

THE PREDICTIVE VALIDITY OF SELECTION METHODS IN STAFFING ACTIVITIES

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Abstract: *The paper presents the predictive validity of the main selection methods used in staffing activities, starting with initial assessment and finishing with substantive selection methods. Taking into account the predictive validity of each selection method can make the difference between a random choice of candidates and an accurate measurement.*

Key words: *selection methods, predictive validity, reliability.*

1. The selection process

The aim of the selection process is to identify the candidate who presents the highest probability to obtain work performance. There is no selection method that can guarantee one hundred percent that the correct choice was made, but there are different selection methods that can reduce the biases.

The selection in staffing activities has two distinct levels: the initial assessment (shifting) and the evaluation (substantive selection). For each level there are distinct assessment methods, which can be distinguished also by the recruitment source: internal or external. There are two types of objectives that the selection process has to achieve. The first, which is a short-term one, is focused on the candidate and his/her profile in order to obtain work performance. The second is centered on organization and its possibility to maintain and develop the new employees. In order to accomplish these objectives, the selection process, and generally the whole staffing approach, evaluates the following dimensions:

- i.) the convergence between job specification and the candidate's profile
- ii.) work motivation and the candidate's interest for the open job and organization (the future employer)
- iii.) the fit between the candidate and the organization (the convergence between the candidate's values and organizational culture.)

The selection has to be viewed as a process, not as an event or a single assessment intervention. From the shifting stage, when we have "applicants", we move to evaluation, when we have "candidates" and, in the last stage, we make a fine selection operating with "finalists". The process is based on prediction and anticipation, because the past situations should be predictive of how successful the candidate will be in new situations. Furthermore, the assessment follows the candidates' potential and, from this point of view, we also have a strong future oriented approach. No matter strategy is adopted,

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the selection criteria have to be job related and to have a clear behavioral nature. The evaluation in the selection has to be centered on person results not on personality traits.

2. Shifting applications

The initial assessment procedure used also as preemployment inquiry divides applications into two classes: those that cover the minimum standards in order to perform the tasks and those that are below the minimum standards. The job specification is the main document that fundamentals the assessment and indicates appropriate methods to be used. Those can be: resume and cover letter, application forms, biodata, letter of recommendation and reference check, initial interview and tests (job knowledge test and ability tests).

Each method evaluates specific dimensions of job performance and it is necessary to use at least a combination of two of them in order to cover the complexity and the variety of job requirements. The proper method will be chosen regarding the job complexity, methods utility, reliability and fidelity. The methods that involve quantitative evaluations (point rating schemes) are more appropriate than those based on subjective judgments. The quantitative approach is more indicated in this case than the qualitative approach.

For the internal candidates there are some specific initial assessment methods, but in practice the same selection cluster is often used. The internal assessment methods [3] are based on the "special" position held by the candidates, the fact that he/she is already the company's employee. Skills inventory, peer assessment, self assessment and informal discussions and recommendations are the most important internal initial assessment methods.

3. Substantive selection methods

Two different approaches can be used in the selection process: the successive one or the cumulative one. The first one involves the gradual assessment of candidates in order to obtain a short list and finally to identify the future job holder. This approach is frequently used because it facilitates resources saving, but it has a low level of transparency. The cumulative approach involves the assessment of all candidates, using two or more methods, and listing a final top-down hierarchy. The main disadvantage of this strategy is the fact that it is expensive; therefore it is applied for complex jobs or in case of a small number of applicants.

The main substantive selection methods are:

- a) selection interview
- b) assessment centre
- c) selection tests (personality test, ability test, integrity test, knowledge test)
- d) work sample
- e) unconventional methods (graphology, astrology)

The selection mix design is based on the following issues: predictive validity and reliability of the methods, previous efficiency and costs-benefits analysis.

The work performance of a new employee is determined by variables that cannot be integrally controlled by organizations. Because all methods are no one hundred percent valid, it is necessary to enhance the level of validity applying a combination of two or more selection methods. This does not mean that using a higher number of methods will automatically generate a higher level of validity.

The value of the selection method depends directly on its capacity of making accurate predictions about the future job performance. Predictability, validity and reliability of the selection tests make the difference between an accurate measurement and a random choice of candidates.

4. Predictive validity

A selection instrument is valid when it can anticipate correctly the future work behaviour. The quality of a selection test or instrument is stated on four main characteristics:

- 1) reliability – refers to the consistency of a measurement. It is the quality of a test to get the same result repeatedly and to measure the same item every time when it is applied. A reliable test measures the same factor, each time it is used in the same conditions with the same subjects. In short, it is the repeatability of the measurement. A measurement is considered reliable if a person's score on the same test taken twice is similar. Reliability is not measured, it is estimated.
- 2) validity – is the extent to which a test measures what it claims to measure (diagnostic value). The prognostic validity is the quality of a test to make predictions about human behaviour. There are four aspects of validity: content validity, concept validity, predictive validity and concurrent validity.
- 3) standardization sample – refers to the quality of a test to be adapted to the population's cultural background and national characteristics. It is necessary to take into account those dimensions because applying an “universal” test usually creates biases.

- 4) standardization – requires a uniformity of procedures and conditions (layout, instructions, content and researcher behaviour). A standard test facilitates comparison between results obtained by different groups.

Those characteristics were studied and debated especially in relation to psychological tests and they are usually underlined in users manuals. Psychologists have the legal obligation to present these aspects when applying tests in the selection process.

For other selection methods, the validity, reliability and standardization – revealed by scientific research – is not so clear. In most cases the research is centered on predictive validity of work performance, but the investigations are complex, because there are many types of factors involved and minimum possibilities for standardization.

The meta-analytic findings summarize the results obtained by studying large samples, but each of them contains methodological limits, which generate a variety of scores.

In Fig. 1 there are illustrated the results obtained by Frank L. Schmidt and John E. Hunter [4], Neil R. Anderson and Vivian J. Shackleton [1] and Stephen Taylor, quoted by Michael Armstrong [2] and a large number of studies presented by Herbert Heneman, III, Robert G. Heneman and Timothy L., Judge in their paper [3].

Predictive validity of selection methods

Table 1

Selection method	Schmidt and Hunter	Anderson and Shackleton	Heneman and others	Taylor
Cognitive ability tests	0,51	0,54	0,50	0,50-0,55
Work samples	0,54	0,55	0,54	0,50-0,55
Job knowledge tests	0,48	-	0,45	-
Assessment centers	0,37	0,41	0,37	0,50-0,55
Structured interviews	0,51	0,62	0,31	0,35-0,40
Biodata	0,35	0,40	0,32-0,37	0,35-0,40
Personality tests	0,41	0,38	0,10-0,15	0,40-0,50
Unstructured interviews	0,38	0,31	0,23	0,15-0,20
References	0,26	0,13	0,16-0,26	0,15-0,20
Unconventional methods	0,02	0,00	0,00	0,00

Predictive validity can take values between [0.0, 1.0]. When the value is up to 0.5 the validity is very good, between 0.5 and 0.3 the validity is good, and under 0.3 the validity is poor.

In conclusion, general ability tests or cognitive ability tests have the best prediction capacity, which can be 0.58 for managerial positions or 0.23 for repetitive tasks. Furthermore, cognitive ability tests used with other selection methods enhance the general predictive validity of the selection process. The decision to apply this kind of test or not has to be carefully analyzed because the validity gain can be insignificant in the same situation. This is the case when cognitive ability tests are combined with knowledge tests, when the general validity rises only by 0.002 points.

References

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