Psychometric testing in the workplace — getting the right person for the job

**Psychometric testing** — either the use of computer packages or pencil-and-paper tests — has the potential to deliver useful information and details that aid the assessment of (potential) employees for their workplace suitability. Professor Craig Jackson of Birmingham City University considers the benefits and concerns of such tests.

“A psychological test is any procedure on the basis of which inferences are made concerning a person's capacity, propensity or liability to act, react, experience, or to structure or order thought or behaviour in particular ways.” *The British Psychological Society*

**Introduction**

In theory, psychometrics (valid and reliable assessments using quantitative, data-driven outputs and results) have the potential to make employee selection as objective and scientific as possible. The quantitative and objective element of employee selection is seen as being a vital pre-requisite to personnel selection in a highly litigious and accountable business culture. Given the current high level of unemployment and job-seeking competition, psychometric testing may become even more popular as a tool to help deal fairly with the vastly increased number of applications that companies receive for their vacancies. Some may argue that psychometric testing takes the “human element” out of the “art” of the interviewing and selection process, and that this is a retrograde step, as not all elements of good employee selection may be quantifiable or even “testable”.

Essentially, in an occupational/organisational context, a psychometric test is a method of assessing a person's personality or ability in a structured and uniform way that allows for direct comparisons with other people who have also taken the test. As good as they are, critics argue that psychometric tests would not be able to detect the magical "x factor" that an employer may want from a prospective candidate, and as such they remain limited. While such tests can be good at spotting candidates' potential skills and interests, they are often mistakenly thought to be tests of psychological flaws or personality failings.

However, the reality is that in a workplace context, the isolation of such “psychopathology” is not the purpose of such tests. Occupational psychometrics are mostly tests of abilities and skills; tests of personality traits; or tests of interests and vocational preference. Some tests are designed to be used by employers to aid them in the recruitment process, while other psychometric tests are designed to help individuals discover their own skills and thereby aid their career decisions. It is worth mentioning that the discipline of quantitative psychometrics has benefitted other fields, with psychometric tests regularly being used in the professional fields of healthcare, medicine, psychiatry, forensics, law-enforcement, probation work and criminology.

**Popularity**

There is no doubt that there is a huge market for companies offering psychometric services to companies and individuals alike who require quantifiable psychometric profiles of vocational abilities. There is a need for caution here among those considering the services of psychometricians, and the British Psychological Society provides very clear advice and guidance about the area. Psychometric consultants will rarely provide cast-iron guarantees about the infallibility of their tests as there is no consensus on a definition of successful psychometric testing. It is merely used to help match employees to jobs, identify skills and academic abilities, to assist with career planning, and to measure levels of ambition and aspiration. However, at best can it be any more than merely a suggestive tool? As with many psychological assessments, the tools often give the test-taker the
caveat that “there are no right or wrong answers”. Psychometric questionnaires are designed to encourage the test-taker to consider his or her options, and if repeated occasionally, to provide a “vocational trajectory” highlighting his or her changing preferences and desire for different challenges. The types of assessment used most often fall into two main areas:

Ability tests that measure a person's capability in specific key skill areas, hopefully ones that map onto the job role in question. These are often a range of standardised tests which will give objective information to identify if someone has the right skills needed to do a specific job. Specific tasks may include measures of verbal analysis, logical reasoning, numerical ability, managerial judgment, speed and accuracy in checking information, or an ability to simplify and convey details. These are sometimes known as “tests of maximum performance”.

Personality questionnaires that measure a person's (work-) style preferences are concerned with people’s typical or preferred way of behaving, while exploring a broad range of personality characteristics relevant to the workplace. These can be used in conjunction with other assessment methods such as attitude development, selection, teambuilding and counselling. Such questionnaires are designed to cover a wide range of job roles and are sometimes known as “tests of typical performance”.

Quality of service
The British Psychological Society (BPS) has clear guidance on the use of psychometric tests and has also set certification standards for those who administer such tests, this being the Level A and Level B certificates of competence in Occupational Testing. In essence there are three levels of competence in test administration in occupational settings; Assistant Test User; Test User; and Specialist in Test Use. The BPS offers useful guidance for those wishing to undertake the services of those offering psychometric testing, and the BPS’s own Psychological Testing Centre (PTC) offers invaluable advice to potential users, including standards for test takers, test users, those developing tests, and members of the public with queries. The British Psychological Society is the leading national organisation for setting standards in psychological testing. It directs the work of the PTC through its own Committee on Test Standards whose role is to set, promote and maintain high standards in testing.

Benefits of psychometric testing
Before embarking on the endeavour to locate a suitable psychometric test, it is worthwhile checking if the benefits of such testing will be relevant to the company or organisation using the test. In short, the benefits of using psychometric tests to assess people are that they give results which are: (a) objective and not influenced by personal feelings, prejudice, or opinions; (b) systematic and routine, that adhere to a proposed plan; (c) reliable and trusted, being consistent in their administration and outputs; (d) valid on many levels such as measuring the skills or attributes that they claim to measure; and (e) consistent across different administrations/deployments and with different groups of individual test-takers.

Ideally, both the individual testing organisation and the test-takers benefit from the equality and fairness of treatment for all test-takers. All test-takers are assessed against each other, ideally under controlled or timed conditions when possible (eg mass testing), regardless of gender, culture, diversity of background, age, gender and sexuality. The most common benefits of testing are, put simply:

- emphasising equal opportunities and non-discriminatory selection for all
- helping identify applicants with the potential to fit job demands and be high performers (recruitment, selection and promotion)
- improving the motivation and morale of those tested (organisational development)
- aiding the understanding of individuals and team members and their possible interactions (personal and team development)
- increasing employee retention — using knowledge of staff strengths and weaknesses in order to place them in the most appropriate roles
- developing benchmark levels of performance — thereby identifying good and poor performers
- demonstrating consistency over time by using reliable and valid assessments
- reducing costs resulting from mismatches in recruitment and selection and the residual expenses of re-selection
- aiding group training and individual coaching
- providing “organisational barometric readings” before and after major changes.

Some claim that correctly designed and implemented online psychometric testing can reduce the costs of recruitment by between 30% and 40%, and because tests can differ in terms of content and respective level of challenge, they are ideal for recruiting/testing all ranges of job positions, including senior managers, graduate recruits, customer service staff and support staff.

Avoiding poor psychometric tests
As there are thousands of webpages offering psychometric tests and testing services, it is vital to be able to discern good tests from the bad. It is worth asking a number of questions about each potential test:
When buying a psychometric test (as opposed to a testing service), is there an accompanying user-guide and manual, clearly stating the scoring procedures, how to interpret such scores, and giving the norms (sampling data) that the scoring system is based upon? Good tests will be transparent about the development and history of the test. Is there evidence that the test has been previously piloted and tested on a large sample? How reliable is the test, and how consistent will the results be if the same person is tested over a number of occasions? An important consideration is the cultural validity of the test — especially with the Internet making access to tests from other countries more readily available. If a test was developed in the USA, with normative data and typical responses based upon samples of individuals from the USA, will any cultural/language differences between test-takers in the USA and UK lead to culturally-invalid results when administered to UK individuals?
An additional consideration concerns the truthfulness and honesty of test-takers in giving their answers, as many individuals may either deliberately or unwittingly give certain (untruthful) answers to some questions because they fear social disapproval from others based upon their truthful responses concerning opinions, prejudice or attitudes. Other test-takers will succumb to the obvious temptation to “beat the test” with prepared and rehearsed answers that “look right”. Some tests will attempt to measure the “social-desirability” of test-takers by asking items and questions about attitudes that may produce a “warning” to the administrator if the test-taker’s responses exceeded a social-desirability threshold, suggesting they were not giving true responses.

Various tests
The number of psychometric tests that are available run into the thousands as there appear to be endless measures of personality, thinking styles, attitudes and entrepreneurship scales. Commonly-
used tests include the Role Model Profiler; the Assertiveness Test; the Risk Attitudes Profiler; and the Entrepreneur Test.

Possibly the most well-known and oldest workplace psychometric test is the Myers-Briggs Type Inventory (MBTI) which was developed during World War Two but was not published until 1962. Critics of this test focus on its reliance on Jungian psychology that catalogues different personality types based on the 16 possible combinations of four dichotomies: extroversion v introversion; sensing v intuition; thinking v feeling; and judgment v perception, eg a person could be categorised as being “extroverted, intuitive, thinking, perceptive”. The type of yes/no items featured on the 72-item version of this test include:

“You try to stand firmly by your principles” YES / NO

“A thirst for adventure is close to your heart” YES / NO

“You prefer meeting in small groups to with lots of people” YES / NO

“You consider the scientific approach to be the best” YES / NO

“You find it difficult to talk about your feelings” YES / NO

“You often spend time thinking of how things could be improved” YES / NO

“Your decisions are based on careful planning” YES / NO

The MBTI is described as the most popular psychometric test, based on an estimated two million administrations each year, but some critics see it as being too well-known and therefore a target for a burgeoning Internet market to provide “correct answers” to the test.

Realistic limitations of testing
It is not advised that psychometric tests be used as a sole means of making personnel decisions in isolation from other methods such as interviews or group performances. Such limitations of tests are as follows.

Psychometric tests sometimes provide a single measure of a test-taker from a quantitative perspective. Given the complex multifaceted structure of many job roles in contemporary workplaces, such one-dimensional approach may not be enough alone.

Ability, skills and even personality are not the only components of a successful worker, and if over-focusing on those attributes, the organisation may miss out vital qualities such as compassion, emotional intelligence or a range of “soft-people skills” that may not be easily quantifiable by such tests.

All tests are subject to some level of error, and can never be 100% accurate. Errors may occur in the different ways that test-takers interpret and respond to the questions in the test, eg different understandings of words such as “fair” “dip” or “lie”, and this may influence their subsequent responses. Of course, tests with maximum validity will have minimised this problem through careful reiteration and refinement of the items/questions involved. Other kinds of errors (such as constant errors) are those that may creep into the data due to differences in time of day of testing, or differences in the test-taking environment between individual candidates. Tests administered through the post or over the Internet (attempting to be convenient for both the taker and the organisation) run the risk of test-takers completing such tests in a variety of on-optimal conditions (eg on the train or while watching TV) that can also unduly influence their responses. It is vital that test administrators understand concepts of “errors of measurement” before placing too much emphasis on the results from such tests.
A golden rule in psychometrics is borrowed from the carpenter’s maxim of “measure twice but cut once” — in that multiple measurements of the same variables/constructs wherever possible provide more accurate (mean) scores. When choosing any test, it is essential that it matches a careful job analysis of the attributes actually required to do the job.

**Ethical considerations and rights**

Those who wish to employ a psychometric test need to carefully consider the ethical implications of the exercise. First, it must be appreciated that those who take such tests may need to be offered guidance and support after the test in the form of detailed and meaningful feedback that explains the scores/performances attributed to them. Quality, jargon-free feedback is essential, in order to ensure that test-takers are not slighted or unduly disturbed by the results — especially if they “learn” something about themselves and their abilities that they did not previously know.

Test-takers have a right to know more about the tests they are about to undertake, especially in terms of the data they generate, who may see it, how and where it will be stored, and subsequently transported, and what the ramifications of their test performance may be. These rights are important to maintain if psychometric testing is to strive for the highest possible ethical standards, and should also include further consideration about:

- how their results will be scored, used and interpreted
- the competence of the test users/administrators to score and interpret results, and whether they have relevant BPS certification
- how test scores will be communicated and to whom, via which media, and the subsequent processes in place should data be lost or stolen
- who may have access to the results
- how confidentiality or anonymity will be protected
- how long will test scores be stored for and how will they be ultimately destroyed
- what assurances will be given to ensure that test scores are not used for other commercial purposes
- what type and level of feedback will be given to the test-taker
- whether the tests are properly constructed, valid, reliable and fit for purpose
- whether contact details of people who can answer subsequent questions are provided
- how data will be circulated among workgroups without disclosing more detail than is necessary.

**Legal position**

As stated previously, because there are no right or wrong answers in most psychometric tests, there is a legal understanding that no element of discrimination from negligence or disadvantaging subjective viewpoints can sway how the test is administered or scored. If, however, a psychometric test has been administered and certain specific characteristics of a potential employee are overlooked or even disregarded, there may be potential legal consequences.

In terms of mental health problems and possible related ill-health considerations, some argue that psychometric testing can provide employers with a way around the Equality Act 2010 as it can be applied at any stage of a recruitment process because it does not necessarily relate to health or medical issues. As it is unlawful to conduct medical screening before confirming appointments to job offers, such psychometrics could help to answer employers’ questions concerning whether or not candidates have the skills and aptitude to carry out the proposed work, whether or not there are adequate indications that workplace behaviour, conduct and social interactions will be appropriate and whether or not any reasonable adjustments will be needed to ensure regular attendance at work. The implementation of such tests must always be done by organisations in good faith and without prejudice.
Summary
There appears to be no slowing down of the popularity of psychometric testing in human performance/behaviours, especially in the occupational and workplace realms. With advances in test development and the improved portability of testing technology, the accuracy and usefulness of such tests can benefit the field markedly.

One area that may need advancing is the long-held notion of the “big five” model: a conglomeration of characteristics found in almost all personality tests. These five personality characteristics are the constructs of openness, extroversion, conscientiousness, agreeableness and emotional stability (or neuroticism). However, some argue that testing now needs to advance beyond these categories. It remains to be seen if such developments in testing will be incremental or monumental, but no doubt it is a field that is likely to get better and become more useful in the litigious and accountable world of work.

Reference
British Psychological Society
www.bps.org.uk