

# Psychometric Assessment and Its Impact on Human Resource Practices

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## **Abstract:**

Competencies have become a prime deciding factor in human resource practices. To assess competency in individuals, many assessment centers use a variety of techniques to great effect. Focusing on personality traits, cognitive ability and judging performance during the screening process are common methods. In spite of this, we see that attrition rates are difficult to lower in many organizations and that puts the HR department into a dilemma whether to use or not to use an assessment center and psychology-based tests. This paper makes effort to highlight some effective and not so effective ways of assessment in order to see that the best fit individual is chosen for any given position of work.

## **Key Words:**

Assessment. Psychometrics. Psychological Testing.

## **1 Introduction**

In order to remain competitive, an organization has to do everything possible to be at the front position of its field. Maintaining this position not only involves improvement in its infrastructure and equipment but also enrichment and development of its Human Resources. This challenges the Human Resource department to perform at the highest level so as to contribute to the overall performance of the organization. For this purpose, a professional skill is required to be developed and updated on regular basis, which is possible by detecting potential of people, identifying their skills and developing a talent pool. Psychometric assessment is the key to assist with all these issues. According to a report by Central Test (2014), psychometric tests will help in assessing human behaviour that will further help in estimating the chances of an individual to succeed in a particular role (p. 2). This is one of the reasons psychometric assessments in human resource practices have evidently enhanced over the years and persist till date (Jenkins & Wolf, 2002). Other reasons cited behind the enhancement vary from HR policies, increased legislation and regulations, large pools of candidates to screen, enhanced costs of raining, as well as lack of self-reliance of candidates in academic qualifications. These factors are expected to encourage further growth of such assessments in the future, making human resource functioning to consider incorporating these tests in the strategies. But whether a psychometric test alone can provide the best result is the major question. This paper aims at measuring the effectiveness of psychometric assessments in choosing the best candidate for a particular role or position .

## **2 What Is Psychometric Assessment?**

The Institute of Psychometric Coaching states the term psychometric tests or assessments as standard as well as scientific techniques used to measure the mental capabilities and behavioral style of an individual (Institute of Psychometric Coaching). Today, the world of psychometrics has opened up a new holistic dimension of understanding people's attitudes, beliefs, values, competencies and personalities (Sreenidhi et al., 2013). The term "Psychometrics" originated from the Greek words "Psyche", meaning mind, and "metron", meaning measurement (Central Test, 2014, p. 4). Therefore, the Central Test (2014) report notes the literal definition of Psychometrics that entails: "the measurement of psychological traits" (p.4). Psychometrics, unlike subjective observations, is based on statistical approach that makes use of standardized questionnaires to underline dissimilarities between individuals and groups that share similar traits. Briefly stated, it measures mental capability (Psychometric Success).

## **3 Why Use Psychometric Assessment?**

The traditional methods of getting to know one's strengths and weaknesses carry a high risk of individual bias. Such methods are outdated and subjective. They are not comprehensive and hence undermine effectiveness of people's performance. Psychometric Assessments will go beyond decisions made on the basis of a chance to make a real impact on the talent and success quotient of any business (Fernandes, Sreenidhi, 2014).

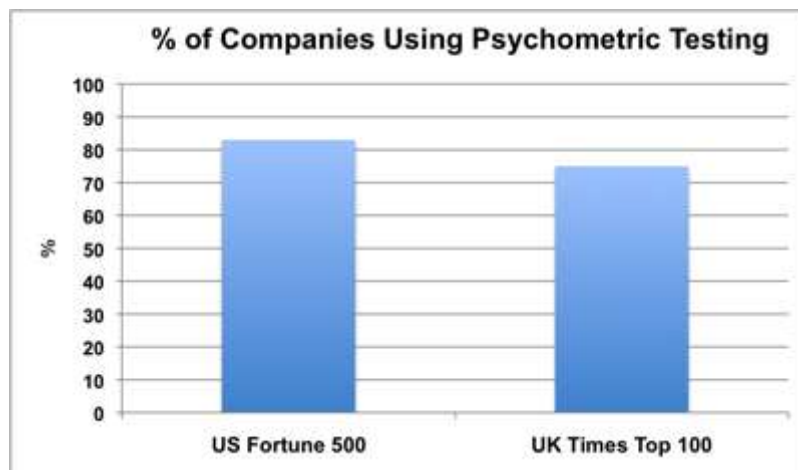
The reason assessments are valuable is that they can uncover information that is not easily found by other, traditional methods. For instance, assessments are good at uncovering a person's aptitude for a particular job for which he has no experience. Psychometric tests do not and should not stand alone as the only selection method. If psychometric tests are handled with insight and sensitivity, they remain the most effective way of predicting behavior (Mittner, 1998). The tests used in the selection setting are purpose-designed to help fit a candidate's talent, personality and attributes to suit a job. They are not designed to reveal innermost secrets or uncover confidential information about the individual. Well-designed psychometric assessments are objective and accurate predictors of individual behavior and preferences. Psychometric Testing brings science to the art of recruitment (Clarkson, 2013).

The recent plane crashes of Airbuses A320 involving Air Asia and Germanwings have been connected to a pilot error, leading to more demands that commercial pilots be tested psychologically for mental stability. According to Henley (The Guardian, 2015), the tests airlines use to assess qualified pilots' mental and psychological fitness for the job vary from country to country, are invariably perfunctory and can never perfectly predict how an individual will behave in particular circumstances on any given day. It is a fact, especially in organisations, that it is wise to have an employee who may not be that skilled but is positively oriented, rather than one who is an expert with a poor attitude. (Sreenidhi et al., 2013). According to Van der Walt (1998), past experience has proven that tests are generally much more reliable and more valid than other techniques. He has also mentioned that studies in trade and industry have indicated that psychometric tests are about four times more effective than screening interviews.

#### 4 Selecting the Best Fit Candidate for a Particular Role or Position

In terms of Human Resource practices, psychometric assessments are designed for the purpose of measuring the suitability of a candidate for a certain role on the basis of required cognitive abilities or aptitude and personal characteristics. These assessments help in making comparison of the actual cognitive abilities and personality of a candidate with those essential in order to carry out the role. Employers make use of information accumulated from the psychometric assessment in identification of unseen characteristics of candidates that are hard to take out from a face-to-face interview. These characteristics help human resource managers in assessing if the individual is ready to take up the particular position or not. Thus the proper use of psychometric tools becomes crucial to human resource development.

Globally, organizations are relying on cost-effective, scientific information generated through unbiased psychometric testing for better people-management decisions. A corporation can employ various assessment tools and dependable and reliable testing products to assist in effective human resource empowerment and planning by accurate profiling of existing and new personnel. These detailed results offer deep insight into important attributes like team working abilities, leadership qualities, interpersonal effectiveness, analytical and decision making abilities and a score of other dimensions that are very essential to increase organizational effectiveness. Psychometric assessment has been used for many years to measure intelligence, aptitude as well as personality of candidates, but in the recent years there has been steep enhancement in their usage in the employment sector. Almost 80% of USA's Fortune 500 organisations and 75% of UK's Times Top 100 organisations are making use of psychometric testing (Psychometric Success).



Source: (Psychometric Success)

However, the effectiveness of psychometric testing is still a big question. Numerous folks still observe these tests as a failure or passed challenge. According to Siobhan Hamilton-Phillips, an occupational psychologist, proper testing during the selection phase reduces the risk of hiring a wrong person for a wrong position (Nolan, 2014). On the other hand, Catherine Fitzsimons, the founder and HR director of Fresh Thinking, has noted that there is no point of substituting interviews for a box-ticking test as one cannot take the gut feelings of an interviewer or of an interviewee too lightly (Nolan, 2014). Therefore, the effectiveness of psychometric testing is still a dilemma. The obvious answer to the questions is that using psychometric testing techniques will have its own advantages and disadvantages. Depending only on psychometric assessment will only provide a partial view of an individual.

The benefit of psychometric assessments arises largely when an organization needs to hire an individual that can easily suit the culture of the organization. According to Smith (2013), when used properly and in a professional and informed manner there are manifold benefits that can be derived and deduced through the use of Psychometric Testing in the selection process. The effectiveness of psychometric assessment for a particular role in an organization depends largely on the skills required for successful accomplishment of that job. It is actually effective for the company to hire the right people for the right role at the very first time. This will not only help in saving costs and time but also help the organization to succeed in a long run. Screening out the most unsuitable candidates through psychometric testing during initial stages helps save time by focusing on the right candidates only (Smith, 2013). In addition to this, these tests can be conducted in a group of up to 15 candidates, which will help save a considerable amount of time as well as effort on the part of a tester.

Predicting potential future behaviour is one of the major benefits of psychometric testing that fulfills the current need of organisations, which is to assess intrinsic qualities of candidates and their ethical stand in the future (Smith, 2013). Moreover, psychometric assessment is usually free from bias in comparison to other assessment techniques because of the fact that all candidates will be given standardized questionnaires, which mean equal opportunity (Steve) to describe their personal traits, and the scores will not be affected by values and beliefs of testers.

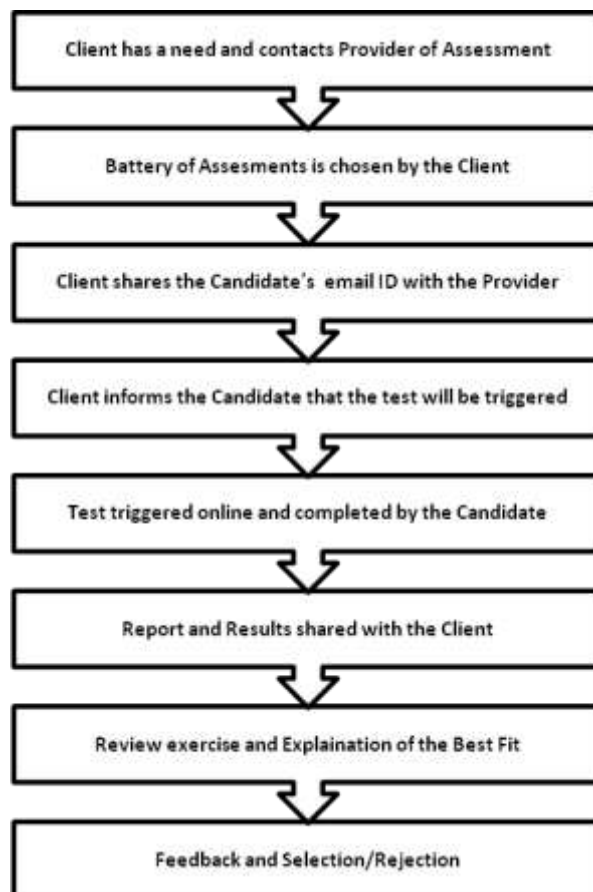


Figure 1: Process of triggering Psychometric Assessments  
Illustration: Author

Figure 1 shows a schematic diagram of the process of triggering and evaluating of a typical Psychometric Assessment. The time period could vary from provider to provider. The average time for a simple set of assessments could be between 2-5 days.

Even though psychometric testing is non-biased, sometimes it can also be biased by adding a touch of discrimination by a tester on the basis of personal information provided by candidates that entails culture, gender, ethnicity, etc. This is the major disadvantage associated with psychometric assessments. Moreover, it is not necessary that candidates will always provide true information about themselves. There is a possibility of providing fake or inaccurate information that can prove disastrous in certain cases. Psychometric tests like box ticking or filling out questionnaires are quite easy and can be scored high by almost every candidate, which will again create confusion for the tester selecting the best candidate. This will enhance the risk of not selecting the right candidate for the given role. In addition to its advantages and disadvantages, the effectiveness of the psychometric testing largely depends on its validity.

## 5 Measuring the Validity of Psychometric Assessment

The validity of psychometrics has been debated for a long time. Arthur (2011) notes that the predictive ability of an assessment helps measure its effectiveness. That means the predictive ability helps in explaining the degree in which a score on a psychometric assessment predicts how well a candidate will perform in the given position or in the given role. The validity of the assessment tests can be measured in quantitative terms by using 0 to 1 measurement scale, where correlation of 0 will represent no prediction or no relation while correlation of 1 stands for perfect prediction and the correlation above 0.3 is considered to be strong (Arthur, 2011). The validity of an unstructured interview has only measure to 0.2. On the other hand, a selection process that unites a general reasoning test, a personality questionnaire, a job simulation exercise, and a structured interview has predicted a validity of 0.7 to 0.8, which further on provides the tester with confidence in hiring the best candidate (Arthur, 2011). This proves that psychometric assessment is really important while assessing the right candidate for the given role. However, it is not entirely reliable and should become a part of the recruitment process and not the whole recruitment process. It cannot replace an interview but should always be used in combination with other processes like screening of application forms and interviews.

Validity and reliability relate to authenticity of the assessments done. Reliability is the consistency or precision with which the test or assessment method measures what it claims to measure. Reliability refers to dependability or consistency. Depending on the focus aspect, validity is classified into various types. According to Niche Consulting, a limited liability company in New Zealand, specializing in offering Psychometric Assessments, the aspects of validity that have an impact on the actual scientific application of the assessment are:

- Construct Validity - the theoretical focus of validity
- Concurrent Validity – the relationship focused validity
- Predictive Validity – the criterion related validity
- Face Validity – concerning the look and feel of the assessment items and whether an applicant can see any relevance of the test or assessment method to the job or role concerned
- Content Validity – concerning how well a test samples the behavioral domain it is trying to measure

The scope of this paper does not allow going deeper into the validity types. These distinctions are illustrated in Figure 2 using the metaphor of a shooting target: a wide dispersion of bullets indicates unreliability, whereas off-center shooting indicates bias or poor validity.

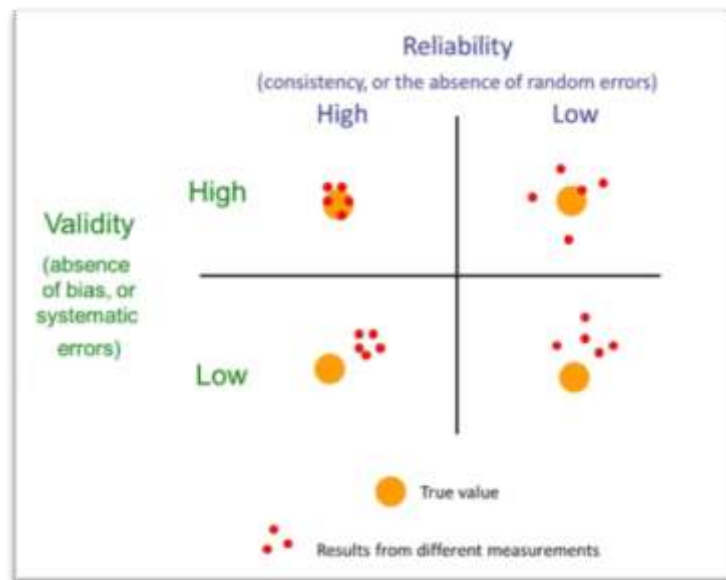


Figure 2

Source: [http://phprimer.afmc.ca/print\\_frame.php?action=chapter&node=57609](http://phprimer.afmc.ca/print_frame.php?action=chapter&node=57609)

Fletcher (2006) says that in order to make psychometrics valid, an organization is required to make changes in its assessment criteria every time in order to keep the balance of skills and personalities required at that time. For example, if an organization needs a person with good communication skills for a role, a tester will craft assessment that will help in assessing candidates on the basis of their communication skills. On the other hand, if they need people with more emotional stability than communication skills for another project, assessment will be changed accordingly. Therefore, in order to be valid, psychometric assessment is required to be flexible so that it can change as per the situation. Therefore, psychometric assessments are only helpful in the case where organisations have already set well-established ways of job performance. In order to measure the validity of the tests in qualitative terms, as per psychometric success, the test must fulfill the following criteria:

- It has to be objective and must not be impacted by the values or beliefs of the tester.
- It is required to be managed in standardized controlled situations.
- It must provide certainty of quantifying and minimizing any sort of intrinsic errors.
- It must predict performance of potential employees accurately.
- It must be non-discriminatory.

In order to include all these validity indicators in the recruitment criteria of an individual, an organization should make use of combined psychometric and other traditional techniques. However, choosing the right assessment criteria largely depends on the role or position for which the candidate is being assessed.

## 6 Choosing the Right Assessment Tool

There is a wide range of assessment tools available on the market that vary from career guidance and personality questionnaires to tests evaluating emotional intelligence. In order to choose the most effective test, several factors are required to be considered that entail:

- Before making a decision regarding the choice of the test, it is necessary to take into account the objective as well as target audiences, for example, what is the objective of the job and what skill sets, competencies or qualities are required to accomplish it.
- It is necessary to choose a test which is scientifically validated as per the criteria of psychometrics if one is deciding to choose psychometric assessment.
- To be effective, a test should be socially desirable and should be according to socially desirable indicators.
- Before testing people using any test, the tester should master the test himself first. It is necessary so that he can get the best out of people.

- It is not mandatory to choose the test rigidly, but the test must be customized depending on the situation or condition of the desired role.

These insights are helpful for a wide range of HR applications – recruitment and selection, individual development programs, learning and development, competency mapping, promotions and appraisal processes, career planning, coaching and counselling, succession planning, benchmarking of internal people and the industry, assessing leadership skills, employee engagement and the like – as they give a holistic view of the innate strengths and powers of the person, so as to optimize their productivity and performance (Sreenidhi et al, 2013).

## **7 Conclusion**

Accurate judgment regarding recruitment, promotion, training and appraisal of personnel is vital in achieving profitability for sustained growth of the organization. In a highly competitive marketplace, one can't afford to postpone good performance due to having the wrong people in the wrong place. The right people in the wrong jobs or the wrong people in the right jobs are both a problem since they rob the organization of its much-needed performance and productivity at all levels. Bits & Pieces or a limited view does not help in understanding the person whether you wish to recruit, retain, train, develop or promote. Complete knowledge of analysis and interpretation is a pre-requisite to make vital decisions about people and unleash the full power of Psychometrics. One cannot ignore personal intuition in a hiring process. After all, assessment is a tool and can be cheated upon.

It can be concluded that it is not always necessary for employers to stick rigidly to psychometric assessment while taking decisions related to human resource practices. It is necessary to choose the best test by combining the traditional approaches and psychometrics. The test is required to fulfill every criterion of a choice of the best tool and it also must be customized according to the given role or given situation. Therefore, the effectiveness of psychometric assessment relies on its combination with the other techniques. It is required to be a part of the recruitment process and not the whole recruitment process.

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