How to design effective work teams
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Introduction

As the use of work teams in organizations increases, so does the need to refine the selection strategies followed in staffing them (Sundstrom et al., 2005).

The notion that individual traits within a team context might influence team effectiveness has been of interest to scientific research for many years now. Among the many aspects of group composition the researchers have focused on are those dealt with in several studies which have analyzed the effect of members’ personality traits and/or cognitive ability on team performance (Barrick et al., 1998; Neuman & Wright, 1999; van Vianen & De Dreu, 2001).

To describe team composition, these authors used four indexes (homogeneity, mean trait level, minimum and maximum) for each of the measured variables.

Objective

The aim of this study was to further analyze the relationship between the group member’s personality and cognitive ability indexes, adding a measure of each member’s performance within a team influence team performance. In the light of these data, it seems that choosing at least one team member who performs at a high level when working individually and one member high in conscientiousness will help in composing an effective team.

Methodology

Indexes

In order to attain team indexes, the previous data were aggregated in compliance with the methods proposed by Barrick et al. (1998), that is, calculating the standard deviation, mean, maximum and minimum values for each group in each of the measured variables (with the exception of group performance).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Neuroticism</th>
<th>Extraversion</th>
<th>Openness</th>
<th>Agreeableness</th>
<th>Conscientiousness</th>
<th>Cognitive Ability</th>
<th>Individual Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (N)</td>
<td>Mean (E)</td>
<td>Mean (O)</td>
<td>Mean (A)</td>
<td>Mean (C)</td>
<td>Mean (CA)</td>
<td>Mean (IP)</td>
<td></td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>Sd(N)</td>
<td>Sd(E)</td>
<td>Sd(O)</td>
<td>Sd(A)</td>
<td>Sd(CA)</td>
<td>Sd(IP)</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>Maximum(N)</td>
<td>Maximum(E)</td>
<td>Maximum(O)</td>
<td>Maximum(A)</td>
<td>Maximum(CA)</td>
<td>Maximum(IP)</td>
<td></td>
</tr>
</tbody>
</table>

Results

Our data showed significant relationships between maximum Conscientiousness (C) and team performance, and maximum individual performance (IP) and team performance.

Table: Zero order and partial correlations

<table>
<thead>
<tr>
<th>Group Task Performance</th>
<th>r</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum (C)</td>
<td>0.316</td>
<td>9.974</td>
<td>0.003</td>
</tr>
<tr>
<td>Maximum (IP)</td>
<td>0.234</td>
<td>4.897</td>
<td>0.012</td>
</tr>
</tbody>
</table>

After classification of the groups into three categories by their scores in task performance (ordered from lowest to highest), the results from a one-way ANOVA indicate significant differences in maximum Individual Performance within the groups. The relationship between task performance and maximum IP seems to be linear, as a polynomial contrast confirms (F= 9.974, p= 0.003).

Conclusion

To maximize the probability of team success, it is important to know how individual traits within a team influence team performance. In the light of these data, it seems that choosing at least one team member who performs at a high level when working individually and one member high in conscientiousness will help in composing an effective team.

References