

MC Expert

A series of expert briefings on key coaching topics for the Meyler Campbell network

PSYCHOMETRIC TESTS: BACKGROUND

WHAT ARE PSYCHOMETRIC TESTS?

Psychometrics is the branch of psychology concerned with measuring 'individual differences' and tests are the measuring tools it uses.

There are tests for virtually any aspect of a person's psychology but some of the most popular areas are:

- IQ or intelligence
- Multiple intelligences, most popularly Emotional Intelligence (EI) and Social Intelligence (SI)
- Ability – verbal, non-verbal, spatial and abstract reasoning
- Attainment (knowledge of an area – school exams are attainment tests)
- Thinking style and critical reasoning
- Implicit views (in particular, underlying prejudice)
- Values
- Trainability and coachability
- Self-esteem
- Personality (how someone will behave 'all things being equal')

These and other human characteristics are sometimes bundled into tests for specific roles (leadership or sales ability), specific business processes (succession planning) or more focused psychological aspects of people at work (leader derailment; behaviour under pressure). All of these tests are measuring selections of the same fundamental, underlying psychological characteristics. These in turn underpin behaviour, so psychometrics can be said to describe likely behaviour and predict it.

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WHAT IS DIFFERENT ABOUT PSYCHOMETRIC TESTS?

We gather information about other people in many informal ways. Mastered, Meyler Campbell's *Business Coach Programme* introduces us to the specific characteristics of psychometrics such as MBTI and FIRO-B but also to more informal assessment techniques: ranging from Strengths Inventories to structured sets of questions which can help to take the psychological temperature of teams or business environments.

The dividing line between psychometric tests and informal assessments is pretty porous but we can say that psychometric tests are modelled on the scientific method and tend to have the following qualities:

They are standardised: delivered in the same standard way, so removing unwanted variables, thus measuring what they are intended to measure rather than irrelevant factors. However, now that many tests are delivered online, in different places, it's become less easy to create a laboratory-like standard way of administering tests.

Reliability: does the test deliver the same results on the same person wherever and whenever it's administered, by different people?

Validity: does it measure what it says it measures? There are a number of different types of validity, one of the most important of which is *predictive validity*: does a test predict what it says it does (for instance, success in a particular job or becoming a director in five years' time)?

Standard scores / scores you can compare or evaluate in some way: If Jenny gets all questions right in a Maths test and Fred only half, you don't know how much better Jenny is at Maths unless you have some idea of how difficult the questions are. Similarly, the fact of knowing that Sanjay and Samantha have passed the driving test can't tell you who the better driver is, or how much better one is than the other. Psychometrics use statistical techniques – much the same as those used in market research – to ensure you know what scores mean. Since ALL measurement contains some element of error (measure a person's height three times and you'll get different results), good psychometrics give you an estimate of how likely a score is to be accurate.

SOME HISTORY

Prospective clients sometimes claim testing is a new fad. In fact, the science behind it has developed over more than a century.

Decade	Testing Development
1000BC	First standardised tests used by the Chan dynasty in China to select civil servants.
1880s	Francis Galton sets up the Anthropometric Lab at International Health Exhibition in London to make first scientific measurement of mental processes. The real birth of psychometrics.
1910s	Publication of first psychometric test of children (the Binet-Simon Scale) and an early adult test (Alpha Army and Beta).
1920s	The Rorschach inkblot test published.
1930s	MMP! – major personality test for measuring mental disorder.
1940s	16Pf – major test of normal personality.
1960s	MBTI – grows out of human potential movement and the major test for coaches.
1970s	Publication of NEO Personality Inventory which established 5 factor model as industry standard. During the period before this, tests were used more for clinical and educational purposes as well as for research. They were largely the tools of psychologists, other specialist medics and specially trained teachers.
1980s	SHL's OPQ – first UK personality test specifically aimed at business use. In the UK, the development of a competency framework in test use by the British Psychological Society increasingly opened up testing to non-psychologists.
1990s	Start of development of computer administered testing.

PSYCHOMETRICS AND COACHING

The MC Expert '*Psychometric Tests and Assessments in Practice*' gives more information on using assessments in coaching practice. But what sort of tests do coaches tend to use?

Mostly they use tests of typical performance, rather than tests of maximum performance. The latter shows how well you do something – think critically, use numbers, visualise shapes, for instance. They tend to have right or wrong answers. Tests of typical performance have no right or wrong answers and describe a person's default way of behaving in certain situations. Personality tests – of which *MBTI* is the best known example – are the psychometrics most widely used by coaches.

FINDING OUT FURTHER INFORMATION

Websites	
http://ptc.bps.org.uk/	The British Psychological Society's information centre for testing. Note that this

	covers use of tests in a variety of areas beyond business coaching. Particularly useful is the review section of the site which reviews commonly used tests within a quite stringent framework. This site also gives information if you want to investigate training in psychometric testing in more depth.
http://www.psychometrics.cam.ac.uk/	The UK's leading university research centre into testing. It creates tests and means of measuring psychological constructs and is at the forefront of social media profiling. It also offers training in aspects of testing. The Psychometrics Centre is in the forefront of the big data movement.
www.etpg.net	Respectively the European and US trade association of test publishers. Many of these are run by quite high level testing experts and have experts on staff. They usually have resources on the background to testing.
http://www.testpublishers.org/	
<u>Books</u>	
Modern Psychometrics: John Rust and Susan Golombok/ Routledge	Perhaps the premier textbook for use if you really want to go into the theory and background of testing, rather than its practical application. It is however quite detailed and statistical.
Testing People at Work: Mike and Pam Smith/BPS Blackwell	Rather old (2005) and difficult to find but follows the BPS competencies for test use and is one of the best introductions to psychometrics and testing if you want to get into the area in more depth.

LINKS IN THE NETWORK

If you would like to be put in touch with someone in the network who could tell you more about psychometrics, please let the office know.

BACKGROUND TO THIS DOCUMENT

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