as well as being used as a tool to measure a person's "potential" or "raw intelligence". The aim of this article is to dispel the myths that surround IQ tests, and in doing so, highlight why it might not always be appropriate, or sensible, for schools and employers to use IQ tests in this way.

A bit of history

In the early 1900s, the French government made it compulsory for all French children to attend school. The government asked a psychologist called Alfred Binet (1857-1911) to help them develop a method of identifying which children were most likely to experience difficulty in schools, so that they knew which children might require a special learning environment. Together with a colleague called Theodore Simon, Binet began developing a test that would allow teachers to measure a child's "mental age"- a measure of a child's ability compared to the average abilities of other children in their age group. This test was called the Binet-Simon Scale, and eventually became the IQ test that we know today. The most important point to consider is that Binet himself never stated that this test was meant to be used as a measure of general intelligence. Binet stressed the limitations of the test, as he believed that not only is intelligence changeable, but that intelligence is far too broad a concept to ever measure with one test, let alone define with a single number. A few years later, a man named Henry H. Goddard brought the test to the USA as he wanted to use this as a tool to promote his belief that some races were superior to others. The test soon began to become a popular way of giving people a score for their intelligence, despite the fact that it was never intended for, or suitable for, this use.

Some interesting research

In the 1960s, Robert Rosenthal and Lenore Jacobson carried out a research study called "*Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*". They wanted to investigate how teachers' expectations could affect pupils' intellectual performance. Rosenthal and Jacobson measured the IQ of all the children in an elementary school in California. They kept these scores a secret, but gave the teachers the names of the children that could be expected to be "spurters" that year, doing better in comparison to their classmates. However, what they didn't tell the teachers, was that they hadn't selected the "spurters" based on their IQ scores, but had actually just picked these children at random. At the end of the study, they retested all of the children on the same IQ test that they had used at the start of the study. They found that the IQ scores of the children who the teachers had been told were "spurters" had gone up significantly more than the rest of the children, despite the fact that they had similar IQ scores at the start of the study. What this study showed was that teachers' expectations of children can actually influence children's achievement; the better teachers expect children to do, the better they actually do.

More recent research has also revealed that people's IQ scores can vary depending on how motivated they are to do well on the test. A psychologist called Angela Lee Duckworth has found that

people do much better on IQ tests if they are promised money as a reward for doing well on the test. Duckworth also found that the more money people were offered for doing well on the test, the better they did at the test. In addition to these studies, Duckworth has carried out a lot of research investigating the relationship between motivation, IQ scores, and later life success. Duckworth suggests that the relationship between IQ scores and measures of life success is partly due to the simple fact that if you are motivated to do well on an IQ test, then you are motivated to do well in later life too.

So, what does IQ really measure?

What IQ tests certainly do not measure is a person's "raw intelligence". A person's IQ score may well be related to other measures of life success, but all an IQ score really shows us is how well someone has performed on that particular IQ test in relation to other people of a similar age who have taken the same test. Using an IQ test to measure someone's intelligence is effectively the same as using someone's time on a 100m sprint as a measure someone's "general sporting ability". Being good at running may well be related to a person's ability in some sports, but "general sporting ability" is far too broad a concept to be measured by one simple test, much in the same way that intelligence is.