VALIDATION STUDY OF A MODEL FOR THE ASSESSMENT OF THE POTENTIAL IN ITALIAN YOUNG PROFESSIONALS

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Introduction
The term “potential” refers to the contribution that workers could give in the future when filling different position in their current one. The expansion “assessment of potential” means to carry out activities, structured and designed for the purpose, aimed at delivering a judgement, both qualitative and quantitative, pertinent to the potential not expressed by those workers on which companies might want to invest in an organizational development perspective (Rao, 2010). The methods considered more valid and reliable when assessing potential are those of the Assessment Center and Development Center (Gaagler, Rosenthal, Thornton, & Bentson, 1987; Klimoski & Bracken, 1987). “Young professional” describes a person who, usually with a university degree, has worked for the company for at least three/five years, carrying out tasks that require the possession of professional skills and the gradual acquisition of a high know-how. The number of skills observed in a potential assessment process depends on the observation/assessment grid and it varies according to the organization. With respect to the number of skills, the methods used to examine the potential to assess the possibility of making correct managerial choices in the use of potential (Hough, 2002).

Research objectives and hypotheses
1. Collect empirical evidence on how many and which skills, among the various ones used for the assessment of potential in Italian Young Professionals, are actually related to the potential.
2. Reach a model for the assessment of potential in Italian Young Professionals that includes the minimum possible number of truly potential predictive skills.

Participants
2008 Italian Young Professionals, who underwent an assessment of potential, took part in the study.

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On defining potential

Model
It is indeed necessary that these skills will be not too correlated between one another (phenomenon indicated in statistics as collinearity of predictions), in order to avoid the risk of including in the model skills that share an excessive variance and therefore substantially measure the same thing.

For these reasons, after a series of exploratory analyses, factor analysis was performed on the 26 skills correlated with the potential. The factor analysis was performed using the principal components method and principal components analyses were conducted on the total of 26 skills correlated with the potential. The analysis was performed in the 26 dimensions, 7 if we exclude those that, according to literature (Coffey & Dwyer, 1992), can be regarded as redundant (in the case of the principal components analyses, factor loadings less than 3). All those items that have factor loadings greater than 0.5 were then submitted, as a whole, to Bartlett’s test for sphericity, which is used to determine whether the correlation matrix is a positive semi-definite matrix and therefore whether the factor analysis can be performed. Bartlett’s test was performed on all the items that were submitted to the analysis and the obtained value p < 0.001, and all the items that were submitted to the analysis then used for the factor analysis.

Discussion on the testing of the obtained model

The results show a positive (r > 0.3) and significant (r > 0.4) correlation between each skill assessed in the context of the assessment of potential and the total potential score. This indicates that all the 26 skills considered in this study really deal with the total potential score and each of them contributes, always differently in the previous (the determination coefficients vary between 17 and 82). Therefore none of the skills results as technically “unnecessary”. However, according to the hypothesis, not all the skills considered for the assessment of potential in the Italian Young Professionals included in this study are equally predictive of the total potential assessment score.

Tools and procedure
The operations for the potential assessment of the participants were conducted by means of a behavior controlled (validated and standardised) situations (through group and individual tests). Each participant was assessed on a variable number of 15 to 20 skills during the assessment of potential using an assessment grid and an Assessment Center. Each skill was evaluated on a scale of 1 (very low score) to 5 (very high score). The initial database included 40 skills that subsequently were extracted on the basis of two criteria, one qualitative and the other quantitative.

1. Qualitative criterion: analysis of the tables and of the content of each skill related to the disclosure, to trace the behaviors observed for each of the different skills and identify their overlapping areas.
2. Quantitative criterion: correlation and factor analyses for the identification of skills that, from a statistical point of view, share a variance percentage above 40% (r > 0.70, t > 1.96) and thus show that they refer, essentially, to the same feature. The labels of the 26 validated skills are in Table 2. In table 2, the last two characteristics). The means that not all the included are equally “necessary”, as they are truly predictive for the potential, or not. In fact, determining the predictive effectiveness of the skills to assess the possibility of making correct managerial choices in the use of potential (Hough, 2002).

Table 2: principal components analysis regarding the 26 skills (eigenvalues > 1, explained variance = 17). Table 3: Employment model, which includes the 26 skills for each model and the total potential scores for each model.

In fact there are differences in the probability that each individual skill has to predict it. The factor analyses and the principal components analyses carried out on the 26 skills tend to extend to 26 dimensions, 7 if we exclude those that, according to literature (Coffey & Dwyer, 1992), can be regarded as redundant (in the case of the principal components analyses, factor loadings less than 3). All those items that have factor loadings greater than 0.5 were then submitted, as a whole, to Bartlett’s test for sphericity, which is used to determine whether the correlation matrix is a positive semi-definite matrix and therefore whether the factor analysis can be performed. Bartlett’s test was performed on all the items that were submitted to the analysis and the obtained value p < 0.001, and all the items that were submitted to the analysis then used for the factor analysis.

Table 1 shows the partial correlation coefficients between each skill and the overall potential score (r), as well as the coefficient of determination (R2). The skills are shown in descending order with respect to the calculated coefficients. As noted, all the correlation coefficients are positive (r > 0) and above 0.40, cut-off beyond which the correlation coefficient becomes statistically significant in the case of psychosocial research.

Table 4: Coefficients of correlation and determination between skills and potential.

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